00-058

Value Maximization and the Corporate Objective Function

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Value Maximization and the Corporate Objective Function

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Abstract

This paper examines the role of the corporate objective function in corporate productivity and efficiency, social welfare, and the accountability of managers and directors. I argue that since it is logically impossible to maximize in more than one dimension, purposeful behavior requires a single valued objective function. Two hundred years of work in economics and finance implies that in the absence of externalities (and when all goods are priced) social welfare is maximized when each firm in an economy maximizes its total market value. Total value is not just the value of the equity but also includes the market values of all other financial claims including debt, preferred stock, and warrants.

Stakeholder theory, argues that managers should make decisions so as to take account of the interests of all stakeholders in a firm (including not only financial claimants, but also employees, customers, communities, governmental officials, and under some interpretations the environment, terrorists, blackmailers, and thieves). Because the advocates of stakeholder theory refuse to specify how to make the necessary tradeoffs among these competing interests they leave managers with a theory that makes it impossible for them to make purposeful decisions. With no way to keep score, stakeholder theory makes managers unaccountable for their actions. Yet stakeholder theory is widely accepted by managers and directors. It seems clear that such a theory can be attractive to the self interest of managers and directors.

It takes more than acceptance of value maximization as the organizational objective to create value. As a statement of corporate purpose or vision value maximization is not likely to tap into the energy and enthusiasm of employees and managers to create value. Since a firm cannot maximize value if it ignores the interest of it's stakeholders enlightened value maximization can utilize much of the structure of stakeholder theory by accepting long run maximization of the value of the firm as the criterion for making the requisite tradeoffs among its stakeholders.

Keywords: Value Maximization, Stakeholder Theory, Balanced Scorecard, Multiple Objectives, Social Welfare, Corporate Purpose, Tradeoffs, Special Interest Groups.

Forthcoming in *Breaking the Code of Change,* Michael Beer and Nithan Norhia, eds, Harvard Business School Press, 2000.

January 2, 2000

Value Maximization and the Corporate Objective Function

By

Michael C. Jensen[1]

Proposition: "This house believes that change efforts should be guided by the sole purpose of increasing shareholder value."

Introduction

Lying behind the statement that I have been asked to address, is a complex set of controversies on which economists, management scholars, managers, policy makers and special interest groups exhibit wide disagreement. Political, economic, social, evolutionary, and emotional forces play important roles in this disagreement as do ignorance, complexity and conflicting self-interests. I shall discuss these below.

At the organizational level the issue is the following. Every organization attempting to accomplish something has to ask and answer the following question: What are we trying to accomplish? Or, put even more simply: When all is said and done how do we measure better versus worse? Even more simply, How do we keep score?

At the economy-wide or social level the issue is the following: If we could dictate the criterion or objective function to be maximized by firms (that is the criterion by which executives choose among alternative policy options) what would it be? Or even more simply, how would we want the firms in our economy to measure better versus worse?

In this light I prefer to restate the proposition I have been asked to address as follows:

- "This house believes that in implementing organizational change managers must have a criterion for deciding what is better, and better should be measured by the increase in long term market value of the firm."

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I call this the Value Maximization Proposition and it has its roots in 200 years of research in economics and finance. "Stakeholder theory", the asserted (and currently popular[2]) main contender to value maximization for this objective function, has its roots in sociology, organizational behavior, the politics of special interests, and managerial self interest. I say "asserted contender" because stakeholder theory is incomplete as a specification for the corporate purpose or objective function, and therefore cannot logically fulfill that role. I argue below that it's incompleteness is not accidental. It serves the private interests of those who promote it, including many managers and directors of corporations.

The answer to the questions of how managers should define better vs. worse, and how managers in fact do define it, have important implications for the welfare of a society's inhabitants. Indeed, the answer provides the business equivalent of the Hippocratic Oath to the medical profession. It is an indication of the infancy of the science of management that so many in the world's business schools, as well as professional business organizations understand so little of the fundamental issues in contention.

Briefly put, value maximization says that managers should make all decisions so as to increase the total long run market value of the firm. Total value is the sum of the value of all financial claims on the firm—including equity, debt, preferred stock and warrants.

Stakeholder theory, on the other hand, says that managers should make decisions so as to take account of the interests of all the stakeholders in a firm. And stakeholders include all individuals or groups who can substantially affect the welfare of the firm, including not only the financial claimants, but also employees, customers, communities, governmental officials, and under some interpretations the environment, terrorists, blackmailers, and thieves.[3]

With this introduction of the issues let me now move to a detailed examination of value maximization and stakeholder theory.

