JOAN ROBINSON, EFFICIENCIES FROM CONCENTRATION, AND THE EVOLUTION OF COMPETITION POLICY

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British economist Joan Robinson's profound contributions to industrial economics still resonate across a wide range of subject matter. Her work is particularly relevant in the context of heightened concerns over whether product market concentration in developed Western economies has, in recent decades, resulted in both increased market power and increased buyer power – and whether this, in turn, has led to a rise in inequality and a decline in the share of value accruing to labor. At the same time, many competition agencies around the world remain skeptical about the potential for mergers and acquisitions ("M&A") to result in substantive cost reducing efficiencies. In this article, I highlight, through the lens of Robinson's writing, the tensions between these two stances, and reflect on how Robinson's analysis could influence future competition policy. My hope is that, in the important debate about the future evolution of competition policy, proponents on both sides can ultimately agree that we must collectively ensure worldviews underlying any changes are, at a minimum, consistent.

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I. INTRODUCTION

The Economics of Imperfect Competition by Joan Robinson is one of those books that any professional competition economist really should read.[2] Robinson was a great British economist who wrote on a wide range of topics, spending a significant amount of time in the early part of her career thinking about competition economics in particular.[3] Later in her career, before the publication of the second edition, Robinson gained practical experience applying competition policy after being appointed in 1949 to the panel of decision makers at the UK's then newly formed competition agency, the Monopolies and Restrictive Practices Commission (which, through various name changes, later became the Competition Commission and now the CMA), during its formative post-war years. The wisdom of allowing an economist to make actual competition decisions was a matter of some debate at the time, with the Board of Trade's Senior Economic Advisor, Sir Alec Cairncross, needing to overrule the objection that economists tend to have "fanatical" views on the subject of monopoly.[4] Joan Robinson became the first economist member of the Commission and, as such, was the first economist decision maker in the UK competition system's history.

For a contemporary reader, much of Robinson's book feels reassuringly familiar, as it is replete with the familiar economists' toolkit: demand curves, cost curves, and discussions of the differences between average and marginal revenues and costs. This is a testament to the fact that a significant amount of its content has survived, contributing to our current understanding of economic theory. Yet, as the saying goes, the past is a foreign country.[5] Our framework for understanding the economics of imperfect competition has developed significantly after nearly a century of thought by subsequent economists, other talented social scientists, and mathematicians. In particular, in her first edition, Robinson was writing before the advent of game theory and contract theory, and she was largely without the benefit of the careful and industry specific empirical work in industrial economics that characterizes our field today. She was writing in the age of heavy industry, oil, and electricity rather than one characterized by data, machine learning, and robotics.

Today, Robinson's contributions still resonate in the context of heightened concerns over whether product market concentration has resulted in both a rise in inequality and a decline in the share of value accruing to labor in developed Western economies in recent decades. Nearly a century after the Great Depression, policymakers once again ask whether product market concentration and the resultant buyer power are the root cause of low investment rates and limited real wage growth experienced by tens of millions of workers in Western economies.[6] Certainly, it is difficult to overstate the profound political and economic importance of the fact that there has been almost no growth in average real wages in the US over the last 40 years, according to data from the US Bureau of Labor Statistics.[7]

Competition policy generally and merger policy in particular have the potential to influence market concentration. If product market concentration and the resultant buyer power were, in fact, at the heart of significantly worse macroeconomic outcomes in labor markets, then it would suggest that concentration through M&A is responsible for material cost efficiencies. However, the experience of many practitioners in private practice is that competition agencies around the world were, as a practical matter in recent decades, highly skeptical about the potential for mergers and acquisitions (M&A) to result in substantive cost reducing efficiencies. If, for the sake of argument, one accepts the idea that there is a problem with the permissiveness of merger control, then the problem would seem necessarily to arise because of other aspects of our analysis of mergers.

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[2] Robinson, J. *The Economics of Imperfect Competition*. New York: Palgrave Macmillan, 1933. And, in particular, the second edition: Robinson, J. *The Economics of Imperfect Competition*. New York: Palgrave Macmillan, 1967.

