

Capital Taxation and Market Power

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Abstract: In recent decades, market power has increased substantially, according to multiple measures that describe industry concentration, mark-ups, and business profitability. While market power can generate benefits, it also raises vexing policy concerns, including the potential for adverse effects on labor markets, income inequality, and the dynamism of market competition. The concept of market power also has implications for how we conceptualize capital income, making it important to distinguish between normal and above-normal returns to capital. The tax system taxes both types of returns to capital, but often imperfectly and incompletely. Full consideration of the relationship between market power and capital income suggests important implications for optimal capital taxation design, including the role of entity taxation, the use of graduated business tax rates, and international tax reform.

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I. Introduction

In prior decades, and especially since 1990, the United States economy has experienced growing market concentration. This trend of increasing market power has been sustained and substantial, and it has occurred across a broad swath of US industries. These trends have important implications for the US economy, affecting the bargaining power of firms relative to workers, inequality, consumer welfare, the efficiency of capital allocation, and the broader functioning of markets.

Increasing market power also has important implications for tax policy. Longstanding tax analyses that treat capital taxes as falling on the “normal” return to capital have efficiency implications that are very different from those that hold if capital taxes instead fall on profits above the normal return to capital. The incidence of capital taxes also depends on whether they fall on normal or excess returns. The optimal rate of capital taxation depends crucially on such efficiency and incidence considerations.

The ideal *form* of capital taxation also depends on these distinctions. Alongside administrative rationale, market power considerations strengthen the argument for the corporate tax as an important tool for achieving capital taxation goals. Further, market power considerations buttress the case for a graduated system of corporate tax rates.

The large role of market power reenforces the already powerful case for tackling international tax competition and countering international tax avoidance. While international tax reform entails balancing the competing goals of tax base protection with the competitiveness concerns of domestic multinational companies, recent improvements in international tax cooperation make that tradeoff less stark. Further, the policy-relevance of such competitiveness concerns are impacted by the presence of market power.

Section II of this paper documents the rising role of market power in economies through the world. Section III explores the consequences of such rising market power. Section IV discusses the nature of capital income, the difference between normal and above-normal returns to capital, and how the tax system affects both normal and super-normal returns. Section V explores how corporate tax policy might adapt to the rising role of market power, as well as broader tax system implications.

II. The Rise of Market Power

A large body of work confirms the rising importance of market power for both the US economy and the world economy; good overviews are provided in Philippon (2019) and Shapiro (2019). By all measures, market power has been increasing in recent decades. OECD (2018) provides a survey discussing increased concentration in rich-country markets, particularly in the United States; they note that a broad range of indicators is consistent with increasing market power. International Monetary Fund (2019) and Calligaris, Criscuolo, and Marcolin (2018) also provide cross-country evidence of rising market power.

One measure of market power considers the concentration of firms within particular industries. For example, the Herfindahl-Hirschman (HH) index is a common measure of market concentration that captures the size of companies relative to their industry.¹ The usefulness of this measure depends on the nature of competition (whether firms compete through prices, quantities, or other means) as well as the extent of product differentiation. As products become more differentiated, Herfindahl indexes become less relevant, as products within the same category may not be particularly close substitutes. Grullon et al. (2019) document the increase in market concentration for the United States. They focus on the 1997-2014 period, finding that the Herfindahl-Hirschman index increases for 76 percent of industries; they find that profit margins and market valuation reflect this increased market power.

Mark-ups are also a useful measure of market power; they show the extent to which prices exceed (marginal) costs. Mark-ups for typical firms have largely remained constant, while those of particularly large and powerful firms have increased dramatically, affecting the economy-wide mark-up. As the market share of the larger companies increases, their market power becomes more consequential for the economy as a whole.

Mark-ups may also be high if fixed costs are large, and mark-ups may increase as fixed costs increase. Additional measures of market power therefore consider trends in profits or market valuation (reflecting the present discounted value of future profits) to capture trends in market power.

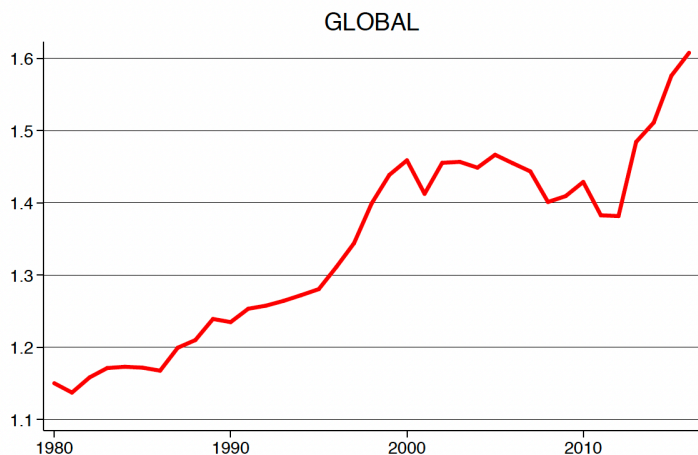
De Loecker and Eeckhout (2021) find that increasing market power characterizes the world as a whole; the aggregate global mark-up has increased from 1.15 to 1.6 between 1980 and 2016. Using similar data and methods, Diez et al. (2018) also find rising mark-ups; mark-ups have increased by 39 percent for 74 economies. Hall (2018) finds that mark-ups grow more in sectors with higher “mega-firm” intensity, although he does not find evidence that mark-ups are higher in such sectors.

Global integration has the potential to stem the agglomeration of market power, as foreign companies may provide competition for domestic companies. But a larger market size (for an integrated world as opposed to a segmented nation) may also enhance economies of scale and scope for large companies, allowing them to reach a dominant position in the world as a whole; cross border mergers and acquisitions facilitate such consolidation. Understanding global market power has large policy implications for global efforts toward policy harmonization (e.g., attempts to stem tax competition), and for the reach of domestic regulatory efforts.

Figure 1 shows the De Loecker and Eeckhout time series for the global mark-up, which is the sales-weighted average mark-up for the world as a whole.

¹ The HH index is the sum of the square of the market shares of each firm competing in a particular industry. Lower values indicate a less concentrated market.

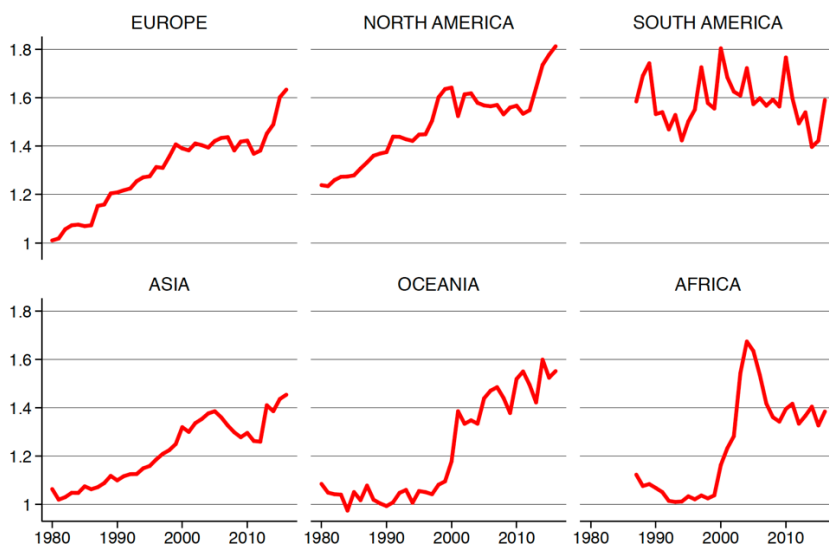
Figure 1: Trends in Global Mark-Ups



Source: De Loecker and Eeckhout (2021); included with author permission.

De Loecker and Eeckhout show regional differences, with particularly large increases in market power in North America and Europe – although Europe has lower mark-ups than North America throughout this time period – and more modest changes in Asia and elsewhere. As they describe, measures of profitability and market valuation show similar trends; profit rates are sharply rising in both Europe and North America, patterns that are consistent with those of mark-ups.

Figure 2: Regional Trends in Mark Ups



Source: De Loecker and Eeckhout (2021); included with author permission.

Philippon (2019) provides an extensive review of the evidence on market concentration, focusing in particular on the growth of market power in the US economy. De Loecker, Eeckhout, and Unger (2020) also focus on the US economy, documenting a large rise in mark-ups for the US economy since 1980, and showing how mark-up rates are related to steeply rising profit rates.

They find that the average profit rate has risen from about 1 percent in 1980 to 8 percent in 2016. A small number of firms is driving these trends; the median firm is losing market share and has stable mark-ups, while a few larger firms with large mark-ups gain market share.

Kahle and Stulz (2017) discuss the role of US public corporations more broadly, noting remarkable concentration in profits such that the largest 100 firms account for 80 percent of public firm earnings in 2015, in a context where profits are a rising share of the economy. They note an important role for consolidation through mergers.

Furman and Orszag (2018) explore the importance of superstar firms in the rising market power evident in the US economy after the mid-1980s, showing a sharp divergence in trends for 90th percentile and above firms (where returns are rising sharply) from those in lower percentiles, where returns are more stable.

Other work, including Eggertsson et al. (2021), Farhi and Gourio (2018), and Covarrubias, Gutierrez and Philippon (2019), attempts to reconcile a collection of macroeconomic stylized facts, including rising profitability, rising market valuation, rising mark-ups, higher Tobin's q (the ratio of market value to asset replacement cost), a declining labor share of income, low productivity growth, and sluggish investment. These macroeconomic patterns are often puzzling on their face, but they are consistent with a rising role for market power, and the evidence supports that causal factor. Syverson (2019) agrees that rising market power is a plausible explanation for these patterns, but he nonetheless cautions that more work needs to be done to definitively clarify that causal mechanism.² Work by Gutierrez and Philippon (2017, 2019) also unpacks the relationship between competition, investment, and productivity.

