Shareholders as Rent-Seekers: Institutional Realities of Corporate Governance and the Implications for Economic Theory

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Abstract

The narrative embedded in agency theory that shareholders are the ultimate owners of corporate assets is shown to be false under standard legal postulates. Shareholders, like other classes of 'pseudo-owners', are liable to inefficiently divert the corporation's surplus income to themselves. Building on the idea of the corporation as a commons, outside shareholders and shareholding managers are modeled as striking an optimal bargain over the distribution of a joint surplus. The distributive outcomes map, through retained earnings, into investment policy and therefore has implications for surplus maximization. Comparative statics demonstrate that the model reproduces the salient agency cost features of the principal-agent model, while adding the possibility of excessive payouts and underinvestment – a set of outcomes termed shareholder rent-seeking. It is shown that running a firm according shareholder value maximization can lead to suboptimal underinvestment by giving outside shareholders excessive bargaining power.

1 Introduction

Ownership of the corporation is a contested subject. The income claims on, use of, and exclusion from corporate assets differ *by design* amongst the various corporate constituencies (i.e., shareholders, executive managers, employees, etc). Agency theory abstracts from these socio-legal complications through the principal-agent model of corporate governance. This ubiquitous approach posits that shareholders are the ultimate and/or *de facto* owners of the corporation. This paper argues agency theory stretches the legal principles and social mores of property ownership too far: consequential welfare losses are omitted from the analysis when other corporate members' ownership-like claims are ignored. Nevertheless, agency theory's focus on equity value maximization has led to the supposedly optimal corporate governance norm: shareholder value primacy (SVP). As it derives from agency theory, the efficiency claim of SVP rests on shareholders' (ultimate) ownership of corporate assets. The shareholder ownership narrative is, however, false. We develop a corporate governance model founded on the contested ownership of this juridical institution.

Without the ownership narrative, the model considers outside shareholders and shareholding managers as two classes of pseudo-owners who bargain over their share of a common pool resource – the surplus created from corporate assets. Because outsiders lack knowledge of the firm's investment opportunities, they can only negotiate over the division of the expected surplus and must leave actual production to managers' investment policy. Optimal distributive bargains may therefore translate into suboptimal levels of investment. Because managers obtain non-pecuniary util-

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ity from corporate assets, their optimal level of investment (viz. payouts) is higher (viz. lower) than what outsiders consider optimal. Without a single class of proprietary owners there is no unique investment optimum, instead there is a range of unranked Pareto optima. Bargaining solutions leading to investment levels outside this range are unambiguously suboptimal as both parties could gain by increasing or decreasing investment. A key finding is that with too much bargaining power, either class of pseudo-owners will create suboptimal investment: managers will over-invest per agency theory, and shareholders will under-invest and payout excessive sums to themselves. The latter result is termed shareholder rent-seeking.

The paper is organized as follows. Section 2 demonstrates that in legal terms shareholders are neither the proximate nor ultimate owners of the corporation. Section 3 explains why shareholder-manager interact by bargaining over surplus distributions, and why managers' non-pecuniary utility in corporate assets is akin to classical firm ownership. Section 4 develops the bargaining model. We present comparative statics showing that agency costs arise when managers have large bargaining power or shareholding is highly dispersed; shareholder rent-seeking occurs when shareholders have too much bargaining power and when their next best investment option is highly valued. Section 5 concludes by considering the implications of the model.

2 Disabusing the Ownership Narrative

The notion of organizational rent-seeking used here is due to Bowles (2004, p. 192) as the "bargaining inefficiency [that] arises whenever some aspect of the allocation

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of productive resources both affects the bargaining outcome and is not subject to contract." The payout-*cum*-reinvestment policy bargaining between shareholders and managers fits neatly this definition because: (i) payout policies are, as a rule, not written into the equity contract; (ii) each dollar of reinvested capital is foregone (or, at least, delayed) shareholder remuneration; and, (iii) shareholder-managers gain utility from retained earnings in the economically relevant range.[1] The supposition in applying Bowles' inefficient bargaining concept is that the distribution of the corporation's surplus is, and should be, negotiated.[2] Since well-established private property rules stipulate the proceeds from its profitable use flow to the owner(s), the supposition implies shareholders do not own the corporation's assets.

This is controversial because economic theory, in general, and agency theory, in particular, posit that shareholders have the same profit-maximizing interest in the firm's assets as do classical capitalist firm owners.[3] If one accepts this functional equivalence of proprietary ownership and shareholding, then the welfare maximizing bargaining structure must be the one in which shareholders have all the bargaining power and may claim whatever amount of the surplus desired. As a corollary, any diminution of the paid out surplus is ascribed to managers' inefficient diversion of

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[1]Throughout the paper 'managers' refers to inside shareholders who have additional institutional roles managing the firm's assets and business contracts; 'shareholders', unless otherwise noted, are outside equity holders with no other role or interest in the firm.

[2]To be clear the rent-seeking discussed here is between outside shareholders as group versus managers as a group. We are not concerned with intra-shareholder conflicts as the equitable (i.e., per share) distribution of payouts is one of the few mandatory rules in corporate law.

[3]To the best of our knowledge there is not a single paper in mainstream economics that differentiates between the interests of the classical firm owner and shareholders – it is assumed both ought to be incentivized by payouts alone. We disagree, owners should be motivated by utility maximization.

funds toward their non-pecuniary utility enhancement (read: agency costs).[4] A decrease in the net present value of payouts is *necessarily* inefficient[5] in agency theory because the 'owners' have lost out. However, as discussed below, shareholder ownership *per se*, as well as its more nuanced depiction in agency theory, is an abstracted narratives which happens to be unequivocally false under the law.

2.1   The Ownership Narrative

Contesting the ownership narrative is muddled b the fact that the most salient feature of the corporate form is referred to as 'the separation of ownership and control' (Berle & Means, 1933). Yet, shareholder ownership has been a contested concept for quite some time (e.g., Veblen, 2006[1923]; Dodd, 1932). This is due, in large measure, to the fact that the corporate form is specifically designed to dissect and distribute the so-called 'nested bundle of rights' that constitute a property right. In his classic exposition, A.M. Honoré (1961) posits eleven separate legal incidences that together constitute complete ownership:

> the right to possess; right to use; right to manage; right to the income; right to the capital (including alienation); right to security (from expropriation); absence of a term limitation; prohibition against harmful use; liability to execution (i.e., to use as collateral), and; the residuary or default-rule character of property under contract.

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[4]The notion that shareholders might be directly responsible for the diminution of value is simply not considered by proponents of agency theory in which managers' less-than-complete ownership interest is always the root cause of corporate inefficiencies (see Jensen & Meckling, 1976; Fama & Jensen, 1983a, 1983b). While, in the signaling literature, shareholders may be overpaid (e.g., Miller & Rock, 1985), it is due to insiders' attempt to correct informational asymmetries, rather than rent-seeking by outsiders (see also Myers & Majluf, 1984; Chetty & Saez, 2010; Vojtech, 2012). Even in joint-production and proprietary theories of the firm shareholders are simply seen as a particular group of financiers and thus do not merit special consideration (Alchian & Demsetz, 1972; Grossman & Hart, 1986; Hart, 1989).

[5]As opposed to being potentially inefficient in our model.

A shareholder without an additional institutional role holds, at most, two of these incidences. Under very limited provisions she has a partial right to the corporation's income (see §2.2.2). And, shareholders are arguably the legal residuaries[6] since they employ the board of directors and can amend the corporate charter (see §2.2.3).

Importantly, shareholders do not hold the right of possession which is "the foundation on which the whole superstructure of ownership rests" (Honoré, 1961, p. 371). The remainder of the property rights elements rests either with managers or with the corporate entity itself – i.e., the juridical person recognized by the courts (see §2.2.1). While the precise breakdown of these legal rights varies between corporate charters within and across jurisdictions, all corporations are distinct from classical firms in that they require an institutional distinction be made between the ownership incidences: shareholders hold certain rights and obligations, and managers others.[7]

The widespread acceptance of Honoré's theory has meant no legal scholar claims that shareholders 'own' the corporation. Indeed, proponents of the Law and Economics school of thought – which shares a close affinity with the Chicago school of economics – are careful not to refer to shareholders as owners (see Easterbrook & Fischel, 1989; Hansmann & Kraakman, 2001). Economists, on the other hand, are not quite so careful in their language (e.g., Bolton & Dewatripont, 2005) because the ownership narrative is embedded in the agency theory of the corporation. This

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[6]Note, this differs from shareholders' economic residual claimancy status by which they are paid if and only if the corporation has a net income.

