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Higher Purpose, Employees and the Firm

Finance Working Paper N° 974/2024
April 2024

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This paper can be downloaded without charge from:
https://doi.org/10.67929/ecgi-fin-974-2024

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ECGI Working Paper Series in Finance

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Abstract

I present a theory of organizational higher purpose in which, in addition to profits, the firm's owner and employee care about a purpose that transcends the firm's business goals but guides its decisions. This purpose sacrifices profits but serves a greater good that generates positive utility for the owner and employee. Some purpose-driven firms insure employees against layoffs. They may pay employees more or less than firms that do not offer such insurance. Whether purpose-driven firms offering layoff insurance pay employees more or less than firms that do not depends on the owner's purpose-linked utility relative to the employee's.

Keywords: organizational higher purpose, profits, layoff insurance

JEL Classifications: D01, D21, D24, G03, G32

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April 8, 2024

HIGHER PURPOSE, EMPLOYEES AND THE FIRM

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ABSTRACT

I present a theory of organizational higher purpose in which, in addition to profits, the firm's owner and employee care about a purpose that transcends the firm's business goals but guides its decisions. This purpose sacrifices profits but serves a greater good that generates positive utility for the owner and employee. Some purpose-driven firms insure employees against layoffs. They may pay employees more or less than firms that do not offer such insurance. Whether purpose-driven firms offering layoff insurance pay employees more or less than firms that do not depends on the owner's purpose-linked utility relative to the employee's.

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HIGHER PURPOSE, EMPLOYEES AND THE FIRM

"If I walked away from our people during their moment of greatest danger, that would echo and be remembered for a long, long time. … We would promise one thing – we promised that the last lever we would pull to protect the integrity of the company would be a layoff".[1]

Gerry Anderson, Chairman and CEO, DTE Energy.

I. INTRODUCTION

In contrast to the Friedmanian view of the virtue of profit or shareholder value maximization as a singular goal for the firm, there is growing interest in the role of organizational higher purpose (HP), a contribution goal that transcends the usual business goals like shareholder value maximization but is intrinsically a part of the business of the organization and influences its corporate governance. Henderson and Van den Steen (2015) define HP as a "concrete goal or objective for the firm the reaches beyond profit maximization", whereas Bartlett and Ghoshal (1994) define it as "the statement of a company's moral response to its broadly defined responsibilities, not an amoral plan for exploiting commercial opportunity". It is consistent with Boulding's (1969) call for economies to be a "moral discipline" as opposed to being "values-free".

Some companies and business groups have embraced the idea of having an explicit statement of organizational HP that guides their decision-making (e.g. Gartenberg, Prat and

[1] See Quinn and Thakor (2018) and https://audio.hbr.org/ideacast/u2018072414530214 28. DTE Energy states its organizational purpose to be "a force for growth and prosperity in the communities where we live and serve".

Serafeim (2019), and Quinn and Thakor (2018, 2019))[2]. In fact, the *Business Roundtable* issued the "Statement on the Purpose of a Corporation" in August 2019, which focused on corporate contributions beyond shareholder value creation. Numerous CEOs of American companies backed this declaration, emphasizing the importance of delivering value for *multiple* stakeholders, including local communities and the country; see the discussion of the *Business Roundtable* declaration in Ellul, Erel, Kuhnen and Marquez (2023). This notion of making decisions that seek to serve not only the shareholders, but also "the greater good", is echoed in numerous HP statements of companies, and these statements are either explicitly prosocial, customer-centric or employee-centric.[3]

While research on organizational HP is at a nascent stage in Economics and Finance, it has been a focus or research in Management and Organization Behavior for much longer (e.g. Hollensbe, Wookey, Hickey and George (2014), and Warrier (1965)). And it is receiving renewed attention in light of increasing societal interest in the topic. For example, *Strategy Science* (2023) recently published a Special Issue on organizational purpose (see Zenger (2023)). The obvious question this raises for Finance research is: What are the ramifications of introducing organizational HP as a component of the firm's objective function? I address this

[2] For examples of companies that have embraced an organizational HP, see Quinn and Thakor (2018,2019). Gartenberg, Prat and Serafeim (2019) study a large sample of publicly traded companies to document the impact of organizational HP on operating performance and financial outcomes.

[3] Quinn and Thakor (2019) point out that most organizational HP statements fall in one of these three categories. An example of an HP statement that is both explicitly prosocial and customer-centric is that of *Tree T-Pee*, a company that makes water-conservation products for farmers: "Save water, protect trees from frost and grow stronger trees. Change the world … one farmer at a time."

question theoretically in this paper by introducing a preference for an organizational higher purpose directly into the utility functions of firms' owners and employees.[4]

In exploring these ramifications, the analysis explicitly considers the tension between the pursuit of purpose and the pursuit of profit. The specific tension I focus on is related to whether to shut down the firm and fire employees when it is financially profitable to do so relative to continuation in a bad economic state. Interestingly, some purpose-driven companies—even those without an explicit employee-centric HP— seek to protect their employees against layoffs. For example, during the 2007-09 financial crisis, Gerry Anderson the CEO of DTE Energy, a publicly traded utility, was advised by his senior executives to shut down plants and lay off many employees because the company was losing money. He decided to do the opposite and made a commitment to his employees that he would avoid layoffs (see the earlier Anderson quote). Quinn and Thakor (2019) also provide examples of other companies that made similar decisions during the 2007-09 financial crisis[5].