Stansbury and Summers (2020) argue that the same stylized facts can also be explained by declining worker power, rather than rising firm power. To some extent, these two explanations are related, as all income is destined for either labor, capital, or rents. Stansbury and Summers note, however, that recent trends in inflation as of their writing (in particular, the non-accelerating inflation rate of unemployment, or NAIRU) are more consistent with the root importance of declining worker power. Bivens et al. (2018) also focus on declining worker power.

Barkai (2020) argues that a rising profit share caused both capital and labor shares to fall; this rising profit share results from declining market competition. He distinguishes between the normal return to capital and pure profits, finding that the pure profits have increased starkly, by 13.5 percentage points (calculated relative to value added).

III. The Consequences of Rising Market Power

Rising market power has important implications throughout the economy, affecting the labor share of income, inequality, consumer welfare, market dynamism, investment, and the rule setting that governs capitalism.

² In a similar vein, Basu (2019) raises some unresolved puzzles in reconciling macroeconomic and microeconomic findings in this literature.

Recent work, including Autor et al. (2017, 2020) and Azar et al. (2022), find a relationship between the rising market dominance of large companies and the declining labor share of income. Autor et al. (2017, 2020) and De Loecker and Eeckhout (2021) find evidence that increasing market concentration has lowered labor shares; industries with increased market concentration experience larger declines in the labor share. This stems from a compositional effect, since the largest and most successful firms have lower labor shares of income than typical firms. Azar et al. (2022) find that industries with higher concentration experience lower wage growth, focusing on concentration in the labor market.

These trends have large implications for inequality. As the labor share shrinks relative to the capital share, inequality increases in parallel, since capital income is far more concentrated at the top of the income distribution than is labor income.³ Further, labor income may also become more unequal, as labor markets become fissured such that many employees work in hypercompetitive labor markets, whereas the few workers employed by “superfirms” benefit from higher wages.⁴ Implications for inequality are further discussed in Bivens et al. (2018), Council of Economic Advisers (2016), and Rinz (2019). Market power gives firms more power relative to their workers in labor markets, acting to depress wages. Of course, other factors are also important in determining the bargaining power of workers.⁵

Market power has well-understood implications for consumer welfare as well, as prices are higher when mark-ups increase. Evidence on increased mark-ups was discussed above, including De Loecker and Eeckhout (2021), Diez et al. (2018), Philippon (2019), and Hall (2018). Philippon (2019) also provides a detailed analysis of consumer impacts in several key sectors in the United States.

Since at least Adam Smith, economists have further emphasized how the absence of healthy competitive forces harms market outcomes beyond prices, reducing innovation, dynamism, and the quality of product attributes. While the counterfactual is often difficult to establish, one can often point to examples from life experience, including long waits, poor service, and mediocre quality in instances where some goods or services are provided by monopoly, or near monopoly, sellers. Supportive evidence is found by Blonigen and Pierce (2016), who show that while mergers and acquisitions often increase market valuation and mark-ups, there is little evidence of effects on measures of company productivity or efficiency, suggesting that market power may generate higher prices without gains for consumers.

³ At present, [Treasury data](#) suggests that the top 1 percent of the US income distribution receives 12 percent of all labor income, but 52 percent of positive capital income; the top 5 percent receives 27 percent of labor income and 70 percent of positive capital income.

⁴ Weil (2014) has argued that the workplace is becoming increasingly *fissured* so that non-essential tasks are often outsourced or offshored. These more routine jobs face intense competition, lowering labor power for many workers. While workers at the most successful companies are well-compensated (exacerbating income inequality among workers), the market power of these companies disproportionately benefits a small number of workers near the top of the income distribution. Also, Song et al. (2019) and Barth et al. (2016) find evidence of increased between-firm inequality.

⁵ These factors include features of labor markets such as the prevalence of unions, collective bargaining, noncompete agreements, regulatory barriers, shifting legal rights of workers and employers, job-lock associated with employer-sponsored health insurance, and barriers to labor market mobility, including high housing costs in high opportunity areas.

Beyond these deleterious effects, the evidence of the impact of increasing market power on investment is not encouraging. Karabarounis, Neiman, and Chen (2017) show declining labor shares are associated with large increases in cash stockpiles by corporations, rather than increased investment. Gutierrez and Philippon (2017) find that greater market concentration has been associated with *lower* investment in recent years, relative to what would be expected given high values of Tobin's Q (the ratio of market value to earnings to asset replacement cost). Gutierrez and Philippon (2019) demonstrate that the contribution of large "star" US firms to US productivity growth has fallen by more than one-third since 2000, and that these firms have experienced disappointing productivity growth. Diez et al. (2018) also show that higher market power is associated with worse investment outcomes, beyond threshold levels of concentration. Eggertsson (2021), Fahri and Gourio (2018), and Brun and Gonzalez (2018) provide models that directly link increased market concentration with lower-than-expected investment. These results imply that market power is not just bad for investment, it is bad for the long-term productivity of workers (which depends in part on the capital stock) and economic growth (which is robustly related to investment).

Zingales (2017) describes the large and rising political reach of large corporations. Not only do the world's biggest companies rival countries in their command of economic resources, but they have an underappreciated role in setting the rules of the game. Zingales notes: "Among the largest corporations in 2015, some had private security forces that rivaled the best secret services, public relations offices that dwarfed a US presidential campaign headquarters, more lawyers than the US Justice Department, and enough money to capture (through campaign donations, lobbying, and even explicit bribes) a majority of the elected representatives."⁶

The role of large corporations in politics and rule-setting is also extensively discussed in Philippon (2019); he documents the political power of U.S. corporate interests, providing evidence that their policy advocacy has been effective. The role of money in politics is both large and rising, and donations and lobbying are effective. Donors get what they pay for (and more), which hampers both tax and regulatory policy responses to rising market power.⁷

IV. Market Power and Capital Taxation

A. What is capital?

Real capital is typically thought of as plant and equipment, including buildings, machinery, and computers. Capital may also be intangible; intangible property generates value but isn't easily "touched"; this concept can include intellectual property (trade secrets, algorithms, etc.), the rights to that intellectual property (patents, copyrights, trademarks), and a host of other

⁶ See page 113 of Zingales (2017). These concerns are longlasting. For example, in the *Wealth of Nations*, Adam Smith argues that "To widen the market and to narrow the competition, is always the interest of the dealers... The proposal of any new law or regulation of commerce which comes from this order, ought always to be listened to with great precaution, and ought never to be adopted till after having been long and carefully examined, not only with the most scrupulous, but with the most suspicious attention. It comes from an order of men, whose interest is never exactly the same with that of the public, who have generally an interest to deceive and even oppress the public, and who accordingly have, upon many occasions, both deceived and oppressed it."

⁷ Cowgill, Pratt, and Valletti (2023) also document a robust association between mergers and lobbying activity.

knowledge-based factors. Corrado et al. (2022) report multiple measures that indicate the rising importance of intangible capital in the economy in recent decades.⁸

Financial capital instruments (stocks, bonds, loans) are just claims on the underlying real capital. When an investor owns shares in a firm, or has made a loan to that firm, they hope to collect some return on their investment in the form of dividends, capital gains, or loan repayments.

Economists typically divide the resulting capital income into at least two parts. The “normal” return to capital is the return that accounts for the cost of finance, which we often think of as the interest rate, proxying for either the cost of borrowing or the opportunity cost of funds. The “excess” (or “supernormal”) return is the return above that normal return.

Several factors can generate excess return that one might usefully distinguish. For instance, factors such as luck or monopoly power can generate large returns above the normal market return. A monopolist (or any firm with sufficient market share to generate market power) can expect to earn “rents” associated with market dominance, and these rents can often be long-lasting and large. Even firms that first arrive at a new market opportunity may experience sustained, if temporary, rents. And, in the presence of important network advantages, first mover advantages can become entrenched, providing a lasting source of market power.

Rents can also come from the ownership of a scarce resource; farmers holding particularly fertile land, property owners of scarce city center land, or owners of scarce natural resources may all earn rents.

Excess profits may also result from other factors, including risk-taking or entrepreneurship. The presence of risk means that the return to investment is variable and might even be negative in some circumstances. Thus, while average industry returns may be modest, some returns may be high while other returns are low. When examining “winners” in such risky markets, one might observe high returns, but one could reasonably conclude that some part of that return is compensation for risk. Some authors refer to the part of excess-profits that results from compensation for risk as “quasi-rents.”⁹

Entrepreneurial returns often have some component of labor income. For instance, imagine an inventor who toils night and day to bring their creation to market. That “sweat labor” may earn them high returns, but it is a type of income that isn’t traditional “capital” income; the recipient

⁸ A recent literature has explored the relationship between market power and intangible capital, including Crouzet et al. (2022) and Crouzet and Eberly (2021). They caution that the macroeconomic data that indicate rising rents may be explained in part by the rising importance of intangible capital. For example, if investment is weak despite high market returns on investment, that may indicate market power, or it may indicate that some part of market returns are being driven by investments in intangible capital, which themselves may generate both normal and excess returns. Crouzet and Eberly (2021) document a positive relationship between rents and intangible capital for key sectors. As discussed below, investments in intangible capital can normally be expensed, so the corporate tax system will only burden excess returns on intangible investment.

⁹ For example, Fox and Liscow (2020, p.2028) state that “True economic rents should be distinguished from so-called quasi-rents, which are payments to factors of production that appear ex post to have been unnecessary to secure the contribution of that factor but that ex ante are needed to induce actors to invest.” However, readers should be cautious, as in other contexts quasi-rents can refer to state-generated rents from command over key resources, or as rents that are merely temporary but are likely to be competed away.

is not being compensated for their investment of capital or their patience as much as their effort. Fleischer (2019) refers to this sort of income as “alpha” income. It captures situations where labor compensation is determined through the ownership of financial assets, whether stock options, shares of a start-up, or stock in a distressed firm; he argues that the rise in this form of income (in both private equity and in founders’ stock) has been a crucial component of rising inequality in recent years.

