



# Competition is (still) a tough weed: A review essay of Thomas Philippon's *The great reversal: How America gave up on free markets*

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## Abstract

In *The Great Reversal*, Philippon makes the case that competition in America has weakened during the past two decades. His book contributes to the rapidly developing literature on the macroeconomic consequences of market power. I argue that Philippon fails to convincingly support his hypothesis because (1) he does not consider competition as a process operating on several margins, with the price being only of them, and (2) the available empirical data does not unambiguously show a rise in market power. Philippon's work suffers from similar flaws as the "structure-conduct-performance" paradigm. I also incorporate recent attempts to estimate aggregate market power and explain why the methods used for such estimations are calculated by making assumptions over which margins entrepreneurs compete and suffers from serious knowledge problems. Finally, I offer an alternative view of competition, which focuses on how and at what speed rents are being dissipated instead of the markup of price over marginal cost.

**Keywords** Anti-trust · Market process · Market power · Competition

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## 1 Introduction

Thomas Philippon's *The Great Reversal: How America Gave Up on Free Markets* is a detailed examination of America's competitiveness in relation to investment,

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prices, rent-seeking, growth and the distribution of income. The author, relying on empirical research he has recently conducted,<sup>1</sup> develops three main theses, which can be summarized as follows. First, competition has declined in the U.S. since the 1990s. Second, the relaxation of anti-trust regulation and new barriers to entry are the reason for this decline. Third, the lack of competition has major macro-economic and distributional consequences (especially a decline in the labor share and the rise in inequality).

Philippon's approach is decisively empirical. We should, he claims "always look at the data first." (Philippon 2019, p. xi). This approach makes the book instructive with respect to some trends and with respect to the empirical challenges faced by economists in this area of research. It is unlikely that having read *The Great Reversal*, one would not be at least slightly more worried about the state of competition in the United States. Yet, economics is not statistics (Leeson 2020) and Philippon's approach fails to convincingly give support to the alleged decline in competition. The reasons for this failure are not only empirical, but also methodological and conceptual.

In many ways, Philippon's book is truly the resuscitation of the still recently near-dead "structure-conduct-performance" (SCP) paradigm. Yet, it is not clear what was responsible for the regained popularity of this paradigm, which was broadly rejected 30 years ago and is still largely rejected today in the field of industrial organization (Berry et al. 2019). The author's line of research seems to indicate a change in attitude toward competition and how markets work rather than a fundamental change in the available empirical evidence. Many economists have recently come to consider competition as a delicate flower instead of a tough weed, to use George Stigler's analogy. Philippon admits this, and during his research, he discovered "how fragile free-markets are" (2019, p. 287). But the delicate flower view, I will argue, is grounded in a misleading view of what competition actually is and how it operates under alternative economic systems.

The rest of this essay is structured as follows. Section 2 explains why the new research on market power, to which Philippon contributes, fails to seriously address the methodological challenges to the SCP approach, which were put forward since the 1950s. In addition to significant limitations faced when trying to measure competition, the current state of the empirical evidence is not such that we can definitely conclude that the U.S. has become less competitive. Recognizing that competition is present on multiple margins leads us to significantly revise the interpretation of the stylized facts given in *The Great Reversal*. In Section 3, I argue that the emphasis on concentration and markups is misplaced once we consider competition as a dynamic process in which rents are endogenously eroded. What matters is not the level of rents but how fast and at what cost they are being dissipated under alternative institutional arrangements. Section 4 concludes.

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<sup>1</sup> Especially his research on declining competition in the US (Gutiérrez and Philippon 2017b), the fall in investment (Gutiérrez and Philippon 2017a), restrictions on free entry and lobbying (Gutiérrez and Philippon 2019b), comparative institutional analysis between the European Union and the US (Gutiérrez and Philippon 2018) and super-star firms (Gutiérrez and Philippon 2019a).

## 2 Multiple margins of adjustment

### 2.1 Structure-conduct-performance reborn

In the 1950s, economists adopting the SCP paradigm argued that the structure of an industry (quantified by how much concentration prevailed in a given market) determines the conduct of economic agents, which in turn determines economic performance. This paradigm, embodied in the “Harvard School,” (Philippon 2019, p. 87) interpreted the many studies who found a positive correlation between profitability or markups and concentration as evidence of collusion or anti-competitive behavior. Critics of this view, especially members of the Chicago School, did not deny this correlation but contested the explanation for it (Posner 1979).