Why do some purpose-driven companies protect their employees against layoffs? In other words, what is the potential connection between pursuing an organizational HP and providing employees implicit insurance against layoffs? This is the specific research question addressed in this paper in the context of exploring the ramifications of introducing organizational purpose in the firm's objective function. Thus, my focus is on organizational HP that has as one of its components an employee-centered focus, while not precluding an explicitly articulated HP that may be customer-centric or prosocial. This is, in part, because purpose-driven companies seem

[4] This is in line with the standard approach to modeling organization purpose, e.g. Bunderson and Thakor (2022), and Henderson and Van den Steen (2015).
[5] For example, Edward Jones.

to especially emphasize employee welfare even when the stated HP statement has a different focus[6]. To address the research question above, I develop a simple theoretical model of optimal contracting in which there is universal risk neutrality and the owner of a firm invests capital and hires an employee (agent) who she contracts with to provide (privately costly) labor to produce output, which is positive under "success" and zero under "failure". The owner as well as the employee care about explicitly articulated HP of the company, and there is cross-sectional heterogeneity in the extent to which owners and employees care about the firm's HP. At the outset, the owner makes an investment in the HP that represents a drain on the output in the success state. At an interim date, the firm owner and employee observe the realization of a non-contractible state of nature that affects the employee's marginal productivity of effort. If the state of nature indicates low productivity, the owner would like to shut down the firm and fire the employee, because this is the financially optimal decision for the firm. I show that, under the optimal wage contract, the employee's participation constraint is slack, so getting fired is personally costly for the employee.

A key element of the model is that the pursuit of its HP requires the organization to continue to operate its business, since the pursuit requires making decisions at the *intersection* of the HP and the business goals of the organization. That is, as Quinn and Thakor (2019)

[6] For example, this is evident in the case of DTE Energy, whose organizational HP statement is dedicated to contributing to the growth and prosperity of the communities they operate in, but they believe that addressing employee motivation and well being is essential to the pursuit of this HP. Another example is Barry-Wehmiller, a purpose-driven manufacturing company, which states its HP as "..., building a better world…", but it believes that that pursuit starts with taking care of the welfare of their employees. It states on its website: "Our commitment to taking care of the people who make our business possible tops our list of company values. It's the same commitment you'll experience if you partner with our industrial equipment and engineering companies to bring your products to the people who use them every day, you engage with our leadership institute to help you build great culture and develop leaders, or you simply connect with us to explore our ideas on people-centered leadership. It's how we're building a better world".

emphasize, the pursuit of HP is *not* something distinct from the firm's routine decision-making and operations, like say charity, but is intrinsically a part of it,[7] with implications for corporate governance (e.g. Aguilera (2023)); see also Bunderson and Thompson (2009). With this model, I derive the following main results.

First, some firms offer layoff insurance to their employees, even though all agents are risk neutral, which is in sharp contrast to the worker-risk-aversion-based justification for providing such insurance (e.g. Azariadis (1975), Baily (1974), and Pagano (2020)). Second, firms that offer greater insurance against layoffs to their employees may pay less or *more* than firms that do not offer such insurance. The mediating variable here is the value the owner attaches to the firm's HP *relative* to the value the employee attaches. When the owner's value is higher, the firm offers insurance against termination *and* also pays a higher wage than the wages paid by firms that do not offer such insurance. When the employee attaches higher value to the firm's HP, the firm offers insurance against termination but pays a lower wage than firms that do not offer such insurance. Third, there is cross-sectional heterogeneity among purpose-driven firms with respect to whether they shut down in the bad (interim) state or continue operating in all states. Only firms whose owners attach personal value to the firm's HP that exceeds a threshold value continue to operate in all states. Fourth, in firms in which owners value the firm's HP more than the employees do, the employee's provision of effort is increasing in the value the owner attaches to the firm's HP. Fifth, in some instances, firms that adopt a purpose have lower

[7] For example, Barry-Wehmiller states : "We're showing what's possible at the intersection of business strategy and profound care for people". The company's former CEO, Bob Chapman, says: "The way we lead impacts the way people live. We just need to learn to care for the people we have the privilege of leading". See https:/youtube/ljWuT2/ANOMO. Gartenberg, Serafeim and Prat (2019) and Quinn and Thakor (2019) also point out that HP is distinct from CSR. An organization can exhibit corporate social responsibility without having an organizational purpose.

wage costs than those that do not. Finally, the less the firm's shareholders value the firm's purpose, the higher is the firm's cost of external financing, which suggests the possible emergence of "purpose clienteles" among investors.