B. The Tax Treatment of Capital Investment

These different forms of capital income have different efficiency implications. Taxing normal returns to capital has the potential to discourage investment. While the literature has not achieved a consensus regarding the tax sensitivity of investment, in part since it is difficult to identify, the theoretical effect is qualitatively clear. Taxing something should discourage it; when returns on capital are taxed, that raises the cost of investment, reducing the amount of investment for any given marginal product of capital schedule.¹⁰ This raises the possibility of harmful effects on labor, due to the foregone productivity associated with the reduced capital stock. However, the evidence in this area is sparse and contested.¹¹

¹⁰ Early work on corporate taxation treated the corporate tax as a tax on corporate capital. This discouraged both capital formation in the corporate sector – since a higher before-tax return would be needed to justify the marginal cost of capital in the presence of taxation – and encouraged the migration of capital out of the corporate sector to the non-corporate sector, until the after-tax rates of return in equalized in the two sectors. The migration of capital raises the before-tax rate of return in the corporate sector and lowers the before-tax return in the non-corporate sector, so the corporate tax ultimately burdens capital holders in both sectors.

Due to international capital mobility, there is also the potential for adverse effects on labor, effects that would reduce the progressivity of the corporate tax. If domestic corporate taxation reduces the domestic capital stock (which migrates to lower tax jurisdictions), it reduces the marginal product of capital, and the wages paid to labor, accordingly. Still, open questions remain regarding whether capital investment might instead reduce the demand for some types of labor, by acting as a labor substitute. For example, investments in robots may increase the marginal product of the workers that remain in the factory to supervise the robots while they also may reduce demand for the workers that would have done the tasks now done by robots.

These general equilibrium models of capital taxation have important insights, but they also neglect the sort of detail that is required to assess the true consequences of corporate taxation for capital formation. Foremost, there is the question of what share of the corporate tax burdens capital at all, relative to the share falling on excess profits. To establish that, we need to know more about the corporate tax base rules: the deductibility of debt, the treatment of investment (including the presence of expensing or accelerated depreciation), and whether tax is based on the residence of the investor or the physical location of the investment itself.

¹¹ Overviews of the empirical evidence on the general equilibrium effects of corporate taxation are provided in Clausing (2012, 2020a); at the country level, there is little evidence of empirical relationships between corporate tax rates and either investment or wage growth. There is more evidence at the subnational level, but it may have limited applicability to the national context.

The empirical evidence in a cross-country context is particularly thin. Djankov *et al.* (2010) note a literature, to which they contribute, that suggests a relationship between corporate taxation and investment, but most studies do not use cross-country analysis. Djankov *et al.* (2010) employ a cross-section of 85 countries in 2004. They find statistically significant relationships between both statutory and effective tax rates and foreign direct investment; effective tax rates, but not statutory rates, have a statistically significant effect on overall investment. Yet the influence of effective tax rates on investment is still subject to caveats: (i) the absence of time-series variation makes it impossible to control for country-specific fixed effects; (ii) the effect loses statistical significance when a complete set of control variables is added; and (iii) the effect loses statistical significance if Bolivia is excluded from the analysis, as noted by Gravelle and Hungerford (2011).

In the context of real-world tax systems, it is important to note that the corporate tax is a tax levied on corporate income (profits), not on capital investment per se. Depending on how a particular investment is financed, the type of investment, and the corporate tax law in place at the time, the normal return can be subsidized, taxed, or completely unaffected by taxation.

To illustrate, consider a machine that costs $\$x$. The cost of purchasing the machine is the opportunity cost of putting financial capital toward the purchase of the machine or paying interest on the loan required to buy the machine, which we can designate r .¹² Beyond that cost, the machine will depreciate at a rate d .¹³ In a world without taxation, the firm will undertake the investment if the benefit, B , exceeds the cost, $(r+d)x$. In a world with taxation, when the cost of capital is fully deductible, and the benefits from the use of capital are fully taxed, the same investment decisions result as in the case without taxation. Designating the tax rate as t , the investor benefits from the machine are $(1-t)B$ and the after-tax deductions cost of the machine are $(1-t)(r+d)x$. The machine will be purchased if $(1-t)B$ is greater than $(1-t)(r+d)x$, which will be fulfilled whenever B is greater than $(r+d)x$.

It is therefore possible to design a corporate tax that falls on profits and does not distort capital accumulation. When the corporate tax is designed to be a tax on pure profits, it is not distortionary, and there will be no consequence for either capital formation or the marginal product of labor. Simply put, the same decisions regarding factor use (capital and labor) that maximize profits in the absence of taxation maximize profits in the presence of taxation.

Real-world tax systems deviate from that treatment in at least two directions. First, for some investments, the tax code subsidizes the normal return, and thus fails to fully tax the above-normal return. This would occur, for a debt financed investment, in the case of expensing coupled with interest deductibility. Tax credits for intangible investment or particular investments (e.g., in clean energy or low-income housing) can also generate this result, although there may be positive externalities that justify the tax subsidy in some of these instances.

Second, for equity financed investments that do not benefit from full expensing, the normal return to capital will be taxed, causing distortions in the capital stock and possible adverse effects on labor. The individual layer of taxation is also important to consider, although much capital income is untaxed at the individual level.¹⁴

Evidence of the effect of corporate taxes on economic growth (which may operate through the investment channel) is also mixed, with little consistent evidence in favor of a robust relationship, particularly when accounting for publication selectivity. See Gechert and Heinberger (2022).

¹² For example, if the machine costs \$100 and the interest rate is 10 percent, the cost of capital is \$10 in this period if the machine is debt-financed. If the machine is self-financed or equity-financed, that interest cost also represents the opportunity cost of not using investor funds in some other project (which would have earned the interest rate), with some risk premium attached.

¹³ For example, if the machine depreciates evenly over 20 years, the additional depreciation cost is $1/20$ per year, or 5 percent. Thus, if the machine costs \$100 and the interest rate is 10 percent, the annual cost of owning the machine is \$15, \$5 of which is depreciation cost.

¹⁴ In the United States, only about 30 percent of US equity income is taxed by the US government at the individual level; the remainder is held in non-taxable accounts or by non-taxable entities. This issue is discussed further in Section V.A. Even in the case where the capital income is taxable, the system often allows indefinite deferral, taxing capital gains only upon realization, and allowing capital income to escape taxation entirely at death.

The negative consequences of corporate taxation for capital formation depend on these design features. Under current law in the United States, some normal returns to capital investment are taxed, some are exempt, and some are subsidized.¹⁵ This disparate treatment of capital investment generates distortions in favor of tax-preferred investments.

The tax treatment of capital may also vary over time. In recent years, Congress has often allowed either “bonus” depreciation or expensing. Indeed, since late 2001, some form of bonus depreciation has been in place for every year except 2006 and 2007.¹⁶ However, the generosity of bonus depreciation has varied, and these changes in tax treatment also distort the time path of investment decisions, moving investment into periods that are relatively tax-favored.

Beyond physical capital, it is also useful to consider intangible capital. The normal return on investments in *intangible* capital are not typically taxed through the corporate tax system. Both R&D and labor expenses are deductible, and R&D expenses also receive a tax credit, so are subsidized through the tax system. While many of the varieties of intangible capital discussed in Corrado et al. (2022) are difficult to measure, most are generated by business inputs that are fully deductible as they are incurred.

The empirical evidence indicates that the corporate tax base is mostly comprised above-normal returns to capital. Power and Frerick (2016) demonstrate that the corporate tax base is increasingly a tax base that is comprised of “above-normal” returns to capital, or something more analogous to pure profits. The risk-free part of the corporate tax base is only 25 percent for all C-corps, and 15 percent for multinational companies, over the period 2002-2013, lower than in the decades prior. Given the increasing role of market power since 2013, and changes in tax law that have exempted more of the normal return to capital, the share of the tax base that is excess profits may be even higher now.

Using a somewhat different methodology and more aggregated data, Fox (2020) shows that the current corporate tax falls largely on excess profits, or rents, over a similar period, 1995-2013. Only four percent of the corporate tax base comes from taxing the normal return to capital over this time period under the author’s baseline assumptions (those common in the literature); more conservative assumptions leave about twenty percent of the corporate tax base falling on normal returns.

Beer et al. (2023) focus on a data set of 10,000 large multinational companies, documenting the large and rising importance of excess profits, even when excess profits are defined quite narrowly as those that exceed large returns on capital or costs of goods sold. For example, for those companies with positive profits, using a threshold return of 10 percent of tangible assets, excess profits average 70 percent of total profits. Beer et al. (2023) show that these excess returns are particularly concentrated in the largest companies, and that US headquartered multinational companies earn particularly high excess profits. Hebous, Prihardini, and Vernon (2022) find similar results, using a somewhat different data set.¹⁷

¹⁵ This paper focuses on US tax systems, but tax systems abroad often have similar features.

¹⁶ See <https://crsreports.congress.gov/product/pdf/RL/RL31852>.

¹⁷ See Figure 6. They use data on 40,000 public and private companies from S&P Capital IQ.

These stipulated threshold returns are far higher than what most economists would describe as the “risk-free” return, particularly in the low real interest rate environment that characterized the data in the years of these studies. Presumably the authors set such high thresholds to be compatible with definitions that are used by current or proposed law. For example, the US GILTI minimum tax provision taxes low-taxed foreign income above a ten percent return on tangible assets, and OECD/G20 Pillar 2 proposals include substantial “carve-outs” that do not require minimum taxation for some return on tangible assets and payroll.¹⁸ Of note, Beer et al. (2023) show that excess returns would be an even larger share of total profits at lower thresholds.