[7]Clearly, a corporation with one shareholder, who is also the CEO and Chair of the board of directors, differs little in economic substance from the classical firm owner (expect, importantly, for the shareholder's limited liability). Nevertheless, corporate law requires the names and duties of the Board of Directors to be specified in the articles of incorporation, thereby rendering these institutional positions distinct from the real person who may occupy multiple roles.

theory originates in Jensen and Meckling's (1976) application of the principal-agent (PA) model to the shareholder-manager relationship; it has since become the singular conceptualization of the corporate form in the economics literature.[8] In fact, the Jensen-Meckling paper has the distinction of being "the most frequently sighted article in business academia" (Stout, 2012, p. 35). Yet the PA model maintains the ownership narrative by casting shareholders as principals who grant certain, limited powers over *their* property to hired agents. As with shareholder ownership *per se*, this too is a reductive depiction of shareholders' connection to the corporation and thus misrepresents the actual juridical relationships at hand.

2.2 Agency Theory's Legal Fallacies

A principal hires agents to work on her behalf, in her interest. The agency theory of the corporation asserts that widely-held incorporated firms are structured this way because shareholders are the ultimate proprietary owners of corporate assets. Jensen and Meckling (1976, p. 309; emphasis added) are quite explicit about this treatment:

> Since the relationship between the stockholders and manager of a corporation fit the definition of *a pure agency relationship* it should be no surprise to discover that the issues associated with the "separation of ownership and control" in the modern diffuse ownership corporation are intimately associated with the general problem of agency [. . . While t]he problem of inducing an "agent" to behave as if he were maximizing the "principal's" welfare is quite general [. . .] We confine our attention to [. . .] the analysis of agency costs generated by the contractual arrangements between the *owners and top management* of the corporation.

That is, agency theory takes the ownership narrative as a literal description of share-

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[8]Conversely, there are many competing economic theories of the firm (examples include Coase (1937), Alchian and Demsetz (1972), Grossman and Hart (1986); see also Foss and Klein (2008) for a review and defense of the Coasean firm). While each theory offers a different perspective on the nature of the corporation as a particular type of firm, none offers a theory of corporate governance distinct from the principal-agent model.

holders' relation to the corporation and thereby telescopes the analysis onto the moral hazard associated with self-interested agents. Put another way, agency theory asserts that shareholder value and firm value are perfectly contiguous metrics. Moreover, because the ownership narrative is merely sifted (if not reified) through shareholders' principal status, the pursuit of shareholder value maximization is *a priori* optimal.

Conceptualizing shareholders as legally akin to principals with an ultimate proprietary claim rests on three misconceptions: (i) shareholders privately create the corporation; (ii) the share is a claim on profits, and; (iii) managers have a fiduciary duty to maximize shareholder value. We argue that the proprietary foundations of the corporation require, at a minimum, enabling public law statutes; the share is a salable claim to dividends only, and; managers owe a fiduciary duty to the corporation as a whole – not to shareholders.[9]

2.2.1 A Nexus of Contracts and Entity Status

Contractual efficiency underpins the principal-agent model in which the corporation is a complex "nexus of contracts" between private parties. The eminent Law and Economics scholars Easterbrook and Fischel (1989, p. 1426) argue "arrangements among the actors constituting the corporation usually depend on contracts and on positive law, not on corporate law or the status of the corporation as an entity." It follows that, as a mere set of implicit and explicit contracts, all corporate constituencies voluntarily pledge their physical and/or human capital to the joint venture (see Alchian & Demsetz, 1972). Shareholders then, like classical capitalist firm owners,

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[9]Although the focus is on US law, these three cleavages are so fundamental to legal theory that they apply to most other jurisdictions, and certainly to other common law countries.

commit unsecured capital in order to obtain profit. Like a benefactor to a trust, so the argument goes, shareholders *create* the corporation by contracting with an agent to manage their *assets* so as to maximize their *utility*. In effect, this contractarian view re-positions shareholders as the original owners who have rationally chosen to exchange the other elements of their property rights bundle for a pure equity stake.

The nexus of contracts depiction of the corporation is anachronistic and inaccurate. The corporation is a legal entity. It has 'personhood' under the law which enables *it* to own property, engage in contracts and litigate. As Lynn Stout (2012, p. 37) puts it, "corporations are independent legal entities that own themselves". Entity status was not and *could not be* created by private contracting.

Early 19th century American general incorporation statutes were designed to allow the free establishment of religious and educational institutions which could survive its founders and be donated to directly. By dint of historical circumstance, the jurisprudence surrounding these entities later became the basis for incorporated firms (O'Melinn, 2006). Within a few decades, firms' entity status proved to be a crucial institutional tool for industrialization. It allowed groups of private individuals to jointly commit, or "lock-in", capital to large-scale projects without the risk of other parties halting or holding up the project (Blair, 2003).[10] As with churches and schools, business corporations' perpetual existence enabled them to commit to long-term projects independent of the life of any particular shareholder and, therefore, independent of all shareholders. A firm can achieve this only if its assets are not owned by mortal individuals; the assets must instead be owned by an immortal legal

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[10]Blair argues locking capital into the corporate entity is the flip side of investor limited liability: you don't bear risk beyond your investment, but you can't pull out your invested funds.

entity. Thus, the historically crucial features of early industrial firms – perpetual existence and committed capital – were made possible by the entity status invariably enabled through public statutes.

Contractarians may admit this history, but argue that corporate law merely lowers the costs of contracting to create a corporation.[11] This transaction cost argument does not hold because equity contracts (i.e., the share) hold the universal *scope* of property rights that can only be created by State sanction. The Roman Law distinction between *in rem* (property) and *in personam* (contract) rights rests primarily on the issue of scope: contracts bind the only the undersigned, property binds everyone.[12] Because the dissected property rights of the corporation continue to hold with *in rem* scope it is impossible for individuals to privately generate them. On purely theoretical grounds,[13] Hansmann and Kraakman (2000) argue that the essential role of corporate law is "positive asset partitioning" between investors and the entity itself, meaning corporate assets are protected from seizure by shareholders' personal creditors. Without positive asset partitioning it would be impossible for courts to block creditors from seizing corporate assets in the case of shareholder defaults.

The universal scope of the corporation's "locked-in" equity capital thus protects *inter alia* against members' misuse and misfortune by passing asset ownership to a

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[11]In perhaps the pithiest dismissal of entity status Easterbrook and Fischel (1989, p. 1426) explain: "It would be silly to attach a list of every one of Exxon's investors to an order for office furniture just to ensure that all investors share their percentage of the cost."

[12]Note that each the incidences cited by Honoré places a right or duty with either the property right holder or with every other person in the jurisdiction. My *right* to possession, for example, imposes a reciprocal *duty* of every other person not to occupy my property (see Hohfeld, 1917).

[13]On practical grounds, Armour and Whincop (2007) argue it is infeasible for each shareholder to agree with every potential corporate customer, supplier and employee that the unauthorized contracting of the corporation's "shared property" will render the agreement null and avoid.

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juridical person. As with early 19th century industrialists, the credible commitment of capital to productive projects requires, at a minimum, public statutes enable an immortal legal entity to own assets independently of all current and future shareholders and lenders. No series of private contracts could create a juridical person with such proprietary protections under the law. Hence, shareholders may through private contracting *join* an entity enabled by statute, but they cannot create it.