[3] For biographies, see (i) G C Harcourt & Prue Kerr (2009) "Joan Robinson" in the Great Thinkers in Economics series. Palgrave, McMillan, and (ii) Nahid Aslanbeigui and Guy Oakes "The Provocative Joan Robinson. The Making of a Cambridge Economist." Durham (NC) and London, Duke University Press, 2009, pp. x+302. (Available from https://library.oapen.org/bitstream/handle/20.500.12657/43831/external_content.pdf?sequence=1.)

[4] The exchange reported between the Board of Trade's R.C. Bryant, Dame Alix Kilroy and Sir Alec Caincross is notable: Bryant: "It is probably better to have the Economist as an advisor and not as a member of the Commission, since this is a subject on which economists are apt to have fanatical views..." Dame Alix Kilroy: "[W]hat would the world of economists think to a Commission without an economist member?" Sir Alec Cairncross: "I doubt whether economists hold more "fanatical" views of monopoly…They sometimes have a better understanding of industrial organization and a clearer conception of the public interest." See Stephen Wilks, *In the Public Interest: Competition Policy and the Monopolies and Mergers Commission*. Manchester University Press, 1999, page 93.

[5] L. P. Hartley. *The Go-Between*. Hamish Hamilton, 1953.

[6] Robinson objected to the older descriptor "monopoly buyer" and adopted the term "monopsonist" to avoid it. She explains that the word "monopsony" was derived from the Greek *δψωυϵιν*, which she describes as meaning "to go marketing." See Robinson, page 215, footnote 1. At least for this non-Greek scholar, this etymology does not provide reassurance that the term captures Robinson's concept very well since we ordinarily think of marketing as being about selling rather than buying. The term buyer power seems to better capture the intended concept.

[7] See, for example, https://www.pewresearch.org/fact-tank/2018/08/07/for-most-us-workers-real-wages-have-barely-budged-for-decades/.

In short, one can believe concentration either drives buyer power or does not, but one cannot reasonably believe that it is both a major driver of macroeconomic trends and also irrelevant for the proper analysis of the competitive effects of mergers.

II. ROBINSON'S ANALYSIS

Those who have read *The Economics of Imperfect Competition* may recall that Robinson's analysis proceeds in two steps. First, she analyses the difference between product market outcomes under competition and monopoly. Second, she analyses the effect of product market competition – or a lack of it – for market outcomes in factor input markets, particularly labor markets.

In the first stage, she highlights that marginal incentives (where marginal revenue equals marginal cost) determine firm decision-making under monopoly while, under competition, free entry implies that normal economic profits will be zero (i.e. *average* revenue will equal *average* cost).[8]

Robinson recognizes that using free entry to ensure that average revenues and costs determine market outcomes under perfect competition relies heavily on some assumption sufficient to establish that the free entry condition effectively applies to all firms (rather than only requiring that the marginal firm cannot make profits under free entry).[9] Robinson acknowledges this concern, but believes the profits earned by any infra-marginal firms under perfect competition are best considered "rents," or returns properly earned by scarce factor inputs. Such rents might literally be the rent earned on a highly productive piece of land or, more generally, the return to a factor of production that has some natural advantage (e.g. an entrepreneur that is particularly effective at running a business). For every infra-marginal firm, Robinson considers that the total rents earned by all the factors of production should be considered a lump-sum cost for a firm operating under perfect competition, rather than a part of their profits. As a result, every firm will make exactly zero economic profits under perfect competition and will operate at the scale where average cost – including the fixed costs that arise from scarcity rents – is equal to price.[10]

In the second stage, Robinson traces the implications of the nature of product market competition for outcomes in factor input markets and, in particular, labor markets. The implication of her first stage analysis is that a monopolist benefiting from buyer power (in Robinson's terms, "monopsony power") over some or all factor inputs (labor, capital, land, and entrepreneurs) may sometimes even be in a position to achieve *lower* costs of production for any given level of output compared to firms operating under perfect competition.