C. Is it ok to tax rents? Possible Concerns

There are three remaining theoretical concerns associated with taxing above-normal returns to capital. First, such taxes may discourage useful risk-taking behavior, if some rents are in fact compensation for risk-taking, sometimes referred to as “quasi-rents.” For example, perhaps a given sector taken as a whole has merely average returns, but some firms and/or time periods experience below-average returns, or even losses, whereas other firms and/or time periods experience above-average returns. These apparent excess returns are in fact what is necessary to motivate investment in this sector, since the riskiness of the sector means that the chance of high returns is balanced out by a chance of lower or negative returns.

At first blush such an argument suggests that one might be concerned with taxing the above-normal returns, since it would push average returns below the opportunity cost of capital for the sector as a whole. However, if losses are fully deductible, taxation of profits (and deductibility of losses) effectively makes the government a risk partner in the enterprise, encouraging risk-taking behavior. For example, at a tax rate of 25 percent, the investor gets only 75 percent of the profit, but they also only face only 75 percent of the loss (if losses can eventually be used), dampening the volatility of the extreme outcomes. If the investor instead desired the full profit, and was not content with three quarters of it, in theory they could simply scale up the investment by four-thirds to achieve the same result.¹⁹ This substantially reduces the concerns associated with taxing returns to risk.

Concerns about the negative effects of taxing risk may persist if losses are not fully usable by taxpayers. That may be the case in many instances, although there are some considerations that diminish these concerns. For example, for diversified investors, losses are typically usable over most time horizons, since diversified stock portfolios tend to be profitable across most medium- or long-run periods. Also, limited liability means that business losses in one enterprise need not reduce the profitability of separate enterprises or cut into the personal assets of owners of companies. Finally, mergers and acquisitions provide opportunities for profitable companies to make use of losses in other companies.

Second, there is the possibility that above-normal returns could be shared with workers. That mechanism would operate swiftly, since it does not require changes in the underlying capital

¹⁸ See OECD/G20 Base Erosion and Profit Shifting Project. [Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy](#). October 2021.

¹⁹ In practice, investments may be more lumpy than continuous, which can inhibit scaling up.

stock that drives the marginal product of labor. Still, to the extent that such rents are shared with workers, they appear to be shared primarily with the highest income workers, as shown in Dobridge et al. (2021) and Ohrn (2022), so the consequences for the distribution of corporate tax incidence are minimal, as demonstrated in Gale and Thorpe (2022). Further, the economy-wide evidence does not suggest that such effects are large enough to move the path of wage growth, as discussed in Clausing (2020a).

A third concern is that taxing profits could discourage entrepreneurship. Entrepreneurship is not easily classified as either capital or labor income; it may entail both work effort (the sweat labor of starting up and nurturing a business) as well as elements of deferred consumption that we might associate with savings behavior. Several questions influence the ideal tax treatment of such income. First, are there positive externalities from entrepreneurship that are not captured by the income earner? Second, is such behavior responsive to rates of taxation? Third, with the prior factors in mind, how distortionary is taxing entrepreneurship relative to alternative sources of tax revenue?

New companies may provide gains in innovation that benefit the larger economy as well as gains in competition that help offset the increasing market power discussed in Section II above.²⁰ Such benefits may spillover to actors outside those undertaking investment, so small business creation and expansion could plausibly provide positive externalities that justify lighter tax treatment.

Of course, existing law also favors entrepreneurial activity. In early days of businesses, companies often report losses, and since capital gains are not taxed until realization, companies can grow and be sold, benefiting from preferential capital gains treatment. Indeed, current tax law has features that suggest that legislators presume that there are particularly large benefits from the growth of small businesses. For example, the small business stock exclusion in Section 1202 of the code provides exemption for qualifying small business capital gains income.²¹ Section 179 provides particularly generous tax treatment of small business investments, with full expensing up to certain thresholds.²²

Of course, there are other possible explanations for favorable treatment for small businesses beyond positive externalities from innovation and entrepreneurship. In particular, the small business community may be politically powerful and adept at lobbying for tax breaks, regardless of whether small businesses are particularly new or innovative.

A second question is the tax sensitivity of entrepreneurship. How sensitive are entrepreneurs' business decisions to the tax rate that applies to their above-normal returns? Excess returns are (by definition) returns above what is needed to bring capital to market, but entrepreneurial effort

²⁰ Promising new companies may also end up being acquired by dominant companies in the same sector, reducing the competitive benefits of new companies, but perhaps still allowing the benefits of their innovation.

²¹ Individuals exclude from gross income the greater of \$10 million or 10 times their initial investment in their company.

²² Thresholds have become more generous in recent years; see <https://crsreports.congress.gov/product/pdf/RL/RL31852>. As already discussed, many types of investment (if debt-financed, expensed, favorably depreciated, or qualifying for tax credits) may already be tax free or tax-subsidized. However, Section 179 provides expensing for small business investment on a more consistent basis than general bonus depreciation rules, which provide less than full expensing in many years.

may nonetheless respond to the taxes that apply to excess returns. While this is an empirical question, it is one that is difficult to answer given identification challenges surrounding the mechanism at hand, and the literature has found inconclusive results.²³ Still, it is worth acknowledging that many non-tax policy factors may also be important in fostering entrepreneurship. These factors include well-defined property rights, institutional strength and stability, immigration policy, education policy, research funding, and infrastructure funding.²⁴

Finally, most taxes are distortionary, so any distortions that result from taxing the returns to entrepreneurship might usefully be compared with those resulting from alternative sources of finance, such as labor taxation or consumption taxation. Further, labor, capital, and entrepreneurial income may be difficult to distinguish in practice, generating the possibility of income shifting across tax bases. Many high-income people have substantial discretion in terms of the form in which they earn their income. All else equal, high-income entrepreneurs will seek to earn their income in the most lightly taxed form, regardless of whether the income truly originates from their labor, capital, or some combination thereof. This is a strong argument for treating different forms of income similarly.

D. Taxing Normal Returns to Capital

From both an efficiency and distribution perspective, taxing corporate profits (those above the normal return to capital) is preferable to taxing the normal return to capital. However, that does not necessarily imply that the optimal rate of taxation for the normal return to capital is zero. Taxes must fall on something, and Pigouvian taxes on goods with negative externalities (such as carbon emissions and cigarettes) are unlikely to raise sufficient tax revenue to fund the state. Therefore, taxes on the normal return to capital should be compared to taxes on labor. Both discourage forms of capital formation, since labor taxation discourages human capital investment by lowering the after-tax return to labor effort. Both discourage activity, in the form of investment or labor effort. It is ultimately an empirical judgement as to which tax would be more distortionary, and that judgement would no doubt depend on the details of the tax systems in question, including such matters as rate structure and tax base definition.

In terms of progressivity, taxes on capital income, even the normal return to capital, are likely to be more progressive than taxes on labor income, since some share of the tax will be borne by capital, and capital is far more concentrated at the top of the income distribution than is labor income.²⁵

²³ See, e.g., the survey from Bruce, Gurley-Calvez, and Norwood (2020).

²⁴ As one example, Bell et al. (2019a,b) find that non-tax factors drive innovation and patenting, including investors' socioeconomic status as children, geographic location, and demographic characteristics.

²⁵ For detailed analysis of these distributions, see an overview of Treasury data and modelling here: <https://home.treasury.gov/system/files/131/Distribution-of-Income-by-Source-2022.pdf>

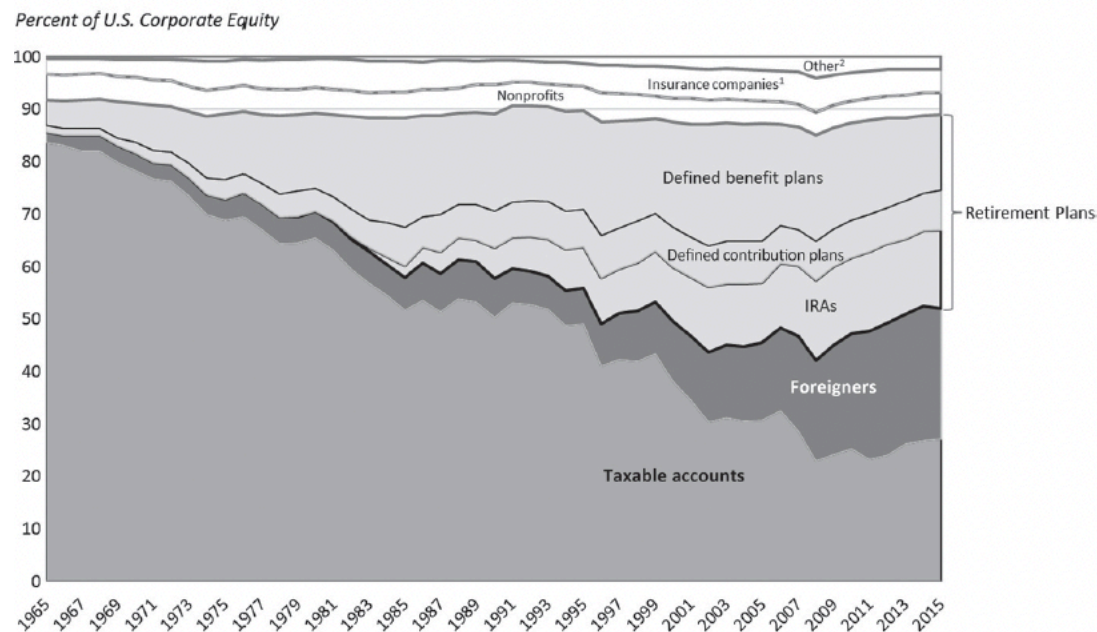
V. Tax Policy Implications

A. The Role of the Corporate Tax

The importance of market power strengthens the argument for taxing capital income at the entity level, rather than the individual level. However, there were already important reasons to favor taxation at the entity level. First, entity level taxation is simply more comprehensive. About 70 percent of all US equity income is completely untaxed by the US government at the individual level, since the income is either held by untaxable individuals (e.g., non-profit endowments), in untaxed accounts (e.g., retirement accounts, pensions, and college savings accounts), or in foreign hands (whose governments may or may not tax that income), as shown in Figure 3. Unless many popular tax preferences are reconsidered, much of the capital income tax base is unreachable if one is limited to the individual layer of taxation.