2.2.2 Dividends and the Business Judgement Rule

Shareholders receive dividends only when a corporation has positive operating profits. If this accounting condition is met, then the board of directors *may* choose to declare dividends (Stout, 2012, p. 40). Yet, it is a common economic proposition that the equity contract gives shareholders a claim on profit. In practice, a going-concern never payouts out 100% of its stock of retained earnings (or, internal equity) as doing so would be tantamount to shutting down a profitable enterprise.[14]

Shareholders' claim to all of the firm's profit is not simply unrealistic, it also has no basis in law. If management pays out no dividends (or repurchases no shares), shareholders have no legal remedy – the courts will not intervene per the business judgement rule (BJR). This legal doctrine affords corporate management near-unquestioned deference before the courts when fraud and negligence are absent (see Veasey, 2005). Under the BJR, the CEO is never legally required to payout funds to shareholders so long as she can loosely justify the decision in terms of long-

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[14]Finite-period optimal dividend models assume precisely this: the firm shuts down and payouts its internal equity at the end date (e.g., Myers & Majluf, 1984; Miller & Rock, 1985). In an infinite horizon setting, retained earnings and/or their discount factor are driven to zero by the transversality condition. Both simplifications are of course never observed in practice.

term profitability.[15] Shareholders might demand greater payouts and even threaten litigation against the company, and such pressure may even succeed in changing payout policy. But successful payout pleas succeed in spite of any legal force behind them. A true principal, in contrast, would face no such legal barrier to obtaining the income generate by her capital from the hired agent(s).

2.2.3 Shareholder Primacy and Fiduciary Duties

The direct managerial implication of agency theory's ownership narrative is the efficiency of the shareholder value primacy (SVP) norm. As the ultimate proprietary owners who have hired a board of directors to be their agents, maximizing the value of shareholder assets is tantamount to social welfare maximization (Friedman, 1970). Thus, the foregoing critique of the nexus of contracts and the pecuniary claims of shareholders might be dismissed if CEOs or other senior management were legally bound to maximize shareholder value. Indeed, the board of directors' fiduciary duty to shareholders is the fulcrum of the principal-agent model, yet it too is an abstraction from institutional reality. The top level management hold a fiduciary duty to the corporate entity itself – the physical-person embodiment of which may change from one corporate constituency to another given the particular circumstance.

Although rare, a cleavage between shareholder and firm value does arise in the so-called 'vicinity of bankruptcy', during which time shareholders have an incentive

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[15]Leo Strine (2012, p.149) implicitly makes this argument in affirming his fellow Delaware Chancellor's ruling in *eBay v Newmark* that Craigslist's business plan ran afoul of corporate law because it "openly eschewed stockholders wealth maximization". If the corporate strategy merely eschewed stockholder wealth covertly there would have been no issue. Similarly, in the only other US case ruling against managerial discretion, *Dodge v Ford*, the defendant (Henry Ford) openly admitted to not maximizing profits (Strine, 2012, p.148).

to strip the corporation of its assets before reorganization procedures ensue. In such circumstances of conflicting interest, the established principle is to view the directors as being fiduciaries of the corporate entity as a whole. As put by the former Chief Justice of the Delaware Supreme Court (Veasey, 2005, p.1431; original emphasis) reflecting on his 12-year tenure:

> Naturally, one often thinks that directors owe this duty to both the corporation and the stockholders. That formulation is harmless in most instances because of the confluence of interests, in that what is good for the corporate entity is usually derivatively good for the stockholders. There are times, of course, when the focus is directly on the interests of stockholders. But, in general, the directors owe fiduciary duties to the *corporation*, not to the stockholders. This provides a doctrinal solution to the incentive problem that is entirely consistent with the emphasis on board governance, namely, that the board's duty is to do what is best for the corporation.

This legal doctrine is perfectly in accordance with the efficiency norm that grounds economic theory. The social function of capitalistic firms is to create value for its owners. Shareholder value primacy proponents err by assuming maximal payouts imply maximal owner utility. Yet, if shareholders were the ultimate residual owners, then *any* shift in agents' fiduciary duty would amount to theft. We must therefore conclude that corporate law recognizes that "shareholder ownership" is a contestable and malleable abstraction. It may be useful at times, but when the ownership narrative would be harmful to other corporate constituencies it may be cast aside. Fulsome private property ownership would allow for no such malleability.

2.3 So What?

In legal theory the falsity of shareholder ownership is patently clear (see also Ireland, 1999; Stout, 2002). But if shareholders act *as if* they were the ultimate owners of the corporation, then agency theory could be said to capture the relevant economic be-

havior. Indeed, Thomas Joo (2009) argues that the 'shareholder ownership' is never meant descriptively; rather it is a narrative of corporate legal theory with a normative goal – namely, efficiency via shareholder value primacy. In this sense agency theory asks us to accept, in spite of the bespoke legal complexes built around the corporate form, that the economic relationship between shareholders and corporate assets does not differ from classical firm owners' relationship with their personal property. Many reject this claim, arguing that the ownership fallacy, agency theory and attendant SVP norm muddles our understanding of the socio-legal foundations of the corporation (e.g., Lazonick & O'Sullivan, 2000; Englander & Kaufman, 2004; O'Melinn, 2006; Bonen, 2008; Stout, 2012; Petrin, 2013; Chassagnon & Hollandts, 2014). Consequently, these critiques have led to alternative narratives, such as stakeholder value and the team production theories of the corporation (Blair & Stout, 1999; O'Sullivan, 2000; DesJardin & McCall, 2004), that better reflect the institutional complexity of corporate governance. While such theories have made important inroads, particularly in the aftermath of the financial crisis (e.g., Williams & de Graaf, 2009), the proposed alternatives remain as second-tier challengers to the still-dominant ownership narrative. A key reason for this agency theory's monopoly on efficiency.

The recurrent weakness of alternative corporate governance theories is that they omit or downplay the importance of the efficiency norm.[16] Upon this point, Jensen

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[16]An admirable exception is Rebérioux's (2007) critique of the efficiency of shareholder value primacy on the basis that shareholders are not effective monitors of corporate management. While we are sympathetic to this argument, it maintains that manager's self-interested behavior remains the proximate cause of the diminution of value, and makes a strong normative claim that shareholders *should* monitor better. But if shareholders are the corporation's ultimate owners, then it is not clear why we should have anything to say about how they use their own property: its your prerogative to be "irrational" with your assets; competitive forces will weed out the bad investors.

(2001) is able to argue that, by asking managers to focus on multiple objectives (viz. shareholder payouts *and* social mores), stakeholder value-based management necessarily leads to suboptimal outcomes because the corporate surplus is diminished. Maximizing shareholder value and then redistributing can, as Sundaram and Inkpen (2004) argue, maximize other stakeholders' welfare too. Similarly, John Boatright (2009) argues Blair and Stout's team production theory is ethically inferior to agency theory because SVP creates more wealth and allocates that value more justly via the competitive forces unleashed from a clear assignment of property right claims.

Shareholder value primacy is also resilient against empirical evidence that it leads to excessive payouts and risk-taking (e.g., Lazonick, 2007; Mason, 2015). Agency theory proponents are always able to attribute such inefficiencies to bad management: Shareholders of course want more profit so they would never willing agree to suboptimal investment of *their* assets. In response to MBA students' rejection of SVP, for example, Tse (2011, p. 57) defends it as having been "opened up for misguided use as these managers can take the [SVP] model as a convenient pretext to seek personal enrichments, all in the name of shareholder value maximisation." Hence, insofar as corporate governance is concerned, Tse claims the financial crisis is ultimately traceable to issues of agents' moral hazard. Again and again, critical theories that reject the ownership narrative are themselves rejected for failing to prioritize efficiency. Even when an episode of mass inefficiency emerges as in 2007/08, it is explainable as practitioners' failure to follow the (true!) precepts of SVP.

We believe that the positivistic argument needn't be ceded. Without a fulsome ownership claim, the principles of utility maximization apply on a contingent and

indirect manner to shareholders vis-à-vis corporate assets. As on of many pseudo-owning corporate members, outside shareholders can inefficiently divert corporate value to themselves. Before turning the model of shareholder-manager bargaining built on the legal facts discussed here, we provide an explanation of the two key social dimensions of the theory.

3 Social Interactions and Property's Utility

In addition to dropping the shareholder ownership narrative, the theory presented here departs from the principal-agent model in two important dimensions. First, the shareholder/manager interaction takes place over the division of the yet-to-be-realized surplus, rather than over the productive operations themselves. Second, managers' non-pecuniary utility stemming from corporate assets in themselves is more ownership-like than shareholders' sole interest in cash payouts (e.g., dividends).

