

Competitive Surplus: Distributive Potential?

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Introduction

This paper begins by showing that firms without market power, that is that are price takers, can have long run competitive profits, meaning profits above “break even” profits. We argue that it is theoretically possible and practically overwhelmingly likely that such profits are common and substantial. And we argue that they are a potentially significant resource for redistributive projects,¹ for example through taxation, regulation and stake-holder mandates. In other words, we argue against the conventional neoclassical wisdom that dominates policy areas like antitrust holding that, in the long run, in an industry that is competitive, in the sense that all firms are price takers, firms can earn more than breakeven profits only in highly exceptional circumstances.

As we will show in detail, the neoclassical model of perfect competition makes it axiomatic that, under the assumptions of the model, no more than breakeven profits can occur. But in that model, all firms have identical U-shaped cost-curves. We will argue that relaxing that assumption so as to recognize the possibility of cost-curve variability leads to the possibility that competitive low-cost price-taking firms will have long run profits. The second, less commonly theorized situation in which price taking firms without market power will earn more than breakeven profits we will call the “captive market” case. If rising cost curves prevent any firm from taking over the market, a multitude of small firms can share the surplus created by excess demand in a situation of fixed or severely inelastic supply.

In the economist's model of perfect competition, cost-curve derived profits can occur but will disappear as firm advantages, whether in production or marketing, are imitated by competitors until all firms have adopted least-cost efficient practices. This assumes long-run mobility of factors of production, the absence of barriers to entry and perfect information (no trade secrets). In other words, short run profits are possible, but long run profits are not.

However, there is no reason to presume that in the real world where these assumptions are not met competitive profits appearing in a particular market will disappear either in the short-run or in the long-run. Their fate depends on the whole complex of legal, economic and material conditions of the particular market.² The restrictions of supply that make it possible for firms without market power to nonetheless reap more than break-even profits may be temporary, in which case the profits will obviously disappear. But the restrictions may be the result of legal, economic or material conditions that have no tendency to disappear over time.

We will discuss numerous examples of cost curve variability including transportation costs and locational advantages of various kinds. For captive markets we include racially segregated poor neighborhoods, exclusionary zoning, and occupational licensing.

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¹ Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 STANFORD LAW REVIEW 387, 444 (1981); Duncan Kennedy, *Law Distributes I: Ricardo, Marx, CLS* in Karen Engle & Neville Hoed eds., *Hierarchies at Work: Race, World-Systems, and Legal Distribution*, (Columbia Univ. Press 2025); Dina Waked, *Competition Law and Policy in the Global South: Power, Coercion and Distribution*, CURRENT LEGAL PROBLEMS, Vol. 76, Issue 1, (2023).

² To reiterate, we mean profits that are more than the profit necessary to compensate the firm for both real and the opportunity cost incurred by remaining in the market rather than choosing another way to deploy its capital.

This article has three distinct goals: First, it aims to show the marginalization in mainstream discourse of the set of circumstances that create above break-even profits in markets where all firms are price takers. Although pure economic theory acknowledges this possibility, the literature persistently - and we will argue arbitrarily - treats above break-even profits in this situation as temporary, marginal or exceptional. When these profits are found to be long-term, the economists refer to this as a situation of market failure. The literature in industrial organization (IO) and antitrust (AT) fails to acknowledge the possibility of persistent and long-term above break-even profits even in exceptional circumstances. These two fields, IO and AT, mistakenly interpret these profits as signs of market power.

Second, we show that the economists' persistent tendency to downplay above break-even profits in competitive markets leads to explicit or implicit assumptions about the plausibility of redistributive strategies. For example, Mark Roe in a valuable discussion suggests that firms in competitive markets will not voluntarily adopt Economic, Social and Governance (ESG) mandates because they would have to be financed from break-even profits. They would therefore threaten to put the firm out of business. It would seem to follow, though he does not discuss the point, that taxation or state-imposed exaction of profits in competitive industries would have the same effect, or at least impose serious efficiency costs as firms are forced into some combination of price increases and output reductions. We will show to the contrary that legally imposed mandates can appropriate competitive profits without increasing costs to consumers or putting the firms out of business.

Third, recognizing that above break-even profits can be common in markets where all firms are price takers leads us to these conclusions: First, it allows us to develop the possibility of redirecting the surplus into redistributive projects like ESG mandates and new construction zoning exactions, as well as redistributing it through buyer-seller relationships, for example, by rent control. These strategies were thus far – at least in orthodox accounts - workable only with respect to firms with market power or even monopoly power. Expanding these conclusions to price taking firms significantly expands the available redistributive repertoire.

Because the language in which these issues are discussed is often ambiguous and confusing we begin with an attempt to clarify our terms in a rigorous way. We use the term “break-even profits” synonymously with *accounting profits* which are the profits necessary to access the capital necessary for the operations of the firm at any given output level.

“Above-break-even profits” we use synonymously with the terms “competitive profits” and “competitive surplus” to refer to *economic profits* that derive from a firm's cost-curve or captive market advantages, allowing it to produce at a cost less than the market price. This is a form of “producer surplus”.

Competitive profits or producer surplus are also referred to in technical language as economic rents, but we will use the term “rent” narrowly only to describe the payment by firms to landlords in a lease contract.

Our approach in this paper is an application of the type of distributive analysis that has been central to critical legal studies since the early 1980s.³ It is also consistent with what is now often called inframarginalism, that is, analysis specifically designed to locate and potentially

³ For example, Duncan Kennedy, *Distributive and Paternalist Motives in Contract and Tort Law, with Special Reference to Compulsory Terms and Unequal Bargaining Power*, 41 Md. L. Rev. 563 (1982).

to reallocate surpluses generated by different market configurations.⁴ We also have incorporated insights from “profit theory.”⁵

The paper is organized as follows: Part I models above break-even profits in competitive markets based on cost curve advantages. Part II models the variety of scenarios, including captive markets, that suggest that competitive profits are likely pervasive. Part III presents empirical evidence that supports the pervasiveness claim. Part IV discusses mechanisms for the reallocation of competitive profits from the firms that realize them to other uses. The brief Conclusion flags some of the ethical/political issues likely to be involved.

Part I: Zero-surplus in Competitive Markets: Economic Theory, Industrial Organization and Antitrust

1.A. The Microeconomic Model: Zero-surplus in Competitive Markets

The basic economic model of perfect competition⁶ that leads analytically to the impossibility of economic profits (profits above the break-even point) is composed of a long and stringent set of assumptions or conditions.⁷

The first is that all buyers and sellers are price-takers. The competitive firm does not choose the price of its product or service – instead, that price is determined by the interaction of all the firms supplying their goods and services and the consumers demanding these goods and services on the market. Because such a firm does not have an effect on the going price, the graph of the demand curve facing such a firm appears as a horizontal line at the current market

⁴ Ramsi A. Woodcock, ed., *Toward an Inframarginal Revolution*, in *Toward an Inframarginal Revolution: Redistributing the Gains from Trade* i–ii (Cambridge Univ. Press 2025).

⁵ Richard Makadok, *The Four Theories of Profit and Their Joint Effects*, 37 *J. Mgmt.* 1316 (2011).

⁶ The basic economic model of perfect competition that we rely on in this paper, is a Marshallian partial-equilibrium model that is the basis of analysis in standard industrial organization and antitrust textbooks. We do not employ more complex economic models, such as the Edgeworth Limit Theorem or Prisoner’s Dilemma to further complexify the distributional consequences.

⁷ See e.g. Jean Tirole, *THE THEORY OF INDUSTRIAL ORGANIZATION* p. 6-7 (“The model starts with a very fine description of available goods. An economic good is characterized by its physical properties, the date on which and the state of nature in which it is available, its location, and so forth. Consumers are perfectly informed about all goods’ properties and have preferences over bundles of goods. Producers (firms), which are owned by consumers, are endowed with production-possibility sets. A paradigm of market organization is then added. All agents are price takers. The consumers maximize their welfare given that their expenditures must not exceed their income (which stems from their endowment and their ownership of firms). This gives rise to demand functions (“correspondences,” if there are several welfare-maximizing bundles). Producers maximize profits over the technological possibilities, giving rise to supply functions (or correspondences). A competitive equilibrium is a set of prices, with associated demands and supplies, such that all the markets (one for each good) clear (i.e., total demand does not exceed total supply). [...] A key property of competitive equilibrium is that each good is sold at marginal cost. A producer would increase profits by expanding production of the good if its price exceeded his marginal cost. Conversely, if he produced the good at all, he would contract production if the marginal cost were to exceed price. This trivial result has important implications. [...] Perhaps the most conspicuous of all the conditions is price-taking behavior. Though it is easy to exhibit markets that seem to be reasonably described by this assumption (e.g. some agricultural markets), most markets are served by a small number of firms with non-negligible market power.”).

price (see Figure 1). No matter how much the firm produces, the price of the good or service it provides does not change.

Figure 1

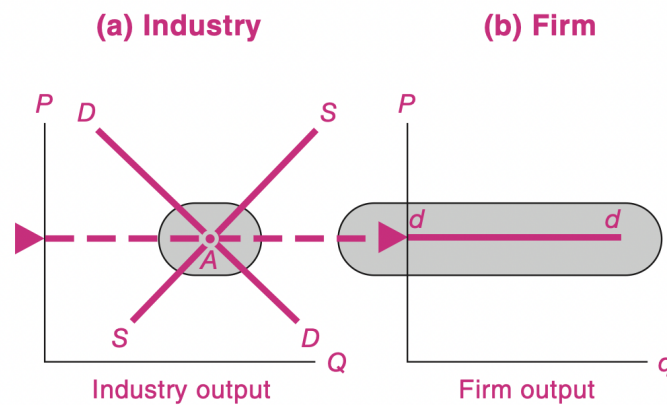


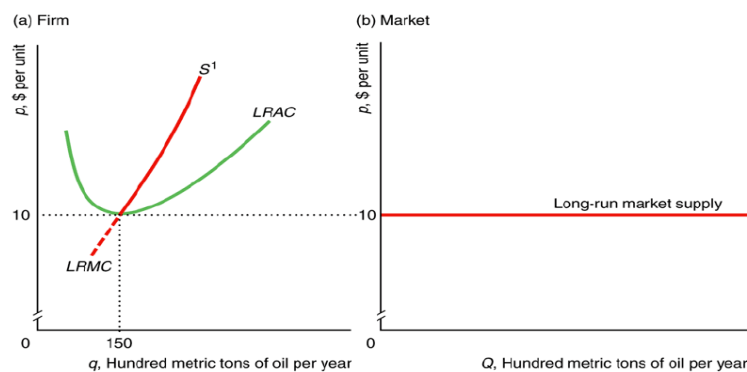
FIGURE 8-1. Demand Curve Is Completely Elastic for a Perfectly Competitive Firm

Source: Samuelson and Nordhaus⁸

The second necessary assumption of the model (often erroneously omitted) is that all firms are price takers with respect to inputs.

A third assumption is that all firms confront identical U-shaped cost curves. If this is the case, the necessary consequence is that the long-run industry supply curve will be horizontal, generated by the fluctuating arrival and departure of firms whose cost curves are U-shaped rather than horizontal. For example, Perloff *Microeconomics* represents the relationship between firm and industry cost-curves as illustrated in Figure 2:

Figure 2



Source: Jeffery M. Perloff⁹

⁸ Paul A. Samuelson and William D. Nordhaus, *ECONOMICS* 150 (nineteenth ed.).

⁹ Jeffery Perloff, *MICROECONOMICS: THEORY AND APPLICATION WITH CALCULUS* 275 (fifth edition).

A fourth assumption is that there is free entry and exit in the industry. The fifth is that firms operate with perfect information and modify production without transaction costs.

A sixth and final assumption is that all firms are profit maximizers, meaning (in the usual understanding) that each will expand output to the point where its marginal costs equals the price.¹⁰

The paradoxical result is that if all the conditions of the model are satisfied, no firm can do more than break even (i.e. can generate no economic profits).