In the Chicago School, the focus shifted from market concentration to trying to explain how excessive profitability persists without attracting new entrants (Posner 1979; Lamoreaux 2019). Stigler (1983, p. 67) argued a barrier to entry is “a cost of producing that must be borne by a firm which seeks to enter an industry but is not borne by firms already in the industry.” With equal access to technology, economies of scale are not a barrier to entry, and contestability can put a check on economic profits. Once Stigler clarified the concept of barrier to entry, the idea that they may be commonly encountered was greatly diminished. Stigler insisted that an economic explanation for the persistence of economic profits needed to be developed. Looking at correlations between concentration and profitability is only a stylized fact until it is interpreted through the lenses of economic theory. Yet Stigler’s lessons seem to have been forgotten. For instance, Philippon never analyzes what those barriers to entry could be despite dedicating chapter 5 to the “Failure of free entry.” It is not clear what in recent years could have made markets less contestable.

One major problem with the SCP paradigm is that the relationship between structure and conduct collapses once we recognize that entrepreneurs do not compete uniquely on the output-price margin. Market competition also involves both rivalry with respect to inputs and competition on multiple non-price margins. Once those multiple margins on which people compete are considered, industry concentration or market structure must be considered as endogenous to the competitive process rather than an explanatory variable for agents’ decisions. Demsetz (1973) explained how there is not a single way to interpret the relationship between economic profits and concentration. Economic profits could be large precisely because entrepreneurs have superior forecast ability, because of unexpected changes in the demand for a product, or because of the superior productive efficiency of a particular firm. Demsetz’s critique is sometimes interpreted as a statistical argument about reverse causality and endogeneity (Berry et al. 2019). Yet his underlying argument was economic, not statistical. It was really about how concentration and profits can be the result of an entrepreneur’s superior foresight as they compete on multiple margins such as what input to buy, what process of production to be adopt, what information to communicate, and how to manage their firm. In Demsetz’s words, “It is not until the experiments are actually tried that we learn which succeed and which fail” (1973, p. 3). Subsequent research showed that practices which were usually considered anti-competitive, such as resale price agreements with retailers to force retailers to compete on non-priced margins (Telser 1960) and even horizontal price fixing (Dewey 1979), could in fact be a result of competitive behavior.

Despite those decisive criticisms, Philippon's work is nothing less than a resurgence of SCP. He repeatedly uses concentration as evidence for a decline in competition and presents correlations between concentration and profits, productivity etc. without really providing an economic explanation for those relationships. When not interpreted in detail, concentration ratios do not tell us much. For instance, Rossi-Hansberg et al. (2018) find that while market concentration has increased at the national level, it has decreased at the local level since the 1990s. Defining a market or industry to compute those ratios is also problematic, especially when much of the process of economic growth consists in expanding the number of available substitutes (Mises 1949). Finally, to prove that higher concentration ratios such as the market share of the four biggest firms (CR4) lead to higher markups because of collusion, one has to show that smaller firms in the industry also restrict output, raise prices, and have higher markups. Collusion cannot be collusion if bigger firms vigorously compete with smaller firms. Yet Philippon, including in some of his past work (Covarrubias et al. 2019), never shows evidence of collusion. Once we adopt the view that prices communicate information (Hayek 1945) to entrepreneurs who do not really know what demand curve they face and what production functions their competitors have adopted, the "unconscious parallelism" of Cournot competition seems unlikely to be a pervasive problem.