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2 Stakeholder theory, for example, has been endorsed by many professional organizations, special interest groups, and governmental organizations including the current British government. See the excellent article on the topic by Elaine Sternberg (Sternberg 1996) (and her book (Sternberg 1994)) who surveys its acceptance by the Business Roundtable, its recognition by law in 29 American states and even by the *Financial Times*.

3 See (Freeman 1984, p. 53). "The … definition of 'stakeholder' [is] any group or individual who can affect or is affected by the achievement of an organization's purpose." "For instance, some corporations must count 'terrorist groups' as stakeholders."

The Logical Structure of the Problem

In discussing whether firm's should maximize value or not we must separate two distinct issues:

1) Should the firm should have a single-valued objective, and

2) Should that objective be value maximization or something else (for example, maintaining employment or the improving the environment).

The debate over whether corporations should maximize value or whether it should act in the interests of its stakeholders is generally couched in terms of issue #2, and it is often falsely framed as stockholders versus stakeholders. The real conflict is actually an unjoined debate over issue #1, whether the firm should have a single valued objective function or scorecard. This confusion has led to widespread misunderstanding.

What is commonly known as stakeholder theory, while not totally without content, is fundamentally flawed because it violates the necessity for any organization to have a single valued objective as a precursor to purposeful or rational behavior. In particular, I argue that firms that adopt stakeholder theory will be handicapped in the competition for survival because, as a basis for action, stakeholder theory politicizes the It leaves its managers empowered to exercise their own preferences in spending the firm's resources.

Issue #1: Purposeful Behavior Requires the Existence of a Single Valued Objective Function.

A Simple Example

Consider the a firm that wishes to increase current year profits, *p,* as well as market share *m.* Assume, as in Fig. 1, that over some range of values of *m* profits increase. But at some point increases in market share come only at reduced current year profits—say because increased expenditures on R&D, advertising, or price reductions to increase market share reduce this year's profit. Therefore it is not logically possible to speak of maximizing both market share and profits. In this situation it is impossible for a manager to decide on the level of R&D, advertising, or price reductions because he or she is faced with the necessity to make tradeoffs between the two "goods" *p* and *m* with no way to do so. While the manager knows that the firm should be at least at the point of maximum profits or

maximum market share, there is no purposeful way to decide where to be in the area where more of the one can be obtained only by giving up some of the other.

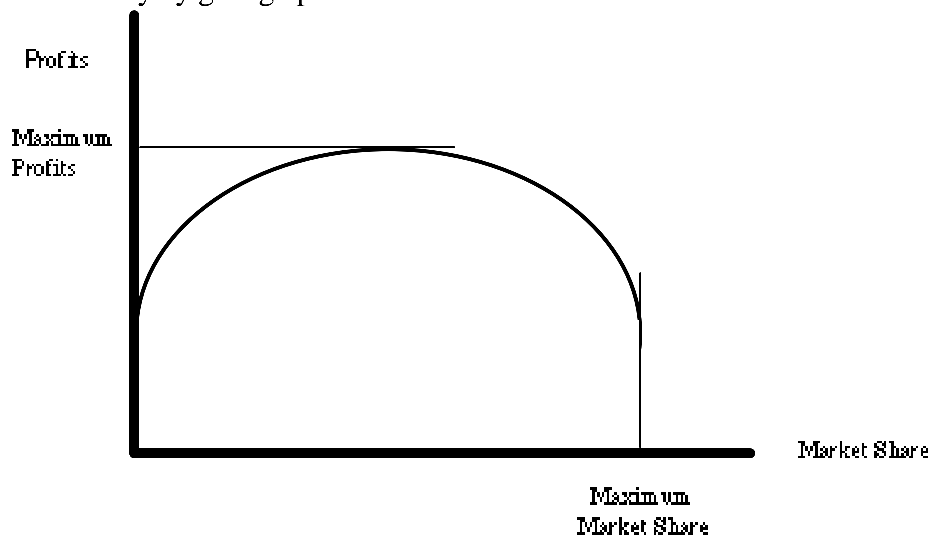

Fig. 1.1
Tradeoff between profits and market share. A manager directed only to maximize both profit and market share has no way to decide where to be in the range between maximum profits and maximum market share.