While the intuition underlying each specific result above is discussed in detail later in the paper, it useful to have an overarching summary of the economic intuition driving these results. Pursuing the firm's stated purpose requires the firm to continue to operate even when it is not the optimal course of action from a financial standpoint[8], although this continuation commitment is not unbounded, as I discuss below This is because the pursuit of purpose is intricately tied to the firm's day-to-day operations and not distinct from these operations, so the idea of purpose pursuit is vacuous if the firm ceases to operate. Thus, in deciding whether to shut down the firm, the firm's owner faces a tradeoff between the utility she derives from pursuing the firm's purpose and the financial cost of doing so in the bad interim state. When the purpose-linked utility is high enough, this tradeoff tilts in favor of continuation despite the financial cost. When the purpose-linked utility is not that high, the tradeoff favors shutting down the firm in the bad interim state. This generates a threshold level of purpose-linked utility such that owners whose utility is above this threshold provide their employees credible assurance that the firm will continue in all states, and owners with utility below this threshold shut down in the bad interim state. Because the optimal wage contract gives employees higher expected utility than their reservation utility, they prefer continuation in all states.

[8] In a survey of organizational employees about their firms' priorities conducted by the Economic Intelligence Unit on behalf of The Economist (2007), it was found that "Sacrificing some profits to do the right thing" was ranked as the third most important consideration, behind " Taking account of the broader interests of society in making business decisions", and "Maximizing profits and serving the interests of shareholders".

I show that this threshold utility for continuation is increasing and concave in the financial loss suffered by the firm from continuation in the bad interim state. Thus, if this loss is large enough, the threshold may be so high that *no* firm continues in the bad interim state. This shows that the pursuit of purpose via layoff insurance will be eschewed by all firms if excessive shareholder value is sacrificed by doing so.

Somewhat surprisingly, firms that offer their employees insurance against layoffs do *not* necessarily pay them lower wages. The intuition here is that lowering wages have two consequences that the firm's owner cares about – the financial benefit of a lower wage bill (the "wage minimization" effect) and the disadvantage of a lower employee effort elicitation. The latter effect diminishes the probability of firm success and hence the *expected* purpose-linked utility of the owner (the "purpose enhancement" effect), so when this effect dominates, the owner prefers to pay a higher wage.[9]

What kinds of firms does this analysis apply to? One might be tempted to think that the pursuit of HP is a "luxury" that a privately-owned company can "afford" –-after all, the owners of a privately-owned company can choose whatever objective function they wish to maximize and are not responsible to public shareholders to maximize their wealth—but publicly-owned firms cannot[10]. This is not borne out by the data. Organizational HP is being pursued by various

[9] The actual intuition is a bit more complicated and related to the specific mechanisms at work in the model, involving the relationship of the owner's purpose-linked utility with the employee's purpose-linked utility, as explained later in the paper.
[10] See, for example, Karnani (2010). However, we should note that the argument there pertains to the pursuit of corporate social responsibility (CSR) objectives at the expense of shareholder value. As I point out elsewhere in this paper, CSR is not the same as HP. While my focus is on the short-term tension between profits and HP, there is quite a bit of empirical evidence that HP actually enhances shareholder value on average in the long run if it is authentic, clearly communicated and employees believe in it. See also Edmans (2020) who argues that corporate purpose and profit need not be in conflict.

types of firms, large and small, private and public[11]. Thus, the issues discussed here are germane for public firms as well.

This paper is related to numerous strands of the literature. The most relevant are theoretical papers that model organizational HP. Examples are Besley and Ghatak (2005), Henderson and Van den Steen (2015), Bunderson and Thakor (2022), and Song, Thakor and Quinn (2023). While some of these papers also model both the firm's owner and employees attaching value to its HP in their objective functions, none of them examines how the pursuit of purpose can lead the firm to protect its employees against layoffs and how this impinges on optimal wage contracts and contracting costs. Further, some of these papers focus on issues I do not consider. For example, Henderson and Van den Steen (2015) focus on the economic benefits to firms from adopting a purpose. They show that a prosocial purpose can enhance the firm's profitability by strengthening the employees' identity and reputation, which increases employee effort. The firm then effectively becomes a carrier for the identity and reputation of its employees. Song, Thakor and Quinn (2023) show that even when a firm's HP is welfare-enhancing in a setting in which some firms authentically value the HP and some do not, putting social pressure on all firms to adopt it *can make all agents worse off*. Bunderson and Thakor (2022) examine the interaction between a bank's capital ratio and HP investment. While a common thread running through these theories, and one that this paper shares, is that an authentic HP can motivate employees to work harder and possibly do so at lower wages, these

[11] These companies include KPMG, DTE Energy, Barry-Wehmiller, Heineken, Sandler O'Neill and Partners, Edward Jones, Bank of Bird in the Hand, and others. These companies are a mix of small and large companies, as well publicly owned and privately owned companies, in a variety of industries.

papers highlight numerous additional issues that represent a rich agenda of research questions related to purpose that this paper does not cover, but complement the issues examined here.