3.1 Negotiation Location

Inefficient underinvestment would be impossible if shareholders knew their firms' productive possibilities. The signaling literature takes this asymmetric information seriously (e.g., Leland & Pyle, 1977; Myers & Majluf, 1984). Miller and Rock (1985), for example, present a model in which managers signal expected cash flow information to shareholders through payout policy. In equilibrium it is perfectly possible that shareholders are overpaid (i.e., investment is below the value maximizing level). Unlike agency theory, however, this stand of literature treats shareholders as mere

investors rather than as involved owners: shareholder interact with the firm only by buying or selling shares in response to managers' actions.[17] The model presented below merely shifts this framework toward the active shareholder-manager relationship assumed in agency theory and advocated by shareholder value proponents.

There is ample empirical evidence to believe shareholders negotiate over their 'slice of the pie', rather than over the correct level of investment and output. Buttressed by the ownership narrative, the past two to three decades have seen a marked rise in shareholder activism. As a case in point, rising shareholder activism – buttressed by the ownership narrative – has culminated in massive share repurchase programs (Hecht, 2014; van Rixtel & Villegas, 2015; Lazonick, 2015). Beyond eating into firms' cheapest source investment funds (i.e., retained earnings), share repurchases increase risk because the retirement of equity raises leverage. The uptick in risk is of course magnified when companies finance repurchases through borrowing. Mason (2015) finds evidence of this in the increasingly strong correlation between payouts and debt levels over the past 20 years. In September, *The Financial Times* warned that share buybacks had spurred an increase in corporate borrowing to such an extent that it has "led to a deterioration in the health of US companies" (Platt, 2015). Even the *Wall Street Journal* noted that "[s]keptics say firms using [leveraged repurchases] are taking on risks that could imperil them should the economy sour or the market hit a downturn" (Stumpf, 2014).

Since the growth in buybacks began before and continued up to the financial crisis, it must be the case that some repurchases are manifestations of inefficient un-

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[17]To be sure these models adopt the ownership narrative insofar as the 'value of the firm' is the equity price established by these passive owners.

derinvestment. Our model introduces this possibility (otherwise ruled out in agency theory) by drawing on the widely-acknowledged informational asymmetry between insiders and outsiders. Given their lack of knowledge, shareholders' next best option in a world with incomplete contracts is to negotiate over their share of the surplus – whatever that may happen to be. However, avoidable inefficiencies may arise when such negotiations take precedence over managers' investment discretion.

3.2 The Value of Owning

There are two reasons to believe that property ownership conveys non-pecuniary utility in nearly all circumstances: (i) property is bound up with notions of personhood and individuality, and; (ii) empirical evidence from dual equity-class corporations indicates shareholders value control for its own sake (i.e., for reasons that cannot be explained by appeals to higher returns).

Margaret Jane Radin (1982) argues that property confers much more than the rights to exclude, manage and earn: it is a basis of our personhood. Drawing on Hegel's *Philosophy of Right*, she posits a spectrum of property running from the deeply personal to the wholly fungible. The former is epitomized by a wedding ring, the latter by a dollar bill. By exerting one's *will* upon an object by, say, purposively using or occupying it, the property can shift toward the personal end of the spectrum. Radin's argument is that legal practice recognizes this 'personality of property' when, for example, renters are afforded protections against landlords or a neighbor is made legally immune for accidentally building onto his neighbor's land. The law, in effect, follows the social principle that objects become valued

and treated as property through continued use and occupation, rather than through deed alone. Imbued with a sense of self, *specific private property objects become decreasingly substitutable with the stream of income it generates.* That is, property becomes valued in its own right because the owner forms a personal connection to it. Thus, akin to proprietary ownership, the time and energy spent working with corporate assets means managers are likely to have a much greater subjective, personal connection to the firm as compared to outside equity holders.

Secondly, shareholders pay more for shares with greater controls rights even though there is no appreciable monetary benefit to control rights. Since the New York Stock Exchange ended the requirement that listed companies have a single class of share in 1986 (Hiltzik, 1986), dual class shares have proliferated. In the extreme, non-voting shareholders have no power over corporate policy at all.[18] More common is for the superior share class to provide ten times the voting power of an inferior share with the same dividend claim.[19] Such structures represent a significant divergence between an interest in payouts and the power to employ managers and indirectly control assets. Not surprisingly, empirical studies consistently find significant price premia in the market value of corporations with equitable voting rights over those with dual class shares (see Zingales, 1995; Claessens, Djankov, Fan, & Lang, 2002; Dyck & Zingales, 2004; Gompers et al., 2010). In Anglo-Saxon countries the share price premium is found to be between 5 and 10% (Adams & Ferreira, 2008).

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[18]Non-voting stock is not as rare or underpriced as one might think. In fact, The world's largest initial public offering was in September 2014 for Ali Baba's NYSE-listed shares, all of which were devoid of voting right (*The Economist*, 2014).

[19]Gompers, Ishii, and Metrick (2010, p. 1056) report that, from 1995 to 2002, 10:1 was the modal voting rights imbalance between superior and inferior shares for dual class firms in the Compustat universe (excluding trusts, closed-end funds, ADRs, units, and REITs).

Conversely, there is scant evidence of returns premia between corporations with single and dual class shares.[20] Evidently, shareholders value equity investments in corporations with one class of shares (i.e., one-share, one-vote) more than they value dual class corporations, even though they do not receive greater returns for paying this premium. We must therefore conclude that rational investors benefit in some other, non-pecuniary aspect of holding greater voting rights. The determining the precise nature of this utility is beyond the present scope, but it stands to reason that greater influence begets greater utility from organizational performance (see Hirschman, 1970, ch. 7).

4 A Model of the Corporate Commons

Simon Deakin (2012) argues that SVP's shortcomings stem from the theory-driven, functional approach of the Law and Economics school of thought.[21] In its place, he (p. 365) calls for a "data-driven" approach in which corporate theory reflects the

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[20]Return differentials between corporations with equitable (1-share, 1-vote) and non-equitable voting stocks have been much less analyzed than market values. This is likely because there tends to be little difference. Lemmon and Lins (2003) is one popular example demonstrating that, in the midst of the Asian financial crisis, total returns to equitable firms were greater (less negative) than returns to more tightly controlled firms. They note cumulative stock returns prior to the crisis exhibited no such divergence (p. 1448), whereas through the crisis a binary indicator for inequitable inside shareholder control is negative at the 5% or 10% level depending on the model specification (Table IV). However, because Lemmon and Lin do not distinguish between dividends and price declines, it is not clear what drove the return differentials during the crisis. Masulis, Wang, and Xi (2009) test US firms in more regular times (1995-2003) and find the ratio of control rights to cash flow rights are not significantly related to excess returns, but are significant and negative at the 10% level when this ratio interacts with changes in corporate cash holdings.

[21]Deakin (2012, p. 344) says this "approach is reductive, abstracting from the dense linguistic and behavioural textures of legal forms and processes, in order to throw light on the economic structure which undergirds legals rules. From this perspective, the terms used by the legal system to describe juridical relations do no necessarily give a good account of the functions of legal rules." Hence, Law and Economics is driven by economic postulates (theory) rather than legal rules (data).

"series of fragmented, domain-specific perspectives" such as labor relations, enterprise liability, and insolvency law, as well as delegated management contracts. The rich set of socio-legal relations at play leads Deakin (2012, p. 368) to reconceptualize corporate property as a commons in the following sense:

> Each of these areas of law has a dual function: specifying the conditions under which various contributors of inputs [i.e., corporate constituencies] can draw on the resources of the firm while at the same time, preserving and sustaining the firm's asset pool as a source of productive value. [...] It is the role of the legal system to maintain this commons where doing so generates a surplus for the parties immediately involved in the productive process and for society at large.

The corporate commons conceptualization rejects shareholders' (or any other constituency's) ownership as both fact and narrative. Yet this shared resource cannot be solved by a Coasean ascription of proprietary claims because this commons was *created by and for* the dissection of property rights. Indeed, a 'non-owned firm' presents a heretofore unanswered question for economic theory: without a single (set of) property owner(s), how does one conduct welfare analyses? To address this we restrict attention to the bargaining between shareholders and managers, and return to the first principles of utility maximization, broadly defined.