Multiple Objectives is No Objective

It is logically impossible to maximize in more than one dimension at the same time unless the dimensions are monotone transformations of one another. Thus telling a manager to maximize current profits, market share, future growth in profits, and anything else one pleases will leave that manager with no way to make a reasoned decision. In effect, it leaves the manager with no objective, and the result will be confusion and lack of purpose that will fundamentally handicap the firm in its competition for survival.[4] This ambiguity can be resolved by specifying the tradeoffs among the various dimensions, and doing so amounts to specifying an overall objective function such as $V = f(x, y, \ldots)$ that explicitly incorporates the effects of decisions on all the goods or bads (denoted by $(x, y, \ldots)$) affecting the firm.

Nothing in the analysis so far has said that the function f must be well-behaved and easy to maximize. If the function f is non-monotone, or even chaotic, it makes it more difficult for managers to

4 See (Jensen, Wruck, and Barry 1991; Wruck, Jensen, and Barry 1991) for a case of a small non-profit firm that almost destroyed itself while trying to maximize over a dozen dimensions at the same time.

find the overall maximum, but even in these situations the meaning of better or worse is defined and managers and their monitors have a principled basis for choosing and auditing decisions. Without defining the meaning of better there is no principled foundation for choice.

Issue #2: Total Firm Value Maximization Makes Society Better Off

Given that a firm must have a single objective that tells us what is better and what is worse, we then must face the issue of what that definition of better is. (As we pointed out above, this does not mean that individuals or firms care only about one thing. This single objective will always be a complicated function of many different goods or bads.)

The short answer to this question of the definition of better is that two hundred years worth of work in economics and finance indicate that social welfare is maximized when all firms in an economy maximize total firm value. The intuition behind this criteria is simply that (social) value is created when a firm produces an output or set of outputs that are valued by its customers at more than the value of the inputs it consumes (as valued by their suppliers) in such production. Firm value is simply the long term market value of this stream of benefits.

When monopolies or externalities exist the value maximizing criteria does not maximize social welfare. But the solution to these problems lies not in telling firms to maximize something else, but in defining and assigning the alienable decision rights necessary to eliminate the externalities. (Under the Coase Theorem we know externalities can only exist if some alienable decision rights are not defined or assigned to someone in the private economy, see (Coase 1960; Jensen and Meckling 1992)).[5]

Maximizing the total market value of the firm, that is the sum of the market values of the equity, debt and any other contingent claims outstanding on the firm (such as warrants) is one objective function that will resolve the tradeoff problem among multiple constituencies. It tells the firm to spend an additional dollar of resources to satisfy the desires of each constituency as long as that constituency values the result at more than a dollar. While there are many single-valued objective functions that could

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[5] In addition we should recognize that when a complete set of claims for all goods for each possible time and state of the world do not exist the social maximum will be constrained, but this is just another recognition of the fact that we must take into account the costs of creating additional claims and markets on time/state delineated claims. See (Arrow 1964; Debreu 1959).

guide a firm's managers in their decisions, value maximization is an important one because it leads under some reasonable conditions to the maximization of social welfare, and we turn now to this issue.

Value Maximizing and Social Welfare

Profit Maximization

Much of the discussion in policy circles over the proper corporate objective casts the issue in terms of the conflict between various constituencies or "stakeholders" in the corporation. The question then becomes one of whether shareholders should be held in higher regard than other constituencies such as employees, customers, creditors, etc. It is both unproductive and incorrect to frame the issue in this manner. The real issue to be considered here is what firm behavior will result in the least social waste, or equivalently, which will get the most out of society's limited resources—not whether one group is or should be more privileged than another.

To see how value maximization leads to a socially efficient solution first consider a simpler objective function, maximizing profits in a world in which all production runs are infinite and cash flow streams are level and perpetual. This allows us to ignore the complexity introduced by the tradeoffs between current and future year profits (more accurately, cash flows). Consider now the welfare effects of a firm's decision to take resources out of the economy in the form of labor hours, capital, or material in voluntary purchases from their owners in single-price factor markets. The firm uses these inputs to produce outputs of goods or services that are then sold to consumers through voluntary transactions in single-price markets.