This is given by the following formula:

$$P=MC =\min AC= \text{zero-profit price}$$

Under these assumptions, if demand changes (or cost changes), competitive firms are assumed to respond by increasing or decreasing output to satisfy the condition of $MC=P$. If the new price generates surplus, such profits induce new firms with the same U-shaped cost curve to enter the industry.¹¹ The shift in the supply curve will drive the price back down to the equilibrium level of $P=MC$. If reduced demand lowers the market price, firms lose money and some leave until the price goes back up to cover marginal cost.

The short-run and the long-run

The economists recognize that in the real-world free entry and adjustment of production to new conditions are not costless, information is never perfect, and transaction costs are pervasive. They insist, however, that as long as the other conditions of the model are satisfied the profits that emerged from these deviations from the model will be temporary. In the long-run they will be competed away.

According to mainstream economic theory, it is, therefore, possible for firms to earn competitive profits in the short-run, but in the long-run these infra-marginal profits should disappear either due to entry or expansion.¹²

¹⁰ Tirole supra note 7 at 7.

¹¹ Lynne Pepall, Daniel J. Richards, and George Norman, *INDUSTRIAL ORGANIZATION: CONTEMPORARY THEORY & PRACTICE* (3rd ed.) p.24-25 “Other than assuming that a competitive firm will price equal to its marginal cost, there is an additional condition that must be met in order for firms to achieve long-run competitive equilibrium: namely, the condition is that in a long-run equilibrium, each firm earns zero economic profit. [...] Figure 2.2(b) illustrates this by the shift in the industry supply curve to S_2 . As drawn, this shift reestablishes the initial price, PC . Each firm again produces output q_C at which the industry price equals both the firm’s marginal cost and its average cost. Of course, total industry output is now higher at Q^*C . While each firm is producing the output q_C , there are now more firms. These examples illustrate a central element in our definition of an equilibrium—namely, that no firm has the incentive to change its production plan. In the long run, this includes the idea that no firm wishes either to leave or to enter the market.”

¹² Although not relevant to our argument in this article, the standard account is incomplete as an explanation of how perfect competition could exist even under the idealized assumptions of the model. It does not provide an explanation of why, under the zero-transaction cost assumption, there won’t be collusion and parallel pricing by competitors. See Duncan Kennedy, *Cost-Benefit Analysis of Entitlement Problems: A Critique*, 33 *Stan. L. Rev.* 387, 438-44 (1981). A complete account of perfect competition under no transaction costs is provided by the “limit theorem.”. See e.g. Jerry Green, *The Stability of Edgeworth’s Recontracting Process*, 42:1 *ECONOMETRICA* 21, 21 (1974); PETER NEWMAN, *THE THEORY OF EXCHANGE* 116-17 (1965). For a demonstration that legal rules *can* enable the parallel exercise of bargaining power even under the more complex version of atomistic competition provided by the limit theorem, see Pascal McDougall, *How Law Shapes Class Power Under Perfect Competition* (unpublished draft, 2024).

The anomaly of the upward-sloping supply-curve

The literature also acknowledges that in the real-world conditions may produce deviations from the assumptions leading to upwardly sloping rather than horizontal supply curves as illustrated in Figure 8-6 from Samuelson and Nordhaus's famous textbook *Economics*.¹³

Figure 3

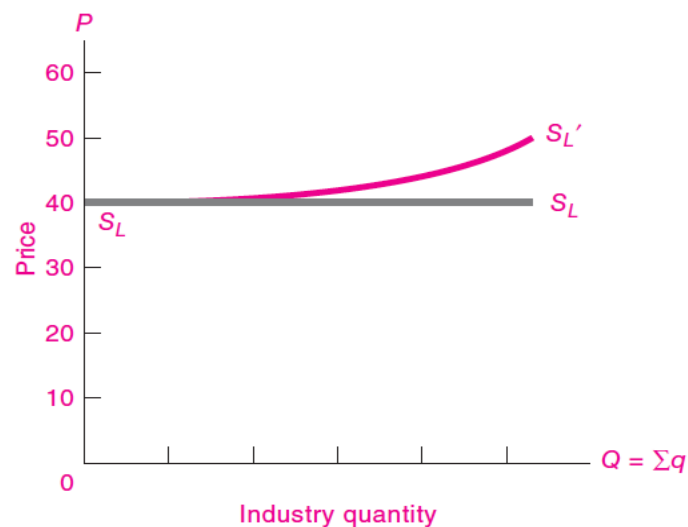


FIGURE 8-6. Long-Run Industry Supply Depends on Cost Conditions

Source: Samuelson and Nordhaus¹⁴

Samuelson and Nordhaus explain the possibility of a rising supply curve as follows: “[w]ith entry and exit free and any number of firms able to produce on identical, unchanged cost curves, the long-run [supply] curve will be horizontal at each firm’s minimum average cost or zero-profit price. If the industry uses a *specific factor*, such as scarce beachfront property, the long-run supply curve must slope upward [...] as higher production employs less well-suited inputs.”¹⁵

They restate the point: when “some of the inputs used in the industry are in relatively short supply—for example, fertile vineyard land for the wine industry or scarce beachfront properties for summer vacations. Then the supply curve for the wine or vacation industry must be upward-sloping, as shown by $S_L S_L'$ in Figure 8-6.”¹⁶

The emphasis on the scarcity of beachfront property and fertile land for the wine industry reinforces the idea that cases of upward-sloping cost curves are rare. After the above brief reference they ignore them. They move on to the general proposition that in the long run, the price in a competitive industry will tend toward the point where revenues just cover full competitive costs. Below this long-run price, firms would leave the industry until price returns to long-run average cost. Above this long-run price, new firms would enter the industry, or

¹³ Samuelson and Nordhaus, *supra* note 8.

¹⁴ *Id.* at 156.

¹⁵ *Id.* Figure 8.6.

¹⁶ *Id.* at 155.

existing firms would expand their output, thereby forcing market price back down to the long-run equilibrium price where all competitive costs are just covered.

Other economists who have tried to further unpack the competitive surplus issue have done so in the “theory of profits” literature. Similarly, the field of business strategy is often about ways to generate competitive advantage.¹⁷ For example, Richard Makadok starts his piece on the theory of profits acknowledging that “basic economics teaches that, under price competition, profit is expected to tend toward zero, so in a competitive capitalist economy, any large sustained profit should be rare.”¹⁸ He goes on to explain the profits that persist in a competitive capitalist economy must correspond to the “rare outlier phenomenon – a small number of companies that beat some rather long odds.”¹⁹ His paper is then dedicated to unpacking the exceptional situations where surplus value does take place.

He identifies four such scenarios: (1) “competitive advantage: when a firm has an advantage that allows it to create value that no rival can match;”²⁰ (2) “rivalry restraint: whether endogenous or exogenous, rivalry restraint can affect profits by artificially raising output prices (or lowering input prices) from their competitive levels to benefit firms at the expense of others;”²¹ (3) “information asymmetry: when it creates hazards for the transactions leading to some firms, those that are better informed, being able to exploit their information advantage at the expense of less informed firms;”²² (4) “commitment timing: when firms’ profits differ due to differences in the timing of their strategic commitments – some preemption may allow the early bird to get the worm or allow the delayed second mouse to get the cheese.”²³

There is no reason to treat these scenarios presented by Perloff and Makadok as anomalies. Treating them as such, further cements the “basic” economic assumptions of zero-profits in competitive markets that are completely dominant in the IO and AT literatures. In those literatures the possibilities of deviations from the model simply disappear.²⁴ They take it for granted that in competitive markets “[Firm] profit either induces new firms to enter the industry or existing firms to expand production. This expansion shifts the industry supply curve outward until the equilibrium price again just covers average cost.”²⁵ The following graph (Figure 4) represents the long-run equilibrium in competitive markets.

¹⁷ See Michael E. Porter, *Location, Competition and Economic Development: Local Clusters in a Global Economy*, 14(1) *Economic Development Quarterly* (2000). An important assumption in the business strategy literature is that sustaining competitive advantage is difficult because others will generally try to imitate successful firms. This was also Schumpeter’s point.

¹⁸ Makadok, *supra* note 5 at 1316-17.

¹⁹ *Id* at 1317.

²⁰ *Id* at 1318.

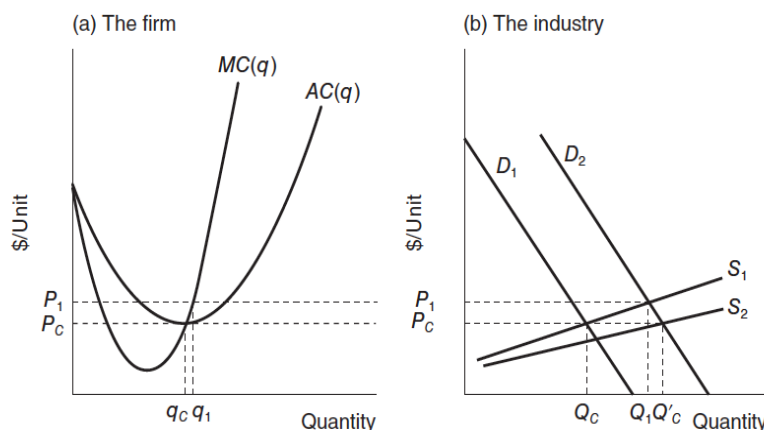
²¹ *Id* at 1318.

²² *Id* at 1319.

²³ *Id* at 1320.

²⁴ *Id.* see footnote 13.

²⁵ Pepall et al, *supra* note 11 at 25.

Figure 4**Figure 2.2** The long-run competitive equilibrium

Price P_1 is consistent with a short-run equilibrium in which each firm produces at a point where its marginal cost is equal to P_1 . However, at P_1 price exceeds average cost and each firm earns a positive economic profit. This will encourage entry by new firms, shifting out the supply curve as shown in (b). The long-run competitive equilibrium occurs at price P_C , in which each firm produces output level q_C and price equals both average and marginal cost.

Source: Pepall et al.²⁶

Similarly, antitrust textbooks hold that profits for competitive firms will disappear as existing firms expand output or new firms enter the market.²⁷ This has led IO economists and antitrust lawyers to use profits, or firm's ability to price above marginal cost, as a measure of market power. Since accounting profits are easier to observe than economic profits, they use them as imperfect proxies of market power. This explains why the Lerner Index, which measures profitability, is used in both the IO and AT literature as a measure of firm market power.²⁸ The

²⁶ *Id.* p. 23.

²⁷ Einer Elhauge and Damien Geradin, *GLOBAL ANTITRUST LAW AND ECONOMICS* 5 (2nd ed. 2011) ("The intersection of the demand and supply curves is the competitive market equilibrium, where buyer willingness to pay matches supplier willingness to price, and P_c and Q_c are, respectively, the competitive market price and quantity. If the price dipped below P_c , then quantity supplied would dip below Q_c but that would leave some buyer demand unsatisfied because some buyers are willing to pay a higher price, and this they would bid up the price until it reached P_c again. If a supplier tried to charge above P_c then the quantity demanded would go below Q_c , but that would leave an opportunity for a rival seller to win sales by charging a lower price. Thus rival sellers would bid down price until it reached P_c again. This competitive market equilibrium has many wonderful features. Goods are never provided to buyers if the marginal cost of doing so exceeds the value buyers would put on them as indicated by buyer willingness to pay. Goods are provided whenever buyer valuation does exceed the marginal cost. If demand increases [...], then the demand curve will shift to the right (at each price, more quantity demanded), but then a new equilibrium arises, with a higher P_c and Q_c , that again process the good whenever buyer valuation exceeds market cost. If costs increase [...], then the supply curve will go up, resulting in a higher P_c and lower Q_c , but again the product will be supplied whenever buyer valuation exceeds the new marginal cost. And the whole thing works in reverse if market demand or costs decrease."). See also RICHARD WHISH & DAVID BAILEY, *COMPETITION LAW* 4-5 (7th ed. 2012) ("[...] in the long run, price equals the marginal cost of production (cost for this purpose including a sufficient profit margin to have encouraged the producer to invest his capital in the industry in the first place, but no more."); Helen Jenkins & Beatriz Yemail, *Economics at the Heart of Competition Policy*, In *INTRODUCTION TO EU COMPETITION LAW* 25 (Peter Wills ed., 2005) ("An efficient allocation means this price reflects the cost of producing the good. If all markets in the economy exhibit this, resources cannot be allocated differently to make any consumers better off without making someone else worse off.").