Further, the entity level of taxation is the only way to reach most foreign investors in US equity markets. These investors also benefit from the features of the American economy that generate US equity income, so the entity layer of tax is one way to assure that foreign investors contribute to financing the relevant government services.²⁶

Figure 3: Ownership of US Corporate Stock, 1965 to 2015, including both direct and indirect holdings



Source: Burman, Clausing, and Austin (2017), Figure 1, using data from Board of Governors of the Federal Reserve System, “Financial Accounts of the United States”; Investment Company Institute (2016), “The U.S. Retirement Market, Fourth Quarter 2015”; Barclay Hedge; Prequin; Tax Policy Center calculations.

²⁶ See Rosenthal and Burke (2020). In theory, cross-border withholding taxes can also reach foreign investors, but these are often lowered or eliminated by treaty.

Second, even for those accounts that are taxable by the US government, the taxpayer has substantial discretion over when, and indeed if, capital taxation occurs. While corporate dividends may trigger immediate taxation, capital gains are only taxed at realization, so taxpayers can defer taxation (allowing funds to grow free of tax) indefinitely. Further, if assets are held until death, they qualify for a “step-up” in basis, so that capital gains escape taxation entirely. Those shares donated to charity will also escape taxation.

Finally, entity level taxation can also serve as an important backstop for the individual income tax, preventing those individuals with discretion from channeling funds into corporations, retaining earnings, and obtaining lower tax rates as a consequence. The more the corporate rate falls below the top individual rate (or pass-through rate), the more the corporate form acts as a tax shelter.²⁷

A counterargument holds that since individual investors are less mobile than corporations, it is more efficient to tax capital at the individual investor level.²⁸ This is an important consideration, but one that presumes that policymakers are powerless to change the elasticity of the corporate tax base, a question addressed in Section B below. While it is certainly daunting to change international tax rules, it may be less daunting than changing the many tax preferences that benefit individual investors.

Beyond these rationale, the presence of significant and rising market power makes the argument for the corporate tax stronger. As Avi-Yonah (2020) has argued, the corporate tax has an important role as a regulatory device. Governments can use the tax system to influence the behavior of corporate actors. For example, investment is spurred through rounds of bonus depreciation, research and development is incentivized through the R&E tax credit, and other activities such as clean energy, low-income housing, and the development of orphan drugs (treating rare diseases) are encouraged through general business credits.

In a similar manner, the more that the corporate tax base overlaps with a tax base that is solely excess profits, the greater the efficiency justification for the corporate tax. Taxing excess profits generates government revenue, allowing society as a whole share in the fruits of the exercise of market power (or the fruits of luck or risk-taking), without deterring investment or economic activity. Indeed, if the corporate tax fell *only* on excess profits, one could justify (on efficiency grounds) much higher tax rates than today’s 21 percent rate, especially if one could address international mobility issues (discussed below), as argued by Furman (2020) and Fox and Liscow (2020).²⁹

²⁷ Using a calculation for corporate investments financed by equity and taxable at the individual level—and under the assumption that non-corporate business (pass-through) income would be taxed at the individual level at top labor income rates—Gravelle and Hungerford (2008) find that a corporate tax rate of 27 percent or lower would provide sheltering opportunities for corporations that distribute less than 73 percent of their earnings.

²⁸ A related question is whether the capital itself moves (which would impose efficiency costs as well as burdens on labor), or whether the tax base (profits) moves far more than the underlying capital investment.

²⁹ To move toward a corporate tax levied solely on excess profits, full expensing could be combined with ending the deductibility of interest for debt-financed investment. While this tax base is popular with many economists, the business community would vociferously oppose the non-deductibility of interest, so moving toward a cash flow tax base may prove difficult in practice. See Furman (2020).

Beyond these arguments, a graduated corporate rate may also be a sensible feature of the tax code. Prior to the 2017 Tax Act, there was a modest graduated rate in the corporate tax rate structure, but most of the corporate tax was paid by corporations that were at the top marginal rate of 35 percent, which applied at the \$10 million income threshold. A slightly lower 34 percent marginal rate applying for income between \$75,000 and \$10 million, and lower marginal rates of 25 and 15 percent applied for income below \$75,000 and \$50,000, respectively.

Since 2018, the corporate tax has been levied as a flat 21 percent rate. There is a good argument for a flat rate of tax. Unlike the individual income tax, a graduated rate in the corporate arena need not improve progressivity. For instance, we do not know that wealthier people are more likely to own shares in the most profitable corporations (as opposed to less profitable ones), relative to those lower in the income distribution.³⁰ Thus, a graduated rate structure is an indirect (and potentially ineffective) way to achieve progressivity goals.

However, the larger the company's taxable income, the more likely that a large share of their corporate tax payments are above-normal returns. Since taxing above-normal returns is particularly likely to burden shareholders, a higher tax rate may be justified. Whereas for less profitable companies, more of the corporate tax burden falls on the normal return to capital and labor.

Beyond these favorable incidence effects, a graduated corporate tax can also discourage size itself, and the accumulation of economic power, which has the negative consequences discussed in Section III. A graduated rate does not distinguish among the causes of size (which could result from economies of scale, luck or first mover advantages, risk-taking, access to some key resource, or other factors), but it does tilt the tax playing field against large-profit companies relative to small-profit companies, improving the competitive environment in a clear and transparent manner. While a somewhat higher tax rate will not prevent companies from becoming large (which may be warranted or even desirable in many instances), it will act as a constant disincentive for mergers, acquisitions, and agglomeration itself.

While European Union antitrust authorities have been active, and American antitrust efforts appear to be on the rise, it is difficult for antitrust law to act swiftly, systematically, and transparently.³¹ Antitrust processes are slow, and they require due deliberation. While company mergers have been blocked on occasion, and there have been instances of fines or regulation, antitrust remedies are generally infrequent. The evidence from Section II shows that market power indicators have steadily increased, despite any such antitrust measures. Shapiro (2019) discusses the implications of rising market power for the future of antitrust policy, and Lamoreaux (2019) considers the historical context of antitrust policy.³²

³⁰ One possible consideration is founder's stock. It remains an empirical question whether the share of founder's stock in the hands of wealthy founders is higher for those companies that are very profitable, but there are certainly prominent billionaires for whom their wealth is largely founders stock.

³¹ For an account of some recent developments in the United States, see Dayen (2022).

³² Shapiro suggests a number of reforms to reinvigorate U.S. antitrust enforcement. He documents a need for stronger merger enforcement (with greater skepticism for horizontal mergers between successful firms), greater efforts to promote competition in the digital sector (including a more careful application of antitrust principles to large technology firms), and greater attention to the role of antitrust in labor markets (focusing on both mergers and anticompetitive agreements).

In contrast, a higher tax on more profitable companies would provide a direct and transparent tax preference for companies operating in a relatively competitive environment compared to those that are more insulated from competition. And given the distribution of corporate profits and tax payments in the United States, even a small hike in the rate at the top could have large revenue consequences.

For example, consider the following possible tax schedule.

Table 1: Example of Graduated Corporate Tax Rate Schedule

Corporate Profit Brackets	Marginal Tax Rate
Less than \$100 million	21%
\$100m to \$1b	25%
\$1b to \$10b	30%
Over \$10b	35%

This schedule would keep the rate at its present level (of 21 percent) for smaller profit companies, while raising the corporate tax rate for those companies with higher profits. Marginal rates would be calculated as they are presently under the individual income tax system, so that the increased rate would only apply to income above the thresholds in question. For example, a corporate taxpayer with \$2 billion in income would pay 21 percent on their first \$100m in income, 25 percent on \$900 million of their income, and 30 percent on \$1b of their income, for a total tax bill of \$546 million and an average tax rate of 27.3 percent.³³

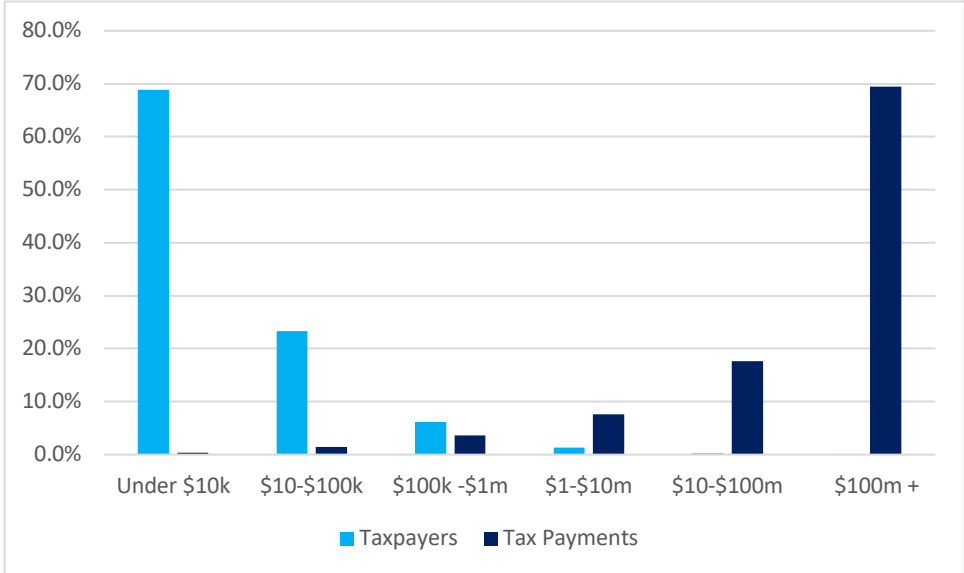
As noted above, a graduated rate of corporate taxation was, until recently, a feature of the corporate tax, so this sort of rate structure is not unprecedented, although prior rates were nearly flat for those companies with more than \$75,000 in profits.