Part of recognizing that competition does not simply concern output prices is to take "Williamson's trade-off" (Williamson 1968) seriously into account. A small decrease in average cost due to concentration can easily swamp the negative welfare effect resulting from a potential weakening of output price competition. Yet, Philippon (2019, p. 89) argues that "any merger that increases market power is bound to result in losses with regard to consumer welfare." Here Philippon is clearly wrong. An increase in productive efficiency more than offsetting a fall in allocative efficiency will in fact increase consumer surplus in general even though consumer surplus in that particular market is reduced. Why? Because more factors of production will be available to produce other consumer goods. To illustrate, recall supply curves represent the marginal opportunity cost of increasing production. If marginal cost for good X is equal to \$10, it means that producing one additional unit of X implies forgoing the production of other goods whose value would amount to \$10. If concentration in the market for X increases both market power and productive efficiency, overall consumer surplus may increase, even if the price of X increases. The improvement in productive efficiency will make factors of production more available in alternative lines of production. In other words, other markets will experience an increase in supply, a fall in prices and increased consumer welfare. Philippon suggests that monopoly profits are dissipated in share buybacks and are not reinvested. While such reasoning is surely attractive to many readers, it is not correct. Share buybacks is an efficient way to improve the allocation of investment from sectors with poor growth opportunities to promising high productivity sectors. What matters is real resources, not first-round transfers of money. Anti-trust authorities trying to maximize consumer welfare in each individual market could reduce overall consumer welfare.

Even then, Philippon is aware that "good" concentration may increase productivity. Yet, he claims, the relationship between concentration and productivity, as measured by total factor productivity (TFP), which was positive in the 1990s,

became negative in the late 2000s (Philippon 2019, p. 77).<sup>2</sup> Even if we put aside the acute measurement problems associated with TFP, the negative correlation between TFP and concentration does not square with some other empirical findings.<sup>3</sup>

For instance, De Loecker et al. (2020) find that most of the rise in markups is due to a within industry redistribution of market shares from low to high markups firms while the median firm's markup has not changed. This would seem to suggest that concentration has mostly been the result of a redistribution of market shares toward the most efficient firms. Similarly, Autor et al. (2019) find that the rise in concentration was accompanied by decreasing profit margins within firms and increasing productivity as measured by TFP. Finally, Philippon's result is hard to square with the fact that Europe has experienced lower TFP growth in the 2000s than the US (van Ark et al. 2008). Yet Philippon repeats again and again that concentration is associated with lower productivity growth while Europe has become more competitive than America. Of course, other factors may be at play here, but Philippon does not even try to counter this figure. Neither does he try to square his results to those found by Autor et al. (2019) or De Loecker et al. (2020) among others. The rise in concentration may have been the result of competitive behavior aimed at increasing productive efficiency and cannot be used as evidence for the recent weakening in competition.

One of the most puzzling things about *The Great Reversal* is that no evidence of output restriction is presented. The standard monopoly model contains two clear predictions and a third less clear one. The first two are that when a monopoly is introduced, prices need to go up (above marginal cost) and output must shrink. The third is that profits will go up if the firm's owners are able to appropriate the monopoly rent. Yet, evidence of output restriction is completely absent and evidence for raising prices is scarce to say the least.

The most detailed evidence on prices is presented in chapter 7. Philippon here presents the evolution of the Purchasing Power Parity (PPP) exchange rate relative to the market exchange rate between the U.S. and the E.U. as evidence of pervasive market power. In other words, it is shown, using the "Big Mac Index" and price indexes, that PPP adjusted prices have increased more in the U.S. than in the E.U. Omitting the problems associated with measuring purchasing power across countries, the relative price of the American Big Mac with respect to its European counterpart has increased faster than the relative increase in the American price level. This seems curious, to say the least, given Philippon's perspective as Mc Donald's has faced significant competition in the last two decades. The author, listing a number of possible alternative explanations, never actually investigates whether wages have increased more in the U.S. than in the E.U.

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<sup>2</sup> See also his work in Covarrubias et al. (2019).

<sup>3</sup> On the measurement issues, imagine that concentrated industries have increased quality of their product relatively more thus biasing inter industry measures of TFP. In other words, competition on non-priced margins is hard to account for in TFP measures. There are other fundamental problems. For instance, it is difficult to account for new factors of production being used in measures of TFP. Finally, if the input mix varies substantially between concentrated and non-concentrated industries, biased technological change will lead to diverging TFP growth rates which are not due to concentration.

