

Chapter 17: Firms as Organizations in a Society with Governments

I. Introduction

The term “firm” is often used in ways that are not always internally consistent. The term firm is sometimes used to include all persons and organizations that create things for sale in markets. In which case, one-person businesses are firms, and one-person models of decisionmaking can be used to model the decisions of such firms. This is one interpretation of the model of the firm developed in Chapter 3. However, most firms are organizations—meaning that they consist of more than one person and operate in an environment with many standing rules. If we take that to be a clearer characterization of a firm, then a one-person business is not a firm until he or she hires at least one employee who then has a stable relationship with the proprietor. A firm is a group of individuals that are assembled and organized to produce things for sale.

It includes both a firm’s leadership and its team members. In cases in which a firm’s leadership directly hires all team members, purchases all inputs, and directs the production process, one can model a firm’s behavior as if it were run by a single person. Although that model also requires several people to share aims and expectations, and it also requires solutions to all the associated principal-agent problems between the firm’s governing body and its non-governmental employees.

However, as authority for hiring, the purchase of inputs, and the orchestration of production is delegated to others, that model becomes less persuasive. It is such moderately large more complex firms that are the main focus of this chapter.

All moderately large organizations adopt a variety of rules—both informal and formal rules—that attempt to resolve coordination and free-riding problems. It is such rules that transform groups of individuals into organizations. In addition, organizations have relatively stable decisionmaking procedures that contribute to their effectiveness. Relatively large modern organizations—as emphasized long ago by Max Weber (1904/1922)—also attempt to benefit from delegation and specialization in areas in which they are productive.

They create rule-bound standing semi-autonomous centers of decisionmaking for implementing their policies. In other words, all large organizations have bureaucracies. This in turn implies that large organizations make use of delegated decentralized decisionmaking.

Many of these organizational features are quasi-constitutional in that they characterize standing procedures through which major decisions are made and policies are implemented.

Such institutional features and the common problems that all organizations have to ameliorate imply that firms (and most other non-governmental organizations) can be profitably analyzed using public choice ideas and models. However, models of political decisionmaking have to be adjusted a bit to take account of relevant differences in the choice settings confronted, the specific aims of their formateurs, and the unique problems that particular institutional arrangements are designed to overcome.

The main purpose of this chapter is to undertake a broad-brush analysis of how this can (and has) been done. The result can be regarded either as a critique of the neoclassical theory of the firm or as a useful extension of it.

If institutional solutions are incomplete, then an extended analysis of organizational dilemmas can explain why particular types of institutions are in place—namely they attempt to overcome various dilemmas that would otherwise reduce profits in the short or long run. Many of these partly solved problems are likely to resemble those found in governments, because all organizations face fundamentally similar problems. Ignoring the existence of organizational dilemmas would produce faulty understandings and predictions about how firms operate. Indeed, in extreme cases, institutional failures may undermine the viability of firms.¹

This is not to say that the internal operations of firms have been entirely neglected by economists. For example, various theories of and solutions to what are termed principal-agency problems have been developed. However, such problems are often—at least

¹ Note that a sole proprietor does not have the same problems as a firm. One person businesses do not have to solve problems associated with delegated decisionmaking except perhaps various subcontractors. Firms too use subcontractors and thus are similar to one-person firms in this respect. It is only after a one-person business hires a person to work for him or her, that the one-person business becomes a firm in the sense the term is used in this chapter. It is at that point that he or she confronts the types of problems focused on in this chapter.

implicitly—regarded to be second order difficulties, rather than one of the main reasons that firms are organized.²

Although large firms must earn net-revenues to be viable, they do not usually have to maximize profits to survive. This is only true in the most competitive circumstances imaginable (e.g. those termed perfect competition in most economic textbooks).

What this chapter demonstrates is that many of the ideas and models developed in Parts II and III can be used to provide deeper insights into the successes and failures of firms. The analysis and its implications deepen our understanding of how firms operate and also help to explain deviations from the predictions of the core neoclassical theory of the firm. For example, the neoclassical model cannot easily account for decisions by firms to donate to charities, adopt internal policies that raise production costs, and take controversial policy stances on issues that do not affect a firm's profits. That many firms do some or all of the above implies that many firms (and shareholders) are not pure profit maximizers.

II. Firms as Organizations

As organizations, firms have a beginning, and many have an end, as with dissolutions or bankruptcy.

The initial formation of a firm has many similarities with the contractarian theory of the origin of a state. Both are products of voluntary agreements. Both types of organizations attempt to provide useful services or products to a community or broader public that are initially underproduced or missing.