Also related are empirical papers on the consequences of organizational purpose, e.g. Gartenberg, Prat and Serafeim (2019), Grant et al (2007), and Hedblom, Hickman and List (2019).[12] These papers provide support for the theoretical result that the pursuit of organizational purpose, working primarily through the employee motivation channel, has a positive impact on firm performance. Gartenberg, Prat and Serafeim (2019) provide large-sample empirical evidence based on a sample of nearly 500,000 workers across 917 firm-year observations from 2006 to 2011 and conclude that an authentic higher purpose communicated with clarity positively impacts both operating performance and forward-looking measures of performance like Tobin's Q and stock price. Grant et al (2007) provide causal evidence that connecting employees to the organization's purpose can positively impact employee productivity, in the context of university call center workers. Other related papers are Gartenberg (2023) and Henisz (2023).

Other relevant papers are those at the interface of law and economics that have discussed the tension between the traditional shareholder-value-maximization goal and broader objectives that include purpose. For example, Haupt (2023) states, "One of the oldest corporate law issues – for whom and is the corporation managed? – has become one of the hottest public policy issues of corporate law. The new trend holds instead that the purpose of companies is to produce solutions to the problems of people and planet and in the process produce profits."

[12] Hedblom, Hickman and List (2019) provide evidence based on a field experiment that ". . . when a firm convinces its workers that their efforts make the world a better place (as opposed to purely making money) . . . , output increases and wage costs go down".

This paper is also related to papers that examine the relationship between external finance and "socially responsible" investments (e.g. Morgan and Tumlinson (2019), Landier and Lovo (2020), and Oehmke and Opp (2020)), as well as those that examine the role of banks in promoting socially responsible investments (e.g. Haushalter, Henry and Iliev (2023), and Thakor (2019)).[13] More closely related is Allen, Qian and Xie (2022) which shows theoretically that financing with "implicit benefits" – that may include welfare-enhancing benefits to the contracting parties – can achieve lower financing costs, higher managerial effort and better outcomes for both borrowers and lenders. Unlike this paper, these papers focus on how corporate investments and contracting arrangements can be made to internalize social costs.

Also related is the literature on the provision of employment and wage insurance by firms. Ellul, Pagano and Schivardi (2018) document that family firms offer greater employment insurance and larger wage discounts in countries where there is less generous unemployment insurance. They find no such substitutability between private and public insurance for non-family firms, but they do find that family firms provide lower wage insurance than non-family firms. Guiso, Pistaferri and Schivardi (2005) examine the how risk is shared between firms and their employees, using matched employer-employee data. They document that firms protect employees fully against temporary shocks to output but insure them against permanent shocks only partially. The empirical analysis in Bena, Ellul, Pagano, and Rutigliano (2023) reveals that entrepreneurs with better-diversified portfolios provide more insurance to employees against labor risk, but there is no evidence of insurance being priced in average wages. Kim, Maug and

[13] Lo and Thakor (2023) discuss how purpose-driven banks can help to close the "funding gap" in biotech R8D and improve social welfare. Jorring et al (2022) highlight the role of financial innovation in facilitating this, and improving the delivery of healthcare.

Schneider (2018) use German establishment-level data to show that skilled employees of firms with 50% labor representation on boards are protected against layoffs during adverse industry shocks, but they get lower wages. In contrast, Jager, Schoefer and Heining (2021) provide evidence that sharing governance with workers on the board does not affect wages or rent sharing between labor and capital. On the theoretical front, Jaggia and Thakor (1994) develop a model in which firms offer wage and employment insurance to workers to incentivize them to allocate a greater portion of their effort to firm-specific human capital development and less to marketable (general) human capital. They show that firm leverage diminishes the benefit of this insurance, so the firm's optimal capital structure trades off the tax benefits of debt against the cost of lower firm-specific human capital.[14] Berk and Walden (2013) argue that firms are able to diversify away idiosyncratic risk better than workers, so they effectively behave as if they are less risk averse and offer their workers layoff insurance.

The employment and wage insurance literature discussed above shows that shareholder-value maximization could induce firms to offer layoff insurance to risk-averse employees. This paper differs from that literature in a number of ways. First, unlike that literature, insurance against layoffs occurs despite universal risk neutrality and the absence of uncertainty about worker ability, so risk aversion plays no role in the analysis. Second, this paper derives the novel result that cross-sectional heterogeneity in terms of whether insurance against layoffs is offered by firms can be explained by the values firm owners attach to the firm's purpose. It is not encountered in the earlier literature, due to the differentiating focus of this paper on

[14] This theory is supported by the evidence in Baghai, Silva, Thell and Vig (forthcoming) that Swedish export firms that suffer a negative export shock due to currency movements lose talented workers, but only if they are highly leveraged. For a related theory, see Berk, Stanton and Zechner (2010).

organizational HP. Third, my result that wages in firms that offer insurance against layoffs could be either lower or higher than wages in firms that do not offer such insurance as novel as well.

The rest of the paper is organized as follows. Section II develops model. Section III presents the analysis. Section IV discusses empirical implications. Section V concludes. All proofs are in the Appendix.

II. A SIMPLE MODEL OF HIGHER PURPOSE

In this section I develop a simple model of organizational HP that is consistent with the stylized facts discussed earlier in the Introduction, and also generates new predictions.