²⁸ *Id.*

Lerner Index is given by the following equation as a measure of price-cost margin as developed by British economist Abba Lerner in 1934:

$$L = (P - MC) / P$$

The use of the Lerner Index particularly in AT to proxy market power disregards the possibility of variable cost curves and the resulting competitive profits. According to Einer Elhauge, who refers to the works of Phillip Areeda, Louis Kaplow and Jean Tirole amongst others, market power or concentration is defined as “the power to raise prices above marginal cost, which is the incremental cost of producing the last unit of output.”²⁹ He goes on to argue that,

This definition is normally useful. In a perfectly competitive market, all products are sold at marginal cost. An inability to profitably increase prices above marginal cost would certainly indicate the absence of market power, and a persistent ability to charge above long-run marginal costs would typically indicate market power. The degree of market power under this definition is often measured by the Lerner Index, which is the difference between price and market cost divided by price.³⁰

Although Elhauge goes on to question the theoretical limitations of this definition, it remains as one of the most agreed upon measures of market power.³¹ Even if its limits are acknowledged, it has not prevented the long-run availability of surplus or profits to be considered a proxy for market power. For example, Philippe Aghion and other scholars working on measuring competition have repeatedly used markups as a proxy of the Lerner Index and thus of market power.³²

The use of the Lerner Index is an indication that the literature ignores the existence of short-run inframarginal profits. But it is perfectly possible for a firm with no market power in a competitive market, that is, a firm that is a price-taker, to earn substantial profits based on its cost-curve advantages.

1.B. Refuting the zero-surplus assumption for competition

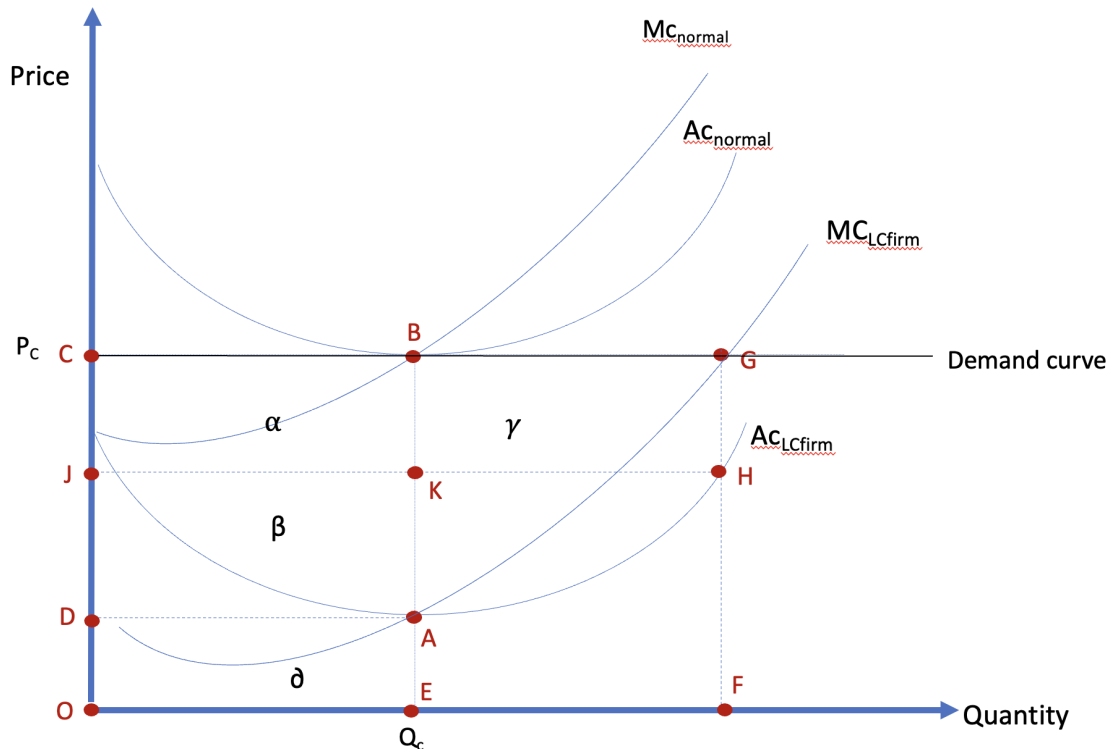
Figure 5 describes the situation of a low-cost firm in a competitive industry. C is the market price set by industry supply and demand. Line CG is the (long run) supply curve of the industry and also the demand curve for the reasons explained above. It is determined by the lowest point of the identical U-shaped average cost curves of the identical “normal” competing firms in the industry, marked AC_{normal} . All the firms produce quantity E . The curve AC_{LCfirm} describes the average cost of an “abnormal” firm identical to the others except that it manages to reduce its costs compared to its competitors.

²⁹ *Id.* at 277, citing Areeda and Kaplow, *Antitrust Analysis* 556 (5th ed. 1997).

³⁰ *Id.*

³¹ *Id.* for a discussion of several limitation.

³² See e.g. Philippe Aghion, Matias Braun and Johannes Fedderke, *Competition and Productivity Growth in South Africa*, 16(4) *ECON. TRANSITION* 741, 748 (2008); Philippe Aghion et al., *Competition and Innovation: An Inverted-U Relationship*, 120(2) *Q. J. ECON.* 701 (2005); Philippe Aghion and Rachel Griffith, *COMPETITION AND GROWTH: RECONCILING THEORY AND EVIDENCE* 16 (2005).

Figure 5

Its lowest average cost, much lower than that of its competitors, is also at quantity E. The marginal cost of this low-cost firm is given by the curve MC_{LCfirm} . Like its competitors it is a price taker, with output so small that its choice of an output cannot affect the industry price. Because like its competitors it has a U-shaped cost curve, it cannot exploit its cost advantage to take over the market (more on this assumption of the theory of perfect competition below).

Mainstream economists hold that in order to maximize profits competitive firms will produce until $MC = P$. For our low-cost firm this would mean production at point G (quantity F). The logic is that for any unit produced beyond F, the firm would lose money because marginal cost per unit is greater than the price per unit ($MC > P$). For any unit below that $P > MC$ and by failing to expand output the firm would be failing to realize all possible profits.

For example, according to Hylton, in order for a firm to maximize its profits: “price must equal marginal cost ($p = MC$). Why? The firm is maximizing cost ($MR = MC$), or that it will produce each unit that brings in as much or more revenue than it costs. When the demand curve is infinitely elastic, $MR = p$. Thus, in long run competitive equilibrium $MR = MC = AC = p$.”³³

This statement is true only for a competing firm operating with the standard industry cost curve. A firm with a cost curve advantage will choose to stop expanding output at the point at which the increase in profit from adding a unit of production is less than the profit the firm can derive from an alternative use of that marginal profit. In other words, a rational firm in a competitive market will evaluate whether increasing its output is the best use of its resources. For example,

³³ Keith N. Hylton, *Antitrust Law: Economic Theory and Common Law Evolution* 10 (Cambridge Univ. Press 2003).

a product differentiating firm might decide to divert the profits from this product to another one if the marginal return to investment in the alternative is greater than the return from increasing production of the principal good.

But there are many other uses for above breakeven competitive profits. For another example, the firm might decide to invest in research and development designed to further increase its cost advantage. Or designed to shift its cost curve to the right thereby increasing its capacity and permitting the expansion of output in hopes of acquiring a market share large enough to permit monopoly profits. Where the firm will decide to stop increasing its output and divert resources elsewhere is therefore indeterminate, falling somewhere between F where its $MC=P$ and E, the very different point where the firm has the least average cost per unit at A.

It is important to note that the competitive profits that the low-cost firm in Figure 5 generates have nothing to do with market power. It is, however, possible to imagine that the cost advantage is so great that it can profitably expand production a great deal, forcing out enough competitors that it acquires market power. In this case, once it has disposed of its competitors it will be in a position to restrict output and generate monopoly profits. If we maintain the assumption of the theory of perfect competition that all firms have U-shaped cost-curves, including the low-cost firm, then there is a built-in limit on how far the low-cost firm can expand. In Figure 5 that is point G where $MC>P$.

The assumption of a U-shaped cost-curve in the theory of perfect competition is made plausible in a variety of ways. For example, Samuelson and Nordhaus puzzlingly explain a stable condition of perfect competition in the wheat market as coming about because no individual farm is large enough to affect the market price, as evident in the following quote:

What is meant by perfect competition? This technical term refers to a market in which no firm or consumer is large enough to affect the market price. For example, the wheat market is perfectly competitive because the largest wheat farm, producing only a minuscule fraction of the world's wheat, can have no appreciable effect upon the price of wheat. [...] When all industries are subject to the checks and balances of perfect competition, [...] markets will produce the bundle of outputs most desired by consumers using the most efficient techniques and the minimum amount of inputs.³⁴

A more plausible explanation is given by Ronald Coase through transaction cost analysis.³⁵ Coase offers a transaction cost explanation for the size of the firm in *The Nature of the Firm* (1937).³⁶ In his explanation, firms have a choice between organizing any given element of production through incorporation into the firm's hierarchical bureaucratic structure and contracting out. The firm will expand, increasing its size and elaborating its internal bureaucracy up to the point where contracting out is cheaper than further expansion.

Coase has explained this as follows,

[A]s a firm gets larger, there may be decreasing returns to the entrepreneur function, that is, the cost of organizing additional transactions within the firm may

³⁴ Samuelson and Nordhaus, *supra* note 8 at 35.

³⁵ See Chandler and Williamson.

³⁶ Ronald H. Coase, *The Nature of the Firm*, 4 *Economica* 386 (1937).

rise. Naturally, a point must be reached where the costs of organizing an extra transaction within the firm are equal to the costs involved in carrying out the transaction in the open market, or to the costs of organizing by another entrepreneur. Secondly, it may be that as the transactions which are organized increase, the entrepreneur fails to place the factors of production in the uses where their value is greatest, that is, fails to make the best use of the factors of production.[...] Finally, the supply price of one or more of the factors of production may rise, because the “other advantages” of a small firm are greater than those of a large firm.³⁷

Another way Coase has restated this conclusion is as following: “When we are considering how large a firm will be the principle of marginalism works smoothly. The question always is, will it pay to bring an extra exchange transaction under the organizing authority? At the margin, the costs of organizing within the firm will be equal to the costs of organizing in another firm or to the costs involved in leaving the transaction to be “organized” by the price mechanism. Business men will be constantly experimenting, controlling more or less, and in this way, equilibrium will be maintained.”³⁸

Whatever the reason for increasing cost curves, a correct reading of the theory of perfect competition shows that it is only if all firms face identical curves (and all the other assumptions of the model are in place) that output expansion or competition from new entrants will eliminate any profits above the break-even point necessary to prevent exit. In short, cost curve variation can produce profits for firms that are price takers.

It is also part of the theory that when there are deviations from the model, for example cost curve variations, they disappear “in the long run.” Here the key assumptions are perfect information, including technical knowledge, no transaction costs and free entry into the market. We critique this part of the theory in Part II below. But first, we explore situations of monopolistic competition to contrast these with situations generating competitive surplus.

1.C. Profits in Monopolistic Competition

While the literature restricts the possibility of profit in competitive markets to the supposedly truly exceptional cases like vineyards and scarce beachfront property, there is discussion of short-term competitive profit in the industrial organizational literature of monopolistic competition (MC). MC refers to situations where firms have differentiated products, brand image or locations of sale - that allow them to exert some market power to charge above marginal cost to customers on the basis of location, quality or brand preferences.³⁹ Economists distinguish these “economic profits” from the accounting profits that are necessary to break even and prevent exit from the industry. They are also described as “economic rents,” the name for unearned surpluses in general used in welfare economics. In the model, they are supposed to be dissipated in the long run by new entrants.

For example, Perloff and Carlton have argued that:

³⁷ *Id* at 394-395.

³⁸ *Id.* at 404.

³⁹ Elhauge and Geradin, *supra* note 27, at 257-265.