In this simple situation a firm taking inputs out of the economy and putting its output of goods and services back into the economy increases aggregate welfare if the prices at which it sells the goods more than cover the costs it incurs in purchasing the inputs. Clearly the firm should expand its output as long as an additional dollar of resources taken out of the economy is valued by the consumers of the incremental product at more than a dollar. Note that the difference between these revenues and costs is

profits. This is the reason (under the assumption there are no externalities or monopolies)[6] that profit maximization leads to an efficient social outcome[7]

Because the transactions are voluntary we know that the owners of inputs value them less than or equal to the price at which the firm buys or they wouldn't sell them. Therefore, as long as there are no negative externalities in the input factor markets, the opportunity cost to society of those inputs is no higher than the total cost to the firm of acquiring them. I say "no higher" because some suppliers of inputs to the firm are able to earn "rents" by obtaining prices higher than the value of the goods to them. Such rents do not represent social costs. Likewise, as long as there are no externalities in the output markets the value to society of the goods and services produced by the firm is at least as great as the price the firm receives for the sale of those goods and services. If this were not true, the individuals purchasing them would not do so. Again, as with producer surplus on inputs, the benefit to society is higher to the extent that consumer surplus exists (that is, some consumers are able to purchase the output at prices lower than the value to them).

Therefore, when the firm acquires an additional unit of any input (or inputs) to produce an additional unit of any output, it increases social welfare at least by the amount of the difference between the value of the output and the cost of the input(s) required in producing it.[8] The signals to the firm are clear: continue to expand purchases of inputs and sell the resulting outputs as long as an additional dollar of inputs generates sales of at least a dollar.

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[6] By externalities I mean the situation in which the full social cost of an action is not borne by the firm or individual that takes the action. Examples are air or water pollution where a firm adds pollution to the environment without having to purchase the right to do so from the parties giving up the clean air or water. There can be no externalities as long as alienable property rights in all physical assets are defined and assigned to some private individual or firm. See (Jensen and Meckling 1992)

In the case of monopoly, profit maximization leads to a loss of social product because the firm expands production only to the point where its incremental revenues are equal to a dollar, not where consumers value the incremental product at a dollar. In this case the firm produces less of a commodity than that which would result in maximum social welfare.

[7] I am indebted to my colleague George Baker for this simple was of expressing the optimality of profit maximization.

[8] Equality holds only in the special case where consumer and producer surpluses are zero, and there are no externalities or monopoly.

Value and Tradeoffs through Time

In a world in which cash flow, profit and cost flows are not uniform over time we must deal with the tradeoffs of these items through time, for example, when capital investment comes in lumps that have to be funded up front, while production occurs in the future. Knowing whether society is benefited or harmed requires knowing whether the output that occurs in the future is valuable enough to offset the cost of having people give up their labor and capital and material inputs in the present. Interest rates give us the answer to this. Interest rates tell us the cost of giving up a unit of a good today for receipt at some time in the future. So long as people take advantage of the opportunity to borrow or lend at a given interest rate, that rate determines the rate at which they will value moving a marginal dollar of resources (inputs or consumption goods) forward or backward in time.

The value one year from now of a dollar today saved for use one year from now is thus $\$1 \times (1+r)$, where r is the interest rate. Alternatively, the value today of a dollar of resources to be received one year from now is its present value of $\$1/(1+r)$. In this world an individual is as well off as possible if his or her wealth (measured by the discounted present value of all future claims) is maximized.

When we add uncertainty nothing of major importance is changed in this proposition as long as there are capital markets in which the individual can buy and sell risk at a given price. In this case it is the risk adjusted interest rate that is used in calculating the market value of risky claims. The firm objective function that maximizes social welfare thus becomes “maximize total firm market value.” It tells firms to expand output and investment to the point where the market value of the firm is at a maximum.[9]

Stakeholder Theory

To the extent that stakeholder theory argues that firms should pay attention to all their constituencies, the argument is unassailable. But taken this far stakeholder theory is completely

[9] Although I shall not go into the details here the same criterion applies to all organizations whether they are public corporations or not. Obviously, if the financial claims are not explicitly valued by the market social welfare would be increased as long as managers of partnerships or non-profits increase output so long as the imputed market value of claims on the firm continue to increase.

consistent with value maximization which implies that managers must pay attention to all constituencies that can affect the firm.

But, there is more to the story than this. Any theory of action must tell the actor, in this case managers and boards of directors, how to choose among multiple competing and inconsistent interests of these constituencies. Customers want low prices, high quality, expensive service, etc. Employees want high wages, high quality working conditions and fringe benefits including vacations, medical benefits, pensions, etc. Suppliers of capital want low risk and high returns. Communities want high charitable contributions, social expenditures by firms to benefit the community at large, stable employment, increased investment, etc. And so on with every conceivable constituency. Obviously any decision criterion, and the objective function is at the core of any decision criterion, must specify how to make the tradeoffs between these often competing and inconsistent demands of a firms constituencies.