In addition, Robinson notes that a monopolist may have differential ability to exercise buyer power in different input markets. As Robinson describes, "by employing less… labor, [the monopolist] may be able to lower the rates of wages he has to pay, and he will substitute capital for labor in circumstances where a competitive producer, for whom the wage is independent of the amount of labor he employs, would not find it profitable to do so."[11] She continues, "If the monopolist knows that when he buys more machines from a subsidiary industry, all the machines which he buys will be cheaper, he is under a greater incentive to substitute capital for labour than are individual competitive producers, who would each individually receive a negligible share in the induced economies resulting from their own purchase of the machinery."[12]

As a result, a monopolist may face different *relative* prices for factor inputs compared to firms in a competitive market and therefore find it profitable to use a different input mix compared to a firm in a perfectly competitive market (i.e. capital/labor ratios may differ). If it is easier to exercise buyer power against labor than capital, the relative price of labor will fall and a monopolist will find it profitable to use more labor intensive production methods, even if each individual worker is less productive as a result. Thus, lower wages resulting from buyer power exercised against employees may mean a monopolist invests less in capital.

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[8] Marginal revenue, the additional revenue earned from the sale of an additional unit of output, is equal to price under competition and below price for a monopolist. The reason is that the competitive firm takes market prices as fixed while a monopolist realises that market demand falls as prices rise, meaning an additional sale requires that the price charged for all units sold will fall. At competitive quantities, where price equals marginal cost, the monopolist's profits from the last unit produced are negative (since marginal revenues < price = marginal cost). Thus, a monopolist has an incentive to restrict quantities below competitive levels. Under free entry, with identical firms, entrants will compete away profits so that if P is the market price, q^c is firm volumes then $Profits = Pq^c — C(q^c) = 0$ or price equals average cost, $= C\,(q^c)/q^c$. Since firm revenues $R = Pq^c$, price also equals average revenues, revenues $P = R/q^c$. In equilibrium, supply equals demand so that $Q(P) = Nq^c$, or inverting demand we get $P = P(Nq^c)$ where $P = P(Q)$ is the inverse of the market demand curve, $Q = Q(P)$.

[9] One sufficient but strong assumption is that firms are identical (symmetric) so that we can proceed on the basis that there is a representative firm.

[10] See in particular the discussion at Robinson, pages 124–125. Robinson explores the properties of the resulting four cost curves – average and marginal costs when respectively including and excluding rent in chapter 10; see Robinson, pages 133–142.

[11] Robinson, p. 172.

[12] Robinson, p. 173.

In short, for Robinson, market power in product markets has the potential to have real effects on the distribution of income by restricting output (and, hence, employment) with the aim of increasing product market prices and profits and by driving down wages and employment through the exercise of buyer power against workers. Cheaper labor will, in turn, result in reduced investment in physical capital because of the substitution of labor for capital, and this will reduce labor productivity.

Even so, the question of whether society is better off overall under competition or monopoly is purely an empirical one in Robinson's analysis. First, monopsony power can mean a product market monopolist restricting output would pay lower wages than a firm under perfect competition. Lower wages can mean lower marginal cost of output for any given level of output, which may mitigate the extent to which a monopolist would scale back output below competitive levels. If, in addition, a monopolist also benefits from economies of scale, then Robinson argues monopoly output could actually be higher than competitive levels.[13] Thus, Robinson has a notably different starting point from most competition agencies' current working presumption that, if anything, x-inefficiency will mean that firms with market power will almost always have higher costs than those that experience the challenges of competition. Indeed, her description of the position – "The discovery that costs under monopoly are lower than under competition considerably enlarges the class of cases in which monopoly output may exceed competitive output"[14] – is likely to be viewed as almost heretical in many competition agencies today.[15]

III. MACROECONOMIC TRENDS

In recent years, there has been a clear concern expressed in academia and, now, by policymakers that market concentration exists in a substantial number of markets, may have risen markedly,[16] and may have had significant real-world consequences. Specifically, there is a body of academic empirical work that suggests:

- Margins have increased in recent decades[17]
- The share of value going to labor has fallen[18]
- The rate of investment in tangible capital has been low in recent decades[19]