4.1 Model Setup

Consider a widely-held corporation without debt in a world without taxes. Let Y denote the net income or surplus that is either reinvested R in the firm or paid out to shareholders as dividends D. As in Jensen and Meckling (1976), we abstract from the complications of temporal uncertainty by taking all variables as equal to the net present value of the expected flows, and assume that all other corporate contracts – including the manager's salary, employee wages, etc. – have been optimally chosen.

We assume the firm neither issues new, nor repurchases existing, shares. Investment, therefore, is financed entirely by retained earnings R:

$$R + D \equiv Y := Y(R)$$

where $Y(R)$ is a standard production function, $Y'_R > 0, Y''_R < 0$, with R taking the place of invested capital, typically denoted by K. The lion's share of R is obtained from the productive surplus generated over the firm's operating lifetime, but a small portion is the "locked-in" capital paid by shareholders at the initial equity issuance such that $R > 0$. This paid-in capital is a sunk cost for shareholders.

Let outside shareholders own $\alpha \in [0,1]$ of the firm's shares and managers hold the remaining $1 - \alpha$ fraction. Shareholder net utility is given by,

$$V(R) = \tilde{V}\left(\alpha\big(Y(R) - R\big)\right) - x \tag{1}$$

where x is the value of selling one's shares and investing in the next best alternative. Gross utility $\tilde{V}$ is a standard subjective utility function, $\tilde{V}' > 0; \tilde{V}'' \leq 0$. Equation (1) says outsiders view each dollar of retained earnings as a dollar less in payouts. As such, R is utility enhancing only when an increase in R generates at least a proportionate increase in D.

Although managers value D in a similar fashion as shareholders, they value R differently. Because they use and direct corporate assets personally, managers value R in its own right. Like other property owners, managers obtain non-pecuniary

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utility through the use of the property. Managers' net utility is given by

$$U(R) = \tilde{U}\big((1-\alpha)\big(Y(R) - R\big), R\big) - q \qquad (2)$$

where q is the value of quitting the firm and finding the next best employment opportunity. Gross utility $\tilde{U}$ is now determined by two factors: payouts and retained earnings. Like $\tilde{V}$, $\tilde{U}$ is increasing and concave in $D = Y(R) - R$. We assume it is increasing and strictly concave in its second argument.[22]

Since neither shareholders or managers own the corporation's assets, there is no unambiguous welfare-maximizing R^* even though an R_S^* (viz. R_M^*) maximizing $V(R)$ (viz. $U(R)$) can be found (see below). Instead we argue that the investment policies R_S^*, R_M^* set the lower and upper bounds of surplus maximizing behavior such that any $\{R^* \in R : R_S^* \leq R^* \leq R_M^*]\}$ yields an optimal $Y(R^*)$. Outside of these limits, Pareto-improving distributions of Y exist. Although investment policy sets the welfare benchmarks, the model assumes shareholders and managers jointly determine R indirectly through their *ex ante* negotiation over the distribution of the surplus. We show that welfare maximizing distributions can result in suboptimal investment policies, $R \notin R^*$, depending on the structure of the bargaining interaction.

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[22]The utility of retained earnings captures notion of the non-pecuniary "use-value" of property. Yet the core logic can be found in other branches of economics. For example, the rationale for imputing homeowner utility into GDP is that housing is an investment that provides non-pecuniary utility through the use and occupation of the property. Just as the imputed utility of homeownership rises with real estate value, a firm owner's non-pecuniary utility can be expected to increase with the scale of her firm's assets. This is similarly the case for corporate managers.

4.2 Optimal Investment Benchmarks

To make the analysis concrete assume both agents' utility in payouts is linear. Managers' additive use-value of commanding corporate assets exhibits diminishing marginal returns. Let,

$$V(R) := \alpha\big(Y(R) - R\big) - x \tag{1'}$$

$$U(R) := (1 - \alpha)\big(Y(R) - R\big) + \delta R^{\psi} - q \tag{2'}$$

where $\delta > 0$ and $0 < \psi < 1$. Further, let $Y(R) := AR^{\kappa}$ where $A > 0$ is the productivity factor and $0 < \kappa < 1$ is output elasticity. Then the optimal investment levels maximizing utility for the shareholders R_S^* and for managers R_M^* are, respectively,

$$R_S^* = (A\kappa)^{1/(1-\kappa)} \tag{3}$$

and

$$R_M^* = \left(A\kappa \cdot \frac{1 - \alpha}{1 - \alpha - \delta\psi R^{\psi-1}}\right)^{1/(1-\kappa)} \tag{4}$$

Since $\delta\psi R^{\psi-1} > 0$ it follows that $R_M^* > R_S^*$ for all parameterizations.[23]

The conflicting investment policy preferences are represented graphically in Figure 1. The tangencies at points S and M indicate that managers' valuation of retained earnings leads them to invest more and payout less than outside shareholders would prefer. The basic result is identical to the agency cost analysis in Jensen and Meckling (1976, see fig. 1 and accompanying text). Their model differs only in the *descrip-*

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[23]This is because $\frac{1-\alpha}{1-\alpha-\delta\psi R^{\psi-1}} > 1$ implies $-\delta\psi R^{\psi-1} < 0$, which must hold.

Figure 1: Investment Optima
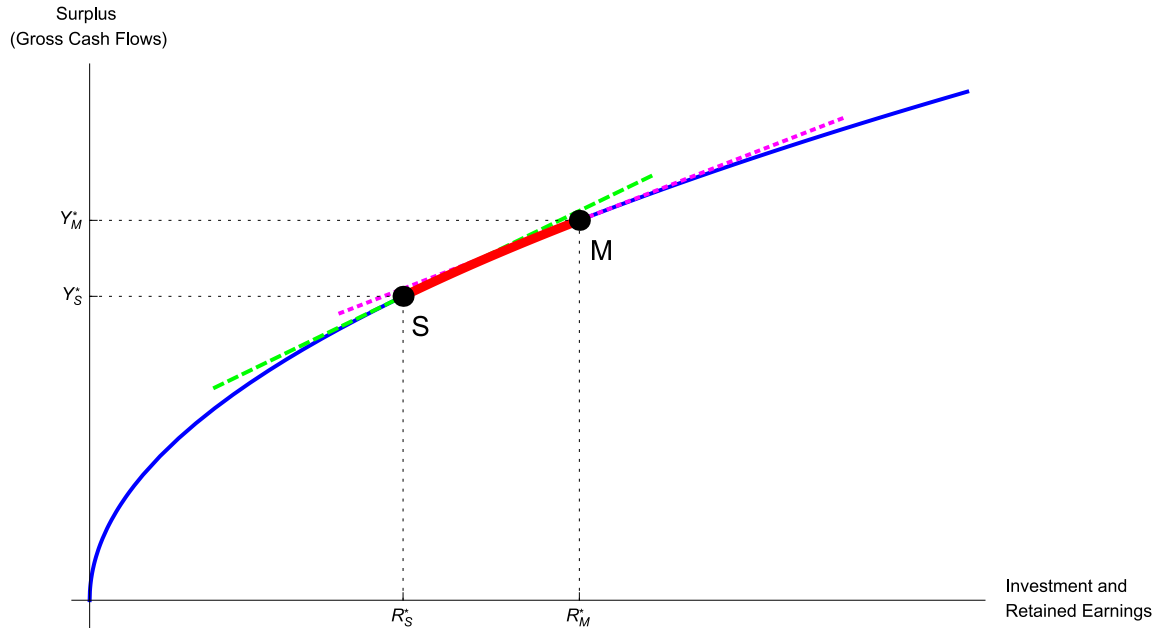
tion of R_M^* as being preferred by managers' for reasons of cost rather than benefit.
Agency costs arise because managers exchange D for R at a rate lower than 1-for-1
(the slope at M) whereas the tradeoff for outsiders is exactly unity (the slope at S).
Indeed, it is somewhat ironic to note Jensen and Meckling assume that the complete
owner values R in its own right (as is the case here); it is only when this owner sells
some α of equity claims that a linear utility in payouts is considered correct. From
that point of view, it mechanically follows that any $R > R_S^*$ is suboptimal.