In many markets firms engage in *monopolistic competition*: Firms have *market power*, the ability to raise price profitably above marginal cost, yet they make **zero economic profits**. Such a market structure combines attributes of monopoly (market power) and competition (zero economic profits). An industry has monopolistic competition if there is *free entry* and each firm faces a *downward-sloping demand curve*. If firms enter the industry whenever positive profits are available, each firm makes zero economic profits in the long run, as in a competitive industry. If a firm faces a downward-sloping demand curve, it has market power.⁴⁰

In this reassuring picture, new entrants drive down the price the monopolistic competitor can charge and eliminate profit above what is necessary to break even. Unlike the price-taking firms we are analyzing, these firms start with the ability to set prices above marginal cost. When they lose because of new entrants they return to the perfect competitive situation in which all firms are price takers just breaking even.

What we will argue in the following sections starts from the demonstration above that cost curve variations can generate surpluses for firms that are price takers without market power. Neo-classical modeling and empirical evidence suggest that these surpluses can be and likely are in fact large and long lasting.

Part II: Pervasiveness of Competitive Profits

In this section we will discuss the way captive markets and locational advantages can generate long lasting competitive profits. It may be one of the reasons for the failure of the literature to recognize these situations as important exceptions to the no-competitive profits rule is that in each of the cases the persistence depends on some legal rule or regulation without which the advantage would not occur. We have included a note on patents to further illustrate this point.

Even Carlton and Perloff, who have a much broader understanding of the possible conditions for competitive profits (called by them “rents”), restrict the analysis to a small number of exceptional situations, where they distinguish economic profits from rents, as in the following quote:

Although a monopoly may earn positive profits, it does not follow that any firm that earns a positive profit is a monopoly. [...] Certain scarce resources, such as land, can earn rents. For example, a wheat farmer who owns particularly productive land earns a large profit. This profit is attributable to the land that is owned and should properly be called a rent. The farmer behaves competitively, taking price as given and operating where price equals marginal cost. This farm is a competitive firm; rents on factors of production do not indicate a monopoly. As long as output is not restricted so that price equals marginal cost, there is no market power. Scarce resources can command very high prices and those who own those resources benefit. For example, star athletes earn high salaries (rents) even though they are not monopolies that restrict output.⁴¹

⁴⁰ Dennis W. Carlton and Jeffery M. Perloff, MODERN INDUSTRIAL ORGANIZATION 224 (fourth ed.).

⁴¹ *Id.* at 129-130,

This quote recalls Ricardo, whose highly abstract model of the rent of agricultural land is the starting point for the analytic.⁴² He posits something called the “original and indestructible power of the soil,” meaning its fertility before it has been developed for commercial agriculture.⁴³ Operationally, this meant that a given acre is more fertile than another acre if it costs less than the other to produce a bushel of wheat, assuming the same amount of land labor, and capital.⁴⁴ The most fertile land has the lowest cost of production.⁴⁵

In his model, all land is cultivated by farmers who are not owners but capitalist entrepreneurs. He further observes that where land varies in fertility, landlords will be able to charge farmers for the use of land according to its fertility with maximum charge for the most fertile land and no charge for the least. Like Perloff, Ricardo sharply distinguishes between the “profits” of farmers renting from owners in a competitive market for agricultural land and on the other hand the “rent” landlords receive for nothing more than making the land available to farmers.

There are many other situations similar to the agricultural land example. The next parts discuss some of these.

2.A. Captive Markets

The following quotation, from Einer Elhauge, illustrates what we are calling a captive market, a situation of “sudden increase in market demand” using the housing crisis during WWII as an example:

Suppose, for example, we have a competitive market with numerous sellers with small output who cannot expand quickly, and there is a sudden increase in market demand. Prices will increase sharply, above marginal and average costs, and yet each individual seller is a price taker that cannot itself significantly affect market output or prices. Instead, the price premium they earn over their costs is called an economic rent. Such situations may call for rent control— indeed, the New York rent control laws were initially enacted to deal with the increase in housing demand during World War II. But whether or not rent control is merited, these situations do not suggest an anticompetitive market or that any seller has market power.⁴⁶

Elhauge recognizes the possibilities of competitive profits due to the existence of a captive market, but his only example is of a temporary emergency thereby enforcing the marginality of that situation. He thereby reinforces the conventional notion that situations of competitive profits are inherently unusual or temporary, as in the familiar examples of scarce beachfront property and vineyards for specific wines.

⁴² Duncan Kennedy, *Law Distributes I: Ricardo, Marx, CLS* in Karen Engle & Neville Hoad eds., *Hierarchies at Work: Race, World-Systems, and Legal Distribution*, (Columbia Univ. Press 2025).

⁴³ David Ricardo, *THE WORKS AND CORRESPONDENCE OF DAVID RICARDO, VOLUME 1 ON THE PRINCIPLES OF POLITICAL ECONOMY AND TAXATION* 65 (ed. 2004).

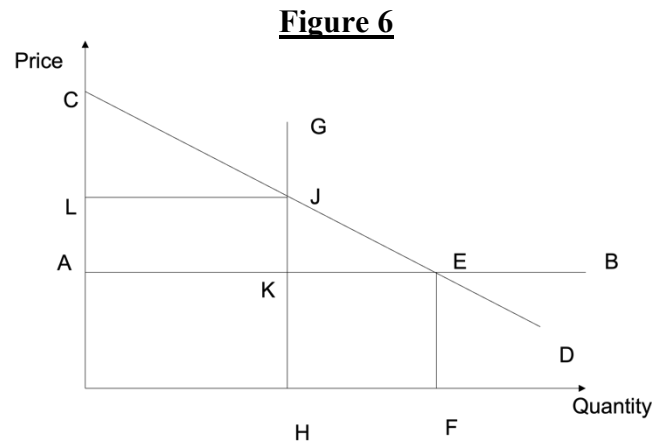
⁴⁴ *Id.* at 69-70.

⁴⁵ *Id.* at 70.

⁴⁶ Elhauge and Geradin, *supra* note 27 at 257-265.

However, in any market in which supply is fixed at a particular level such that the market price is above cost for all available units, the market is effectively captive. And if it is competitive, all competitors will earn competitive surplus. The following graph (Figure 6) illustrates this phenomenon which applies not only to beachfront and vineyard property but also to rental housing in segregated poor black neighborhoods and the market for new housing in heavily regulated suburbs, to occupational licensing and to many other situations as well.

Concretely, we can imagine a highly competitive beachfront property market, where there is a large amount of beachfront land and all the owners land are competing for summer rentals.⁴⁷



Hypothetical:

The area is divided into a very large number of small plots. Each with a separate owner. At time 1, there are many undeveloped plots. The reason being that the cost of developing them is less than anticipated profit.

The inputs for the industry are available in unlimited supply at constant prices. So, the industry cost curve is horizontal. AB. The demand curve is CD. Each proprietor has a U-shaped cost curve because of costs other than factor inputs—for example terrain features. There are no economies of scale to be derived from combining plots. Each operates at the lowest average cost point in the U-shaped cost curve and sells at the industry price E, representing the intersection of the industry supply and demand curves. There are only break-even profits. When the industry expands, new entrants with the same cost curve take up the opportunity. There are no competitive profits generated.

Now imagine that for various reasons including the unique fertility of the land (vineyard case), locational limitation (beachfront) or restricted customer mobility (segregated poor black neighborhood) there is an absolute limit on the space. Suppose production within the space to increase supply is not possible—zoned beachfront, fixed soil capacity, or high costs of new construction (partly because of needed and unneeded regulations) relative to very low income in the segregated black neighborhood making new construction unprofitable. The limit is represented by the vertical line GH.

⁴⁷ This is the situation of beachfront developments in Massachusetts – in adjacent suburbs, a large number of units of tiny housing were built on beachfront strips and on the streets laid out behind them. Over time, a competitive market in summer rentals developed. There is a rental differential according to distance from the water. None of the owners has market power.

The new price is J where the demand curve hits the quantity limit, further up the demand curve than the original price C. At this price there is an excess of demand over supply which means there is surplus represented by the rectangle ALJK. At price J, it all goes to the small holders. But why price J rather than price K where it all goes to the tenants, or a price in between splitting the surplus between small holders and consumers? At all of these prices the smallholders stay in business because they are making money, although at price K it is no more than they made before the restriction.

Imagine that the restriction is an event brought about by an exogenous change (climate, regulation, etc.). The small holders between quantities H and F disappear. The remaining smallholders as rational profit maximizers, decide to raise the rent. As they all do this, they discover that they still have renters so they all keep doing it until rent reaches point J. Because of the identical U-shaped cost curves, none of them can use the new profit to expand at the expense of their neighbors and because of the absolute limit on land they can't expand production in new sites. Therefore, the industry will remain competitive even in the presence of very large profits for every firm.

This is supposed to help understand how landlords renting to poor tenants racially excluded from housing outside their poor black neighborhood can find themselves paying higher rents than white tenants, living in white neighborhoods with high mobility and no spatial restriction, for identical housing. And how exclusionary zoning can generate large profits for owners of land suitable for new upper-income development in all white suburbs.

It is a formalization of Bruce Ackerman's argument in his famous 1972 article arguing that increasing landlord costs by requiring minimum habitability would not raise rents, given the assumptions.⁴⁸ Because landlords would have no motive to abandon and no alternative to eating the cost of upgrading. (In his version, the enforced habitability scheme forces out a few high cost smallholders who go bankrupt but their supply is replaced by new state funded affordable units so there is no supply reduction⁴⁹.)

Although our captive market example is a land example, there are other captive markets. For example, in the classic case of skilled workers where supply is limited by a licensing procedure where all the workers will be able, without combination (in other words still competitors), to demand a wage above their marginal product.⁵⁰ Where entry into a business is legally restricted, requiring a license, but many licenses are granted, the same result may occur. In other words, what counts is the legal structure of the market rather than land and its positionality.

2.B. Location, Transportation and Agglomeration

In this part we discuss cases where spatial and legal factors combine to generate competitive profits. We start with the pure transportation cost case, and then we discuss the more complex case of firms having exclusive access to a locational advantage, followed by agglomeration

⁴⁸ Bruce A. Ackerman, *Regulating Slum Housing Markets on Behalf of the Poor: Of Housing Codes, Housing Subsidies and Income Redistribution Policy*, 80 Yale L.J. 1093 (1971).

⁴⁹ *Id.*

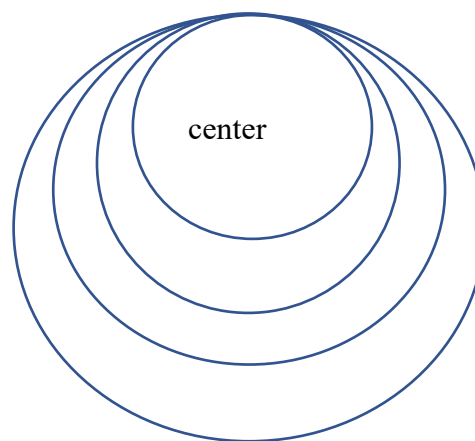
⁵⁰ See Alfred Marshall,

effects. We then discuss two ways these competitive profits might be eroded. The first is the case of rents and the second is the case of new entrants.

2.B.1. Simple Transportation Cost Case

The simplest case of locational advantage relates to the cost of transportation of the firm's product to market. In a stylized hypothetical similar to the one for captive markets, imagine that an agricultural product is sold in a single urban market where the cost of production of the product is identical regardless of where it occurs with the only variation in the cost to the firm is a function of the distance to the market.

Figure 7



In Figure 7 the center represents a market and the outer rings represent sites of production at progressively greater distance and therefore transportation cost from the center. We can imagine that in each of the rings there are large numbers of firms competing, each with an identical cost of production and transportation cost. Assume that all firms have identical U-shaped cost curves and that demand is great enough so that no firm can expand to the point of being able to affect the price.

For example, many markets for agricultural products are highly competitive, while at the same time firms operate with dramatically different locational advantages based on distance and the cost of transport. In these markets, even the largest firm does not produce enough to affect the price on the relevant local national or international market.

A second example is urban and suburban residential rental housing markets. In many markets rental values are decisively influenced by the vicinity of transportation to jobs. All the firms enjoying the favorable location sell at a higher price even when the market is highly competitive.