Neglected market opportunities exist for a variety of reasons. They may exist because of what Coase termed transactions costs, Knightian uncertainty, ignorance, collective action problems, and legal barriers of various kinds. As a consequence, new commercial organizations are founded every day, as an entrepreneur or formateur observes or imagines

² Part of the neglect of organizational design issues by economists may be a consequence of overspecialization. Within managerial science, discussion of alternative institutions is a main focus of attention. See, for example, Tushman and Nadler (1978), Greenwood and Hinings (1988), Harris and Raviv (2002), or Godwyn and Gittell (2012). The latter is an edited volume that provides a collection of essays on organizational design. Galbraith's (1974) classic article provides another influential information processing theory of firm design. There are also journals of organizational design and organizational dynamics. That extensive literature does not, of course, imply that public choice analysis has nothing further to offer.

unexploited opportunities for profits that can be realized by producing and selling goods and services.

The team members recruited are all volunteers as are a firm's customers. They freely trade their labor-based services for money in the first case and their money for the firm's products and services in the second.

In contrast to a hypothetical contract-based polity, a firm does not require unanimous support within a community to form and profit. It does, however, require continuous voluntary relationships to survive. A firm needs only to be supported by a subset of consumers, input providers, and investors in a community—rather than all such persons in a community. Moreover, the voluntariness of a firm's relationships is real and continuous, rather than imaginary and temporary.

This contrasts with contract-based governments that adopt majoritarian procedures. In such governments, unanimity is only required to initiate a government. After it is founded and an agreement to adopt majoritarian procedures is adopted (with various constraints on policies), a contract-based democratic government only needs to satisfy a majority of its community members to continue.³

The high failure rate of new firms implies that many formateurs are unable to generate the more or less continuous level of support required for their survival. Errors in judgments and changing circumstances require organizations to constantly make adjustments—thus decisionmaking is ongoing, rather than a one-shot affair. Formateurs who are correct about their prospects for profit may continue for years, albeit with adjustments to adapt to changing circumstances every day.

A Firm's Quasi-Constitutional Choices

Both firms and governments are normally founded by a person or small group (their formateurs). In both cases, their founding requires assembling and organizing a group of sufficient size and skill to produce the undersupplied services. And, in both cases, it is necessary to devise decisionmaking procedures and other rules to solve their group's collective action problems. It is these rules that transform a group of individuals into an organization.

³ Of course, to continue, a government must also maintain sufficient power to avoid being conquered by one of its neighbors.

After the founding, the new organization must continually determine and make proper adjustments to changing circumstances—including the recognition of previously unknown or neglected opportunities and dangers.

With this in mind, a corporate charter normally characterizes the decisionmaking procedures of the top levels of a firm's government, its initial funding (capital), and commitment to operate within the law of the territory in which it is incorporated. A charter may also state the aims of the corporation, including profits, the production of particular types of goods and services, aims for innovation, and in some cases other non-economic goals. Its decisionmaking rules can be altered within limits, but reforms have to be acceptable to a sufficient number of investors, team members, and corporate law to be adopted.

As true of many political governments that expand through time, an economic organization may also find it useful to alter its initial decisionmaking procedures and organization as it grows. For example, the government of a polity may change from direct to representative democracy, create new bureaucracies and positions in the cabinet, and alter its method of finance by adding or expanding its tax systems. Similar reforms are often adopted by firms that grow from proprietorships into larger businesses in order to take greater advantage of specialization and better address their monitoring and incentive problems.

Hierarchical Decentralization

Decisionmaking in large organizations is always decentralized to some degree, because of the advantages of specialization and the cost savings associated with rapid responses to surprise events in production and in relationships with others beyond the organization. A good deal of relevant information is “local” and known only to those directly participating in particular links in the chains of production and consumer relations. Thus, many of the persons occupying positions well “below” the “top” levels of authority are delegated significant decisionmaking authority.

In some cases, the pattern of decentralization resembles that of federal systems of governance. A large company may have regional divisions that have significant autonomy over product design, production levels, and prices. Competition between the regional units may be used to induce innovation, reveal shirking, and identify especially skilled and trustworthy employees. In other cases, the pattern of decisionmaking resembles that of “cabinet-based governance.” Particular specialized areas of autonomy may be created, as with departments or divisions for marketing, supply chain, finance, and research and

development. In most cases, significant veto authority and agenda control remain vested in the higher echelons for all “major” decisions, but most decisions are delegated to others.

The result is usually a relatively stable hierarchical, but decentralized, system of decisionmaking with a good deal of authority vested in its various departments and often also in its relatively “low-level” employees.⁴

Organizational Dilemmas

The usual problems of governmental bureaucracies also exist for the various agencies within firms whose productivity is difficult to judge, as with marketing or research and development departments. Such units may lobby the upper levels of a firm’s government for more resources than necessary to complete their tasks at lowest cost, as in Niskanen’s (1968) model of governmental bureaucracy.

The lower levels also transmit information to the upper levels and have some ability to propose changes in the rules that govern them. One of the functions of polycentric systems of decisionmaking is to transmit “useful” information upward through the chain of command with each level passing on what is believed to be most useful to the next level of authority. This process, of course, provides numerous circumstances where opportunistic behavior (e.g. agency problems) can undermine the performance of both economic and other organizations. Niskanen’s excess budgets are only one of many such possibilities.