The Specification of Tradeoffs and the Incompleteness of Stakeholder Theory

Value maximization provides the following answer to the tradeoff question. Spend an additional dollar on any constituency to the extent that the long term value added to the firm from such expenditure is a dollar or more.

Stakeholder theory as stated by (Freeman 1984) and others contains no conceptual specification of how to make the tradeoffs among stakeholders that must be made. This makes the theory damaging to firms and to social welfare, and it also reveals one reason for its popularity.

Implications for Managers and Directors

Because stakeholder theory provides no criteria for what is better or what is worse, it leaves boards of directors and executives in firms with no principled criterion for choosing among alternative actions and constituencies. Stakeholder theory gives no decision criteria for problem solving in firms. Stakeholder theory gives no criteria for problem solving in firms. Firms that try to do behave only by the dictates of stakeholder theory will eventually fail because natural selection will eliminate them if they are competing with firms that are behaving so as to maximize value. If this is true why do so many mangers

and directors of corporations embrace stakeholder theory? One answer lies in their own personal short run interests.

Because stakeholder theory provides no definition of better, it leaves managers and directors in these firms unaccountable for their stewardship of the firms resources. With no criteria for performance, managers cannot be evaluated in any principled way. Therefore, stakeholder theory plays into the hands of self-interested managers to pursue their own interests at the expense of society and their financial claimants. By expanding the power of managers in a powerful and unproductive way, stakeholder theory therefore increases agency costs in the economic system. It is not surprising that so many managers like it.

By gutting the foundations on which the firms internal control systems could constrain managerial behavior stakeholder theory gives unfettered power to managers to do almost whatever they want subject only to the constraints of the financial markets, the market for control and the product markets. Thus, it is not surprising that we find stakeholder theory used to argue for governmental restrictions on financial markets and the market for corporate control.[10] These markets are driven by value maximization.

Implications for the Power of Special Interests

In addition, stakeholder theory plays into the hands of special interests who wish to use the resources of firms for their own ends. It gives such special interest groups the appearance of a principled, legitimate claim on the resources and decision making power of the firm. In effect it politicizes the firm, giving rein to all sorts of claims and leaving managers and board members no clear, principled criteria for rejecting some and accepting others.

With the widespread failure of centrally planned socialist and communist economies, those who wish to use non-market forces to reallocate wealth from others to themselves and to those whom they prefer find great solace in the playing field that stakeholder theory opens to them. It gives them the appearance of legitimate political access to the sources of decision making power in organizations, and

[10] We also see the arguments used to further restrictions on product market competition. Witness the pressures for restrictions on global trade and environmental campaigns.

deprives those organizations of a principled basis for rejecting those claims. The result is to undermine the foundations that have enabled markets and capitalism to generate wealth and high standards of living worldwide.

If widely adopted, stakeholder theory will reduce social welfare while its advocates will be claiming to increase it—just as in the failed communist and social experiments of the last half century. And stakeholder theorists will often have the active support of managers who wish to throw off the constraints on their power and influence provided by the value criterion and its enforcement by capital markets, the market for corporate control and product markets.[11] Indeed we have seen and will continue to see more political action limiting the power of financial and control markets in constraining managers. And such actors will continue using the arguments of stakeholder theory to legitimize their positions. Exposing the logical fallacy of these arguments will reduce their effectiveness. But because there is something deeper in the evolution of the human psyche that drives the attraction to stakeholder theory it is worth delving deeper into the issue.

Conflicts Between Family and Markets and Their Role in Stakeholder Theory

Stakeholder theory taps into the deep emotional commitment of most individuals to the family and tribe. Those of us whose ancestors had little respect or loyalty for the family, band, or tribe for tens of thousands of years probably did not survive. We have, however, in the last few hundred years of humanity's existence experienced the emergence of a market exchange system of prices and private property rights on which they are based. This system for voluntary and decentralized coordination of human action has brought huge increases in the welfare of humans, and in their freedom of action.

As Frederick Hayek points out, however, we are generally unaware of the functioning of these systems because no single mind invented or designed them—and they work in very complicated and subtle ways.

> We are led—for example by the pricing system in market exchange—to do things by circumstances of which we are largely unaware and which produce results that we do

[11] Such stakeholder arguments for example, played an important role in persuading the courts and legislatures in the U.S. to limit hostile takeovers through legalization of poison pills and state control shareholder acts.