2.B.2. Locational Advantage in Management Literature

In the management literature, the general theory of how a firm ought to choose its location is given by the *least cost theory*. According to this theory, a firm chooses the location that is least costly to maximize its profits. Relevant factors include transportation costs, production costs, including labor costs, and also non-labor costs associated with a particular location, such as the general regulatory environment and the quality of amenities associated with the site.⁵¹ And the actual favored location could be anywhere geographically (in the whole world). Transportation costs are just one factor among many.

All of these costs are a function of the legal framework set by governments in the different locations including private law, legislative and administrative regulation, and constitutional law where it is applicable. Production choices are continuously impacted and often determined by the legal environment, e.g. the prohibition or high cost associated with the use of dangerous chemicals or the costs of amenities, such as heat and air conditioning. Transportation costs are a function of the regulation of different means of transportation. And of course, labor costs are both extremely important and overdetermined by government. The theory of locational advantage therefore requires a detailed legal comparison of potential sites.

When economists treat variable costs in competitive industries as due to “special factors” with examples like beachfront properties and vineyards, they are making a heroic unrealistic assumption.⁵² The existing locational advantage literature makes exactly the opposite assumption, namely that significant cost variables are a pervasive dimension of business choices and are always highly particularized. Moreover, locational advantages can appear and also disappear altogether – because they are strongly based on the fluctuating regulatory environment of competing locations. The literature makes no distinction between firms in competitive and in imperfectly competitive markets.

2.B.3. Agglomeration Effects

Agglomeration effects are cost advantages that may accrue under particular circumstances to producers in a location where there is a dense network of firms. Sassen lists “the gains made by proximity to sellers of key inputs, joint production opportunities, and lifestyle amenities attracting high-income personnel.”⁵³ Rosenthal and Strange describe agglomeration effects as the gains derived from “the sharing of inputs whose production involves internal increasing returns to scale,” labor market pooling improving the employer-worker matching, and knowledge spillovers in localized industries.⁵⁴ This form of locational advantage is consistent

⁵¹ See Michael J. Webber, *Industrial location* (Sage publications, 1985) (for a typology of location advantage costs).

⁵² Samuelson and Nordhaus, *supra* note 8 at 154.

⁵³ In SASKIA SASSEN, *THE GLOBAL CITY: NEW YORK, LONDON, TOKYO* 101, 104-105 (1991), agglomeration effects are treated as a factor in a firm’s choice of location, referring to the gains made by proximity to sellers of key inputs, joint production opportunities, and lifestyle amenities attracting high-income personnel.

⁵⁴ A similar definition is provided in the overview of agglomeration economies literature in Stuart S. Rosenthal & William C. Strange, *Evidence On The Nature And Sources Of Agglomeration Economies*, In *HANDBOOK OF REGIONAL AND URBAN ECONOMICS: VOLUME 4: CITIES AND GEOGRAPHY* 2119, 2121-2125 (V. Henderson & J. F. Thisse eds., 2004). Building on ALFRED MARSHALL, *PRINCIPLES OF ECONOMICS* (1920), Rosenthal and Strange describe agglomeration effects as the gains derived from “the sharing of inputs whose production

with intense competition among firms located in the agglomerated area and the profits do not reflect market power.

2.B.4. Concluding note on the relevance of access to land for the general analysis of competitive profits

It is important to emphasize that although the analysis of location is centrally concerned with the ownership of land, the reason for this is that land is a primary determinant of jurisdiction, which in turn determines the set of legal background rules that generate advantages and disadvantages. The scarcity of land and its positionality is not a necessary part of the analysis. Even if land is available to the competitors in infinite free supply, differences between jurisdictions for example with respect to rules governing unfair competition, intellectual property and the legally permitted level of exploitation of wage labor, will generate differences in cost curves. Therefore, there will be differences in extractable surplus for firms in a competitive market (where all firms are price takers, as per the analysis above). In other words, as long as there are differentiated legal backgrounds in different jurisdictions, there will be differences in cost advantages between them.

2.C. A Note on Patents

A patent, on some element of the production process, may give the patent-holder a cost advantage lowering the cost curve. This generates a surplus that cannot be replicated by its competitors. It is possible that the patent-holder producing at a lower cost than its competitors will be able to undersell them and expand production to such an extent that it can force them out of business. On the other hand, the patent-holder may find that even with the patent the cost of production rises beyond average cost long before the firm's output is large enough to affect the price. As explained in the previous section, this depends on the elasticity of the cost curve.

The patents that we are discussing here are patents that lower the firm's cost curve, because they cover elements in the production process, and are not the patents that introduce a new commodity or significantly alter an existing one. These often confer market power and monopoly profits directly rather than through the production process. Production process patents produce profits that may or may not generate the ability to affect prices depending on the shape of the cost curve.

In any case, the existence of surplus cannot induce new entrants because by hypothesis they lack the cost advantage conferred by the patent. This surplus might only encourage other firms to compete in an R&D race, where each is hoping to be awarded its own patent to generate surplus in a similar manner.

Most references to patents in economic textbooks are with regards to conferring monopoly power and the creation of imperfect markets. For example, Perloff and Carlton state that, "Patents, which give the inventor or creator of a new product an exclusive right to sell it, have

involves internal increasing returns to scale," labor market pooling improving the employer-worker matching, and knowledge spillovers in localized industries. Moreover, they analyze agglomeration effects in terms of their industrial, geographical, and temporal scopes.

both desirable and undesirable effects. The chief benefit is that the possibility of obtaining monopoly profits encourages more inventive activity. Without patents or other similar incentives, there may not be enough inventive activity. The chief disadvantage is that new products may be sold at excessively high (monopoly) prices if no close substitutes are available.”⁵⁵ An exception is found in Tirole’s basic patent race model, where he discusses the conditions that facilitate competition in patent races.⁵⁶

A common theme runs throughout this literature: namely, the profitability of patents in competitive markets. Even where they do not serve the pursuit of monopoly, process patents can provide innovators with profits – in some models even profits higher than those available to innovating monopolists.⁵⁷

2.D. Erosion of Competition Profits: Rents and New Entrants

2.D.1. Rents

Locational advantages, whether based on transport or other locational cost advantages, are like producer advantages based on the variable fertility of the soil.⁵⁸ They generate surplus, but to whom the surplus is allocated is a function of the ownership of land in the location. As a result, locational advantages may be offset or even eliminated. Where the firm is the owner of the land in the advantaged local, it gets the whole surplus but where the land is owned by another entity it will charge the firm rent.⁵⁹

The first intuition might be that the rent will fully offset the typical firm’s surplus based on transportation cost, but there is no reason to believe a priori that this will be the case. The reason for that is that the rent is a function of supply and demand for land in the location. If there is a large amount of land available in the location that is suitable for the firm’s use and the alternative uses generate only small surpluses, the landowner will not be able to appropriate the surplus generated by the competitive firms selling in the locationally advantaged market. In the opposite case of firms locating in an area disadvantaged, because of transportation or other cost factors, the disadvantage may be fully or partially offset by the cheapness of land in the area compared to land in the city. There is no reason to assume that rents dissipate profits

⁵⁵ Carlton and Perloff, *supra* note 40 at 549.

⁵⁶ See e.g. Drew Fudenberg, Richard Gilbert, Joseph Stiglitz and Jean Tirole, *Preemption, Leapfrogging and Competition in Patent Races*, 22 *European Econ Rev* 3 (1983).

⁵⁷ For a more in-depth overview of this literature, see Morton I. Kamien, *Patent Licensing*, in *HANDBOOK OF GAME THEORY*, VOLUME 1 332 (R.J. Aumann & S. Hart eds., 1992) at 335 (“The exceptions occur if firms only realized perfectly competitive (zero) profits originally or if the invention is drastic and licensed for a fixed fee.”); see also Shmuel S. Oren & Yair Tauman, *Optimal licensing of cost-reducing innovation*, 21 *J. MATH. EC.* 483 (1992). Can Erutku & Yves Richelle, *Optimal Licensing Contracts and the Value of a Patent*, 16 *J. EC. & MAN. STRAT.* 407 (2007); Carl Shapiro, *Patent Licensing and R&D Rivalry*, 75 *AM. EC. REV.* 25, 25-27 (1985).

⁵⁸ See David Ricardo, *A GENERAL THEORY OF TAXATION* and Duncan Kennedy, *supra* note 41.

⁵⁹ It is important to note that if I am buying the land, I am internalizing the locational advantage as a capital expenditure until it is fully amortized. Up until that point, it is counted as part of my liabilities, and therefore reduced my profits and is no different from a rental payment for the land. However, by contrast with rental, when the property is fully amortized, the competitive profits based on location are going to the firm rather than continuing to go to the landlord as is the case of rental. Moreover, the firm as owner internalizes future gains and losses from fluctuations in the value of the location advantage as opposed to being at the mercy of the landlord when they occur.

generated by locational advantages or that locational advantages systematically increase profits.

Surpluses derived from locational advantage, whether they are appropriated by the firm or by the landowner, are available for appropriation by governments. They can be taxed without modifying the quantity that the firm will supply as Ricardo demonstrated 200 years ago and therefore without efficiency cost. Alternatively, as we will explain in Part 4 they permit the imposition of exactions in favor of stakeholders for example, for the construction of parks and recreational facilities.

In the case of agglomeration effects, the owners of land in the agglomerated area will be able to appropriate part of the resulting surplus, depending on the supply in the area, including in supply the possibility of building up rather than out. If the agglomeration effects are great enough, the competitive firms located in the area will drive out production everywhere else, taking more of the market until their competitors go out of business. Then the profits associated with the difference between the profits in the location and those in other locations disappear. The firms would no longer be able to pay rents on anything but their breakeven profits.

2.D.2. New entrants

As Porter points out, new entrants into these markets threaten to erode some of the profits these firms generate from having chosen low-cost location as determined by the multiplicity of factors listed above.⁶⁰ Economists working on profit theory, however, discuss scenarios where profits that do not depend on market power persist. Those introduced by Makadok as mentioned in Part I above include his categories of: “commitment timing”; “rivalry restraint”; “competitive advantage”; and “information asymmetry”.⁶¹

For example, Makadok’s category of “commitment timing” would apply where the available sites with the locational advantage are limited and they are all acquired by competing firms who therefore enjoy competitive profits. If the famous new entrant enters by buying up an existing firm’s space, there will obviously be no impact on the total amount of competitive profits. The analogy here is to the rent control hypothetical above. Profits can’t be competed away by new entrants for the simple reason that they cannot acquire the space necessary to go into business.

Of course, over the long-run it may be the case that land in the immediate neighborhood of the advantaged location is available. And if the cost of bidding it away and converting it, and the relatively higher cost of using it are lower than the expected competitive profits, there will be new entrants. However, in this case, the new entrants have no impact on the competitive profits of the initial set of firms, except in the extreme case where the new entrants’ higher cost production is large enough to drive down the market price for everyone.

An example of what Makadok calls “rivalry restraints” is the case of a mine that is the lowest cost producer of a raw material needed for use in a competitive manufacturing industry. A firm that managed to enter into an exclusive dealing contract with the mine eliminates rivalry from its competitors for the profits it derives from the cost advantage. This situation presupposes

⁶⁰ Porter, *supra* note 17.

⁶¹ See references to Makadok *supra* note 5.

that the mine has failed to appropriate in negotiating the license all of the surplus derived from the locational advantage. A new entrant might offer to pay more for the license and displace the first mover. Here, the new entrant does not reduce competitive profit rather reallocates it from the firm to the mine.

In the next section we discuss the evidence for the pervasiveness of competitive profits. But, we note in passing, that there are many other sources of competitive profits analogous to the ones we discuss. For example, technological change can generate situations where first or late mover advantages can generate enormous surpluses. As with all the cases we discuss above, legal rules and regulations, will decisively shape the existence and distribution of these surpluses as well.

Part III. Evidence of the Pervasiveness of Competitive Profits

In this part we discuss whether there is enough competition in, for example, the American economy to make it interesting to talk about competitive profits. We find that despite the increase in market concentration, there is empirical evidence of a great deal of competition. That evidence is not evidence of competitive profits. Thus, in the following we treat these two issues separately.

3.A. How prevalent is competition?