Within firms, such problems are moderated by the possibilities for both internal independent reviews by accountants and other independent efficiency experts. Firms benefit from the profit metric for such reviews. Insofar as a center of delegated authority produces tangible effects on a firm’s profits, such reviews tend to reduce agency problems relative to those of otherwise similar government bureaucracies, whose metrics are less concrete and measurable (as with contributions to the marginal probability of reelection, future support, or increases in social welfare).

Principal-agent (shirking) problems are often ameliorated by shifting personnel. Less productive or trustworthy individuals may be shifted to other positions within the organization where skills or trust are less important—or expelled from the company. As in

⁴ In some firms, a single employee can shut down an assembly line or be tasked with ordering critical supplies. For useful overviews of delegation from a non-public choice perspective, see for example, Bititci et al. 2011, Sandhu et al., 2019, or Verle, 2014.

politics, shareholder elections may encourage such shifts when negative consequences (lower than average profits) are apparent to shareholders.

Besides the shirking problems that every organization must deal with, there are also collective choice problems, internal rent-seeking problems, and corruption risks associated with delegation. All of these suggest that profits may be only roughly maximized by a typical large firm—even when its owners completely agree that (risk adjusted) profits should be maximized.⁵

III. The Seeking and Management of Economic Rents

As true of governments of polities, a firm's decisionmakers naturally have relationships with many others outside the firm. There are the obvious ones stressed in the core neoclassical theory of the firm: a firm's customers and input providers. In both types of relationships, discretion may create various agency problems, which is to say, behavior that reduces firm profits.

For example, a firm's buyer(s) may pay a premium for inputs or accept inferior inputs in exchange for kickbacks. Or, a personnel officer may offer jobs to friends and family who may not be the most skilled or trustworthy of the persons that could be hired.

Other economically significant relationships with governments also exist, that are ignored in most textbook treatments of firms. That a firm's team members may be tempted by bribes of various kinds can be analyzed in a manner similar to that undertaken in Chapter 14. That a firm may also profit from attempting to bribe government officials can be analyzed with the same models. The latter may increase the profits of firms as discussed in that chapter.

Other methods of influence are also possible. Several of these have been analyzed by the Chicago Political Economy strand of regulatory theory—a line of research initiated by the

⁵ This is not to say that institutions have never been analyzed by economists, nor that whether or not profits are maximized has never been discussed. However, the public choice line of reasoning differs from that of its precursors. Although it is compatible with Simon's (1991) satisficing or sales-maximizing models, it does not require bounded rationality for its conclusions. Moreover, a public choice analysis can explain instances of intentionally unprofitable firm behavior that are absent, or less clear, from the behavioral economics or agency problem perspectives.

work of Stigler (1971) and Peltzman (1976). The regulatory and legal environment in which firms operate is not entirely exogenous to their decisions.

Profiting from Rent Seeking

The Chicago school of political economy emphasized that firms were often involved in the crafting of regulations. Doing so is completely consistent with the neoclassical model of the firm, although that model neglects that source of profits. Firms devote resources to secure preferential rulings by regulators and attempt to influence legislation that affects their industries up to the point where marginal increase in revenues (or avoidance of losses) equals the marginal cost of lobbying. Such firm-government relationships provide a possible escape from the discipline of markets by shifting public policies away from those that advance moderate voter interests. Similar lobbying efforts may be undertaken to reduce their tax burdens or to be protected from competitive pressures. In addition to efforts to affect their regulatory environment and taxes, firms can also profit by lobbying for various subsidies and also for cost-plus contracts to provide governments with goods and services. Together, these lobbying activities can, at least potentially, have non-trivial effects on the profits of both large and small firms.

Such profits are termed “rents” in the rent-seeking literature that extended and deepened the Chicago school’s analysis of economic regulation in the 1980s and 90s. The efforts to obtain such preferences are often competitive, as emphasized by the rent-seeking literature, because only a subset of firms or industries may “qualify” for the special treatments or subsidies sought. Considerable resources may be invested in such contests and, thus, net industry profits from such privilege-seeking activities are not as great as they would have been with less competition for them.

In other cases, firms may have shared interests that, for example, might be advanced by changes in the methods used to calculate net revenues or value added that affect corporate or all firm taxes—as with various treatments of accelerated depreciation and capital gains.

In cases in which firm interests do not conflict, free riding may occur, which reduces overall rent-seeking expenditures (and associated rent-seeking losses). Olson (1971) terms cases where free riding is likely to be endemic as latent groups, because little lobbying would occur in the absence of organized economic associations such as the Chamber of Commerce, National Association of Manufacturers, various farm cooperatives, and unions in the United States.

There are also cases in which free riding is far less than complete, because the interests of some firms are sufficient for them to undertake lobbying without an organization. Such groups of firms are what Olson (1971) refers to as privileged groups.

Such activities increase profits and affect market prices, without involving the production of goods and services to consumers or other producers. The normative concerns raised by the rent-seeking literature need not be reviewed here, but that such activities take place clearly undermines several claims about market efficiency.