> not intend. In our economic activities we do not know the needs which we satisfy nor the sources of the things which we get. Almost all of us serve people whom we do not know, and even of whose existence we are ignorant; and we in turn constantly live on the services of other people of whom we know nothing. All this is possible because we stand in a great framework of institutions and traditions—economic, legal, moral—into which we fit ourselves by obeying certain rules of conduct that we never made, and which we have never understood in the sense in which we understand how the things that we manufacture function. (Hayek 1988, p. 14)

Moreover, these systems operate in ways to constrain the small group or family, and these constraints are not well understood or instinctively welcomed by individuals. Supporters of stakeholder theory will find allies in the hearts of people through their evolutionary attachment to the small group and the family. As Hayex puts it:

> Constraints on the practices of the small group, it must be emphasized and repeated, are *hated*. For, as we shall see, the individual following them, even though he depends on them for life, does not and usually cannot understand how they function or how they benefit him. He knows so many objects that seem desirable but for which he is not permitted to grasp, and he cannot see how other beneficial features of his environment depend on the discipline to which he is forced to submit—a discipline forbidding him to reach out for these same appealing objects. Disliking these constraints so much we hardly can be said to have selected them; rather, these constraints selected us: they enabled us to survive. (Hayek 1988, pp. 13, 14) italics in original.

Thus we have a system in which human beings must simultaneously exist in two orders, what Hayek calls the micro-cosmos and that of the macro-cosmos.

> Moreover, the structures of the extended order are made up not only of individuals but also of many, often overlapping, sub-orders within which old instinctual responses, such as solidarity and altruism, continue to retain some importance by assisting voluntary collaboration, even though they are incapable, by themselves, of creating a basis for the more extended order. Part of our present difficulty is that we must constantly adjust our lives, our thoughts and our emotions, in order to live simultaneously within different kinds of orders according to different rules. If we were to apply the unmodified, uncurbed, rules of the micro-cosmos (i.e. of the small band or troop, or of, say, our families) to the macro-cosmos (our wider civilization), as our instincts and sentimental yearnings often make us wish to do, we would destroy it. Yet if we were always to apply the rules of the extended order to our more intimate groupings, *we would crush them.* So we must learn to live in two sorts of worlds at once. To apply the name 'society' to both, or even to either, is hardly of any use, and can be most misleading. (Hayek 1988, p. 18) italics in original.

Stakeholder theory taps into this confusion and antagonism and relaxes constraints on the small group in ways that are damaging to society as a whole. Such deeply rooted forces have a major impact on our evolution, and in this case, not generally for the good.

Enlightened Value Maximization and Enlightened Stakeholder Theory

There is a way out of the conflict between value maximizing and stakeholder theory for those interested in improving management, organizational governance, and performance. It is what I call enlightened value maximization and enlightened stakeholder theory.

Enlightened Value Maximization

Enlightened value maximization recognizes that communication with and motivation of an organization's managers, employees and partners is extremely difficult. What this means in practice is that if we were to tell all participants in an organization that its sole purpose is to maximize value, we would not get maximum value for the organization. We must give them enough structure to understand what that means in a way they can be guided by it and therefore have a chance to actually achieve it. They must be turned on by it, in the sense that it taps into something deep in the passions of human beings—for example building the world's best automobile, or creating a movie or play that will affect humans for centuries. All these can be consistent with value maximization.

I believe there is a serious semantic issue here. Value maximizing tells the participants in an organization how they will assess their success in achieving a vision or a strategy. Value maximizing says nothing about how to create a superior vision or strategy. Value maximizing says nothing to employees or managers about how to find or establish initiatives or ventures that create value, only how we and they will measure success in the activity.

Defining what it means to score a goal in football or soccer, for example, tells the players nothing about how to win the game. It just tells them how the score will be kept. That is the role of value maximization in organizational life. It doesn't tell us to have a great defense, or offense, or what kind of plays to create or practice or how much to train and practice, or whom to hire, and so on. All of these critical functions are part of the competitive and organizational strategy of any team or organization. Adopting value creation as the score keeping measure does nothing to relieve us of the responsibility to do all these things and more in order to survive and dominate in our sector of the competitive landscape.