We here ask whether there is sufficient competition in the economy to warrant our search for competitive profits. There is a trend of decreasing competition and there is a lot of evidence of competitive decline. So, if it is true that there are no more competitive markets, then it might seem futile to explore the existence of competitive profits. We argue that despite the widespread claim of increase in market concentration across different industries and sectors, we can nonetheless still find highly competitive markets.

Before we look further into these competitive markets, it important to first acknowledge the claims made by scholars regarding the disappearing of competitive markets. Mark Roe in a recent article has argued that,

Industrial concentration has increased from what it once was. While more concentration does not mean less competition—because three firms may compete as ferociously as six - important analyses also see competition declining as concentration increased. Four tendencies point to decreasing competition in the American economy: the increasing concentration itself, rising corporate profits as a proportion of gross domestic product, increasing markups (or profit-to-cost ratios), and declining dynamism.⁶²

⁶² Mark J. Roe, *Corporate Purpose and Corporate Competition*, ECGI Working Paper No. 601 (2021) p. 15

Many scholars, often labeled the neo-Brandeisians, have strongly advocated similar positions.⁶³ They continue to provide evidence from different sectors illustrating how American markets have become more consolidated, calling to break up these monopolistic structures and to restore market competition.⁶⁴

It is interesting to note, that despite the affirmation that competition is decreasing, which often comes across as a general consensus, there is a counterclaim that challenges this position. For example, the Information Technology and Innovation Foundation, has published empirical evidence to question the validity of the assumptions about concentration.⁶⁵ They conclude that “despite widespread claims of widespread monopolization, just 4 percent of U.S. industries are highly concentrated, and the share of industries with low levels of concentration grew by around 25 percent from 2002 to 2017.”⁶⁶ They have also argued that “Overall, Census data show U.S. industries have not become more concentrated: The average C4 ratio (the share of sales that the top four firms capture in an industry) increased just 1 percentage point from 2002 to 2017. The more concentrated industries were in 2002, the more likely they were to become less concentrated by 2017.”⁶⁷ And finally, they have also illustrated evidence to show that “prices rose less in industries with higher levels of concentration than they did in the overall economy from 2002 to 2017. There was no relationship between industry concentration and profitability in that period.”⁶⁸ The following table from their paper illustrates the change in C4 ratio.

⁶³ See e.g. Lina M Khan, *Amazon's Antitrust Paradox*, Yale LJ (2017); Tim Wu, *THE CURSE OF BIGNESS: ANTITRUST IN THE NEW GUILDED AGE* (Columbia Global Report 2018); Matt Stoller, *GOLIATH: THE 100 YEAR WAR BETWEEN MONOPOLY AND DEMOCRACY* (Simon & Schuster 2019); Jonathan Tepper and Denise Hearn, *THE MYTH OF CAPITALISM: MONOPOLIES AND THE DEATH OF CAPITALISM* (Wiley 2018); Zephyr Teachout, *BREAK 'EM UP: RECOVERING OUR FREEDOM FROM BIG AG, BIG TECH AND BIG MONEY* (All Points Books 2020); Barry Lynn, *CORNERED: THE NEW MONOPOLY CAPITALISM AND THE ECONOMICS OF DESTRUCTION* (Wiley & Sons 2010).

⁶⁴ *Id.*

⁶⁵ Robert D. Atkinson and Filipe Lage de Sousa, *No, Monopoly Has Not Grown*, Information Technology & Innovation Foundation Reports (June 2021).

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

Table 3: Selected industries' percentage-point change in C4 ratio, 2002–2017⁶²

NAICS Code	Industry Description	C4 2002	C4 2017	PP Change
517312	Wireless Telecom Carriers (except Satellite)	63.3%	86.3%	23.0
485310	Taxi Service	17.6%	77.2%	59.6
481111	Scheduled Passenger Air Transportation	33.6%	71.1%	37.5
517311	Wired Telecommunications Carriers	58.0%	64.1%	6.1
515210	Cable and Other Subscription Programming	63.9%	62.2%	-1.7
334111	Electronic computer manufacturing	75.5%	58.0%	-17.5
336111	Automobile manufacturing	75.5%	57.5%	-18.0
512230	Music Publishers	55.4%	57.0%	1.6
519130	Internet publishing and broadcasting and search portals	41.1%	54.0%	12.9
512290	Other Sound Recording Industries	55.7%	50.7%	-5.0
325412	Pharmaceutical Preparation Manufacturing	36.0%	43.9%	7.9
334413	Semiconductor and related device manufacturing	56.5%	43.7%	-12.8
512199	Other Motion Picture and Video Industries	77.2%	39.6%	-37.6
325414	Biological Product (except Diagnostic) Manufacturing	42.0%	39.5%	-2.5
454110	Electronic Shopping and Mail-Order Houses	24.2%	36.6%	12.4
511210	Software Publishers	39.5%	32.4%	-7.1
444130	Hardware Stores	13.4%	31.4%	18.0
512120	Motion Picture and Video Distribution	28.8%	29.9%	1.1
512240	Sound Recording Studios	9.7%	12.0%	2.3

This table shows that some industries have become more concentrated, while others have become less. It also shows that in most industries chosen here, the sales of the top 4 firms are below the threshold of 66% set to determine market dominance in antitrust jurisprudence.⁶⁹

We will not delve further into these statistics, claims and counterclaims, given that for our purposes we are not preoccupied with the amount of competition but with the existence of competitive profits for redistributive potential. We, thus, need to side with neither of these two positions. It is sufficient for our purpose to show that we can find some competitive markets, despite declining competitive levels in other markets, that might be rife with competitive profits.

3.B. Indirect Evidence of competitive profits

The literature on locational advantages provides the first indirect claims regarding the existence of competitive profits. The main argument found in this literature is that firms, competitive firms, with certain locational advantages make more profits than firms without such advantages. The least cost theory, discussed above, illustrates ways firms with situations that lower their cost functions manage to increase their profits. This is the first indirect evidence of the existence of competitive profits.

⁶⁹ Elhauge and Geradin, *supra* note 27 at 285 (“In actual practice though, U.S. courts tend to determine the existence of monopoly or market power without requirement direct evidence of control over pricing or power to exclude rivals. Instead, U.S. courts tend to use the alternative of inferring monopoly or market power from firm market shares, at least when coupled with evidence that entry barriers to that market are relatively high. The precise dividing line unclear. The Supreme Court has indicated that market share above 66% indicate monopoly power without clearly specifying the lower bound. Lower court cases have generally required a market share of at least 50% to constitute monopoly power.”).

Similarly, Michael Porter has written advising firms, that want to generate profits and escape the zero-surplus predicament of competitive markets, to adopt an aggressive program to either keep their costs below the costs of other sellers (called a cost leadership strategy) or keep their products distinguishable from the competition (called a product differentiation strategy).⁷⁰ The logic of either of these strategies can be viewed as trying to delay the development of the assumed conditions of perfect competition, so as to delay its long-run conclusions of zero economic profit.

Porter's position is that these competitive profits are intrinsically endangered and thus need special strategies to be preserved. Whether these strategies will make these firms escape their competitive positions and achieve market power, or remain in competitive industries with higher surpluses, is not discussed further. But we could assume, that some will remain price takers without market power in competitive industries. Thus, indirectly supporting the assumptions that some competitive firms will enjoy competitive profits – particularly those that follow the strategies discussed by Porter.

3.C. Empirical evidence

It is difficult to find empirical evidence of competitive profits, given that the existence of profits has come to mean the existence of market power. Although there is no clear, agreed upon way, to measure market power the most common definition used by economists is to measure profits instead. Another reason for lack of empirical evidence, is that scholars interested in distributive projects explain that surplus ready for distribution comes from monopoly profits – as we will explain later.

These positions show that competitive profits, although implicitly assumed, are considered transitory and endangered. There is little evidence of the existence of competitive profits, beyond these implicit assumptions. This is to a large extent due to the strong position of the economists that is adopted by most antitrust scholars to consider these profits signs of market power.

Based on the US Census Bureau's Economic Surveys – using CR4, CR8, CR20 and CR50 as indicators of concentration – many competitive sectors are found with CR8 levels below 30%. These include the national commercial banking sector; steel product manufacturing; plastic products manufacturing; industrial machinery manufacturing; and apparel manufacturing; constructing; and transportation and warehousing, amongst many others. Other markets that have proven to be competitive using the same US Census Bureau's Economic Surveys include offices of lawyers, marketing consulting firms, architectural services, portfolio management, and telemarketing bureaus.

Some of these are summarized in the table below.

⁷⁰ Michael Porter, *COMPETITIVE STRATEGY: TECHNIQUES FOR ANALYZING INDUSTRIES AND COMPETITORS* (1998).

Industry	CR Measure	Revenues of largest firms as percentage of total sales, shipments or revenues 2017
Commercial banking	4 largest firms	24.6
Commercial banking	8 largest firms	33.4
Commercial banking	20 largest firms	48.4
Commercial banking	50 largest firms	65.5
Steel product manufacturing from purchased steel	4 largest firms	13.0
Steel product manufacturing from purchased steel	8 largest firms	21.3
Steel product manufacturing from purchased steel	20 largest firms	39.6
Steel product manufacturing from purchased steel	50 largest firms	61.8
Plastic products manufacturing	4 largest firms	8.5
Plastic products manufacturing	8 largest firms	12.8
Plastic products manufacturing	20 largest firms	20.5
Plastic products manufacturing	50 largest firms	31.7
Industrial Machinery Manufacturing	4 largest firms	14.4
Industrial Machinery Manufacturing	8 largest firms	19.2
Industrial Machinery Manufacturing	20 largest firms	30.0
Industrial Machinery Manufacturing	50 largest firms	43.5
Apparel manufacturing	4 largest firms	6.0
Apparel manufacturing	8 largest firms	10.6
Apparel manufacturing	20 largest firms	19.7
Apparel manufacturing	50 largest firms	32.4
Construction	4 largest firms	2.2
Construction	8 largest firms	3.4
Construction	20 largest firms	6.4
Construction	50 largest firms	10.6
Transportation and Warehousing	4 largest firms	17.9
Transportation and Warehousing	8 largest firms	26.4
Transportation and Warehousing	20 largest firms	34.2
Transportation and Warehousing	50 largest firms	42.8

What is now interesting to explore are the profits of the largest firms in each of these sectors. And as can be seen in the appendix, the profits of the largest firms in each of these sectors show consistent profits that are relatively stable over a period of 10 years. This illustrates that surpluses or profits can be generated in competitive markets over a long period of time. Whether these profits will in an even longer-run reach zero, cannot be determined. The longevity of the profits (here illustrated over a decade) is sufficient to consider policies aimed at redistributing these profits.

Part IV. Techniques for Reallocating Competitive Profits

As we noted in the introduction, competitive profits whose theoretical possibility and empirical probability we have established, constitute an asset available for state reallocation through various mechanisms. In this section, we describe techniques for accessing competitive profits in our two cases of captive markets (including the famous beachfront property, racially segregated low-income neighborhood housing, suburban housing development and occupational licensing) and locational advantages (including agglomeration effects). For each case we will discuss the techniques of price regulation (for example rent control), profits and sales taxation, as well as mandates (for example environmental, social and governance (ESG) mandates and real estate development exactions).

In this part of the paper we are not arguing in favor of reallocation of competitive profits as a general policy, or for doing it in particular situations, or for employing any particular technique to achieve it when it is deemed desirable. Our goal is to clarify how the options work so as to inform the framework for making those ethical/political decisions.

4.A. Reallocating captive market surpluses through profits taxes and price regulation (e.g., rent control)

For captive markets the obvious way to appropriate competitive profits for revenue purposes is through a profits tax. In the stylized hypothetical we proposed at the beginning of Part II we assumed that all the owners of the beachfront properties or landlords in the segregated low-income neighborhood have the same cost function. In that case, a single uniform profits tax could be set up to take up a part or the whole surplus of rent above cost without causing owners to withdraw or deteriorate their units. Where cost-curves vary, the amount of the tax would vary as well. Landlords whose rental income is enough to cover the opportunity cost of the investment would stay in business, again as we noted per the Ricardian analytic.