## 2.2 On recent attempts to measure market power

In chapter 7, as fairly decisive evidence illustrating a lack of competition, Philippon presents a positive correlation between the rise of the American relative to European markup on the one hand and the American concentration ratio relative to the European concentration ratio on the other. But, in addition of the problems mentioned with using such correlations as evidence for lack of competition, Philippon calculates markups wrong. Instead of comparing prices to marginal cost in both Europe and the US, he compares prices to average labor costs while not addressing the potential biases which could follow from this approach, especially given the widely different dynamics in the European and American labor markets and the tendency for larger firms to be more capital intensive (Demirer 2020).

Let's assume, for the argument's sake, that Philippon had measured markups correctly. It would still not prove that the US economy is less competitive as competition does not operate on a single margin. Philippon (2019, 114), on the other hand, claims that economics is the "science of figuring out equilibrium prices." Let's see some of the issues with measuring markups which arise once it is recognized that competition does not simply occur with respect to output price. To do so, I use as an example the "production approach" to markup measurement, which has gained in popularity recently (De Loecker et al. 2020; Demirer 2020; Raval 2019a). Starting from the typical marginal cost formula derived from cost minimization:

$$\lambda_{it} = \frac{P_{it}^V}{\partial F_{it} / \partial X_{it}^V} \quad (1)$$

Where  $\lambda_{it}$  is marginal cost,  $F_{it}$  represents output,  $X_{it}^V$  represents any variable input used in the production process and  $P_{it}^V$  is the price of this variable input. Multiplying each side by  $\frac{X_{it}^V}{F_{it}}$  and rearranging Eq. (1) using the price of output  $P_{it}$ , we get:

$$\underbrace{\frac{\partial F_{it}}{\partial X_{it}^V} \frac{X_{it}^V}{F_{it}}}_{\text{OutputElasticity}} = \underbrace{\frac{P_{it}}{\lambda_{it}}}_{\text{Markup}} \underbrace{\frac{P_{it}^V X_{it}^V}{P_{it} F_{it}}}_{\text{RevenueShare}} \quad (2)$$

Since the revenue shares of output going to variable inputs can be readily known and that only firm-level data is needed to calculate markups, the production approach to markups has gained in popularity in the past few years. The only thing to be estimated to measure markups in (2) is the output elasticity. By the equimarginal principle, estimating markups using any variable input should yield the same results.

Economists have generally tried to measure the elasticity of output assuming a Cobb-Douglass production function or using a translog production function (Raval 2019a; Demirer 2020). With a Cobb-Douglas function, the elasticity of output is assessed by regressing the log of output on the log of each variable input. Yet this log-linear specification assumes that output elasticities are common across all firms in a

given industry<sup>4</sup> and that variation in variable input allocation between firms come exclusively from variations in input prices (Demirer 2020), an implication which is rejected empirically (Raval 2019b). Finally, the Cobb-Douglas approach also implies Hicks neutrality, meaning that technology does not impact the marginal rate of substitution between inputs<sup>5</sup> and that all firms in the same industry have the same ratio of revenue shares between different inputs, an assumption which is hard to reconcile with the empirical evidence (Demirer 2020).<sup>6</sup>

Raval (2019a) finds that the prevailing production approach to markups estimation yields wildly different results when using different variable inputs. Worse, he found that markups using labor are negatively correlated to markups using materials. Demirer (2020) argues that large firms have lower output elasticities with respect to their “flexible” inputs, suggesting that aggregate markups are overestimated unless we take into account labor-augmenting technological change. His estimates suggest that markup growth is much lower than that estimated in the recent literature.

But even when using so called non-parametric production functions, the fact remains that any estimated production function is unlikely to take into account every circumstance of time and place as well as potential factors of production such as entrepreneurial skills which are neither priced on the market nor produced. If there are as many production functions or more as there are firms, output elasticities cannot be estimated using firm level data.<sup>7</sup>

If estimating marginal cost using different variable inputs yields different results, and depends on different assumptions concerning the prevailing production function, which result should be used? There is often no straightforward answer except that it becomes mostly a judgment call which, contrary to entrepreneurs on the market, is not rewarded or punished by the profit and loss mechanism. But the problem is even deeper, if we go back to Eq. (1), we see that one of the crucial assumptions of the production approach is that firms are price-taking in the input market and, more importantly, that the price of inputs has been costlessly discovered, negotiated etc. If this is not the case (which it is not), “objective” costs (i.e. market prices) no longer equate individuals’ own subjective costs (Buchanan 1969). Similarly, notice that with changes in the quality of output across firms, the estimation of markups using the production approach becomes problematic.