Once disabused of the ownership fallacy, the welfare economics of corporate gov-
ernance is not so self-evident. In Fig. 1 $R > R_M^*$ is suboptimal as both parties would
benefit from lower retained earnings and higher payouts. Similarly, any $R < R_S^*$ is
suboptimal as both parties would benefit from higher retained earnings and lower
payouts. Along the segment SM, however, there is no *a priori* welfare ordering of

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$R^* \in [R^*_S, R^*_M]$ without some exogenous social welfare function. In terms of a linear combination $\lambda V + (1 - \lambda)U$ with $0 \leq \lambda \leq 1$, for example, Jensen and Meckling simply assume $\lambda = 1$. In contrast, we do not claim to know the true social welfare weightings of the various corporate constituencies.

4.3 Dividing the Surplus

As pseudo-owners there is no pretense for allowing shareholders to determine the distribution of the corporate surplus to their liking. Instead, dividing the surplus is a governance problem solved through negotiation since payouts $D = Y - R$ are, as a rule, not subject to contract.[24] In line with dividend signaling models we assume shareholders' lack information about the surplus function $Y(R)$. And outsiders, in any case, do not control investment policy. Shareholders and managers must therefore agree to a distribution of the surplus Y that guarantees both are better off than their fallback options, x and q. If this condition is not met, either or both parties would abandon the enterprise. The surplus distribution problem is solved as an generalized Nash bargain in which managers benefit from their $1 - \alpha$ share of payouts in addition to the surplus retained in the firm. Shareholders gain only by the proportion α of the paid out surplus. Shareholders are exogenously assigned the bargaining power $\beta \in (0, 1)$, and managers $1 - \beta$. We interpret $\beta = 1$ as fully realized shareholder value primacy, and $\beta = 0$ as complete managerial domination.

Let s be the fraction of Y received by outside shareholders such that managers

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[24]That is, other than the positive profit requirement, $D = 0$ if $Y \leq 0$.

receive $1 - s$. These shares are determined by the investment level R,[25]

$$s = \frac{\alpha D}{Y} = \alpha(1 - R/Y), \qquad \text{and} \qquad 1 - s = \frac{(1-\alpha)D + R}{Y} = 1 - \alpha(1 - R/Y).$$

For any given surplus level, we can normalize $Y = 1$ to yield the unique mapping between surplus share s and the rate of retained earnings $r \equiv R/Y$ as,

$$r = 1 - \frac{s}{\alpha} \tag{5}$$

Negotiations over the distribution of the surplus therefore has a direct implication for the rate of investment.

Maximizing the generalized Nash product $(V(sY))^\beta \, (U((1-s)Y))^{1-\beta}$ yields the optimal distributions of Y. Using lower case letters to denote values scaled by Y, these distributions are defined by the shares s^* and $1 - s^*$ that solve

$$\frac{\beta v'_S}{v} = -\frac{(1-\beta)u'_S}{u} \tag{6}$$

Given (1′) and (2′) and the the bijective mapping $s \mapsto r$ in (5), shareholders' and managers' normalized utility can be written as univariate functions of s:

$$v(r(s)) := \alpha(1 - r) - x \qquad\qquad = s - x \tag{7}$$

$$u(r(s)) := (1-\alpha)(1-r) + \delta r^\psi - q \qquad = \frac{s}{\alpha} - s + \delta\left(1 - \frac{s}{\alpha}\right)^\psi - q \tag{8}$$

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[25]These shares should not be taken to mean managers value R directly (rather than at a diminishing rate). Instead $1 - s$ includes includes R because this is under the managers' control. By similar reasoning, outsiders' share s would not include R even if they valued it directly as well. The diminishing utility of R is brought in through the utility functions in the Nash product.

Note that s is shareholders' proportionate realization of the firm's net income and α is the fraction of dividends they receive from this surplus. Since $R > 0$, it follows that $\frac{s}{\alpha} < 1$.

Plugging (7) and (8) into (6) is yields the implicit function of outsiders' share of output s^* consistent with optimal allocations:

$$\frac{\beta}{s^* - x} = \frac{1 - \beta}{\frac{s^*}{\alpha} - s^* + \delta\left(1 - \frac{s^*}{\alpha}\right)^\psi - q} \underbrace{\left(1 - \frac{1}{\alpha} + \frac{\psi\delta(1 - s^*/\alpha)^{\psi-1}}{\alpha}\right)}_{-u'_s > 0} \qquad (9)$$

Managers' marginal utility in outsiders' share, u'_s, is negative for nearly all virtually parameterizations of a widely-held corporation. The exception is when outside ownership is very low (e.g., $\alpha < 0.2$), at which point the $\frac{1}{\alpha}$ term dominates such that $u'_{s|s=0} > 0$ and $u'_{s|s=1} < 0$. This potential for an interior maximum of $u(s^*)$ occurs because, with α small, managers claim the bulk of dividends and therefore have an incentive to payout more. We do not consider such tightly-held firms as our interest is in diffused shareholding structures that deviate most substantially from classical proprietary firms.[26]

The efficient bargain (9) can be characterized by the more familiar (albeit still implicit) functional form,

$$s^* = x + \beta\left(\Gamma(s^*) - x - q/(-u'_s)\right) \qquad (10)$$

$$= x(1 - \beta) + \beta(\Gamma(s^*) - q/(-u'_s))$$

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[26]Moreover, at $\alpha < 0.2$ the $\Gamma(s)$ function fails to be uniquely defined in the domain of $s \in [0, 1]$. Thus, imposing the restriction $\alpha \geq 0.2$ has the additional benefit of ensuring that the implicit functionals found here are well-behaved.

where $\Gamma(s^*) = \frac{s\psi\delta(1-s/\alpha)^{\psi-1}+\alpha\delta\left(1-\frac{s}{\alpha}\right)^{\psi}}{\alpha-1+\psi\delta(1-s/\alpha)^{\psi-1}} > 0$, which is positive since the all terms in the numerator are positive and the denominator is equivalent to $-\alpha \cdot u_s' > 0$. This term represents the elasticity of the manager's shared interest in s^* because, for $\alpha < 1$, she too is a shareholder benefiting from payouts.

The first equality in (10) shows that outsiders' receive the value of their fallback position x plus their fraction β of the managerial utility-adjusted joint surplus (cf. Bowles, 2004, ch. 5). The second equality highlights the bargaining balance. For $\beta = 0$, managers have all the power and the optimal bargain provides shareholders just enough so as to be indifferent between investing in this firm and the next best alternative. With a modicum of power, shareholders improve their lot by reducing the surplus captured by managers. In other words, for $\beta > 0$ shareholders can act to reduce agency costs. At the other extreme, shareholders receive $s^* = \Gamma(s^*) + q/u_s'$ when $\beta = 1$. In this case shareholder value primacy is perfectly implemented: managers payout to shareholders' precisely what they demand. As discussed in §4.2, greater payouts do not necessarily mean greater welfare outcomes. For this we must assess under what conditions the bargaining allocation generates an investment rate within the optimal investment segment $R^* \in [R_S^*, R_M^*]$.

4.4   Bargaining Implications for Investment

Substituting $r^* = 1 - \frac{s^*}{\alpha}$ into (10) and rearranging shows the fraction of surplus Y that must be reinvested to achieve the optimal bargaining solution is,

$$r^* = 1 - \frac{x(1-\beta)}{\alpha} - \beta\left(\frac{\delta\psi(1-r^*)(r^*)^{\psi-1} + \delta(r^*)^{\psi} - q}{\alpha - 1 + \delta\psi(r^*)^{\psi-1}}\right) \tag{11}$$

As before, managers' nonlinear utility in the use-value of assets forces an implicit functional form. However, with standard numerical parameterizations we can investigate the how the rate of earnings retention r^* is affected by the degree of outside equity holding α, the bargaining power of shareholders β, and the relative fallback options for insiders and outsiders, respectively, q and x.

In the present model, r is the single degree of freedom that jointly determines the distribution in (11) and the level of output $Y(R)$. The latter solution is, in effect, a fixed point problem of mapping $rY(R)$ into R. For ease of presentation we plot the solution as the intersection of

$$Y(R^*) = \frac{R^*}{r^*}. \tag{12}$$

This allows for direct comparison with the surplus function in Figure 1.