Consider a three-date setting with risk neutral agents and a zero riskless rate. At $t = 0$, there is a firm operated by an owner who invests capital in a production process. The owner also hires an agent (employee) who provides labor input in the form of effort $e \in [0,1]$. The amount of effort provided by the employee is unobservable and hence cannot be directly contracted upon. The private cost of effort to the agent is $e^2/2$ and the agent's reservation utility is 0. The owner offers the employee a wage contract that generates an expected utility for the employee that satisfies the employee's participation constraint.

At t = 1, a state of nature $\theta \in \{\theta_{l,}\ \theta_{H,}\}$ is realized, where $\Pr(\theta = \theta_H) = \lambda \in (0,1)$ and $\Pr(\theta = \theta_L) = 1 - \lambda$. This state affects the firm's production function in that at t = 2 the firm's output, x, is X with probability $q(e,\theta) \in (0,1)$ and 0 with probability $1 - q$. Specifically,

$$q(e,\theta) = \begin{cases} a(\theta_H)\, e \;if\; \theta = \theta_H \\ a(\theta_L)\, e \;if\; \theta = \theta_L \end{cases} \qquad (1)$$

where $a\,(\theta_H) > a\,(\theta_L) > 0$. Although the realization of θ is observable to the owner and the employee, it cannot be contracted upon because it cannot be verified by a third party. The employee chooses e at $t = 1$ after observing θ.

There is a zero lower bound on consumption, so the optimal wage contract in this setting pays the agent $w > 0$ if $x = X$ and nothing otherwise. This contract is set before θ is realized and cannot be renegotiated. This is because the realization of θ is not contractible.

The owner can choose to not employ the agent *at* $t = 1$, in which case normal operation ceases and the output is $K \in (0, X)$ with probability 1. This can be thought of as liquidation of the firm.

The owner can choose how much of the output to invest in an organizational HP that generates utility for the owner. Specifically, if the owner invests $y > 0$, it generates utility $m\,\phi(y)$ for the owner, with of $\phi' > 0$, $\phi'' < 0$. We take y as fixed for the analysis and allow the positive scalar m to vary in the cross-section of owners over $[\underline{m}, \overline{m}]$. The parameter m can be viewed as a measure of the value the owner attaches to the HP. We assume that the firm's chosen purpose generates a utility of $\beta m\phi(y)$ for the employee. The motivation for this assumption is that the firm's HP makes the employee's work more deeply meaningful, as has been documented in numerous papers[15]. This elevates the value of the firm's human capital; see Edmans (2011) for evidence on the positive impact of employee motivation on stock price.

No restriction is imposed on β. If $\beta > 1$, then the employee values the firm's purpose more than the owner, and if $\beta < 1$, the employee values the purpose less than the owner.[16]

[15] For example, Bunderson and Thompson (2009), Hedblom, Hickman and List (2019), and Grant et al (2007).

[16] If we fix β, then this specification means that the employee values the firm's HP more when the owner values it more. This captures the idea that owners who believe more passionately in the firm's HP will invest more in communicating it and

The HP chosen by the owner can be viewed as something that serves the greater good. An example is *4Ocean* choosing as its HP the task of ridding the world's oceans of plastic garbage. Another example is Development Bank of Singapore which adopted a purpose of "making banking more fun" in order to improve the customer experience and access to banking services (see Quinn and Thakor (2019)).

I now impose parametric restrictions on the relationship between $a\ (\theta_L)[X-y]$, the maximum value of the firm if it continues when $\theta = \theta_L$, and its value, K, if it shuts down:

(a) $a\ (\theta_L)[X-y] < K$. (b) $\overline{m} > \frac{2\sqrt{K}-a(\theta_L)[X-y]}{a(\theta_L)[1+\beta]\phi(y)} > \underline{m}$. (2)

2 (a) simply states that in the θ_L state, the maximum possible financial value of the firm with continuation is less than its financial value if it shuts down. This is sufficient to ensure that the firm makes a financial loss by operating, relative to shutting down, when $\theta = \theta_L$, making the pursuit of purpose financially costly in that state. 2 (b) is a sufficiency condition for cross-sectional heterogeneity in the shut-down decisions of firms, based on differences in the utilities their owners derive from the firm's HP.

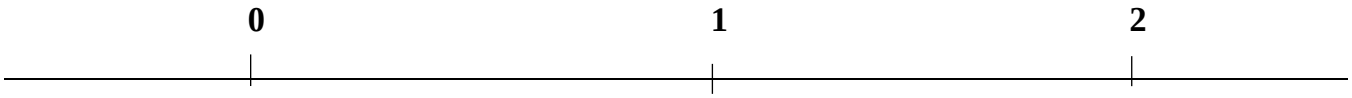
Summary of Sequence of Events and Timeline:

At t = 0, the owner of the firm announces the investment y in the firm's HP and hires an agent with whom a wage contract is negotiated. The contract pays the agent w if the output at t = 2 is X and zero otherwise. The owner's utility from the stated HP, $m\ \phi(y)$, is common knowledge. The wage contract offered to the agent must guarantee the agent at least his

in "connecting" employees to that HP (see Quinn and Thakor (2018, 2019). In any case even if this were not true, given any two-purpose-linked utilities, we can always express one as a multiple of the other.

reservation utility of zero. The agent's utility from the firm's HP is $\beta m\phi(y)$. At $t = 1$, a state of nature $\theta \in \{\theta_L, \theta_{H,}\}$ is realized and observed by the firm's owner and the employee/agent. After observing this realization, the owner decides whether to continue to operate the firm or shut it down. If the firm is shut down (in state θ_L), its liquidation value is *K*. If the firm continues, the agent chooses unobserved effort *e*, which affects the outcome at $t = 2$. At the terminal date $t = 2$, the firm that chose to continue realizes an output *x*, which is $X > 0$ with probability (w.p.) $q\ (e, \theta)$ and 0 w.p. $1 - q(e, \theta)$. This summary is shown pictorially in *Figure 1*.