This also means, for example, that we must give employees and managers a structure that will help them resist the temptation to maximize short term financial performance (usually profits, or

sometimes even more silly, earnings per share) of the organization. Such short-term profit maximization is a sure way to destroy value. This is where enlightened stakeholder theory can play an important role. We can learn from the stakeholder theorists how to lead managers and participants in an organization to think more generally about how the organization's policies treat all important constituencies of the firm. This includes not just financial markets, but also employees, customers, suppliers, communities in which we exist, and so on.

Indeed, it is obvious that one cannot maximize the long-term market value of an organization if we ignore or mistreat any important constituency. We cannot create value without good relations with customers, employees, financial backers, suppliers, regulators, communities, and so on. But having said that we can now use the value criterion for choosing among those competing interests. I say competing interests because none of them can be satisfied in their entirety if the firm is to flourish and survive. Moreover, we can be sure, externalities and monopoly power aside, that using this value criteria will result in making society as well off as it can be.

Resolving the externality and monopoly problems is the legitimate domain of the government in its rule setting function. Those who care about resolving these issues will not succeed if they look to firms to voluntarily resolve these issues. Those firms who try to do so will either be eliminated by competitors who choose not to be so civic minded, or will survive only by consuming their economic rents in this manner.

Enlightened Stakeholder Theory

Enlightened stakeholder theory is easy to explain. It can take advantage of most all that stakeholder theorists offer in the way of processes and audits to measure and evaluate the way in which the firm manages its relations with all important constituencies. We add to it the simple specification that the objective function of the firm is to maximize total long-term firm market value.

I say long-term market value to recognize that it is possible for markets to not know the full implications of a firm's policies until they begin to show up in cash flows over time. In these cases the firm must lead the market to understand the full value implications of its policies and wait for the market

to catch up and recognize the real value of its decisions as they become evidenced in market share, employee loyalty, and finally cash flows and risk. Value creation does not mean succumbing to the vagaries of the movements in a firm's value from day to day. The market must be ignorant of many of our actions and opportunities at least in the short run. It is our job as directors, managers, and employees to resist the temptation to conform to the pressures of our equity and debt markets when those markets are not in possession of the private competitive information that we possess.

In this way stakeholder theorists can see that stockholders are not some special constituency that ranks above all others, only that long-term stock value is an important determinant (along with the value of debt and other instruments) of total long-term firm value. They and managers and directors would see that value creation gives management a way to assess the tradeoffs that must be made between competing constituencies, and allows for principled decision making independent of the personal preferences of managers and directors. Importantly, managers and directors also become accountable for the assets under their control because the value scorecard also provides an objective yardstick against which their performance can be evaluated.

Measurability and Imperfect Knowledge

It is worth noting that none of the above arguments depend on value being easily observable. Nor do they depend on perfect knowledge of the effects on value of decisions regarding any of a firm's constituencies. The world may be complex and difficult to understand. It absolutely has great uncertainty about the effects of any decisions we may make. It may be governed by complex dynamic systems that are difficult to optimize in the usual sense. But that does not obviate the necessity of making choices (decisions) on a day to day basis. And to do this purposely we must have a scorecard.

In the absence of a scorecard we can engage in intense value claiming activities at the expense of value creation. We can take random actions, and we can devise decision rules that depend on superstitions. All of these are unlikely to serve us well in the competition for survival.

We must not confuse optimization with value creation. To create value we need not know exactly where and what maximum value is, but only how to institute changes and strategies that cause value to rise. To navigate in such a world in anything close to a purposeful way we have to have a notion

of "better" and value maximization is such a notion. I know of no other scorecard that will score the game as well as this one. It is not perfect, but that is the nature of the world. We can tell (although not perfectly) when we are getting better, and when we are getting worse. If we are to pay any attention to the nihilists who call themselves stakeholder theorists, they must offer at least some way to tell when we are "better" other than their own personal values. In the meantime we should use their theory only in the form of enlightened stakeholder theory as I offer above. In this way it is a useful complement to or identical to enlightened value maximizing (or value creating, for those who argue the world is to complex to maximize anything).

Discussion

In his comments in the following article, "The Purpose of Change: The Puzzles and Paradoxes of How Living Companies Create Wealth. Why Single-Valued Objective Functions are not Quite Enough" Peter Senge makes many points. I agree with virtually all of them, including the one in the title of his paper. Yes, a single-valued objective function is "not quite enough" to assure success of any organization.