Moreover, rent-seeking and rent-dissipation may occur inside firms as well as in relationships with governmental officials.⁶

Rent Sharing

Firms that realize supra-normal profits, whether through innovation or superior efforts at rent-seeking, have inputs that have higher marginal revenue products than their counterparts in firms that compete in Marshallian circumstances. In such cases, there is a tension between the input providers who would like to receive their marginal revenue products as wages and firm owner-managers who would rather pay them their opportunity cost wage, prices, and rental rates.

If inputs are simply purchased in competitive markets, the profits will all be realized by firm owners. However, labor is normally part of the firm because firm-specific human capital accounts for part of each type of labor's productivity within the firm. It is for this reason as well as transactions cost savings that firms have long-term employees. As part of a firm, such labor has numerous opportunities to lobby for higher salaries.

If such internal lobbying activities are successful, there will be some profit sharing or rent sharing within the firm. This is most likely among those in influential positions within the firm's top levels and also for especially valuable input providers, such as relatively high-level managers, successful sales personnel, or innovative leaders of research and development.

⁶ See, for example, Tullock (1967/2008), Krueger (1974/2008), or Cowling and Mueller (2008)—all of whom assume that profits from currying favor are competitive and thus in equilibrium the returns from rent-seeking are the same as other investments that might be made. Later papers suggested that various entry barriers may reduce or eliminate the return-equalizing nature of rivalry for government favor. See Congleton and Hillman (2015) for examples.

Recent economic studies suggest that rents are often shared throughout highly profitable firms, although there is some evidence of a decline in such practices (see, for example, Bell et al., 2024, or Arai & Heyman, 2009).

Rent Extraction

Firms also engage in rent-extracting activities. They may create contests within the firm or among governments that transfer “rents” from groups within and outside the firm to firm owners and upper-level managers.

The former is one of the ways that firms reduce their own agency problems. By inducing competition within the firm for bonuses or positions with greater salaries and authority, they can often induce extraordinary work effort from their employees—the excess dissipation equilibrium noted by Tullock (1980).

Similarly, by creating decisionmaking procedures for siting their factories, data centers, and offices, large firms can create competitive contests among governments that seek to benefit from the increased tax revenues anticipated when a large firm locates within their territories. Competition among governments for such facilities leads them to promise tax advantages of various kinds and infrastructure improvements, both of which advance corporate interests in profits.

The contests among governments for such facilities have some aspects that resemble rent-seeking and others that resemble auctions. One-on-one meetings, detailed proposals for site preparations, reports on input prices and local amenities, dinners out, and so forth—resemble lobbying. The tax preferences offered resemble bids at auctions. Insofar as the entire package influences the final locational decision of a firm, a significant fraction of the local benefits from such facilities may be competed away—but in this case, largely in the form of transfers to the corporations profiting from the “bids” of rival governments.

News accounts suggest that large firms can extract millions of dollars of locational tax receipts in this manner—indeed, much more in some cases.⁷ Again, such possibilities for profits or cost reduction are absent from neoclassical models of the firm.

⁷ As an extreme example, *Politico* (February 2019) reported that Amazon would have received several billion dollars of tax preferences if it had located one of its East Coast regional centers in New York. According to that report, the amounts on offer had briefly exceeded a billion dollars during the bargaining process. See: <https://www.politico.com/states/new->

IV. Corporate Governance

One of the largest changes in a firm's governing institutions occurs when a privately held proprietorship or partnership converts to a corporate structure where shareholders, in principle, own the firm. A firm's formateurs sell off part (or all) of their ownership rights because they find it more profitable to raise capital by selling shares (claims on future profits) than by selling bonds or borrowing from banks to fund new investments of various kinds.

To assure shareholders that their claims on future profits will not be jeopardized by major firm decisions, shareholders are (often) given the right to vote for a board of directors that has veto power over major firm policies and/or the ability to select (or fire) the firm's CEO. Such boards are not mere advisors; they are part of the firm—and often the part most directly controlled by shareholders.

Shareholders vote their shares, which creates a weighted voting system analogous to ones that were occasionally used to select members of parliament in the late medieval and early modern periods in Northern Europe. The exchange of money (capital) for veto power, in turn, resembles the constitutional bargaining that gradually shifted the center of policy making authority from the king-dominated ones of the medieval period to the parliamentary-dominated ones in the modern period (Congleton, 2011).

When majority rule is used to select boards of directors who, in turn, select the CEO, shareholder governance resembles a prime ministerial system. When shareholders vote directly on the CEO, shareholder governance resembles a presidential system.

When shareholders hold roughly equal numbers of shares, there are tendencies for median voter or moderate outcomes. And, insofar as shareholders are all interested in profits, but disagree about circumstances, the median voter may have unbiased and accurate estimates of those circumstances as per the Condorcet Jury Theorem (Grofman et al., 1983; Congleton, 2007).