Figure 1. Sequence of Events



- Firm's owner's utility from stated HP, $m\ \phi(y)$, is common knowledge.
- Owner commits to invest $y > 0$ in the HP.
- Owner hires employee and negotiates wage contract to provide effort.
- Employee's utility from the firm's HP, $\beta m\phi(y)$, is also common knowledge.

- State of nature $\theta \in \{\theta_L, \theta_{H,}\}$ is realized and observed by owner and employee.
- Owner decides whether to shut down the firm or continue.
- If continuation chosen, employee chooses unobservable effort *e*.

- Output *x* is realized.
- It is X > 0 with probability $a\ (\theta_i)e$, where $i \in$ {L, H} and 0 with probability $1 - a\ (\theta_i)e$.
- Employee's wage is paid.

III. ANALYSIS

We will first analyze the base model and then examine an extension. In the base model, the owner is self-financing the firm. External financing will be introduced in the extension.

A. Analysis of the Base Model

We will use backward induction, starting with an analysis of events at $t = 1$ and then analyzing events at $t = 0$. We will conjecture (and verify later) that some firms will be viewed as credibly pre-committing to not shut down the firm in the θ_L state and some firms will be viewed as those that will shut down the firm when $\theta = \theta_L$.

***Employee Effort Choice at t = 1*:**

At $t = 1$, the employee takes as given the wage contract agreed upon at $t = 0$, and chooses e after observing θ. Thus, e is chosen by the employee as follows:

$$e \in argmax \left\{a(\theta)e\,[w + \beta m\phi(y)] - \frac{e^2}{2}\right\} \tag{3}$$

where we have used the fact that the wage contract is of the form:

$$\text{Employee's wage} = \begin{cases} w & if\ x = X \\ 0 & if\ x = 0\ or\ the\ firm \\ & is\ shut\ down\ at\ t = 1 \end{cases} \tag{4}$$

The solution to (3) is characterized below.

Lemma 1*: The employee's unique choice of effort in response to the wage contract in (4) is*

$e_i = a\,(\theta_i)\,[w + \beta m\phi(y)]$ *where* $i \in \{L, H\}$. (5)

Note that the employee's effort is increasing in both the pecuniary compensation (the wage w) as well as the employee's non-pecuniary utility from the firm's purpose. This means that the

more the employee values the firm's purpose, the less the firm needs to pay the employee to elicit the same effort[17].

Firm's Choice of Wage Contract at t = 0:

The firm's owner now takes the employee's anticipated effort response to a wage contract (described in Lemma 1) and optimizes with respect to the choice of the wage contract.

Consider first an owner who can credibly pre-commit to not shut down when $\theta = \theta_L$. Such an owner solves:

$$w \in argmax\ \{\lambda a(\theta_H)e_H[A - w] + [1 - \lambda]a(\theta_L)e_L\ [A - w]\} \quad (6)$$

subject to

$$\lambda\left[a(\theta_H)e_H\{w + \beta m\phi(y)\} - \frac{e_H^2}{2}\right] + [1 - \lambda][a(\theta_L)e_L\{w + \beta m\phi(y)\} - \frac{e_L^2}{2}] \geq 0 \quad (7)$$

where

$$A \equiv X - y + m\phi(y) \quad (8)$$

and e_i is the employee's effort choice when $\theta = \theta_i$, $i \in \{L, H\}$, and is given by Lemma 1. So (7) is the employee's participation constraint. The solution is presented below.

Proposition 1: *If the firm can credibly pre-commit to not shut down in any state θ, the optimal wage contract is:*

$$w_1^* = \frac{X - y + m\phi(y)[1 - \beta]}{2} \quad (9)$$

[17] This is consistent with Edmans'(2020) observations that the pursuit of organizational purpose can increase the total size of the economic pie.

The owner's expected utility is:

$$U_{I} = B\left[\frac{X-y+[1+\beta]\,m\phi(y)}{2}\right]^{2} \quad (10)$$

where

$$B \equiv \lambda\ [a(\theta_H)]^{2} + [1-\lambda]\,[a(\theta_L)]^{2} \quad (11)$$

We characterize next the solution for the firm whose owner cannot credibly pre-commit to continue operations in all states of the world.

The owner solves

$$w \in argmax\ \{\lambda a(\theta_H)e[A-w] + [1-\lambda]\,K\} \quad (12)$$

subject to

$$\lambda\left[a(\theta_H)e_H\{w+\beta m\phi(y)\} - \frac{e_H^2}{2}\right] \geq 0 \quad (13)$$

and e_H is given Lemma 1. Here (13) is the employee's participation constraint.