Under current law, there are also many provisions that are more favorable for small companies, as well as some base protection measures that only affect large companies. Examples of the former include special expensing rules; for instance, approximately \$1 million of investment can be deducted, and the favorable treatment is phased out at higher investment levels (above about \$2.7 million). Examples of the latter include 163(j) interest limits, which affect only those taxpayers above \$27 million in receipts in 2022, and the base-erosion anti-abuse tax BEAT, which affects those with average annual gross receipts of \$500 million or more. Indeed, the BEAT exists to counter avoidance opportunities that are far more likely to occur among large companies.

³³ This rate schedule is just for illustrative purposes, and it could be modified in any number of ways. For example, there could just be two brackets, one below \$1b in taxable income, and one above that threshold. Or, one could increase the marginal brackets very gradually as incomes increased above \$100 million. Either alternative could be designed to raise a similar amount of revenue as the schedule in the text. In the present illustrative bracket schedule, bunching of reported profits near thresholds might be observed, although these brackets indicate tax rates for marginal dollars of income above each threshold, such that average tax rates are lower than marginal tax rates.

While the publicly available IRS data do not allow these exact breakdowns, one can examine proximate statistics for 2019, the most recent year available. Figure 4 and Table 2 show data from the IRS SOI Publication 16, the “Corporation Income Tax Returns Complete Report.”

Figure 4: Distribution of Corporate Taxpayers and Corporate Tax Payments, 2019



Source: IRS Statistics on Income data for 2019 on C corporations; see Table 4.

Table 2: Corporate Taxpayers and Corporate Tax Payments, 2019

Tax Payment Tiers in 2019	Number of Companies	Total Tax Payments (in millions)
Under \$10k	345,076	856
\$10 to \$100k	117,019	3,703
\$100k to \$1m	30,847	9,195
\$1m to \$10m	6,798	19,515
\$10m to \$100m	1,422	45,264
\$100m and up	353	178,266
Total:	501,515	256,797

Source: IRS Statistics on Income data for 2019, Table 4.

It is readily apparent that most corporations would be untouched by such a reform. Of the approximately 500,000 corporate tax returns filed in 2019, fewer than 2,000 of them had tax payments over \$10 million (and thus taxable income nearing \$50 million). Indeed, about 99.7 percent of corporate taxpayers fall below those thresholds, and thus even more would be excluded from the reform suggested above. However, most of the tax *base* would be affected by this reform, since 87 percent of the tax payments are made by corporations above the \$10 million tax payment threshold, and 69 percent of all corporate tax was paid by companies with tax payments that were over \$100 million (and thus with taxable income nearing \$500 million). The

average company with more than \$100 million in tax payments has \$2.4 billion in taxable income (after tax credits).

Consider the revenue effects of this reform in 2019 under two (restrictive) assumptions: there is no behavioral response, and each corporation has a situation that is the average of those in their IRS segment. In that event, tax burdens would only increase for fewer than 2 out of 1,000 corporations. For those with tax payments between \$10 and \$50 million, very little of the average company's taxable income after credits (which averages \$106 million) would be subject to an additional four percent tax. There are 272 taxpayers with tax payments between \$50 and \$100 million who have an average taxable income of \$341 million, so about 71 percent of their income would have an additional 4 percent tax rate applied to them, generating about \$3 billion in tax revenue.

For the 353 companies with tax payments above \$100 million at present, who have an average taxable income of \$2.4 billion (after credits), about 58 percent of their income would be taxed at 30 percent, and another 37 percent of their income would be taxed at 25 percent; this group would generate about \$57 billion in additional tax revenue.

Across these two groups, tax revenues would increase by about \$60 billion in 2019, an increase of 30 percent relative to the baseline. This revenue increase is an underestimate in one respect, since assuming everyone in the top bracket is an "average" company removes any additional revenue associated with the 35 percent bracket for those companies with more than \$10 billion in profits.

Data from the Fortune 500 list covering the year 2019 suggest that there are about 13 US companies with more than \$15 billion in worldwide profits, suggesting they might be over the \$10b threshold in U.S. profits. Together, these companies generate about \$273b in profit above the \$10b threshold.³⁴ An additional 5 percent tax on that base would generate \$14 billion in additional revenue. Garcia-Bernardo, Janksy, and Zucman (2022) suggest that between about one-third and about one-half of U.S. corporate profits are foreign profits, so this suggests perhaps about \$7-9 billion in additional US tax, bringing the total to about \$68 billion.³⁵

However, none of these estimates account for behavioral response, and we would expect behavioral response along at least three margins. First, if companies face higher tax burdens, they may do less real activity. Given the target population of companies, this concern is not large, since these companies have large excess profits, and the additional tax would not fall on the normal return to capital, so it would be relatively non-distortionary.

Second, and more significant, large companies have other ways to respond to higher tax burdens. For instance, they may seek to shift profits toward lower-tax destinations; that problem is

³⁴ Although IRS data are yet released for years after 2019, updating the Fortune data to the most recent year available (2021 data) would roughly double the profits earned over this threshold, from \$273 billion to \$542 billion.

³⁵ An additional approach would just apply the tax rate schedule in Table 1 to the Fortune data directly, but then one should account for both the foreign share of worldwide profits (between one-third and one-half) and any book-tax income differences. In recent years, the Congressional Research Service (CRS) estimates that book income has been significantly higher than tax income for large corporations. See the analysis within Sherlock and Gravelle (2021).

addressed in Section B below. This would be true even if size thresholds were set based on global income, if the tax base were determined by US reported income.

Third, larger companies may split into smaller companies (or do fewer mergers and acquisitions) in order to avoid the higher rates of tax felt by larger companies. If a split were a mere formality, such that ownership and control of the company remained as before, that would circumvent the higher tax burdens for large companies. However, the law should ensure that companies would be consolidated for tax purposes if they were not truly separate.³⁶

With a tight definition of commonality, companies would only be able to separate if they were truly willing to give up the benefits of internalization that result from their combination. Such internalization benefits can be significant. For instance, internalization resolves principal-agent problems, helping to align the profit-maximizing incentives within the group. Internalization allows economies of scale (cost reductions due to greater production scale), economies of scope (cost reductions due to producing a larger number of complementary goods), and synergies associated with cooperative product or service development. When companies break up, they lose many of these advantages.

The hypothetical tax schedule in Table 1 above attempts to balance two considerations. First, scale economies may be beneficial, generating cost savings that benefit consumers, resources that fund innovation, and the capacity to absorb risk. One wouldn't want to eliminate the possibility of large companies and the attendant advantages of scale.

However, there are also disadvantages associated with market domination. Concentration of economic power may generate serious negative consequences: depressing wages or employment, systematically lowering the labor share of income, impeding healthy market competition, harming consumer welfare, and corrupting public policy processes. Given the evidence of Sections II and III, it would be useful to have public policy tool that counters excessive agglomeration of economic power.

While antitrust law is one possibility, it is slow and cumbersome. The tax code, however, can act as an ever-present nudge in this area, as in so many others. Indeed, the tax code is a statement of values; we encourage things like clean energy and research by offering them low tax burdens. In this case, market power can be discouraged by levying a somewhat higher tax on those firms most likely to exercise it. This has the salutary effect of allowing society to benefit from those activities that generate above-normal profits, providing an efficient source of finance for fiscal priorities.

At present, the tax code often tilts the playing field in the other direction. Large, profitable multinational companies pay lower rates than smaller domestic companies, often by a substantial margin.³⁷ In part, this is because multinational companies can avail themselves of opportunities to shift profit offshore, toward jurisdictions with rock-bottom tax rates. These low tax rates advantage large multinational companies relative to their smaller, less profitable peers,

³⁶ Similar provisions existed in prior years, when the U.S. corporate tax system featured graduated rates.

³⁷ For one study that shows the low effective tax rates of multinational companies, see Joint Committee on Taxation (2021). See also United States Government Accountability Office (2022).

turbocharging market concentration. Indeed, Martin et al. (2022) provide some evidence for this mechanism.

Further, the causality can go the other way too, as market power fuels tax avoidance. Sophisticated multinational tax avoidance techniques often entail sizable fixed costs, as discussed in Bilicka (2019), and large profits provide the resources to invest in this expertise. Large companies also invest more in political activity, which can bear large fruits in terms of more favorable tax or regulatory environments, as discussed in Philippon (2019). In turn, successful political activity provides policy advantages that fuel concentration.

B. Implications for International Tax Reform

The most important objection to taxing large, profitable companies at higher rates is that such companies are particularly adept at shifting income offshore. Therefore, any higher tax rates for the most profitable companies should be accompanied by associated measures that combat international profit shifting.

There are different approaches to tackling profit shifting, but a central aim is to reduce the elasticity of the corporate tax base. Some, such as Kleinbard (2012), Avi-Yonah (2013), and Fleming, Peroni, and Shay (2014), have suggested full worldwide consolidation, which would require resident firms to pay tax on their global income alongside their domestic income; foreign tax credits would prevent double taxation. This would end the incentive to shift income offshore, although it would put pressure on the definition of residence, so accompanying reforms would need to reduce the elective nature of tax residence by using a management and control criterion and by employing measures to counter corporate inversions.³⁸

A more daunting concern with such reforms is that they would hamper the international competitiveness of US-headquartered multinational companies in global markets, if their foreign income were taxed more heavily than that of their competitors. While this form of competitiveness is a concern, it is less of a concern for those companies that wield substantial market power. Further, it is also useful to note that the competitiveness of the US *location* as a place for US multinational companies to operate would be improved. Unlike current law, there would be no tax advantage associated with operating in lower tax countries, so US-based companies would face no tax distortions in their location decisions regarding where to deploy investments or hire workers.