However, when shareholding is unequal, the largest shareholders are far more likely to be members of the majority than any small shareholder, as demonstrated by the various power indices applied in political research (see, for example, Steunenberg et al., 1999, or Holler, 2004). This weighted-voting effect has a larger effect on a firm's policies when large

[york/albany/story/2019/02/19/with-amazon-deal-dashed-new-yorks-vast-tax-breaks-called-into-question-858517](https://www.albany.edu/story/2019/02/19/with-amazon-deal-dashed-new-yorks-vast-tax-breaks-called-into-question-858517)

shareholders have different degrees of risk aversion or have goals in addition to profits that they want “their” company to advance. It is in such cases that shareholder interests tend to vary and votes over company policies or directors are contentious and consequential.

When CEOs may be replaced by the votes of their elected boards of directors or by the direct votes of shareholders, successful CEOs will, among other things, systematically advance the interests of pivotal shareholders. Conversely, when boards of directors are appointed by the CEOs (as advisory boards tend to be), the boards tend to favor the policies of their CEOs in order to be kept on the board.

Retaining one’s position is generally in the interest of the persons holding top levels of authority in firms, just as it is in governments. High salaries, deference, and status are all associated with such positions.

The identity of the pivotal shareholder differs from that of electorates in democracies because corporations use weighted voting systems. The votes cast are normally proportional to the shares owned, rather than the number of persons owning shares. The voters with the largest blocks tend to be founders or investment companies. The latter are supposed to represent the fiduciary interests of their investors—although it is not always clear that they do so; agency problems exist in those relationships.

If shareholders had identical interests and expectations—as implicitly postulated in textbook models of the firm—the voting methods would be largely irrelevant, and the results would tend to be unanimous agreements about both the identities of boards of directors and corporate policies.

Public choice theory suggests that those with the most at stake are the most likely to vote. In addition, the power-index effect of weighted voting reduces the probability that a small shareholder’s vote is influential. Together, these effects make holders of relatively few shares less likely to cast votes than major shareholders, which magnifies the electoral effects of large holdings.⁸

⁸ See, for example, Brav, Cain, and Zytnick (2022) for evidence that individual shareholders (non-institutional investors) participate in shareholder elections at far lower rates than those holding large blocks of stock (institutional investors)—as might be expected from public choice models.

Shareholder Interests

Insofar as shareholder votes are undertaken independently of one another, the median shareholder (who is likely to be a major shareholder) may be said to determine the interest of board members who wish to retain their positions. Average and above average returns on shares held would tend to induce votes favoring the status quo, other things being equal. Below average returns, on the other hand, would tend to induce opposition to the status quo and lend support to large activist investors—again, other things being equal.

It bears noting that some major shareholders have interests that are induced by their organizations, as with state pension funds or investment firms that manage index funds for their investors. A government's pension managers may have interests that include ideological or electoral goals in addition to interests in profits. Differences between shareholder activists and “ordinary” shareholders may exist because of differences in risk aversion or expectations about future developments in the markets serviced by the firm of interest. Election models imply that all of these differences may affect the voting behavior of shareholders and thereby of a company's boards of directors and CEO.

One area in which disagreements are likely is with respect to a firm's production of non-profit service V —e.g. services that do not enhance profits but are nonetheless of interest to a majority of its shareholders, and therefore their boards of directors and CEO. In such cases, a firm's expenditures on V are not a sign of agency problems as sometimes argued, but of the preferences of their pivotal shareholders and through them by their boards of directors—to undertake such expenditures or other policies that tend to raise production costs without increasing productivity. Such shareholders are willing to accept a somewhat lower rate of return on their shares in order to advance their nonpecuniary goals.

The firms owned by such shareholders are not pure profit maximizers, although they do not entirely neglect profits, because of other goals that their shareholders—especially ones likely to be pivotal—want the firm to advance. This explains why such firms want their names listed on the brochures of the various museums, theaters, research projects, public infrastructure, concerts, lectures, sports teams, etcetera that they sponsor—rather than being anonymous donors. If these expenditures were all agency problems, they would not be

Large shareholders tend to be wealthy and so the principle of decreasing relative risk aversion holds. See, for example, Morin & Suarez (1983).

advertised. However, it is clear that such firms (and their foundations) want to be known for their “V” services, as well as their other more market-based activities.

Tiebout, Shareholder Mobility, and the Limits of Takeover Threats

Unlike political electorates, shareholders can very easily move from one “district” to another by selling their shares in one company and purchasing those of another. By advertising their “public” projects—of which there are too many kinds to completely list here—firms tend to attract the shareholders that favor such projects.

The population of shareholders resembles the Tiebout voters of fiscal federalism. They “reside” wherever the package of returns and other V-type expenditures contribute most to their utility, given the price at which the shares trade. Unlike the usual application of the Tiebout model, shifts among the shares of firms have very low transactions costs. Portfolio adjustments can usually be undertaken without significant effects on other aspects of a shareholder’s life (as with location-dependent, friends, family, information, jobs, amenities etc.).