While there is little evidence of an economy-wide decline in employment, empirical work in labor economics during the last two decades does appear to support an important element of Robinson's concern. Namely, the idea that the elasticity of labor supply is quite small when estimated at the firm level, implying a high degree of "monopsony power."[20] Ashenfelter, et al. (2010) argue that, "if exploited by employers, such high rates of monopsony power imply large welfare losses to society through the misallocation of labor and considerable redistribution of income away from workers and to residual claimants."[21] Those authors argue further that, "chronic concerns over 'shortages' are an indicator that firms are exploiting their monopsony power, as are wage discrimination systems that pay lower wages to full time than to part time or contract workers."[22]

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[13] Specifically, Robinson describes that it will only be so when a monopolist both: (i) experiences economies of scale in production; and (ii) production requires using a 'scarce' factor of production whose price is increasing in the industry volume purchased (i.e. there is at least one input with an imperfectly elastic industry supply curve). See Robinson, page 110 for the definition of scarcity and Robinson, page 153 for the statement of these two conditions.

[14] See Robinson, p. 175. Note that Robinson does not believe that concentration could lead to efficiencies beyond those available under perfect competition (where we could have perfect competition) for the simple reason that the industry cost curve under competition must be taken to show the most efficient organization of industry which can be brought about with existing knowledge (except that each firm under perfect competition might have some know-how that would not otherwise be disseminated). See Robinson, p. 169.

[15] There is good evidence from the international trade literature on the impact of opening up a market to competition. See for example, Pavcnik, N. "Trade Liberalization, Exit, and Productivity Improvements: Evidence from Chilean Plants" The Review of Economic Studies, Vol. 69, Issue 1, January 2002.

[16] See for example Covarrubias, Gutierrez, & Philippon," From Good to Bad Concentration? US Industries over the past 30 years." *NBER Macroeconomics Annual* 34, no. 1 (2020): 1–46 and references therein.

[17] See in particular De Loecker, J., Eeckhout, J. & Unger, G. "The Rise of Market Power and the Macroeconomic Implications." *The Quarterly Journal of Economics* 135, no. 2 (2020), 561–664. And De Loecker, J., Eeckhout, J. "Global Market Power" (2020). (Paper available at https://sites.google.com/site/deloeckerjan/research.)

[18] See Autor, D., Dorn, D., Katz, L., Patterson, C. and van Reenen, J. (2020) "The Fall of the Labor Share and the Rise of Superstar Firms." *The Quarterly Journal of Economics*, Volume 135, Issue 2, May 2020, Pages 645–709. And the references therein.

[19] Haskel, J. and Westlake, S. *Capitalism Without Capital: The Rise of the Intangible Economy* (Princeton, NJ: Princeton University Press, 2017).

Of course, numerous measurement challenges exist when evaluating the evidence based on economy-wide trends and their implications. For example, while the fact of concentration in a substantial number of markets is not very controversial, the direction of the trend in concentration over recent decades is much more so. In seeking to improve upon the previous literature by measuring concentration for markets that are closer to relevant antitrust markets, Benkard, Yurukoglu, & Zhang (2021) found that – while 42.2 percent of the industries in their sample are "highly concentrated" (as defined by the US Horizontal Merger Guidelines), contrary to the previous literature – product market concentration has actually been decreasing since 1994.[23] The measurement of capital investment has similarly been subject to very significant measurement concerns arising from the believed increased importance of intangible capital investment in recent years; the fact that accounting standards mean accounting data understate the extent of intangible accumulation; and the general difficulty in measurements associated with valuing intangible capital, such as brands and know-how.[24]

While the academic debate continues, what is clear is that the available evidence on these macroeconomic trends is not all reassuring. To make progress, we must take the evidence seriously, both as a society and, more specifically, as a competition law and economics community. The interesting question for debate, of course, is whether competition policy should evolve in response and, if it should, how.

IV. THE NEED FOR CONSISTENCY

Robinson's ideas and concerns about the implications of market power in product and labor markets undoubtedly still resonate. Given the emerging empirical evidence, renewed interest in her important contributions to this area is natural. While she studies the polar cases of perfect competition and monopoly, her work also provides useful intuition for what may happen in the more common intermediate cases.