A more modest reform would simply narrow the existing tax preference favoring foreign over domestic income. Under current law, the GILTI provision (for global intangible low tax income) exempts the first 10 percent return on foreign tangible assets from US tax, and income above that threshold is taxed with a 50 percent deduction relative to domestic income. This provides a large incentive to earn income offshore.³⁹

³⁸ One legislative approach that is similar is a bill introduced by Senator Sheldon Whitehouse in the current Congress; see <https://www.congress.gov/bill/118th-congress/senate-bill/357?s=1&r=52>.

³⁹ Arguably, prior law provided an even larger incentive to earn income offshore, as discussed in Clausing (2020b). While income was taxed at the full US rate upon repatriation, it could grow free of US tax prior to that point. Further, companies could create the equivalent of a tax-free repatriation by borrowing against their offshore profits,

In President Biden’s Fiscal Year 2022 budget, the Administration proposed eliminating the tax-free return on foreign tangible assets, reducing the deduction for foreign income to 25 percent, and calculating the tax burden on foreign income on a country-by-country basis.⁴⁰ Together, these changes would have substantially reduced the incentive to shift profit offshore, lowering the elasticity of the tax base.⁴¹ The country-by-country feature of this reform is important; it further reduces the incentive to earn income in low-tax jurisdictions offshore, since the resulting US tax cannot be offset with tax credits from higher tax locations.

The GILTI provision operates as a deduction from the normal corporate rate; thus, whatever GILTI design is adopted, it can accommodate higher corporate tax rates (such as those envisioned in the prior section) with proportionate changes in the tax rate that would apply to low-taxed income abroad. However, the higher the US rate on foreign income relative to the lightest possible treatment of foreign competitors, the more corporations will fear negative competitiveness impacts. Still, it is important to bear in mind that the higher corporate tax rates envisioned in the prior section are triggered by the exceptionally high corporate profits earned by dominant corporations; this should alleviate competitiveness concerns.

Since competitiveness concerns also hold in many countries abroad, this provides a strong argument for international tax cooperation. Left to their own devices, governments often behave as if players in a non-cooperative game, lowering their tax rate to attract tax base and activity from other countries. Since all countries face similar incentives, tax rates are too low relative to what would be chosen if countries could coordinate.

Luckily, countries *can* coordinate, although such coordination is never easy. Still, in 2021, more than 135 jurisdictions accounting for about 95 percent of the world economy agreed to transformative reforms in international tax rules, including a global country-by-country minimum tax of 15 percent. This OECD/G20/Inclusive Framework agreement responds to the “race to the bottom” dynamic in international taxation by raising the bottom, from zero (the approximate tax rate levied by some important low-tax jurisdictions currently) to 15 percent. Further, the agreement would be enforced by an under taxed profits rule (UTPR) that would allow adopting countries to top-up tax burdens for companies operating in their markets that were headquartered in non-adopting countries. Such an enforcement mechanism should encourage widespread adoption once a few major economies adopt, since otherwise companies based in non-adopting countries will still face top-up taxes when they operate in adopting countries; the resulting revenue will just accrue to adopting country governments instead of their home governments. In December 2022, the European Union unanimously moved forward to implement this country-by-

while hoping for lighter tax treatment down the road. This lighter tax treatment did eventually arrive, in the form of a tax holiday in the 2004 American Jobs Creation Act, and in the form of a highly favorable deemed repatriation tax rates of the 2017 tax legislation. The prior system did provide some restraint against profit shifting, however, since shareholders could not access the funds until they were repatriated.

⁴⁰ This proposal was also listed in the Fiscal Year 2024 budget.

⁴¹ In November 2021, the House of Representatives passed a reform that would move in this direction, applying tax on foreign income on a country-by-country basis, lowering the deduction for low-taxed foreign income, and reducing the tax-free return on foreign tangible assets to 5 percent. The US Senate did not pass a similar reform, but instead legislated a corporate alternative minimum tax; this reform will slightly raise the tax burden on foreign income for some multinational companies.

country minimum tax by issuing a Council Directive. In addition, other countries, including South Korea, Japan, Australia, Canada, and the United Kingdom, are also taking steps toward implementation of this minimum tax.⁴²

These initial implementation steps are promising, and hopefully other countries throughout the world, including the United States, will swiftly follow suit. Of course, this agreement is not perfect. Some forms of tax competition would persist, as countries could offer subsidies or refundable tax credits in place of low tax rates. That said, such measures are more difficult for countries to adopt, as they entail direct budgetary costs, not just foregone revenue. Thus, the constraint on tax competition provided by this agreement is a real one, and it is an important step forward.

While progress on international tax cooperation is hopeful, even in its absence, the United States retains substantial ability to make improvements unilaterally, using mechanisms like the UTPR to encourage foreign adoption and protect the US tax base. For example, the Administration's Fiscal Year 2022 budget proposed a "SHIELD" that would act to counter negative competitiveness effects of the stronger proposed GILTI by reducing the ability of foreign companies to strip income out of the US tax base; the proposal also aimed to encourage foreign action on minimum taxation.⁴³

Finally, over a longer time horizon, the United States government could also consider other reforms to lower the elasticity of the corporate tax base, including reforms that tie the tax base to the location of the companies' customers; since customers are relatively immobile, that reduces tax base elasticity accordingly.⁴⁴ In Clausing (2020c), I describe how a sales-based formulary apportionment tax system would work.⁴⁵ Auerbach (2017) describes destination-based cash flow taxation; transition issues that are raised by the tax are discussed in Avi-Yonah and Clausing (2017).⁴⁶ Similar to these reforms, Avi-Yonah, Clausing, and Durst (2009) have suggested a

⁴² See Goulder (2023) and Hannon (2023).

⁴³ The acronym SHIELD stood for "stopping harmful inversions and ending low tax developments".

⁴⁴ In the interim, the "Pillar One" proposal of the OECD/G20/Inclusive Framework envisions adopting a formulary approach to reallocate a share of the excess profits of the largest companies toward market jurisdictions.

⁴⁵ Companies would be taxed on their global income, and the fraction of the global income that is taxable in the United States would be mechanically based on a formula that reflected real economic activities in the United States. A sales-based formula is attractive, but a formula that also depended on employment or payroll would be possible as well, as such factors are also far less tax elastic than reported profits under the present system, and such a formula would satisfy those that hold that the tax base should be (at least in part) based on supply factors.

There is precedent for successful implementation of this approach. US states and other subnational jurisdictions abroad (including in Canada and Germany) use formulary methods to allocate national income, since otherwise state tax bases would be eroded by profit shifting across jurisdictions. In general, this system has worked well. However, since US states are free to develop their own formulas, a lack of uniformity implies some degree of double-taxation and double non-taxation.

Many US states initially adopted a three-factor formula (based on assets, payroll, and sales), but there has also been a clear trend of states increasing the formula weights on the sales factor and even adopting sales-only formulas. This trend has resulted from perceptions that companies would respond to positive weights on payroll or asset formula factors by moving jobs or investments. While Clausing (2016) finds little evidence for such mobility, it was nonetheless an important concern for state governments.

⁴⁶ A destination-based cash flow tax (DBCFT) also ties the tax base on the location of consumers. However, the mechanism is a bit different. The DBCFT would be levied based on company cash flow, with no deductions for interest or imported inputs, but with deductions for labor costs and immediate expensing of investments. This

residual profit split reform for corporate taxation, where residual profits (those beyond a fixed return on expenses) would be allocated based on the location of sales. More recently, Hebous, Prihardini, and Vernon (2022) discuss an excess profits tax that focuses on rents above a normal return and that is implemented with a destination-basis formulary approach. In all cases, such reforms would ideally be internationally coordinated.

In the end, the elasticity of the corporate tax base is a choice. And there are multiple options for reducing the elasticity of the corporate tax base. In the near term, the most practical way forward is to build on the momentum created by the international agreement. International adoption of the OECD/G20/Inclusive Framework international tax agreement, as is underway in several countries, will help limit tax competition pressures and reduce profit shifting incentives.

Foreign adoption of these reforms also supports US international tax reforms that strengthen GILTI, reducing the current tax preference that favors foreign income relative to US income.⁴⁷ First, foreign adoption of minimum taxes reduces any competitiveness concerns associated with a stronger GILTI, which could otherwise create sizable gaps between US treatment of foreign income and rules abroad.⁴⁸ Second, foreign adoption of the undertaxed profits rule (UTPR) causes US multinational companies to face top-up taxes abroad in adopting countries. Thus, these companies would still face 15 percent tax burdens on their foreign income, but the revenue would go to foreign governments instead of the US government, giving the US government a strong incentive to adopt conforming GILTI reforms.

Further, without adoption of aligned reforms, US multinationals would risk facing three types of minimum taxes: current law GILTI, the UTPR taxes levied by foreign adopting governments, and the new corporate alternate minimum tax (CAMT). With adoption, these three taxes could conceivably be condensed into one, as US companies would no longer pay UTPR taxes and there would be less need for the CAMT.⁴⁹

converts the corporate income tax into a true tax on rents since the normal return to capital is neither subsidized nor taxed due to the removal of interest deductions and the presence of full expensing. The DBCFT also addresses tax base elasticity, since the cash flow tax base is located wherever revenues are generated from consumers. However, the regime's treatment of imports requires a border adjustment tax, and this creates thorny transition issues as well as the possibility of terms of trade shocks, if the reform is not adopted in concert with other major trading partners. While it is hoped that exchange rate changes would offset the negative shocks from the border tax adjustment, evidence from countries that have adopted VATs under flexible exchange rates is not encouraging. Thus, phasing in the tax slowly or coordinating with other countries would be desirable.

⁴⁷ Hebous and Keen (2022) show that the international tax agreement can lead to Pareto-improving changes in tax policy, increasing both tax rates and welfare in previously low-tax countries as well as previously high-tax countries.

⁴⁸ These competitiveness concerns originate from businesses that worry that their tax treatment may be less favorable than that of their competitors abroad; however, the market power and large size of these companies somewhat reduces the policy relevance of such concerns. In addition, as noted above, this type of competitiveness is separate from concerns about the competitiveness of the US *location* as a place to do business; this "location" competitiveness may be more directly related to the national interest.