Figure 2 shows the solution to (12) under five parameterizations of β. When shareholders have very little influence over managers ($\beta = 0.1$), the resulting level of retained earnings R_A is well above the upper bound of R_M^*. This point falls within the region of agency costs: managers over-invest and suboptimally divert corporate assets toward their personal, non-pecuniary utility. With $\beta = 0.11$, shareholders are able to negotiate for a larger share of the surplus Y, increasing payouts and reducing r^*. As a result, the investment solution at B has lower reinvestment and surplus relative to A. Shareholder utility, while not at the optimal retention rate R_S^*, is unambiguously improved in moving from R_A to R_B^*. From the managers' perspective, they have shifted from re-investing too much to re-investing too little relative to their maximal

Figure 2: Investment Determined by Optimal Bargaining and Variable β
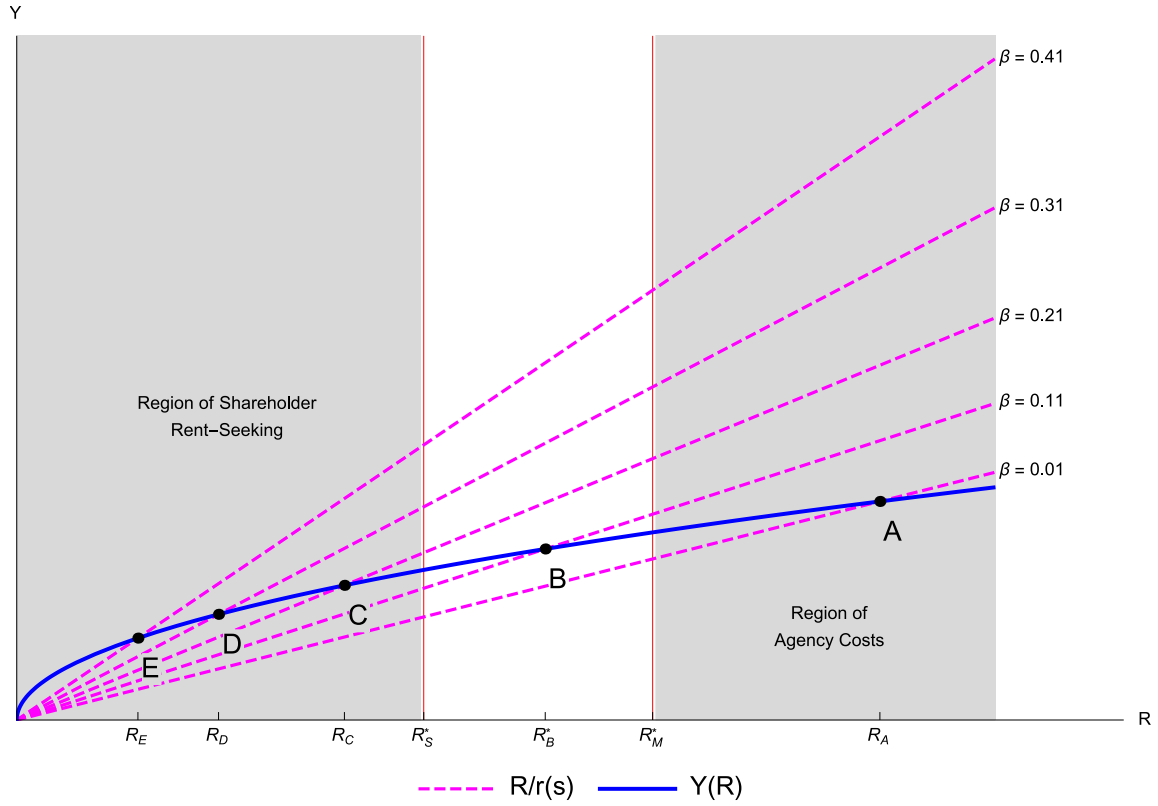
Parameterizations of $Y = AR^\kappa$ and r^* in (11) are $A = 50, \kappa = 0.5, \psi = 0.5, \delta = 1.5, x = 0.2, q = 0.1$ and $\alpha = 0.79$.

utility obtained at R_M^*.[27] Yet, given the information in Fig. 2, the welfare impact on insiders is ambiguous. However, with $Y''(R) < 0$, the marginal gain to shareholders must outweigh any potential loss to managers in moving from A to B. Hence, overall welfare is necessarily higher with an investment policy of R_B^* than with R_A.

Increasing to $\beta = 0.21$ enables shareholders to claim an even greater share of the corporate surplus. But this higher surplus capture is suboptimal. From point C, both

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[27]That is R has shift from being on the right of point M in Fig. 1 to the left.

parties would be made better off by paying out less and re-investing more. In essence, shareholders empowered by greater managerial adherence to SVP, get more than they bargained for. Outside shareholders generate this inefficient outcome because of their lack of knowledge of corporate operations and by exerting energy on obtaining greater payouts.[28] Increasing β to 0.31 and 0.41 further increases the payout fraction s^*, but at the cost of even more inefficient divestment and a lower surplus (points D and E). Thus, as shareholders succeed in diverting a greater fraction of output to themselves, they do so at a cost of themselves and to the enterprise as a whole. Equilibria in this region (e.g., points C, D and E) are examples of shareholder rent-seeking.[29]

Point B in Figure 2 is superior to all other indicated points because it alone falls within the region $R_B^* \in [R_S^*, R_M^*]$. Managers are made better off by moving to any point on $Y(R)$ above B up to $Y(R_M^*)$, and shareholders are made worse off. Shareholders are made better off by moving to any point on $Y(R)$ below B down to $Y(R_S^*)$, and managers are made worse off. The overall welfare impact is ambiguous within these bounds because we do not assume a social welfare function that could allow a rank-ordering along the SM segment. Contrariwise, investment above R_M^* or below R_S^* means that both parties would gain by, respectively, decreasing or increasing retained earnings. Even if the correction is 'over-shot' as it is from the managers' perspective in moving from A to B, the concavity of $Y(R)$ guarantees that,

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[28]Were the typical shareholder to expend more energy on learning the intricacies of his business – as luminaries like Warren Buffet do – rather than fight for higher payouts, he may reduce their informational asymmetry or gain some kind of non-pecuniary utility from corporate success *per se.*

[29]While the values are somewhat arbitrary, the parameterizations are such that low values of β are relevant for analysis. This seems reasonable since managers have an enormous amount of control in terms of scheduling and chairing shareholder meetings, changing corporate practices, and protecting themselves from ouster through staggered board elections and golden parachutes.

at a minimum, shifting from outside to inside the optimal range yields a Kaldor-Hicks welfare improvement.

Figure 3: Investment Determined by Optimal Bargaining and Variable α
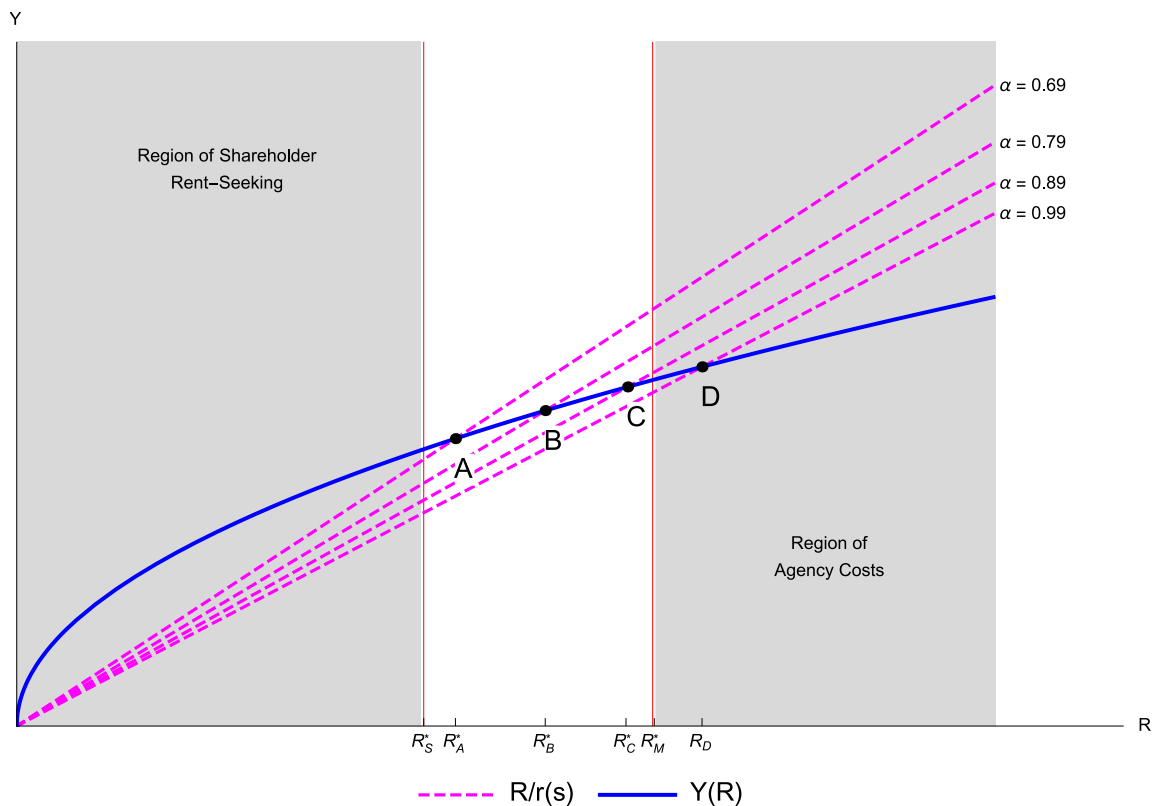
Parameterizations of $Y = AR^\kappa$ and r^* in (11) are $A = 50, \kappa = 0.5, \psi = 0.5, \delta = 1.5, x = 0.2, q = 0.1$ and $\beta = 0.11$.