Proposition 2: *If the firm cannot credibly pre-commit to not shut down in any state θ, the optimal wage contract is.*

$$w_2^* = \frac{X-y+m\,\phi(y)[1-\beta]}{2} \quad (14)$$

The owner's expected utility is:

$$U_2 = \lambda[a(\theta_H)]^2\left[\frac{X-y+[1+\beta]\,m\,\phi(y)}{2}\right]^2 + [1-\lambda]\,K \quad (15)$$

It is instructive to study the wage contracts in Propositions 1 and 2. They are identical in form, so the only difference is that in one case the wage is paid in both states of the world at *t* = 1, whereas in the other case the wage is paid in only the good state because the firm shuts down in the other state. The intuition is that the wage contract cannot be made state-contingent due to the non-contractible nature of the state *(θ)* realization. Thus, it is optimally chosen by the owner at *t* = 0 to elicit the optimal effort from the agent. When $\theta = \theta_H$ is realized, the agent chooses a higher effort than when $\theta = \theta_L$ is realized, even though the wage contract is the same. This is because the agent is faced with a higher marginal productivity of effort when $\theta = \theta_H$ than when $\theta = \theta_L$.

The next task is to verify our conjecture that there will be two groups of firms, both led by purpose-driven owners, with one group choosing to shut down when $\theta = \theta_L$, and the other choosing to continue. This is done in the next proposition.

Proposition 3: *There exists an* $m^* \in (\underline{m}, \overline{m})$ *such that any owner with* $m \geq m^*$ *can credibly pre-commit to continue operations at t = 1 regardless of the state θ realization, and no owner with* $m < m^*$ *can credibly commit to continue when* $\theta = \theta_L$.

This proposition tells us that there is a critical threshold of the owner's purpose value parameter, m^*, such that all owners with purpose value parameters $m \geq m^*$ credibly commit to continuing in all states of nature at *t* = 1, and all owners with $m < m^*$ cannot do so and indeed choose to shut down when $\theta = \theta_L$. The intuition is as follows. When $\theta = \theta_L$ is realized, the firm should shut down from a financial standpoint. What may induce the owner to continue is

the owner's utility from the firm's HP. When this utility is high enough (i.e. m is high enough), the incremental purpose-linked utility from continuation more than offsets the financial loss from continuation.

The result that owners who derive a sufficiently high utility from the firm's HP also offer their employees insurance against termination is important in light of the finding that unemployment risk imposes considerable welfare losses on workers (e.g. Low, Meghir and Pistaferri (2010)), and the finding that displaced workers experience earnings losses even after re-employment (e.g. Jacobson, LaLonde and Sullivan (1993)). These empirical findings suggest a social welfare benefit related to the firm's HP that goes beyond the purpose-linked utility benefits to firms' owners and employees, and thus a positive welfare externality associated with owners who attach sufficiently high utility to the firm's HP.[18]

Corollary 1: *The bigger the financial loss to the firm from continuation when* $\theta = \theta_L$*, the higher is* m^**. The threshold* m^* *is increasing and concave in the financial loss.*

This result is intuitive. A bigger financial loss from continuation in the θ_L state means that continuation is more unattractive to the owner, and it takes a higher utility from the firm's purpose for the owner to wish to continue despite the cost. Hence, m^* increases with the financial loss from continuation.

[18] While the employee's purpose-linked utility is also related to the firm's continuation, I have not modeled any disutility for the employee from being fired, other than the direct wage loss. The empirical evidence suggests additional dissipative costs that are outside the model.

An important implication of this result is that if the financial loss from continuation when $\theta = \theta_L$ is large enough, it can push m^* outside the feasible range $[\underline{m}, \overline{m}]$. In that case, *no* firm will continue in the θ_L state, regardless of the value the firm's owner attaches to the firm,s purpose. Thus, the pursuit of purpose does *not* guarantee layoff insurance. It depends on the magnitude of the financial loss from offering such insurance.

In the next proposition, we ask: in which firms are employees paid higher wages: firms that credibly commit to always continue or those that shut down when $\theta = \theta_L$?

