Endogenous Choice of Stakes Under Common Ownership

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Abstract

We present a simple model of common ownership in which an investor chooses its stake in competing firms in light of the effects on firm behavior and firm profits. Two firms compete in Cournot duopoly, and ownership affects a firm’s objective function in the manner posited by Bresnahan & Salop (1986) and O’Brien & Salop (2000). We show that an investor with equal stakes in both firms—a so-called common concentrated owner (CCO)—places a greater value on an additional share of a firm, compared to atomistic owners. The same is true of a noncommon concentrated owner (NCO) with a stake in just one firm. Both the CCO and the NCOs thus have incentives to acquire any shares held by atomistic owners.

Our model yields two testable empirical predictions. First, equilibrium ownership structure in noncompetitive industries should be systematically more concentrated than in competitive industries. Second, within the investment portfolio of institutional investors, holdings in noncompetitive industries should be systematically more concentrated than holdings in competitive industries.

Keywords: antitrust, common shareholding, common ownership, collusion, horizontal, HHI, institutional investors, MHHI, modified Herfindahl-Hirschman Index, shareholdings, Blackrock, Vanguard, State Street

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I. Introduction

A common concentrated owner (CCO) holds stakes in competing firms. Antitrust theorists have long posited that the interests of a CCO differ from those of an owner of a single firm. Economists have developed models in which, depending on its ownership structure, a firm maximizes a weighted average of its own and its competitors’ profits (see Bresnahan & Salop (1986); O’Brien & Salop (2000)). Specifically, greater CCO ownership induces a firm to place a greater weight on competitor profits. At the same time, greater ownership by concentrated owners who do not hold stakes in competing firms—noncommon concentrated owners, or NCOs—reduces that weight.

Recent empirical work has found that an increased level of CCO ownership is associated with anticompetitive effects. Other papers find no effect. This literature has generated a heated debate about whether common ownership in concentrated industries is compatible with the antitrust laws and whether it should be restricted. See Elhauge (2016), Hemphill & Kahan (2020), Posner, Scott Morton & Weyl (2017), Rock & Rubinfeld (2018), and Scott Morton & Hovenkamp (2018).

The bulk of the empirical literature follows the Bresnahan/O’Brien/Salop approach by employing a measure of common ownership that increases with CCO ownership and decreases with NCO ownership. Examples include Azar, Schmalz & Tecu (2018), Azar, Raina & Schmalz (2019), Antón, Ederer, Giné & Schmalz (2020), Azar & Vives (2021), Backus, Conlon & Sinkinson (2021a, 2021b), Dennis, Gerardi & Schenone (2019), Gramlich & Grundl (2017), Kennedy, O’Brien, Song & Waehrer (2017), Koch, Panayides & Thomas (2020), Newham, Seldeslachts & Banal-Estanol (2019), and Torshizi & Clapp (2021). The measures employed include the difference between the Herfindahl-Hirschman Index and the Modified Herfindahl-Hirschman Index (MHHI delta) and a related profit weight calculation that, like MHHI delta, reflects the contrasting effects of CCO and NCO ownership.

Thus far, the literature has focused on how a particular ownership structure affects firm behavior and outcomes. The ownership structure is taken as given. However, if ownership structure affects firm value, then we would expect owners to alter their stakes in light of this anticipated effect. The literature to date has not addressed this issue. The only exception is Bayona, Lopez & Manganelli (2021), who examine the relationship between common ownership arrangements, control structures, and prices under Bertrand competition.

In this paper, we endogenize the ownership choices of CCOs and NCOs in a Cournot framework. We extend the Bresnahan/Salop/O’Brien approach in the context of a simple two-firm model. In our model, CCOs and NCOs choose their stakes in the competing firms in light of the effects on firm behavior and firm profits. We derive and characterize the level of equilibrium common ownership.

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1 This definition thus excludes common ownership of firms producing complements.
We show that an NCO, compared to an atomistic owner, places a greater value on an additional share of the firm. Hence, the NCO has an incentive to acquire any shares held by atomistic owners. Similarly, a CCO that holds sufficiently similar stakes in the two firms, compared to an atomistic owner of either firm, places a greater value on an additional share. Such a CCO then also has an incentive to acquire shares held by atomistic owners.