⁴⁹ The new corporate alternative minimum tax (CAMT) was legislated as part of the Inflation Reduction Act of 2022. It taxes companies with more than \$1 billion in book income at a rate of 15 percent, but it contains special features to avoid clawing back existing investment incentives, R&D incentives, or general business credits. It does not include a country-by-country minimum tax on foreign income. With a reformed GILTI, there would be less reason to retain this tax provision, unless its scope were limited to domestic companies without multinational operations.

There are additional ways to improve existing US tax laws to better address the market power concerns described in this paper. For instance, the design of the foreign-derived intangible income (FDII) deduction is particularly perverse, since it provides a tax-break for above-normal returns to some income, relative to normal returns. Under the FDII, companies receive a deduction of 37.5 percent (scheduled to fall to 21.9 percent in 2026) on their income above a ten-percent return on qualified business asset investment, if that income is derived from exports.⁵⁰ This provision should be repealed, as suggested in the Administration’s Fiscal Year 2022 and Fiscal Year 2024 budgets.⁵¹ It serves no economic purpose to favor excess profits, and it is an indirect (at best) way to incentivize the development of intangible property in the United States, which would be better targeted by measures that focus more narrowly on research and development.⁵²

Another area where tax policy might be reconsidered in light of growing market power is that of tax-free reorganizations. Global mergers have surged in recent years, reaching \$5 trillion in value in 2021.⁵³ Mergers can spur market concentration, and while they may generate efficiencies, many mergers fail to do so.⁵⁴ Under U.S. tax law, some mergers can be structured to be tax free, when the acquiring firm exchanges some of its stock for target firm stock; tax is then deferred until the underlying asset is later sold. While there are justifications for such favorable tax treatment, there are also counterarguments, and rising market power provides a strong rationale for reconsidering this tax preference.⁵⁵

Ideally, tax provisions would instead provide *less* favorable treatment to very high profit large companies. Under the proposed international reforms and the new CAMT, minimum tax regimes only apply to large companies, although the thresholds vary. As this paper argues, that focus on large companies makes good economic sense, as the corporate tax is more likely to serve both efficiency and fairness goals when levied on above normal returns to capital, and above normal returns are more likely for companies with high profits.

Administrative complexity provides another reason to focus such provisions on large companies. Large companies have more tax avoidance opportunities, both due to their international reach (which allows them to exploit variations in tax treatment across jurisdictions) and due to their scale, which helps them afford the fixed costs associated with setting up tax avoidance structures.

⁵⁰ Tying a tax-break to exports raises a real danger of trade disputes, since it is not consistent with WTO obligations that prohibit tax preferences for exports.

⁵¹ This proposal was also listed in the Fiscal Year 2024 budget.

⁵² The logic behind the FDII provision was to try to match the tax rate for GILTI income, such that US multinational companies might be incentivized to move such mobile income to the US tax base. It appears that a few prominent companies have responded to this incentive. However, as Sanchirico (2018) notes, GILTI tax treatment still dominates FDII tax treatment, since the FDII deduction is only available for export income.

⁵³ See Reuters (2021).

⁵⁴ See Christensen et al. (2011), which notes an M&A failure rate of between 70 and 90 percent.

⁵⁵ See Brauner (2004) for more on the argument for reconsidering tax-free reorganizations. Arguments in favor of tax-free treatment for these types of mergers are based on the idea that the economic substance of the business hasn’t really changed (since it is owned by the same shareholders and has the same underlying value), that firms may lack liquidity to pay tax due from the stock sale (since no cash was received), and that the underlying activities generate efficiencies. However, mergers themselves create value, undermining the notion that the business hasn’t changed, and firms can easily raise liquidity through debt or equity. Further, this tax preference favors some forms of mergers over others and furthers market concentration, both of which can lead to inefficiencies.

The large scale of these companies also helps them comply with complicated new tax provisions, including the minimum taxes described here. While such provisions can be dauntingly complex, the largest companies have the resources required to handle complexity.

C. Implications for Pass-Through Taxation

The tax system may generate distortions in organizational form, as businesses have incentives to adopt the form that is more desirable for tax purposes.⁵⁶ The President’s Advisory Panel on Tax Reform (2005) and Furman (2020) have argued that all large businesses should be taxed at the business entity level. The Panel suggested defining large businesses as those with gross receipts exceeding \$10 million, and Furman (2020) suggests a higher threshold (even after accounting for inflation) of \$25 million in gross receipts.

Many tax law provisions are based on company size thresholds, including the BEAT, interest limitations, and the proposed reforms of the international agreement. Considerations of market power strengthen the already strong case for such thresholds. But once the tax code makes distinctions based on size, it is important to apply such regimes to all businesses.

This strengthens the argument for treating all large businesses similarly for tax purposes. For example, imagine implementing the graduated rates suggested in Table 1 above. While most of the companies with profits high enough to qualify for the graduated rates are publicly traded, and thus required to file as C corporations, not all large businesses are C corporations.

If graduated rates are adopted for the corporate tax, that would give the largest businesses an incentive to organize as pass-throughs, especially in the case of private companies. This strengthens the case for taxing all large businesses at the entity level. The alternative of applying higher marginal rates to the pass-through income of very large pass-through businesses would be difficult, since the very premise of pass-through taxation is that the marginal tax rate is determined at the individual taxpayer level, not at the business entity level.

D. Other Tax Policy Implications

Recent individual income tax proposals have also sought to strengthen the taxation of capital income. For instance, the Biden Administration’s Fiscal Year 2023 budget included a move toward mark-to-market taxation for those taxpayers with more than \$100 million in wealth. For these taxpayers, they would effectively enter a “pre-payment” regime on their unrealized capital gains, where they would pay, over a period of years, income tax on their unrealized gains sufficient to raise their tax burden to an effective tax rate of 20 percent (on all sources of income).

While this is a somewhat complex proposal, it is aimed squarely at individuals with large amounts of wealth, affecting about 20,000 taxpayers, with over half of the revenue raised from

⁵⁶ See Goolsbee (1998), Mackie-Mason and Gordon (1997), and Prisinzano and Pearce (2018).

billionaires.⁵⁷ Since taxpayers are less mobile than corporate profits, there would be fewer concern about profit shifting.

While such an approach directly targets the most well-off taxpayers, it is not a direct response to market power concerns, as the targeted wealth could have originated from any number of sources. It also does not address the large share of US equity income that is not taxable at the individual level by the US government, since it is held by foreigners, untaxable entities (like non-profit endowments), or in untaxable accounts (like retirement accounts).⁵⁸ Still, this proposal would help address the undertaxation of capital income, much of which reflects above-normal returns to capital.⁵⁹

VI. Conclusion

Market power is an important force in both the U.S. economy and the world, and a wealth of evidence indicates that market power has become increasingly important in the past few decades. While the scale economies and network effects that are associated with market power generate efficiencies, they also generate policy concern, through possible detrimental effects on income inequality, labor bargaining power, consumer welfare, and market dynamism.

The importance of market power suggests rethinking common tax policy design concepts. Most important, tax policy should distinguish the normal return to capital from the above-normal return to capital. This distinction has important consequences for the efficiency and equity of capital taxation.

Market power, alongside long understood tax administration criteria, strengthens an already strong case for entity level taxation. The corporate tax has the potential to distinguish companies based on the magnitude of their reported profits; the larger the company's taxable income, the more likely that a large share of their corporate tax payments are above-normal returns. A graduated corporate tax rate system has the potential to act as a constant nudge, tilting the playing field in favor of more competitive markets.

Data indicate that the U.S. corporate tax base is very concentrated. In 2019, about 350 companies (of about 500,000 filers) account for nearly 70 percent of the corporate tax base. Even among these top companies, total profits are skewed toward the largest companies. Analysis within this paper suggests that the revenue gains from a graduated rate structure could be substantial, while affecting less than 2 in 1,000 corporations.

⁵⁷ See <https://www.wsj.com/articles/biden-to-propose-new-minimum-tax-on-wealthiest-americans-11648335232>; <https://www.washingtonpost.com/us-policy/2022/03/26/billionaire-tax-budget-biden/>; <https://www.whitehouse.gov/omb/briefing-room/2022/03/28/presidents-budget-rewards-work-not-wealth-with-new-billionaire-minimum-income-tax/>

⁵⁸ One could imagine reforms that would reduce the tax preference for retirement savings in useful ways, like capping accumulations in retirement accounts. However, such reforms would face a very steep uphill battle politically; of late, Congress has instead moved in the other direction. (See, for example, the Omnibus budget legislation of December 2022.)

⁵⁹ Other proposals might also indirectly address similar concerns. For example, property taxes tax rents that result from scarce land resources, and they are a progressive and efficient way to increase government revenues. While this tax base is not directly related to market power, it is related to rents, which have a similar conceptual basis.

International tax reform has an important role to play in enabling consideration of such reforms. The largest multinational companies are those that often pay particularly low effective tax rates, due to features of U.S. international tax law that facilitate and incentivize their ability to shift taxable income toward low tax jurisdictions. To tax these large companies, international tax reforms seek to make the corporate tax base less tax elastic.

In this regard, recent advances in international tax cooperation are an encouraging development. In 2021, more than 135 countries representing about 95 percent of the world economy reached a political agreement to levy minimum taxes on multinational companies, and recently, major countries have moved toward implementation of that agreement. The agreement also includes a feature, the undertaxed payments rule, that will encourage adoption by other jurisdictions in the years ahead.

This type of international tax cooperation is crucial for resolving longstanding global collective action problems that have often resulted in a shift of the tax burden away from capital and toward labor or consumption. In the years ahead, this agreement can be further refined and strengthened to allow jurisdictions more tax policy autonomy in addressing both market power and fiscal needs.

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