In the limit the Tiebout model suggests that shareholder votes would converge toward unanimity as shareholders sort themselves among firms according to the package of services (here share returns and a vector of V-types of expenditures) and share prices. This turns out to be the case. Incumbent boards of directors routinely receive 90% or more of the votes cast by shareholders.⁹

This process creates a significant barrier for pure profit maximizers to overcome when attempting to “take over” a firm that is spending non-trivial amounts on V-type activities.

Only cases in which the cost in terms of reduced profits and relatively low share prices is sufficient would shareholders be willing to sell their shares at near-market prices. It may be partly for this reason that take-over bids are normally well above the current trading price of the target’s stock. The premiums paid average between 30 and 70 percent, depending on the

⁹ See the Harvard Law School Forum on Corporate Governance. Here, it should be noted that relatively few shareholders actually cast votes in elections for the board of directors—far less than participate in most democratic elections—even primaries and local elections which tend to have turnouts far below those of national elections in the United States.

source and year. This suggests that deviations from profit-maximizing business practices tend to be those favored by a firm's pivotal shareholders.¹⁰

Such premia imply that the takeover markets do not eliminate the non-profit oriented efforts of firms, because their shareholders generally support those efforts. In other words, some shareholders prefer to invest in “socially responsible” firms even if such firms do not maximize the firm's profits in the long or short run. This is not a surprise from an organizational perspective. In electoral models, the possibility that voters have more than one argument in their objective function is taken largely for granted. There are guns and butter, not just guns. Thus V-expenditures may reduce profits while increasing share prices.

V. A More Complete Model of the Firm

In this section, an extended mathematical characterization of firm decisionmaking is developed. It takes into account the possibility that firm owners may not themselves aim for profit maximization, that investments in rent-seeking and rent extraction are often profitable, and that intra-firm rent-seeking absorbs part of any profits realized.

To explore the possibility that a firm's owners have interests that extend beyond narrow models of profit-maximization, we'll depart from the Marshallian model of perfect competition. In that environment, only firms that minimize their average cost of production can exist. Any firm whose costs are even infinitesimally greater than that technological minimum would exit from that market—often through bankruptcy, if there is fixed capital. Any innovation in cost-reducing management techniques will be copied as quickly as possible (and without transactions costs or information problems, this would be instantaneous).

However, if we adopt the Ricardian version of highly competitive markets where producers use different production methods and realize different degrees of inframarginal profits even when there are large numbers of rival firms selling homogeneous products, then competition is less constraining. This is also true of markets in which every firm in every industry

¹⁰ Average premiums vary by year and by industry, but average premiums are reported to be in the range indicated for large firms. Reports on buyout premia can be found at the Statista and Deloitte websites. For a useful overview see, <https://deloitte.wsj.com/cio/what-makes-m-a-so-challenging-01654188458>, which does not mention the possibility highlighted in this piece.

produces a slightly different product and so faces its own slightly downward sloping demand curve.

The latter are commonplace in today's markets with many variegated products produced by large enterprises earning quite different rates of return on their investments. This is the market environment modeled in this section.

The neoclassical model developed in Chapter 3 characterized a price-making firm's objective as the profit-maximizing production and sale of a product:

$$\pi = P(Q)Q - C(Q, w, r) \quad (1)$$

Where $P(Q)$ is the inverse demand function, Q is the output of the product or service to be sold, w is the cost of labor and r that of capital. The profit maximizing output is characterized by differentiating equation 1 with respect to Q and setting the result equal to zero (and assuming that the profit function is strictly concave):

$$\pi_Q = [P_Q Q + P] - C_Q = 0 \quad \text{at } Q^* \quad (2)$$

The implicit function rule implies that Q^* can be characterized as:

$$Q^* = q(w, r) \quad (3)$$

An extended characterization of the demand function would imply that other variables such as average consumer wealth or income, Y , and the prices of other goods, P^O , would be included in equation 3. In either case, the firm's decision is pretty straightforward. It should simply determine the output that sets marginal revenue equal to marginal cost and sell it at price $P(Q^*)$.

The discussion above implies that such a characterization is a gross simplification of the choice setting faced by such a firm—even when the essential (demand and cost functions) are as characterized.

Other possible sources of profits include lobbying for trade protection that tends to increase demand by reducing competition from substitute products, which would imply that $P = p(Q, L_1)$, where L_1 is the extent of lobbying for such protection. Similarly, the cost function is likely to be affected by governmental regulations, R , which can also be affected by lobbying expenditures—as with $R = g(L_2)$. And, of course, the profits realized are taxed in most places rather than tax free as in the core models, and the tax rate may also reflect

efforts by lobbying (or possibly by organized groups of firms), with $t = f(L_3)$. And, of course, intra-firm rent-seeking and shirking may be reduced via expenditures on institutional design. The latter effect may be characterized as $A = a(I)$ where I characterizes institution building investments, which are often ongoing rather than occurring only as a firm is created. The cost function is more complex because in addition to the effects of regulation, there are the costs of lobbying for entry barriers, regulation, tax relief, and institutional development. The firm may also invest in “virtue goods” or “virtue signaling” which is also costly with $C^V = v(V)$.