Our model yields two testable empirical predictions. First, equilibrium ownership structure in noncompetitive industries should be systematically more concentrated than in competitive industries. Second, within the investment portfolio of institutional investors, holdings in noncompetitive industries should be systematically more concentrated than holdings in competitive industries.

The current empirical literature on common ownership has sought to test whether common ownership affects competition directly—for example, by examining the relationship between blockholdings and firm outcomes (such as price levels). This approach has various difficulties, including the challenge of identifying an exogenous shift in common ownership. See Lewellen & Lowry (2021). Our article points to a different empirical approach that has the potential for producing additional evidence about the effects of common ownership.

II. Model

A. Setup

Two firms, A and B, produce quantities \( q_A \geq 0 \) and \( q_B \geq 0 \) of a good at a unit cost of 0. The firms compete in Cournot quantities and face a demand function of \( p = 1 - q_A - q_B \).

Shares in the firms are held by three concentrated owners—NCOA, NCOB, and CCO—and a large set of atomistic owners. NCOA holds shares in A, NCOB holds shares in B, and CCO holds equal stakes in both firms.

Let \( n_A \) equal the fraction of A’s shares held by NCOA, \( n_B \) equal the fraction of B’s shares held by NCOB, and \( c \) equal the fraction of shares in both firms held by CCO, with \( 1 > n_A, n_B, c > 0 \).

At \( t = 0 \), an initial ownership structure is exogenously determined. At \( t = 1 \), NCOA, NCOB, and CCO can sequentially buy shares from (or sell shares to) the atomistic owners of A and B at a price equal to the value of a share to the atomistic owner.\(^2\) This process continues until NCOA, NCOB and CCO no longer want to buy shares from (or sell shares to) the atomistic owners. At the end of \( t = 1 \), a final ownership structure is determined. At \( t = 2 \), firms produce \( q_A \) and \( q_B \) generating profits of \( \pi_A \) and \( \pi_B \) with

\[
\pi_A = pq_A = (1 - q_A - q_B)q_A
\]

\(^2\) Our results are robust to alternative assumptions about the process of share acquisition.
Since firm A and B are identical in relevant respects, we present this and other results only for firm A.

**B. Equilibrium outcomes**

Following O’Brien and Salop (2000), a firm with common owners maximizes a weighted average of its own and its competitor’s profits. Let $w_i$ represent the weight that firm $i$ attaches to its own profits; $1 - w_i$ is the weight that firm $i$ places on its competitor’s profits. Firm A’s objective function $o_A$ is given by

$$o_A = w_A \cdot \pi_A + (1 - w_A) \cdot \pi_B = w_A \cdot q_A \cdot (1 - q_A - q_B) + (1 - w_A) \cdot q_B \cdot (1 - q_A - q_B)$$

and likewise for Firm B. In equilibrium, $o_A'(q_A) = 0$ and $o_A''(q_A) < 0$.

$$o_A'(q_A) = w_A - 2q_A w_A - q_B \iff q_A = (w_A - q_B) / 2w_A$$

Substituting the respective condition for $q_B$ into this equation yields the following Cournot/Nash equilibrium condition:

$$q_A^* = (2w_A w_B - w_B) / (4w_A w_B - 1)$$

yielding equilibrium firm profits

$$\pi_A^* = (2w_A^2 w_B + 2w_A w_B^2 - 3w_A w_B - w_B^2 + w_B) / (4w_A w_B - 1)^2$$

and industry profits

$$\pi_I^* = \pi_A^* + \pi_B^* = (w_A + w_B - 1) \cdot (4w_A w_B - w_A - w_B) / (4w_A w_B - 1)^2$$

and price

$$p^* = 1 - q_A^* - q_B^* = (w_A + w_B - 1) / (4w_A w_B - 1)$$

**C. Profit weights**

We adopt the standard assumption in the common ownership literature (including O’Brien and Salop 2000) that control weights are proportional to ownership stakes. Following O’Brien and Salop, Firm A maximizes $\pi_A + \pi_B \cdot c^2 / (c^2 + nA^2)$ which means that

$$w_A = (c^2 + nA^2) / (2c^2 + nA^2)$$

As $1 > n_A, c > 0$, it follows that $0.5 < w_A < 1$. 
Differentiating \( w_A \) yields:
\[
w_A'(n_A) = \frac{2c^2n_A/(2c^2 + n_A^2)^2}{(2c^2 + n_A^2)^2} > 0
\]