Of course, the obvious alternative for the segregated neighborhood would be to treat tenants as stakeholders and impose rent control (administered to take into account landlord cost) for their benefit. In modern anti-gentrification rent control, the owners of controlled units profit as long as rents exceed their costs.⁷¹ The imposition of the scheme reduces the market value of controlled units and therefore imposes a one-shot capital loss on their owners. When market prices have adjusted to the new income stream, landlords no longer have an incentive to disinvest.

Modern schemes typically do not apply to new construction. Again, contrary to predictions, experience shows that speculation that new units will be eventually controlled is not enough to discourage new construction. The scheme restricts the availability of units and sites for middle and upper income development because landlords cannot withdraw their units to take

⁷¹ Molly S. McUsic, *Reassessing Rent Control: Its Economic Impact in a Gentrifying Housing Market*, 101 Harv. L. Rev. 1835 (1988). They are not protected against market decline. And the scheme includes prohibitions against switching controlled units out of the scheme and against “cold plating” them through improvements that would make them unaffordable. The owner becomes in effect the manager of a semi-public social asset.

advantage of gentrifying demand. The resulting shortage generates a bonus for new construction.

A third alternative, the one proposed by Bruce Ackerman in the article already mentioned, is to require landlords to increase their investment in their units, improving amenity. If all landlords are price takers, competition will force them to “eat” the cost out of surplus.⁷²

4.B. Reallocating competitive profits from locational advantages

Here the techniques for reallocation that we will discuss are profits taxes and sales taxes.

4.B.1. Taxes and mandates measured according to profits

A competitive profits tax has advantages over sales taxes. Taxes on the firm’s profits are absorbed by the firm since, by hypothesis, these firms are price takers. They are not able to raise the price in response to the tax, so they will have to absorb it from their cost-advantage-generated surpluses. Remember that the cost advantaged firms choose a production point on their marginal cost curves short of the surplus maximizing point at which $MC = P$. At that point price just covers cost and total profit, which has been more and more slowly increasing as production increases, is at its maximum. We argued in Part III that before that point is reached the firm will in all probability decide to stop increasing production because the firm has alternative uses for its working capital that will yield more than the diminishing returns from further expansion of this line of production.⁷³

Suppose that the tax is not confiscatory but graduated. The firm’s old solution will no longer be optimal because each increase of production, starting from the maximum profit per unit at the lowest point of the AC curve, will incur a slowly increasing tax with increasing marginal rates. Remember that firm will stop increasing production when the profit on the next unit is less than the return to alternative uses. The tax means that the firm will reach that point sooner than before the tax.

⁷² Ackerman, *supra* note 48.

⁷³ The analysis follows the Ricardian argument that taxing the surplus of the farmer with the more fertile land will not change the farmer’s output, but will only reduce his surplus. See Ricardo *supra* note 43 and Edwin R.A. Seligman, *On the Shifting and Incidence of Taxation*, 7 Pub. Am. Econ. Ass’n 7 (1892). Our case is distinguishable from Seligman’s— as ours is not a monopoly – but the same analytics apply to surplus value of our competitive firms. The analytics of the developed by Edwin R. A. Seligman writing on the shifting of taxation in 1892 are as following: He argued that taxes on the profits of monopolies will be borne by the monopolists, whereas taxes on competitive firms - in specific market conditions, especially when these firms have no surpluses - will be shifted onto the consumers. The reason is that the monopolist will always be charging the highest price at which he can sell the greatest number of products. Thus, a tax on a monopoly’s profits is guaranteed to be borne by the monopolist himself. If the consumers were willing to pay more, then the monopolist would have increased the price before the tax, given that monopoly price is always at the point of the greatest monopoly profits. Thus, a tax on these profits does not increase prices, because such increased price would not be consistent with the maximum monopoly revenue. This assures that a tax on monopoly profits must therefore fall wholly on the monopolist. The same analytics, particularly regarding the absorption of the tax, can be applied to our analysis here of taxing competitive firm surpluses.

Note that the reduced production by the low-cost firm will be taken up by the standard cost firms. There will be an efficiency loss as these units will be produced at higher cost than the ones they replace.

4.B.1.a Locational profits appropriated by owners of the land on which they are generated.

Locational profits are sometimes appropriated by the firm and sometimes appropriated by the landowner in the form of rents. As we explained in section 2.C.2. above on Rents: *Locational advantages based on transport cost like producer advantages based on the variable fertility of the soil,*⁷⁴ *generate surplus, but to whom the surplus is allocated is a function of the ownership of land in the location.* This means that reallocating competitive profits has to take into account that the profits may be appropriated by the owners of inputs who sell or rent them to the firm, in exchange for a share of the firm's profits.

For example, a firm with a transport cost advantage may have to give up some of the profits reflecting this advantage to the owner of the land. As we explained above, if in the favorable location, land for the firm's purposes e.g. industry is plentiful and cheap, because the price is determined by less valuable uses, e.g. agriculture, then the firm will reap all of the competitive surplus and by rent only in the amount charged for agricultural use.

On the other hand, if land in the favored location is valued for other high valued uses, so that the firm is in competition for land, then the owners of the land will appropriate some of the surplus depending on the degree of shortage. It may also be the case that land is expensive for the firm with the locational advantage, because there are many such firms in the location competing for land, as in agglomeration effects. In either case, if we wish to reallocate the competitive profits through a profits tax or an ESG mandate then we have to find a way to reach the part that is being appropriated by the landowner.

A general requirement that every landowner present an accounting of the part of his rental income that is a product of the competitive profits or the profits in general of his tenant would seem obviously unworkable. On the other hand, a special tax targeted at rents from all tenants that enjoy a particular locational advantage, whether competitive or not, could be workable.

The obvious way to do that is by imposing the tax or mandate on the part of the landlords' rent payments that reflect the competitive profits of the tenant firm. The landlord's tenant can pay this increased rent because of its competitive surplus. We would impose the tax or mandate on the landlord by an amount equal to what the landlord gets from the tenant firm above the rent that the landlord could get from the next most valued use. If we allocated more than that, then the landlord will not rent to the firm in this use and the output will be curtailed. This allocation is like the Ricardian taxes on the value of land rented to farmers which have no efficiency costs.

Here is an alternative: When the IRS locates on a firm's corporate income tax returns that it pays substantial sums in rent in an area that has a locational advantage, then the IRS notifies the firm that it will be in the future subject to a tax or a mandate in the amount of the rent above "a normal competitive rent" for this kind of property in the area. In this scenario, the IRS will

⁷⁴ See David Ricardo, A GENERAL THEORY OF TAXATION and Duncan Kennedy, *Law Distributes I*, *supra* note 42.

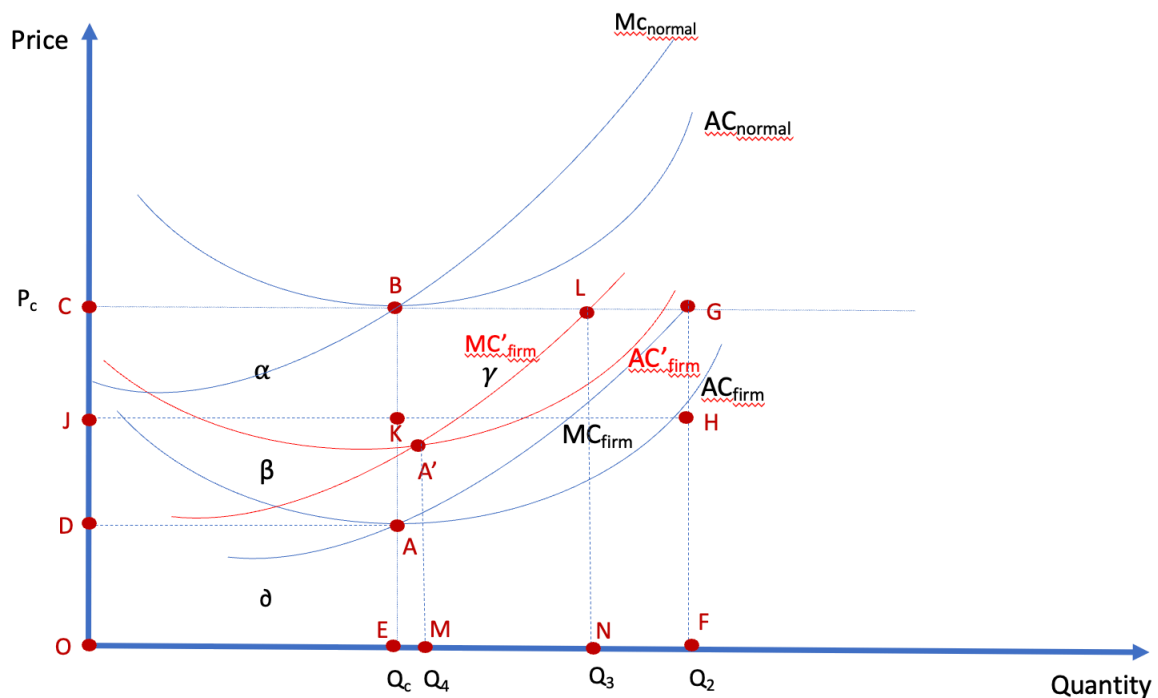
also notify the landlord that in the future the tenant firm will be subjected to this tax or mandate. At that point, we assume that there will be a revision of the lease so that the tenant is paying only the competitive rent to the landlord and pays the remainder of the old rent to the government.

The major efficiency problems would likely be identifying the targets correctly where it is not automatic and inducing compliance.

4.B.2. Sales taxes

Unlike the option of measuring competitive profits directly and then reallocating them, a simpler but cruder method would be to identify a subcategory of firms, with competitive profits, for example all the firms in a region with location advantage, and then impose a tax on those firms alone on a per unit sales basis. If the output of the group selected is a small enough share of the market so that none of their increased cost will be passed along in a higher competitive market price, then there will be no welfare loss to consumers. What there will be, will be a redistribution between the advantaged and the standard firms.

Once they are identified, the tax pushes up the affected firms' MC curves to MC' as in Figure 8 below. This in turn will push up their average cost curve to AC' and will necessarily reduce their output at least to Q_3 (at the intersection of MC' and P) as they are operating in a competitive market, where they are price takers, and thus cannot control the price at which they sell their product. Production beyond Q_3 would sell at a loss at price P. Before the imposition of the tax, the firm chose a quantity of production and therefore of competitive profit at which more profit but at higher cost just equaled the opportunity cost of using the capital here rather than in the best alternative. The competitive firm will now operate somewhere between minimum average cost (now A') and the point at which MC=P (L), in other words at Q_3 . The exact output point chosen is indeterminate.

Figure 8

Efficiency consequences of a sales tax

If the firm reduces its output in response to the mandate, then there will be an efficiency gain because the firms' remaining output will be produced for a lower resource cost than the pre-mandate units – that is moving to a point to the left on the marginal cost curve. On the other hand, the reduced output of the firm will be replaced by other firms which by hypothesis have the standard industry cost curve and their increased output will involve more resource cost than did the units previously provided by our firm. The aggregate efficiency consequences are indeterminate.

4.C. ESG Mandates

ESG mandates are supposed to make the firm act in the interest of all stakeholders to promote long-term value (“stakeholder governance”), and not focus solely on maximizing shareholder value (“shareholder primacy”).⁷⁵ Stakeholder governance considers the impact on employees, customers, communities and the environment.⁷⁶ Since 2004, an increasing number of boards

⁷⁵ Caley Petrucci and Guhan Subramanian, *ESG Amnesia in M&A Deals* (working paper 2024) p.7. 8-13 (“The arc of governance is clear: a growing rejection of shareholder primacy and an increasing embrace of stakeholder governance.”).