Attempts to estimate production functions end up treating the firm’s problem as technical instead of economic. Mostly because of data limitation, estimations involve using variables about (aggregated) total output and (aggregated) inputs. For instance De

<sup>4</sup> Notice that there is no theoretical consideration to help us unambiguously define what can be properly considered an “industry.”

<sup>5</sup> Actually, the Cobb-Douglas production function predicts that the elasticity of substitution between labor and capital is unity. This also not confirmed by the empirical evidence (Gechert et al. 2019).

<sup>6</sup> Imagine we have the output elasticity of capital ( $\theta_K$ ) and labor ( $\theta_L$ ), the share of revenue going to capital ( $S_K$ ) and labor ( $S_L$ ) and the markup ( $\mu$ ). From Eq. (2), we know that  $\frac{\theta_K}{\theta_L} = \frac{S_K}{S_L}$ . Since one of the assumption of Cobb-Douglas is that firms in a same industry will have the same output elasticities, the share of output going to capital divided by the share of output going to labor is predicted to be constant across firms.

<sup>7</sup> Some economists in industrial organization remain skeptical of the macro estimates of markups. Berry et al. (2019, 50) warn: “The relatively narrow focus of industry-specific studies may frustrate economists who are accustomed to working with all firms in one model and dataset, as is often the case in macroeconomics and finance. But the nature of the demand, costs, and competitive setting that affect firm choices is inherently heterogeneous.”



Loecker et al. (2020) use the cost of goods sold (COGS) as their main variable measuring variable inputs. The underlying use of heterogeneous inputs and their possible alternative substitution ratios here are not known. Worse, using a measure such as COGS assumes that every heterogeneous inputs included in this aggregate are perfect substitutes for each other. Yet, firms truly face an economic problem as they use imperfectly specific inputs to produce multiple distinguishable lower order goods (Mises 1920 [1935]). In this case, there is not one but multiple relevant marginal costs “curves” at the industry level and those cost schedules cannot be derived from financial statements and can change due to choices over which technology is adopted by entrepreneurs. The marginal cost will also depend on the rate of depreciation of capital and the length of the production period. Yet rates of depreciation and production time will be unique to each production process and assuming it to be constant across industries and time may be misleading.<sup>8</sup> But those are far from being the only economic problems firms face. Indeed, what about if entrepreneurs actually compete on the margins on which economists estimating production functions make relatively strong assumptions? Meaning, what if entrepreneurs do not passively adopt given processes of production but instead make a choice over which production function to adopt in an attempt to search for the most adequate one? What if entrepreneurs compete based on the quality of inputs, such that they are not homogeneous across firms in a same industry? What about if they compete on the quality of the output? In all these cases, estimating an “industry” output elasticity is subject to serious measurement error and may introduce bias. When inputs are truly heterogeneous, it becomes impossible to distinguish between monopoly, Ricardian and entrepreneurial rents on the one hand, and market power on the other, from outcomes of the market process.<sup>9</sup> In the end, the measurement of marginal cost and markups leaves ample discretion for the theorist.

Let’s look at two other examples. What should count as fixed cost and variable cost and how to distinguish between short and long run marginal cost? For instance Traina (2018) argues that once marketing and management expanses are taken into account, the aggregate markup does not seem to have increased in the US. De Loecker et al. (2018, p. 2), criticizing Traina (2018), argue that when measuring markups, there is a “crucial distinction between inputs that are variable and those that are not.” This “distinction” however is mostly a judgment call from the economist. But if we take a sufficiently large time horizon, every cost is variable. There is no clear-cut criterion to distinguish between fixed and variable costs. De Loecker et al. (2018) thinks that marketing and management expanses should be considered as fixed costs because otherwise markups and the profit rate are too closely related, Traina (2018) thinks that omitting such expanses in markups calculations is misleading. Who is wrong, who is right? We don’t know, can’t know and cannot rely on the data to adjudicate.