Intuition: An increase in \( n_A \) raises \( w_A \) both because it gives NCOA greater control, relative to CCO, over A’s policies (the control effect), and because it increases NCOA’s interest in A (the ownership effect).

\[
w_A'(n_B) = 0
\]

Intuition: An increase in \( n_B \) has no effect on \( w_A \) because NCOB neither has control over A’s policies nor any direct interest in A’s profits.

\[
w_A'(c) = \frac{-2cn^2/(2c^2 + n_A^2)^2}{(2c^2 + n_A^2)^2} < 0
\]

Intuition: An increase in \( c \) affects \( w_A \) in several ways. First, due to its increase in A ownership, CCO cares more about A’s profits (the A ownership effect). Second, due to its increase in control over A relative to NCOA, CCO has a greater ability to induce A to reduce its output for the benefit of B (the A control effect). Third, due to an increase in B ownership, it increases CCO’s incentives to use its existing control over A’s policies for the benefit of B (the B ownership effect). There is no B control effect on \( w_A \).

We can examine these effects more closely if we separate the \( c \) in the formula for \( w_A \) into the A ownership component \( c_{Ao} \), the A control component \( c_{Ac} \), and the B ownership component \( c_B \), such that \( w_A = (c_{Ao}c_{Ac} + n_A^2) / (c_{Ao}c_{Ac} + n_A^2 + c_{Ac}c_B) \). Taking separate derivatives of \( c_{Ac} \), \( c_B \) and \( c_{Ao} \) yields:

\[
\text{A ownership component: } w_A'(c_{Ao}) = \frac{c_Bc_{Ac}^2}{(c_{Ao}c_{Ac} + n_A^2 + c_{Ac}c_B)^2} > 0
\]

\[
\text{A control component: } w_A'(c_{Ac}) = \frac{-c_Bn_A^2}{(c_{Ao}c_{Ac} + n_A^2 + c_{Ac}c_B)^2} < 0
\]

\[
\text{B ownership component: } w_A'(c_B) = \frac{-c_A(c_A^2 + n_A^2)}{(c_{Ao}c_{Ac} + n_A^2 + c_{Ac}c_B)^2} < 0
\]

Thus, the A ownership component is positive, while the A control component and B ownership components are negative. Moreover, for \( c_A = c_B \) the size of the (negative) effect of an increase in \( c_B \) exceeds the size of the (positive) ownership effect of an increase in \( c_A \). Hence, an increase in \( c \) reduces \( w_A \).

\section*{D. The Effect of Profit Weight on Quantities, Price and Profits}

\textbf{Proposition 1:} The equilibrium quantity produced by firm A increases as the weight firm A places on its own profits increases and as the weight firm B places on its own profits decreases.

Proof: Differentiating \( q^*_A \) yields:
\[
q^*_A(w_A) = 2w_B(2w_B - 1) / (4w_Aw_B - 1)^2 > 0 \text{ (since } w_A, w_B > 0.5)\]
\[ q_A^* (w_B) = \frac{(1 - 2w_A)}{(4w_Aw_B - 1)^2} < 0 \text{ (since } w_A, w_B > 0.5) \]

Intuition: An increase in \( w_A \) increases \( q_A^* \) because it reduces the degree to which firm A restrains its own production for the benefit of firm B. An increase in \( w_B \) reduces \( q_A^* \) because an increase in \( w_B \) increases \( q_B^* \) which in equilibrium leads firm A to reduce its own production.

**Proposition 2:** The equilibrium price decreases as the weight firm A places on its own profits increases and as the weight firm B places on its profits increases.

Proof: Differentiating \( p^* \) yields:

\[ p^*(w_A) = -(2w_B - 1)^2 / (4w_Aw_B - 1)^2 < 0 \text{ (since } w_B > 0.5) \]

and likewise for \( p^*(w_B) \).