All this suggests that a more complete model of a firm’s after-tax profits should be modeled as:

$$\pi = a(I)(1 - f(L_3))\{[P(Q, L_1)Q - C(Q, w, r, I, g(L_2), L_1, L_2, L_3)] - v(V)\} \quad (4)$$

With new control variables $I, L_1, L_2,$ and L_3 in addition to Q . Running the firm becomes a much more challenging and multi-dimensional choice.

Moreover, if the owner or pivotal shareholder is interested in more than profits, the objective function is no longer profits per se, but utility as with:

$$U = u(\pi, V) \quad (5)$$

This transforms the choice problem addressed by a firm’s government from a 1-dimensional optimization problem to a six-dimensional one. Differentiating with respect to the control variables generates a family of six first-order conditions which characterize the utility maximizing vector of output, prices, institutional investment, virtue signaling and lobbying efforts.

$$U_Q = u_\pi [A(1 - t)] [P_Q Q + P - C_Q] = 0 \quad (6.1)$$

$$U_{L_1} = u_\pi [A(1 - t)][P_{L_1} Q - c_{L_1}] = 0 \quad (6.2)$$

$$U_{L_2} = u_\pi [A(1 - t)][-c_R g_{L_2} - c_{L_2}] = 0 \quad (6.3)$$

$$U_{L_3} = u_\pi [A(-f_{L_3})](PQ - C - C^V) - u_\pi [A(1 - t)]c_{L_3} = 0 \quad (6.4)$$

$$U_I = u_\pi [A_I(1 - t)](PQ - C - C^V) - u_\pi [A(1 - t)]c_I = 0 \quad (6.5)$$

$$U_V = u_V - u_\pi [A(1 - t)]v_V = 0 \quad (6.6)$$

Each of the first order conditions provides some insight into how the firm owner(s) allocate their resources (which are assumed to be constrained by the requirement of positive profits).

In each case, the firm owner's ideal expenditure sets the marginal utility generated by the expenditure equal to its marginal cost—where the marginal benefits in two cases arise from marginal reductions in taxes or costs associated with successful lobbying. In all but one of the cases, the first order conditions can be reduced to their effects on profits, and thus are entirely consistent with the theory of the firm developed in Chapter 3. If the same sorts of labor and capital are used in all of these activities, the results would look very much like those of the neoclassical theory of the firm. It simply would now include governmental relations (three types of lobbying) and institutional investments in the firm's calculations.

The multi-dimensional version of the implicit function theorem implies that the quantities of output, investments in institutions, and lobbying efforts are all fundamentally functions of the cost of labor and capital used in the various activities of the firm.¹¹ However, only one of the six activities is the production output for sale.

Only expenditures on V are inconsistent with profit maximization.¹²

Such activities have no effects on a firm's revenues (by assumption) and expenditures on V necessarily reduce profits. However, it should be acknowledged that some of the expenditures that resemble V simultaneously increase both profits and owner satisfaction. For example, some of the expenditures on V might enhance local amenities in a manner that makes it easier to attract talented persons to one's enterprise, or V may generate good will

¹¹ The rent-seeking literature suggests that lobbying activity is often counterproductive for society as a whole—to the extent that the latter can be characterized with aggregate utility or net benefits. However, whether this is true varies with the extent of taxes and regulation in this case. If they are originally above the welfare maximizing level, lobbying to reduce them tends to increase welfare—albeit in a somewhat more costly way than might have been conceptually possible with a well-informed and utilitarian oriented electorate. If they were initially at or below welfare maximizing levels such lobbying would reduce social welfare both through their effect on the policies and the expenditures required to bring those reforms into place.

¹² Here, it bears noting that corner solutions are possible for many firms. For example, very small firms might spend little or nothing on institutional improvements, lobbying, or virtue goods. Larger firms, however, are likely to be actively engaged in all these activities.

from local politicians which would make them less inclined to raise the taxes or increase regulations on their firm. Nonetheless, insofar as V directly generates owner satisfaction, expenditures on V will be greater than that required to maximize profits.

Note that firms do not have to have monopoly power (e.g. face a steeply downward sloping demand curve) to engage in the production of V . It is sufficient that firms are Ricardian in that they use different production technologies, have locational advantages, or have exceptional entrepreneurial talent to be able to do so (e.g. be a participant in a Ricardian competitive market). Nor does a firm have to be owned by a single individual to engage in such activities. Pivotal shareholders may favor such expenditures, and such activities may be undertaken entirely for their benefit.