First, Robinson's analysis suggests that buyer power from concentration has the potential to play a significant role when assessing whether a concentration is desirable under a consumer welfare standard. As a general matter, it is probably fair to say that the distinction between averages (under competition) and marginal costs (under monopoly) no longer shines through in competition agency guidelines with quite the same gusto that it once did. And some concentrations, if allowed to proceed, would undoubtedly result in worse outcomes for consumers. And yet, Robinson's economic analysis does suggest that a combination of efficiencies from monopsony power combined with efficiencies from another source (say) economies of scale can sometimes lead to consumers being better off after a merger. Revisiting Robinson underlines Williamson's (1968) message that competition authorities should allow the evidence of potential efficiencies to guide their decisions on whether concentrations are, overall, good for customers or not.[25] Such efficiencies should therefore be properly weighed in the balance by competition agencies when applying the currently applicable legislation.

And yet, in merger investigations, efficiencies defenses often face high hurdles to success. In this respect, I offer the anecdote that I have over the years attended multiple round-tables of senior European competition lawyers agreeing that, to the best of their collective knowledge, the European Commission has never, yes never, approved a merger on the basis that the resulting efficiencies would more than compensate for what would otherwise be an anti-competitive merger effect.

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20 See Ashenfelter, Orley C.; Farber, Henry S. & Ransom, Michael R., "Modern Models of Monopsony in Labor Markets: A Brief Survey." Journal of Labor Economics, Vol. 28, Number 2 (2010). (A working paper version is available from https://www.econstor.eu/bitstream/10419/36902/1/625315251.pdf.)

21 Ashenfelter, et al. (2010) op. cit, page 8.

22 Ashenfelter, et al. (2010) op. cit, page 8.

23 Benkard, L. Yurukoglu, A., & Zhang, A. L. "Concentration in Product Markets." *NBER* working paper 28745 (2010). (Available at https://www.nber.org/system/files/working_papers/w28745/w28745.pdf.)

24 Haskel, J. & Westlake, S. *Capitalism Without Capital: The Rise of the Intangible Economy* (Princeton, NJ: Princeton University Press, 2017).

25 Williamson, O. "Economics as an Antitrust Defense: The Welfare Tradeoffs." *American Economic Review* 58, no. 1 (March 1968), pp. 18–36.

Second, the evidence from industrial economics is that there are at least a sizable minority of markets where concentration is at material levels, and the evidence from labor economics does appear consistent with the potential for buyer power to play a significant role in labor markets. The empirical evidence on macroeconomic trends is more controversial and still under debate within academia, although – as noted previously – what we are currently seeing is not altogether reassuring. Without a doubt, the current macroeconomic debate over the causes of reduced rates of tangible capital investment and its consequences for labor productivity and wages is an extremely important one for the future of our societies, as well as for competition law and economics practice.

In the debate over the implication of Robinson's analysis for optimal future competition policy, one side argues that we do not see efficiencies in merger control so that competition policy can comfortably take an aggressive antitrust stance to control product market concentration. The other side may argue that the evidence from merger control does not support the idea that buyer power from concentration is a major cause of the macroeconomic trends we are observing. What is clear is that buyer power simply cannot simultaneously be a minor driver of efficiencies in the context of merger control – and have been so for decades – while also being responsible for low rates of capital investment and keeping wages depressed for the majority of the population. Such an inconsistency is untenable. Hopefully, both sides in this important ongoing debate can, at a minimum, agree that the world view underlying any future policy change should be internally consistent.

I close with the observation that that there is a different, wider, competition system design question about whether wage savings should in fact be treated as efficiencies in competition policy assessments. Robinson's analysis suggests that customers may sometimes benefit at workers' expense when monopsony power in labor markets is weighed in the balance in merger assessment. Governments could decide to remove the exclusive focus on product market outcomes embedded in the legislation defining the competition system in many jurisdictions. Assessing whether such a change would be desirable involves a variety of considerations, including whether concerns about the exploitation of labor are properly addressed using interventions in labor markets to protect workers' rights and bargaining positions, rather than via the competition system. If competition agencies are asked to do both, it will involve making political decisions that require balancing the interests of consumers and workers. Competition agencies have historically tried hard to avoid making such trade-offs between groups in society in the interest of maintaining bi-partisan and broad based public support for the competition system. If future legislation requires they must, competition agencies will require instruction from democratic governments about how they should do so.