Intuition: An increase in \( w_A \) increases overall production because its direct effect on \( q_A \) exceeds its indirect effect on \( q_B \). As the overall quantity produced increases, price declines.

**Proposition 3:** The equilibrium profits of firm A increase as the weight firm A places on its own profits increases and as the weight firm B places on its own profits decreases.

Proof: Differentiating \( \pi_A^* \) yields:

\[ \pi_A^*(w_A) = w_B(2w_B - 1) * (4w_A + 4w_B - 4w_Aw_B - 3) / (4w_Aw_B - 1)^3. \]

The denominator and \( w_B(2w_B - 1) \) are positive for \( w_B > 0.5 \). The expression \((w_A + 4w_B - 4w_Aw_B - 3)\) is positive for \( w_A, w_B \in (.5, 1) \) as it is 0 at \( w_A, w_B = (0.5, 0.5) \), increasing in \( w_A \), and increasing in \( w_B \). Hence \( \pi_A^*(w_A) > 0. \) Since \( q_A^*(w_B) < 0 \) and \( p^*(w_B) < 0 \), it follows that \( \pi_A^*(w_B) < 0. \)

Intuition: Firm A giving more weight to its own profits implies an increase in A’s profits. Firm B giving more weight to its own profits reduces both the equilibrium quantity for firm A and the price and hence must reduce A’s profits.

**D. The Effect of Ownership on Quantities, Price, and Profits**

**Proposition 4:** The equilibrium quantity produced by firm A increases as the ownership in firm A by NCOA increases and as the ownership in firm B by NCOB decreases.

Proof: An increase in ownership in firm A by NCOA increases \( w_A \) which in turn increases \( q_A^* \). A decrease in ownership in firm B by NCOB decreases \( w_B \) which in turn increases \( q_A^* \).

Intuition: An increase in NCOA ownership in firm A raises the profit weight firm A places on its own profits. This induces firm A to increase its quantity produced. A decrease in NCOB ownership...
in firm B decreases the profit weight firm B places on its own profits. This induces firm B to
decrease its quantity produced, which induces A to increase its quantity produced.

**Proposition 5:** The equilibrium total industry quantity increases as NCOA ownership increases,
as NCOB ownership increases, and as CCO ownership decreases.

An increase in ownership in firm A by NCOA increases \( w_A \) and has no effect on \( w_B \). Differentiating
equilibrium industry quantity \( q_A^* \) on \( w_A \) yields:

\[
q_A^* = q_A^*(w_A) + q_A^*(w_B) = (2w_B - 1)^2 / (4w_A w_B - 1)^2
\]

which is positive. Likewise, for an increase in ownership in firm B by NCOB.

A change in CCO ownership affects both \( w_A \) and \( w_B \). To obtain the effect of a change in CCO
ownership on \( q_A^* \) and \( q_B^* \), we differentiate:

\[
q_A^* = q_A^*(w_A - w_B') + w_B (4w_A'w_B) / (4w_A w_B - 1)^2
\]

\[
q_B^* = (-2w_A'w_B + 2w_A w_B' - w_A') + w_A (4w_B'w_A) / (4w_A w_B - 1)^2
\]

Adding \( q_A^* \) and \( q_B^* \) yields

\[
q_I^* = q_A^* + q_B^* = [w_A' (4w_B w_B - 4w_B + 1) + w_B (4w_A - 4w_A + 1)] / (4w_A w_B - 1)^2 < 0
\]

since the numerator is negative (as \( w_A' \) and \( w_B' \) are both negative and \( (4w_B w_B - 4w_B + 1) \) and
\( (4w_A - 4w_A + 1) \) are positive when \( w > 0.5 \)) and the denominator is positive.

Intuition: An increase in NCOA ownership in firm A raises the profit weight firm A places on its
own profits. This induces firm A to increase its quantity produced. While the increase in the
quantity produced by firm A, in turn, induces firm B to lower its quantity produced, the increase
in firm A’s quantity exceeds the reduction in firm B’s quantity.