He classifies his concerns as instrumental (the operationalizing of value maximization) and objective (the aim itself). Peter discusses at length what it means to "optimize" and I agree with virtually all of what he has to say on this topic except the notion that somehow these difficulties mitigate the importance of having a single dimensional scorecard for evaluating whether we are doing better or worse. I say "scorecard" here because I think some of the difficulty is caused by the language "single valued objective function" and with it the implication that something is being optimized in a classical sense. It matters not whether a perfect model cannot predict in a complicated dynamic setting. We still have to have a definition of "better" to behave purposely.

Indeed, Peter emphasizes the importance of learning, and I agree with this emphasis. But learning cannot occur without as he says "understanding the longer term consequences of alternative policies," and this is my point—one that Peter explicitly agrees with. Learning is important, and I believe creating value maximization requires such emphasis.

I also agree that people commonly want to take actions given by their intuition that will move them in the opposite direction of their desires. Again this is a problem of learning, not of the scorecard that we use to determine whether they are moving in the right or wrong direction. Indeed, the absence of such a scorecard combines with people's defensive behaviors to inhibit learning about the counterproductive effects of their actions.

Peter raises concerns that I share about the tendency of human beings to resort to short term value-destroying actions in the name of value creation. Again, the absence of a clear cut value scorecard facilitates this behavior. This again is a learning problem (about the causal theories affecting the relation between actions and results). Peter's examples of the mistaken belief by insurance company managers about the relation between litigation costs and profits and value are all-too-common. Those managers were engaged in value destroying activities, and did not want to learn otherwise. Indeed the absence of clear-cut measures of value destruction are important to a continued survival of such fallacious theories.

I recall years ago a meeting of a board compensation committee on which I served. We were about to award the management of the company large bonuses for the tremendous job they had done in the previous year. I pointed out that the actions of the management had been associated with the destruction of half of the entire company value in the previous year. The reaction of my fellow directors was stunned. They asked, "How did you calculate that? I explained, but the committee with one abstention awarded the bonuses anyway. I must say that the discussions about value continued and eventually had an effect on policy matters at the board. All this occurred in a company that espoused great allegiance to value creation, but never calculated it.

I share Peter's allegiance to Demings exhortations to "eliminate numerical goals for the work force and numerical goals for management". In most cases these are value destroying activities, yet they survive, and often people argue that they are there to create value. Theories can be wrong, and these are. That does not invalidate the necessity to have a single dimensional scorecard.

Finally Peter raises what he calls objective problems with value maximization. He raises issues associated with seeing a company as a living system rather than seeing it is a machine for making money. I like the analogy and would like to take it one step further. Living organisms in the end have to generate

enough calories to guarantee survival. They evolve in miraculous ways to do this. They emerge rather than are designed. But the grim reaper of death and extinction is there every year to select out those that fail the value creation test of nature. Organisms cannot expend bore in their caloric intake activities than they get and survive.

Companies and economic and management systems are also like organisms, but the survival test often operates with a long lag. It took 70 years for the misguided communist and socialist experiments of the 20th century to fail. General Motors has been on the road to extinction for close to 20 years now, and still it continues. We can do better, and unlike Peter I believe that having the value creation scorecard front and center in every organization will help, not hinder progress. I have watched the alternative in countless companies, and the result is not pretty. ITT, Westinghouse, and many other fine companies are gone because they did not watch the value creation/destruction scorecard closely enough.

Finally Peter offers reference to"A Road Map to Natural Capitalism" (Lovins, Lovins, and Hawken 1999), who he argues suggest new ideas about capitalism and the redefinition and design of the function of corporations. When I read the article what I see is the authors arguing that corporations are missing opportunities to increase value that are associated with husbanding natural resources. The subtitle of the article says it quite well: "Business strategies built around the radically more productive use of natural resources can solve many environmental problems at a profit" (p. 145). On p. 146 they argue "Some very simple changes to the way we run our businesses, built on advanced techniques for making rosources more productive, can yield startling benefits both for todays shareholders and for future generations." They point to ignorance of opportunities by firms, and misled tax, accounting and regulatory policies as explanations for why value creating opportunities are being missed by companies on a grand scale.

I find nothing in the Lovins, et al article or in what they advocate that is inconsistent with value creation. Whether the authors' arguments are true is another issue, but the problem does not seem to be one of counterproductive value creation. In fact, the authors are arguing that companies that do not take these opportunities for value creation will not be around to discuss the issues. In their words: "The

companies that first make the changes we have described will have a competitive edge. Those that don't make that effort won't be a problem because ultimately they won't be around." (p. 158.)

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