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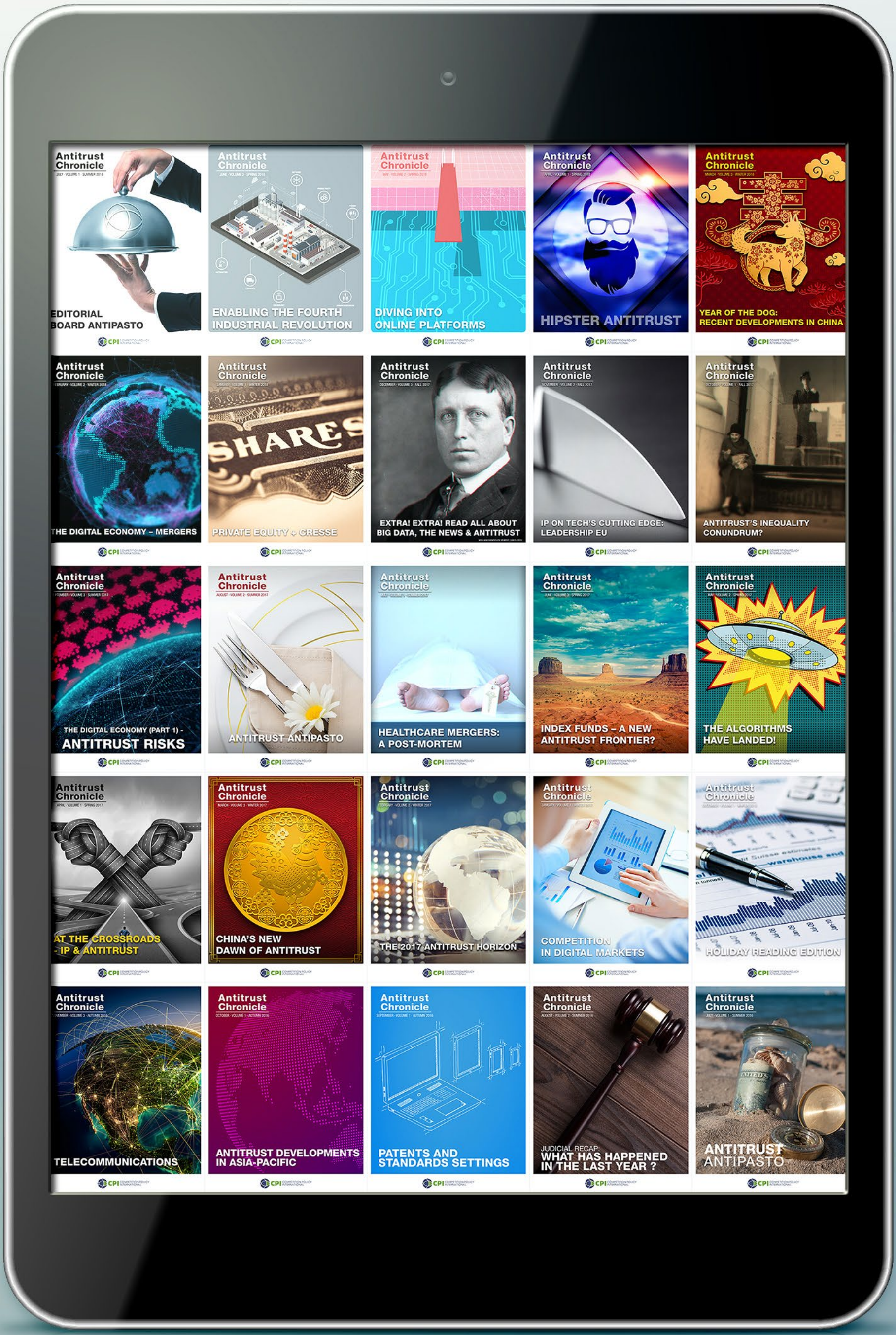
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