A decrease in c leads each firm to give relatively greater weight to its own profits and relatively
less weight to the other firm’s profits. The combined effect of this dual increase in profit weights
is to increase industry quantity produced.

**Proposition 6:** The equilibrium price increases as the ownership in firm A by NCOA decreases,
as the ownership in firm B by NCOB decreases, and as CCO ownership increases.

Proof: If equilibrium industry quantity increases, price decreases, and vice versa.
E. Equilibrium Ownership Structure

Proposition 7: NCOA will always want to buy shares of A from atomistic owners as long as atomistic owners own such shares. NCOB will always want to buy shares of A from atomistic owners as long as atomistic owners own such shares. CCO will always want to buy shares of both firms from atomistic owners as long as atomistic owners own such shares.

Any marginal share of A will have a greater value to NCOA than it does to atomistic owners of A. The reason is as follows. An acquisition of a marginal share of A by NCOA has two effects. First, NCOA acquires the value of the marginal share itself (which, conditional on sale, is the same for NCOA as it is for an atomistic owner). Second, increasing \( n_A \) changes the value of the stake NCOA owned in A before NCOA acquires a marginal share. Specifically, increasing \( n_A \) increases \( w_A \) and thus \( \pi_A \) (since \( \pi_A(w_A) > 0 \)) and thus the value of the pre-acquisition stake held by NCOA. This effect is present for any \( n_A > 0 \) and any \( w_B \). Hence, NCOA will have an incentive to acquire shares of A held by atomistic owners.

If \( c_A = c_B \), then any marginal share of A will have a greater value to CCO than it does to atomistic owners of A. If \( c_A = c_B \), then an increase in \( c_A \) will reduce overall quantity and hence increase industry profits.\(^3\) Since \( c_A = c_B \), the value of the combined stake in A and B owned by CCO before it acquires a marginal share must also increase. In addition to obtaining the value of the marginal share itself (which, conditional on sale, is the same for CCO as it is for an atomistic owner), CCO benefits from this increase.

The result that an NCO attributes a greater value to a marginal share than an atomistic owner follows directly from two of the premises underlying the theoretical literature on common ownership and will hold generally. The first premise is that common owners are interested in having a firm take actions that maximizes the value of their common ownership stakes rather than the value of that firm. The second premise is that increased ownership confers upon the owner some degree of increased control over firm decisions. Both of these premises are necessary to generate the predictions of the common ownership literature. But, by the same token, if an NCO increases its ownership, it will obtain some marginal degree of increased control over firm decisions which it will use to induce to have the firm take marginally more actions that maximize firm value, thus increasing firm value. Since an NCO – unlike an atomistic owner – has a pre-existing stake in the firm that rises as firm value increases, an NCO will inevitably attribute a greater value to a marginal share than an atomistic owner.

The result that CCO attributes a greater value to marginal shares of A and B than atomistic owners, as well, follows from the basic premises underlying the common ownership literature. A common owner who holds equal stakes in all competing firms wants to maximize industry profits. Holding a greater stake in all firms will give that common owner more control and induce firms to take marginally more actions that maximize industry profits. This will raise the value of the

\(^3\) Quantity will change by \((4w_A^2 - 4w_A + 1)(w_A' + w_A')/(4w_A^2 - 1)^2\) which is negative since \(w_A' + w_A' = -2cn^2/(2c^2 + n^2)^2 < 0\).
common owner’s pre-existing stake, with the result that the common owner will attribute a greater value to marginal shares than the atomistic owners.

Since the NCOs and the CCO all want to acquire shares from atomistic owners, the equilibrium ownership structure in the model entails no shareholdings by atomistic owners. This result of the model will hold in a more general setting as long as concentrated owners face no constraints in increasing ownership stakes. In reality, of course, concentrated holders face several constraints: among others, they may have limited access to capital, they may want to reduce risk by holding diversified portfolio, they may want to preserve liquidity. While one would thus not expect that NCOs and CCOs will completely crowd out atomistic owners, the model predicts a higher level of ownership concentration in oligopolistic industries dominated by publicly traded companies where firm decisions affect the value of competing firms than in competitive industries dominated by publicly traded companies where such effects are largely absent.