VI. The Evolutionary Nature of Firm Governance

It is fortunate for a firm's founders that contemporary firms are not the first ones ever founded. Formeteurs all benefit from the successful institutional innovations of previous generations of founders. Some decisionmaking procedures "worked" in the past, and they can be copied. Such procedures identify market opportunities and sufficiently reduce problems of coordination, team production, and intra-organizational rent-seeking to make an organization a value-increasing enterprise. In that way, previous investments in institutional development, I in the model above, tend to generate positive externalities for successive generations of formeteurs.

The typical firm's systems of rules evolve as various refinements of the rule systems prove profitable, and others are discarded because they were not or no longer are.

Organizational innovations that appear to enhance success are copied by the next generation of formeteurs, and so on.

For this reason, it can be argued that contemporary firms are, on average, better able to maximize their profits than firms were in the past. The multiplicity of firms and their relatively shorter lives allow faulty decision, hiring, and compensation rules to be weeded out.

Moreover, insofar as the founding rules are chosen by a firm's formeteurs, the organizing rules of firms are likely to be more fine-tuned to advance the goals of their founders than those of governments tend to be.

As a result, much larger economic organizations are economically viable today than they were in the distant past (North, 1990; Vanberg, 1992; Witt, 2007; Congleton, 2016). The largest have more than a million employees and offices scattered around the world.

However, to say that evolution has improved economic institutions is not to say that all the problems have been solved. If all organizational problems had been solved, the principal-agent literature of the late twentieth century would never have emerged. Such problems would have been merely hypothetical, rather than real, and interest in them would have soon waned.

VII. Conclusions: An Affirmation or Extension of the Neoclassical Model?

Treating firms as organizations deepens the rational choice model of the firm by taking greater account of its internal structure, its relationships with governments, and the possibility that owners have diverse interests. All these are likely to influence the firm's allocation of resources in ways that tend to affect profitability and output. Some of these are simply alternative ways of using the firm's resources—labor, capital, materials, and social connections—to increase long-term profits. Profits may not be truly maximized, but they remain the main objective. Others may advance the non-profit interests of owners and/or senior managers.

The electoral foundations of corporations are also relevant. Public choice analysis implies that pivotal voters matter. In the case of corporations, pivotal voters are likely to be major shareholders. In some cases, they will be the firm's founders, who often retain large blocks of voting shares for themselves when their company incorporates. In other cases, large investment houses or pension funds are likely to be pivotal.

Insofar as a CEO is analogous to a president or prime minister in a democracy, votes in favor of status quo policies imply that a majority of shareholders (in terms of shares, rather than number of holders) approve of the firm's performance—including its charitable and other activities that reduce profits to some extent.

This effect is reinforced by the mobility that shareholders have relative to voters in national elections. This "Tiebout" competition among firms for shareholders tends to encourage firms to efficiently advance whatever combination of goals that their shareholders favor. These interests nearly always include profits, of course, but also other services that have little to do with profits, but nonetheless may advance major shareholder interests.

Public choice models of elections and local government competition have always addressed such multi-dimensional issues. Consumer theory also does so, but for some reason the core models of the firm have not. That firms and firm owners often make gifts to non-profit organizations or support particular political parties is evidence of the multidimensional interests of firm owners. An extended model, naturally, takes account of ideological and other interests, and so can easily account for such policies. Shareholder mobility, in turn, helps explain why takeover efforts are not sufficient to eliminate such activities. That relatively large premiums are associated with takeover bids suggests that major shareholders often accord significant value to their firm's non-profit oriented activities.

Rational ignorance, in turn, suggests that small shareholders tend to be less informed about the profitable prospects that a firm chooses among than large shareholders. That large shareholders tend to be pivotal voters implies that in addition to the Condorcet Jury theorem effects of majority-based elections, firm decisions tend to be relatively well informed. Although profits are not always—or perhaps usually—truly maximized, shareholders vote with “their feet” and hold portfolios of stocks that overall advance their goals better than others that their shareholders are aware of.

In this respect, shareholder portfolios may more closely resemble Tiebout equilibria than even a metropolitan region with many independent satellite communities. Competition induces firms to be relatively efficient at producing their particular mixtures of profits and virtue goods, even if they do not maximize profits.

All the above suggests that firms rarely truly maximize profits in the manner modeled in the core neoclassical characterization of a firm's decisionmaking, even in cases in which profits are the only goal of an organization's founders. It is unlikely that their institutions perfectly solve all the agency problems confronted—although they clearly ameliorate them—nor that competition is sufficient to eliminate any deviations from profit maximizing business strategies. The truly best organizational methods have probably not been worked out.

In cases in which a firm's owners have goals that go beyond profits, activities that tend to undermine profitability are easily explained. A viability constraint remains, however, so owners cannot do as much as they might like to in those unproductive activities, without killing the goose that lays the golden eggs.

Thus, the core neoclassical theory of the firm is not silly or totally misleading. Profits are a prerequisite for every firm's survival. Unless profits are realized, their unprofitable activities

would be impossible. Firms have to be profit seeking even if the interests of firm owners are broader than profits alone.

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