It is beyond the scope of my analysis here to discuss in more detail problems associated with the empirical evaluation of markups. I hope I said enough to convince the reader that researchers trying to obtain macro estimates of markups

<sup>8</sup> For instance, De Loecker et al. (2020) set “an exogenous depreciation rate and risk premium” at 12%. Let’s also mention that accounting for historical depreciation rates is not satisfactory as they do not give us the economically relevant rate of depreciation.

<sup>9</sup> On the difference between entrepreneurial and monopoly rents, see Henrekson and Stenkula (2017).



face insurmountable knowledge problems. This is not to say that attempts to measure markups is not worthwhile. What I want to communicate instead is that measuring markups implies making assumptions over which margins people do and do not compete and therefore distorts how we analyze and perceive the competitive market process. Competition is not simply price competition; it is about entrepreneurs continuously attempting, with the help of profit and loss accounting, to discover what productive arrangements (i.e. which production function) are best suited to answer the most urgent but not yet satisfied needs of consumers. As Hayek points out:

The real problem in all this is not whether we will get *given* commodities or services at *given* marginal costs but mainly by what commodities and services the needs of the people can be most cheaply satisfied. The solution of the economic problem of society is in this respect always a voyage of exploration into the unknown, an attempt to discover new ways of doing things better than they have been done before. This must always remain so as long as there are any economic problems to be solved at all, because all economic problems are created by unforeseen changes which require adaptation (emphasis original, 1948, pp. 100-101).

Before asking ourselves the question of whether or not prices are equal to marginal costs, we should first wonder if we operate in an institutional environment in which competition over the discovery of these costs exists.

One may object that the “market process” paradigm is devoid of empirical content. It is not. As I will explain next section, clear propositions can be formulated once we consider the rent dissipating nature of market competition relative to other forms of competition. The market process paradigm also beats attempts to measure markups under the assumption of cost minimization on an important empirical margin: the existence of losses. Indeed, when derived from the production approach, markups equal or greater than unity are consistent with the underlying assumptions of cost-minimization, but markups lower than one are not! Using the production approach, De Loecker et al. (2020) finds that a fairly large portion of firms have a markup lower than one and that the portion of firms with a markup under 1 has increased since the 80s.<sup>10</sup> Ironically, an increase in the dispersion of markups may suggest that the economy has become more dynamic rather than less competitive.

<sup>10</sup> The existence of losses can also be problematic when calculating aggregate markups. Imagine for instance that  $E[\mu_{it}] = 1$ , where  $\mu_{it}$  is the markup of firm  $i$  at time  $t$ . Firms in an industry produce widgets by hiring the same amount of inputs and adopting the same production function. Yet, because of market uncertainty, 50% of them have  $\mu_{it} = 0$  (meaning they fail to sell anything) and 50% have  $\mu_{it} = 2$ . Following De Loecker et al. (2020), the aggregate markup  $\mu_t$  is calculated using the following formula:  $\sum w_{it}\mu_{it}$ , where  $w_{it}$  is the weight of each firm based on the share of sales. Since zero markups firms by definition have a share of sales equal to zero, the aggregate markup will be equal to 2 even though the “true” underlying markup is equal to 1. An obvious way to get rid of this bias is to use the share of inputs bought instead to the share of sales as weights. Yet this may still not give you the underlying markup if uncertainty happens on the level of choosing which quantity to produce, which “production function” is adequate or if the weight is correlated to the production function chosen by firms.

### 3 Competition and the dissipation of rents

Economic rents are receipts to a resource in excess of its opportunity cost (Tollison 1982). Under the standard assumptions of perfect information and property rights enforcement, the “social” optimum is achieved when there is no positive or negative rents, meaning that price will be equal to marginal opportunity cost in every market. Yet, if we relax the assumption that information is perfect, rents no longer seem to signal an inefficiency but are instead crucial for stimulating entrepreneurs in their decisions to reallocate resources to higher valued uses (Kirzner 1973).<sup>11</sup>

In the absence of transaction costs, competition is also absent as assets are already owned by those valuing them most and no further gains from trade exists. Perfectly defined property rights and an already efficient allocation of resources means that there is nothing left to compete about. Of course, the real world looks very different. Rents are pervasive and, to the extent that they are not owned, will be dissipated through competitive behavior. Whenever rents are dissipated, the margin on which people compete will determine both the costs and benefits of this dissipation process.