F. Portfolio Structure

The results of our model also yield predictions for the portfolio structure of institutional investors. Institutional investors can invest in noncompetitive industries (where ownership affects profit weights) and in competitive industries (where ownership does not affect profit weights) and, in each set of industries, can take concentrated positions in one or several competitors in a single industry (or a few industries) or diversified positions in a larger number of companies in an industry. The model has no implications for ownership structure in competitive industries and, to the extent that institutional investors are interested in diversified portfolios, one would expect any investor to take diversified positions in the set of competitive industries. However, our model yields two predictions. First, given the amount of investments in the set of noncompetitive industries, it is more profitable to concentrate investments in one or a small number of such industries (either as a concentrated position in a single company in the industry or as concentrated positions in multiple competing firms in the same industry) than to spread the investments over a larger number of industries (with less invested in each industry). Second, starting with an equal allocation of investments in firms in competitive and oligopolistic industries, an institutional investor would benefit by shifting investments from firms in competitive industries to firms in noncompetitive industries.

As a result, looking at the portfolio of an institutional investors, one would expect the portfolio to be overweight in the set of noncompetitive industries relative to the set of competitive industries and, within the set of noncompetitive industries, less diversified across industries than within the set of competitive industries.

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4 These predictions obviously do not apply to indexed investors as indexed investors are constrained in their investment allocations by the indexing strategies they follow.
III. Conclusion

In this paper, we have presented a simple model of ownership structure in a setting where concentrated ownership—both common ownership and noncommon ownership—affect the objective function of a firm. Specifically, concentrated common ownership induces a firm to place less weight on its own profits, while concentrated noncommon ownership induces a firm to place more weight on its own profits. These effects on profit weights form the basis for both the theoretical models of and the bulk of the empirical literature on the anticompetitive effects of common ownership.

In our model, both NCOs and CCOs have incentives to raise their respective ownership stakes. If an NCO increases its ownership stakes, the firm’s objective function changes such that the prior stake held by the NCO increases in value. The same is true for a CCO. Our formal model addresses only a duopoly with identical firms and simple production industry demand functions. But the intuition for why both concentrated noncommon owners and concentrated common owners have incentives to raise their respective ownership stakes carries forward to a more general setting.

The incentives of concentrated owners to increase their stakes in firms in oligopolistic industries yield empirical predictions both for the ownership structure of such firms and for the portfolio structure of institutional investors. As to ownership structure, our model predicts that ownership in firms in noncompetitive industries (where ownership structure affects profit weights) will be more concentrated than ownership in firms in competitive industries (where ownership structure does not affect profit weights). As to portfolio structure, our model predicts that institutional investors will invest more in noncompetitive industries than in competitive industries and that stakes in firms in noncompetitive industries will be more concentrated than stakes in firms in competitive industries.

These predictions, in turn, can be used to test the model. In particular, it is disputed to what extent concentrated owners can effectively induce a company to take actions that lower the value of the company but raise the value of their portfolio holdings. In previous work, we identified several reasons why doing so may be difficult, especially if it entails legal or reputational risks (Hemphill & Kahan (2020)). But we have also identified several strategies for achieving this result that seem feasible. The empirical literature to date, however, has not been able to establish whether investors in fact pursue such strategies. Part of the reason for this failure is the difficulty of structuring econometric tests that causally link certain outcomes (such as a change in prices) to ownership structure. The predictions we have developed in this paper point to a different, and perhaps more fruitful, strategy to determine the effect of concentrated ownership.
References


Azar, José, Sahil Raina, and Martin Schmalz, 2019, Ultimate ownership and bank competition, IESE Working Paper.


Dennis, Patrick J., Kristopher S. Gerardi, and Carola Schenone, 2019, Common ownership does not have anti-competitive effects in the airline industry, FRB Atlanta Working Paper.


Newham, Melissa, Jo Seldeslachts, and Albert Banal-Estanol, 2019, Common ownership and market entry: evidence from pharmaceutical industry, DIW Berlin Discussion Paper.


Fiona Scott Morton and Herbert Hovenkamp, 2018, Horizontal shareholding and antitrust policy, Yale Law Journal, 127(7), 2026–2047.

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