⁷⁶ UN Global Compact Report, *Who Cares Wins: Connecting Financial Markets to a Changing World*, The Global Compact (2004).

of directors of major corporations have adopted these mandates voluntarily or under stakeholder pressure rather than as a result of any kind of state compulsion.⁷⁷

Scholars that have looked to firm surpluses for redistributive purposes, such as Mark Roe writing on firm's potential investments in corporate social responsibility (CSR) programs or ESG investments, have mainly assumed that they are or will be financed out of monopoly profits.⁷⁸ The assumption is that competitive profits are either non-existent, non-sufficient or simply transitory. Roe states that “[h]ighly profitable firms—often in weakly competitive markets—do better for their *stakeholders* than those in highly competitive markets.”⁷⁹ He further argues that, “firms compete on costs, services, and quality. In highly competitive markets, firms make profits, but competition drives their profit level down to the minimum that capital providers insist on for providing the capital.”⁸⁰ This has led him to conclude that,

In principle, a firm in a highly competitive market that accedes to expensive new socially conscious corporate purpose pressures will eventually disappear. While realistic market constraints are rarely that severe—and corporate purpose pressures rarely so costly—such a firm in a competitive market will still be compromised. If the corporate purpose costs are large, it must raise its price or cut its services. If it cannot do either because of competition, it will shrink. It will have trouble raising new capital. In contrast, firms with market power in weakly competitive markets do not face the same barrier to incorporating costly CSR and ESG measures into their operations.⁸¹

In this discussion Roe is analyzing the impact of decisions of boards of directors to adopt ESG mandates presumably in response to some kind of social activism and conceivably in cases where they think that the adoption of the mandate will make their product more attractive to consumers. We agree with Roe that firms with market power are more likely to adopt voluntary ESG than the competitive firms we have been discussing. Roe adopts the standard analysis which denies or at least ignores profits in competitive industries. It seems that redistribution of these profits without government compulsion is even less likely than it is for industries with concentrated market power.

In the current debate about ESG mandates for large corporations, there is a wide variety of critiques of the proposals. One of the most widely asserted is that mandates will be inefficient,

⁷⁷ See Petrucci and Subramanian, *supra* note 75 at 8 for an account of these example of ESG diffusion.

⁷⁸ Roe, *supra* note 62.

⁷⁹ *Id.* at 18 (emphasis added).

⁸⁰ *Id.* at 11.

⁸¹ *Id.*

raising prices for consumers and in some cases forcing businesses to close.^{82,83} From the left, they have been criticized as likely ineffectual and even facilitating whitewashing or greenwashing corporate behavior.⁸⁴

Contrary to these critiques, competitive profits are actually a plausible source of significant resources for ESG mandates if they were appropriated to profits taxes in either the captive markets or locational advantage cases, the mandate itself will not have efficiency consequences because it will not modify the firm behavior. Of course, enforcement always involves some efficiency costs. Funding mandates through sales taxes which do have direct efficiency consequences seems in any case an implausible way to carry out the program.

⁸² These critiques are two of four that have often been leveled against ESG mandates. We will not deal with the other two – namely that (1) ESG are vaguely and sloppily designed and (2) that they are unconstitutional taking of shareholder property. And that they are so badly conceived and organized that they will end up hurting the people they are intended to help.. Kristen Altus, *Biden's ESG rule will 'hurt America's retirement security,' GOP lawmaker warns*, FOX NEWS (Feb. 28, 2023), <https://www.foxbusiness.com/politics/biden-esg-rule-americas-retirement-security-gop-lawmaker>; Phil Gramm & Mike Solon, *The 'Stakeholder Capitalism' War on the Enlightenment; ESG advocates would return society to the communal and stagnant world of the Dark Ages*, WALL STREET JOURNAL (May 23, 2022), <https://www.wsj.com/articles/stakeholder-capitalism-enlightenment-blackrock-esg-index-fund-passive-invest-elizabeth-warren-bernie-sanders-retirement-11653313715>; *ESG 'hurts the poor,' Experts don't buy it*, ClimateWire (June 15, 2023); Gonzalo Schwarz and Magatte Wade, *The Poor Get Poorer with ESG Investing*, NEWSWEEK (Aug. 09, 2023), <https://www.newsweek.com/poor-get-poorer-esg-investing-opinion-1818320>.

Avery Ellfeldt, *There's No Evidence for Claims That Environmentally Friendly Investments Are Bad for the Poor*, SCIENTIFIC AMERICA (Jun. 15, 2023), <https://www.scientificamerican.com/article/theres-no-evidence-for-claims-that-environmentally-friendly-investments-are-bad-for-the-poor/>

⁸³ They are even attacked as unconstitutional takings of shareholders' property interests in maximized shareholder value... Phil Gramm & Mike Solon, *The 'Stakeholder Capitalism' War on the Enlightenment; ESG advocates would return society to the communal and stagnant world of the Dark Ages*, WALL STREET JOURNAL (May 23, 2022), <https://www.wsj.com/articles/stakeholder-capitalism-enlightenment-blackrock-esg-index-fund-passive-invest-elizabeth-warren-bernie-sanders-retirement-11653313715>

⁸⁴ Betsy Atkins, *ESG: Environmental, Social, Greenwashing?*, FORBES (Jan. 17, 2022), <https://www.forbes.com/sites/betsyatkins/2022/01/17/esg-environmental-social-greenwashing/?sh=4d952d5e4e31>; Jeff Reeves, *What the SEC Names Rule Means for ESG Funds and Greenwashing*, U.S. NEWS (Oct. 26, 2023), <https://money.usnews.com/investing/articles/what-sec-names-rule-means-for-esg-funds-greenwashing>; Harriet Agnew, Adrienne Klasa & Simon Mundy, *How ESG investing came to a reckoning*, FINANCIAL TIMES (Jun. 06, 2022), <https://www.ft.com/content/5ec1dfcf-eea3-42af-aea2-19d739ef8a55>; Michael Hiltzik, *The GOP is now complaining about environmentally responsible investing*, LOS ANGELES TIMES (Jul. 1, 2022), <https://finance.yahoo.com/news/column-gop-now-complaining-environmentally-130052909.html>. Matthew Lau, *ESG and CSR Have Been Exposed for What They Are*, NATIONAL REVIEW (Mar. 15, 2023), <https://www.nationalreview.com/2023/03/esg-and-csr-have-been-exposed-for-what-they-are/>, Stan Hoe, *What is ESG investing and why do some hate it so much?*, AP (Mar. 1, 2023), <https://finance.yahoo.com/news/esg-investing-why-hate-much-205634798.html>. Dhimitris Lefteri, *What ESG Investors Must Demand For Credible Sustainability Reporting*, FORBES (Jun. 5, 2023), <https://www.forbes.com/sites/columbiabusinessschool/2023/06/05/what-esg-investors-must-demand-for-credible-sustainability-reporting/?sh=209c55982fd7>.

Conclusion: A Note on Equities

In this paper we claim to have established the existence of competitive profits in a wide number of different situations. They are common in part because legal regulation of all aspects of economic life creates large differences both in the costs that firms confront in their markets and in their internal organization and in the rents those regulations make available. We have also outlined the way sales taxes, profits taxes and exactions work as mechanisms to appropriate competitive profits.

We have dealt in some detail at various points in the paper with the efficiency critique that applies to all redistributive proposals aimed to access competitive surplus. There we have aligned ourselves with the familiar Ricardian claim (also made by Seligman) that directly accessing a firm's surplus will not cause it to alter its market behavior but will rather force it to "eat" the charge. It seems worth it to dwell on this point because the claim of efficiency costs of redistributive proposals of all types is an important piece in the narrative that mobilizes neoclassical economic techniques in defense of the economic and social status quo. While of course whether or not the measures we have described would be a good idea or a bad idea depends on the particular circumstances and of course on the political/ethical orientation of the observer. What we hoped to have shown is that the endless reiteration of a global efficiency critique that ignores the particular conditions of surplus production in a particular market is an abuse. And we have provided the analytics for identifying more resources available for distribution at a smaller cost than the literature has suggested.

Appendix

Profits in the largest firms per sector

Steel product manufacturing from purchased steel											
<i>Steel Dynamics Inc.:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	3,214	551	671	1,258	813	382	-130	157	164	278	141
Net income/	17%	6%	6%	10%	8%	5%	-2%	2%	2%	3%	2%
Revenue											
<i>Bekaert Corporation:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions EUR)	886	558	527	527	702	657	598	486	482	479	651
Net income/	18%	15%	12%	12%	17%	18%	16%	15%	15%	14%	20%
Revenue											
<i>Tenaris Global Svcs USA Corp.:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	1,053	-642	731	874	536	59	-74	1,181	1,574	1,701	1,421
Net income/	16%	-12%	10%	11%	10%	1%	-1%	11%	15%	16%	14%
Revenue											
Plastic products manufacturing											
<i>Newell Brands, Inc.:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	572	-770	107	-6,918	2,749	528	350	379	475	401	125
Net income/	5%	-8%	1%	-80%	19%	4%	6%	7%	8%	7%	2%
Revenue											
<i>Berry Global Group, Inc.:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	733	559	404	496	340	236	86	62	57	2	-299
Net income/	5%	5%	5%	6%	5%	4%	2%	1%	1%	0.04%	7%
Revenue											
<i>Aptar Group, Inc.:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	244	214	242	195	220	206	199	192	172	162	184
Net income/	8%	7%	8%	7%	9%	9%	9%	7%	7%	7%	8%
Revenue											
Industrial Machinery Manufacturing											
<i>Stanley Black and Decker:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	1,599	1,186	956	605	1,227	968	884	761	490	884	675

Net income/											
Revenue	10%	9%	7%	4%	10%	8%	8%	7%	4%	9%	7%
Heico Corporation:	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	304	314	328	259	186	156	133	121	102	85	73
Net income/											
Revenue	16%	18%	16%	15%	12%	11%	11%	11%	10%	9%	10%
SPX Flow, Inc.:	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)		6	-95	44	46	-382	88	135	131	127	58
Net income/											
Revenue		0.4%	6%	2%	3%	-25%	4%	5%	5%	4%	3%
Apparel manufacturing											
Cintas Corporation:	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	1,111	876	885	843	481	694	431	375	315	298	247
Net income/											
Revenue	16%	12%	13%	13%	9%	14%	10%	9%	7%	7%	6%
Under Armour, Inc.:	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	360	-549	92	-46	-48	198	233	208	162	129	97
Net income/											
Revenue	6%	-12%	2%	-1%	-1%	4%	6%	7%	7%	7%	7%
Hanesbrands, Inc.:	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	77	-76	601	540	62	539	429	405	330	165	267
Net income/											
Revenue	1%	-1%	9%	8%	1%	9%	7%	8%	7%	4%	6%
Carter's, Inc.:	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	340	110	264	282	303	258	238	195	160	161	114
Net income/											
Revenue	10%	4%	7%	8%	9%	8%	8%	7%	6%	7%	5%
Commercial Banking											
JP Morgan Chase (Commercial Banking Division):	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in million USD)	5246	2578	3958	4237	3539	2657	2191	2635	2648	2646	2367
ROE	21%	11%	17%	20%	17%	16%	15%	18%	19%	28%	30%
Bank of America (Consumer Banking Division):	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in million USD)	11891	6507	1296 2	12029	8202	7173	6649	7096	6647	5321	7447

ROE	31%	17%	35%	33%	22%	21%	20%	24%	22%	23%	34%
<i>Citi Group (North America Global Consumer Banking):</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in million USD)	5934	-46	3157	3340	1991	3358	4308	4487	3918	4814	4095
ROE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ROA	2.23%	-0.02%	2.97%	1.34%	0.80%	1.42%	2.06%	2.12%	1.92%	2.80%	2.48%
Costruction Sector Data											
<i>DR Horton, Inc.:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in million USD)	4175	2373	1618	1460	1038	886	750	533	462	956	72
ROE	31.6%	22.1%	17.2%	17.6%	14.4%	14.1%	N/A	N/A	N/A	N/A	N/A
ROI	37.9%	24.6%	18.1%	20.2%	16.6%	15.4%	12.8%	11.1%	N/A	N/A	N/A
<i>Tri Point Homes, Inc.</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	469	282	207	271	187	196	207	84	-149	61	36
ROE	20%	13%	9%	13%	10%	11%	12%	6%	N/A	N/A	N/A
<i>Pulte Group, Inc.:</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	1946	1407	1017	1022	447	603	494	474	2,62	206	-210
ROE	28%	24%	20%	23%	10%	13%	10%	10%	56%	10%	-11%
<i>M.D.C. Holdings, Inc.</i>	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Net income (in millions USD)	574	368	238	211	142	103	66	63	314	63	-98
ROE	22%	17%	13%	13%	10%	8%	5%	5%	26%	7%	-11%