Perfectly competitive rent-seeking, for instance, will involve a cost equal to the value of the rent and no countervailing benefits (Tullock 1967). Competitors for a \$100 rent will consume \$100 in real resources to capture it. Aggregate surplus will be reduced by \$100 because of rent-seeking while dead-weight losses, that is the wedge between marginal cost and marginal benefit, will remain the same.

Market competition on the other hand, that is competition based of peaceful cooperation to satisfy the most urgent but not yet satisfied needs of consumers (Mises 1949), involves that the cost of reducing the absolute value of a rent (either positive or negative) is lower than the benefits.<sup>12</sup> If an entrepreneur were, for instance, to find and implement a way to reduce a rent whose marginal cost is greater than the marginal reduction in the rent in question (for instance new process of production or a novel use of advertising), he would not be competitive on the market and would have to incur a loss.

Given our discussion above, market process theory is not void of empirical content. First, we should expect that when market competition prevails, industries with initially high markups will see the price to marginal cost ratio decline through time. The speed at which rents are dissipated gives us an idea of how strong market competition is. Second, we should expect that the less costly it is to dissipate a rent through market competition, the more quickly will rents be dissipated. Third, when ownership of rents

<sup>11</sup> Of course if every firm faces a downward sloping demand curve, price equal marginal cost can no longer be held as a welfare standard (Rothbard 1962; Armentano 1990). Imagine, for instance, a world where the supply for factors of production is completely inelastic, in which there are  $n$  goods with an identical demand curve are produced by  $n$  monopoly firms with the same production function for each good. Under such conditions, should not the output mix be the same as in perfect competition? Output restriction by one firm relative to a competitive environment would mean a lower demand for factors of production which would imply a lower marginal cost of producing all other goods, thus leading to an expansion of output in other industries. In equilibrium, supply and demand for factors still needs to be equal. With inelastic supply for factors, the quantity of factors demanded and the output mix will remain the same although the price of such factors will be lower under pervasive monopolies.

<sup>12</sup> By market competition, I mean catallactic competition as defined by Mises (1949). As (Mises 1949, 278) writes: “Catallactic competition is no less a factor in the determination of monopoly prices than it is in the determination of competitive prices.”

is successfully established (for instance through the granting of a monopoly charter), we should expect positive rents to persist. Fourth, when market competition does not prevail but political property rights over rents are not established, we would expect the rent to be dissipated through rent-seeking. Hence, according to the market process view, the value of markups does not give us any indication on the intensity of market competition. What matters is the persistence of rents and the speed at which they are eroded.

By focusing on the rent dissipation process, we should wonder what institutional environment makes different forms of rent dissipation possible or not. Yet this question is emphatically absent from Philippon's book. The closest Philippon (2019) comes to studying the market as a rent dissipating process is when he uses Q theory in relation to entry and investment.

The logic of Q theory is relatively simple. Under competitive conditions, if a one dollar increase in a firm's capital stock increases its market value by more than one dollar ( $Q > 1$ ), it is in the shareholders interest to increase investment. If Q is less than 1, it is in the interest of the firm to shrink its capital stock, for instance, by selling some of its assets. Hence, on a competitive market, there is a tendency for the stock market value of a firm to be equal to the value of the tangible and intangible capital it owns. A Tobin's Q systematically greater than 1, on the other hand, can be evidence that a firm enjoys a either a Ricardian or a monopoly rent. Indeed, the market value of a monopoly firm will be greater than the replacement cost of its capital stock as the present value of the rent will be imputed into the former.<sup>13</sup> With free entry, new firms would progressively enter the market as they would expect the marginal cost of investing to be less than the consequent marginal increase in their market value. The entrance of new firms buying the same capital goods as the incumbent firm would raise the cost of such goods while lowering the price of output. Hence, with free entry, the competitive process will tend to bring the average Tobin's Q back to 1. The first study on Tobin's Q and competition (Lindenberg and Ross 1981) failed to find a relationship between concentration and Q. This may explain why only few studies on the subject were published in the next decades. Yet Philippon and his co-authors (Covarrubias et al. 2019) suggest that the falling elasticities of investment as well as firm and establishment's entry with respect to Tobin's Q are evidence of persistent market power.