The comparative statics analysis is similar for the other key parameters. Figure 3 displays the shifting investment and surplus loci from increasing the fraction of outside share ownership from 69% to 99%. Point B, with $\alpha = 0.79$ is identical to B in Fig. 2. Since $R_A^*, R_C^* \in [R_S^*, R_M^*]$, a 10 percentage point shift in the equity holding structure has no discernible impact on the aggregate welfare. However,

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highly diffused shareholding structures, such as $\alpha = 99\%$, incentivizes insiders to take advantage of outsiders by retaining a disproportionate share of the surplus, $R_D > R_M^*$.[30] Thus, as in standard agency theory, the risk of inefficient moral hazard rises as insiders hold a lesser interest in equity.

Finally, we consider the relative fallback options of managers q and shareholders x. The equilibria locus from independently varying q and x are show in Figures 4a and 4b, respectively. In both renderings point B is identical to B in the preceding comparative statics. As compared to x, q has a more muted impact on the retention rate. There is no unambiguous change in welfare for $0 \leq q \leq 0.5$. For $q > 0.5$, the equilibria (points D and E) are pushed into agency cost region implying that if managers have highly valuable alternative employment options, shareholders are pressed to give up a greater-than-optimal share of the surplus to keep the manager. This result could explain Apple shareholders' willingness to receive normal payouts while Steve Jobs ran the company, but began demanding a greater fraction of the earnings after Tim Cook took charge following the co-founder's death.

Conversely, relatively small variations in shareholders' fallback option have a large impact on the equilibria location. If shareholders have a relatively high fallback option (e.g. $x = 0.3$), then they will be part of the corporate bargain only if they can can claim an inefficiently large share of the surplus and reduce investment to $R_C < R_S^*$ in Fig. 4b. This result indicates that highly liquid stock markets can, all else equal, generate suboptimal corporate behavior by lowering the cost of exiting. Conversely, if shareholders' alternative investments options are poor (e.g., $x = 0.1$),

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[30]In equation (8) as $\alpha \to 1$ the managers' interest in payouts approaches 0, and so s appears only negatively as part of non-pecuniary utility.

Figure 4: Investment Determined by Optimal Bargaining and Fallback Positions

(a) Varying q

(b) Varying x
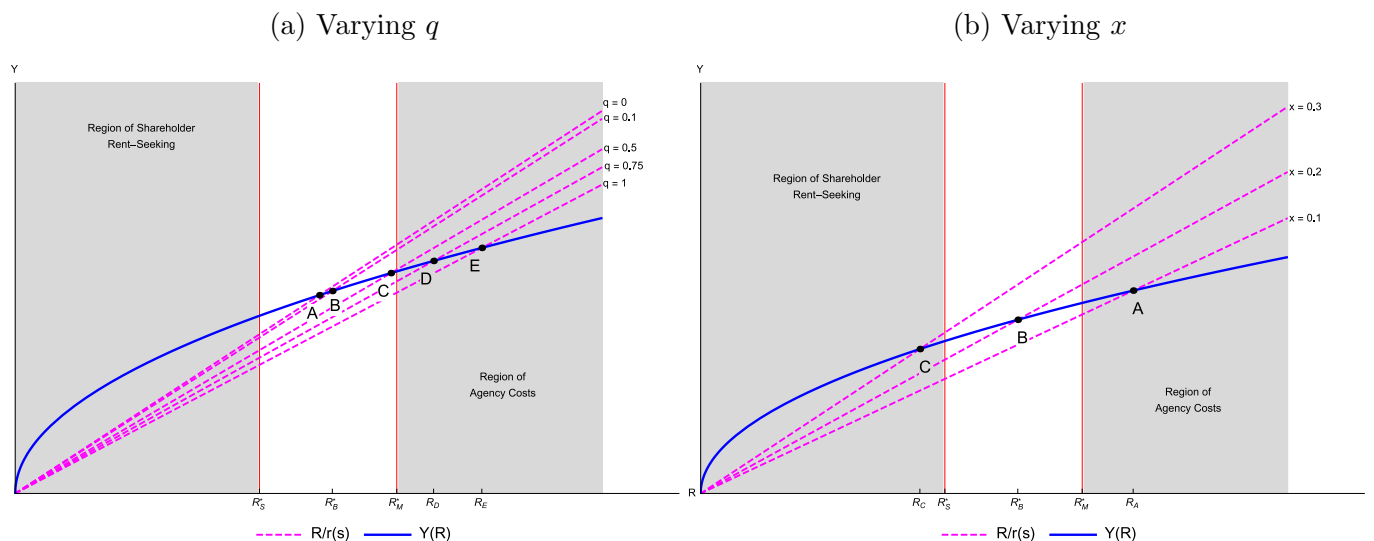
Parameterizations of $Y = AR^\kappa$ and r^* in (11) are $A = 50, \kappa = 0.5, \psi = 0.5, \delta = 1.5, \alpha = 0.79$ and $\beta = 0.11$. In 4a $x = 0.2$; in 4b $q = 0.1$.

then they may be forced to accept a bargain in which managers are able to engage in an inefficient diversion of funds toward themselves, such as $R_A > R_M^*$. In such cases, managerial moral hazard is the price paid for investing in a high performance firm – but Pareto improvements could be made if such firms faced greater competition insofar as this would raise the value of x.

5   Implications and Conclusion

The welfare analysis of corporate governance is greatly complicated if one does not adopt the ownership narrative. However, as discussed in Section 2, this narrative is false on its own and as embedded in the principal-agent model. Section 3 considered

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the social interaction of shareholders and managers as bargaining over a shared surplus, and argued for the relevance of attributing non-pecuniary utility to managers as pseudo-firm owners. This socio-legal background enabled us to posit a model inspired by Deakin's corporate commons. The model captures the salient features of agency theory (that managers can divert funds to themselves if shareholders as powerless or diffuse), but adds an important, heretofore, omitted dimension: shareholder rent-seeking. In some sense, shareholder-generated inefficiencies can be seen as the other side of the agency cost coin: when shareholders have too much bargaining power, suboptimal *under*-investment policies are likely. This result should give pause to proponents of shareholder value primacy because they can no longer claim that the principal-agent model is the only corporate governance theory geared toward social welfare maximization. By starting with the corporate commons concept, it becomes apparent that the unfettered pursuit of shareholder value maximization can, on its own, create inefficient corporate policies.

Much more remains to analyzed. In particular, future work will focus on incorporating debt financing and intertemporal uncertainty. Such extensions will likely build on the findings presented here. Further research, one hopes, can start from the socio-legal reality of the corporate commons and the model presented here. Doing so should help inform more balanced corporate governance principles that do not ignore inefficiencies because of a demonstrably false narrative.

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