Although Philippon's attempt to analyze the dynamic implications so called "market power" is interesting, it suffers from multiple problems. First, we should keep in mind that the public market is not representative of corporate America. It may suffer from serious survivorship bias due to the secular decline in the number of publicly listed firms since the 80s and 90s and bias related to the increased importance of super-firms on public markets. Second, using Tobin's Q would be promising if it did not suffer from similar issues as regressing concentration on profit rates. Tobin's Q will be equal to one for a competitive firm only under the assumption of zero transaction cost. One of the benefits of the price system is that the value of unpriced assets can be imputed in the price of other goods, thus economizing on transaction costs while still being able to use profit and loss accounting to maintain an efficient allocation of resources (Piano and

<sup>13</sup> Marginal Q will tend to unity whether a firm is a monopolist or not. A monopolist will have a marginal Q greater than its average Q because when marginal cost is equal to marginal revenue, additional investment will erode monopoly rents.

Rouanet 2018). An average  $Q$  superior to 1 can be result of an omission of intangible assets such as patents (Morck et al. 1988) or the result of unpriced factors owned by the firm such as entrepreneurial and managerial talent, goodwill or good governance.<sup>14</sup> It may be that superior productiveness resulting from team production is unique to a firm and cannot be purchased except by buying the firm itself (Demsetz 1973). The impossibility to price every asset, and in particular the inability to price the knowledge acquired and used by entrepreneurs, has important implications when studying the competitive process.

While a Tobin's  $Q$  permanently superior to 1 is consistent with competitive behavior,  $Q$  being equal to 1 does not necessarily indicates absence of monopoly. If a monopoly rent is dissipated in a competitive rent-seeking process,  $Q$  will remain equal to unity. Similarly, monopoly rents could potentially be capture by unions, which means that  $Q$  would not necessarily be significantly superior to one. A rise in  $Q$  could therefore be due to weaker unions or decreasing spending related to rent-seeking. Hence we cannot abstract from the institutions under which markets operate if we are to successfully analyze the competitive process.

In that sense, Part 3 of *The Great Reversal* on "Political Economy" is probably the most interesting section of the book. But even though Philippon gives an interesting treatment of rent-seeking, he never analyzes the rent-seeking cost of antitrust policy which, I think, is one of the main weakness of this section.<sup>15</sup> Because it is impossible to identify "market power" with certainty, businesses will be able to exploit this ambiguity to further their own ends and politicians will be able to bully businesses using anti-trust law to extract rents (McChesney 1987). Hence antitrust policies will divert entrepreneurs from market competition to competition in rent-seeking. Philippon's approach does not seem robust to relaxations in the ideal assumptions about individuals' motivations and available information.<sup>16</sup>

## 4 Conclusion

The renewed interest for the SCP paradigm may be explained by the new interest on the macroeconomic consequences of "market power." After the 1970's, scholars in the field of industrial organization started to focus more and more on case studies to get a better grasp on the different institutional features specific to an industry. Yet case studies were not easy to generalize or use to analyze macro-phenomena. The increased popularity of game-theory in industrial organization failed to "lead to any powerful generalization" (Peltzman 1991, p. 206). This lack of generality may explain the renewed interest for old structuralism and relationships, rather uninformed by economic theory, between concentration ratios, markups and other variables such as entry rate, productivity, etc.

In this essay, I have argued that there is an alternative to the SCP paradigm championed by Philippon. This alternative is based on the recognition that competition is present on multiple margins, as well as on the analysis of rent dissipation and the

<sup>14</sup> On the view that entrepreneurship is an unpriced asset, see Manne (2014).

<sup>15</sup> On the rent-seeking costs of anti-trust, see Baumol and Ordover (1985) and Faith et al. (1982).

<sup>16</sup> On the concept of robust political economy, see Boettke and Leeson (2004) and Leeson and Subrick (2006).

institutions in which rent dissipation takes place. For sure, more empirical work is needed if we are to get a better grasp about the forms taken by the market process and the conditions under which it operates. Yet I remain skeptical about Philippon's claim that America has become overall less competitive. Competition is still a tough weed.

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