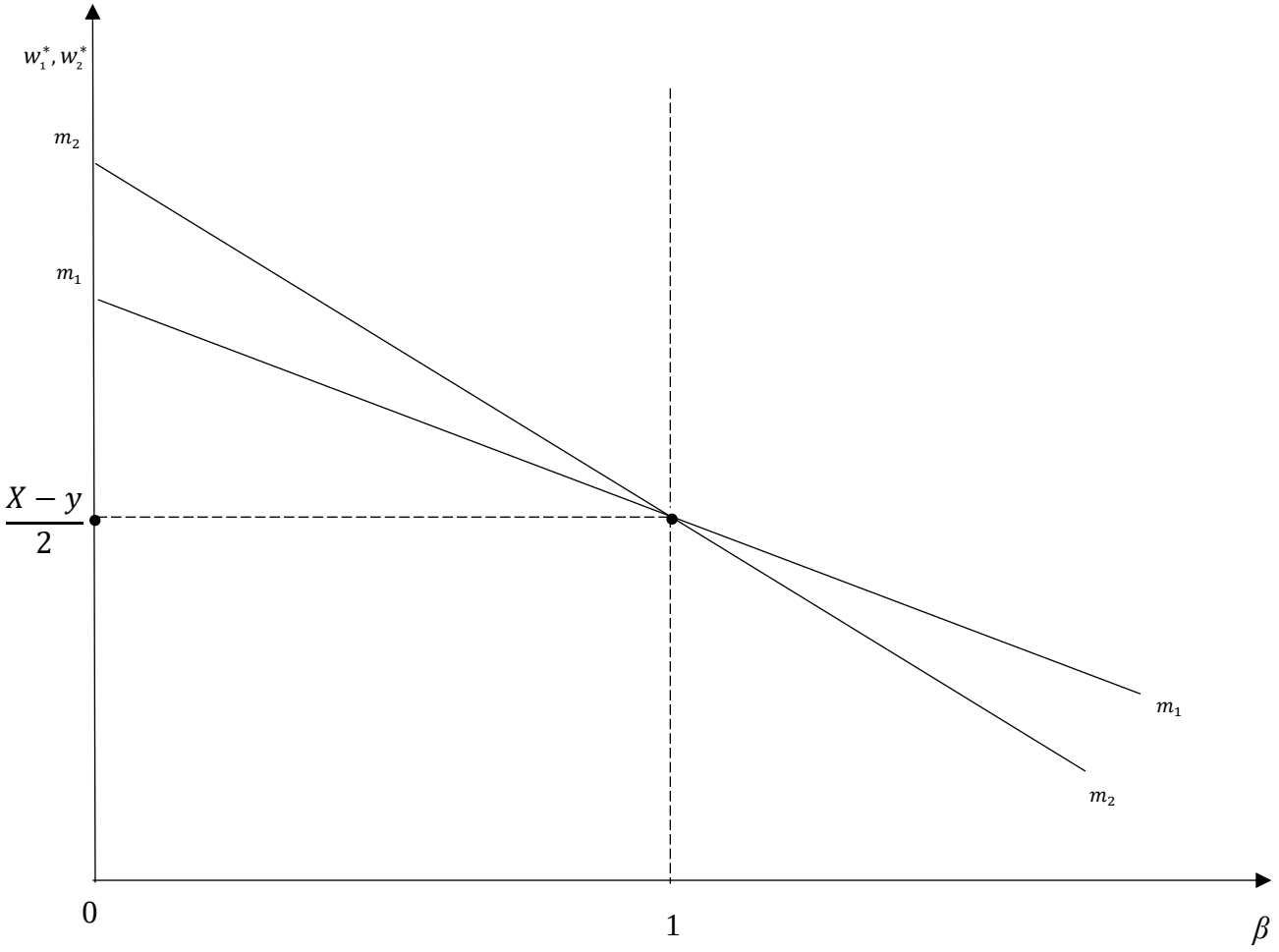
Proposition 4: *Suppose that all owners value the firm's HP more than employees do, i.e. $\beta < 1$. Then in the cross-section of firms $m \in [\underline{m}, \overline{m}]$, owners who credibly pre-commit not to shut down their firms in any state pay their employees more than owners who shut down their firms when $\theta = \theta_L$. Now suppose all owners value the firm's HP less than their employees do, i.e. $\beta > 1$. Then in the cross-section of firms $m \in [\underline{m}, \overline{m}]$, owners who credibly pre-commit not to shut down in any state pay their employees less than owners who shut down when $\theta = \theta_L$. When $\beta = 1$, all owners pay employees the same wage that would be paid if neither owners nor employees cared about the firm's HP.*

This proposition shows that when both employees and firm owners value the firm's purpose, their *relative* valuations affect employee wages. To understand why, note that in this setting, the fact that both the owner and the employee value the firm's HP generates two effects: (i) a "*wage minimization*" effect and (ii) a "*purpose enhancement*" effect. Consider (i) first. Knowing that the employee values the firm's HP, the owner recognizes that she can get the

employee to work harder for any wage than the employee would at that wage in the absence of purpose, so she chooses to lower the wage and yet elicit the same effort that would have been forthcoming with a higher wage if the employee did not care about the HP. Next consider (ii). Since the owner cares about the firm's HP, she wants higher effort from the employee because this increases the owner's *expected* purpose-related utility. These two effects pull against each other, so whether the owner pays the employee more for a higher value of *m* depends on which effect dominates. When $\beta > 1$ and the employee values the firm's HP more than the owner, the wage minimization effect dominates, so owners with higher values of *m* pay less than owners with lower values of *m*, and the wage paid is a *decreasing* function of *m*. Since owners who credibly pre-commit not to shut down have higher *m* values than those who shut down when $\theta = \theta_L$, these owners also pay their employees *less* than do the owners who shut down when $\theta = \theta_L$. In contrast, when $\beta < 1$ and owners care more about the firm's HP than employees do, the purpose enhancement effect dominates, so employee wage is an increasing function of *m*. Consequently, owners of firms that credibly pre-commit to continue in every state pay *more* than owners of firms that shut down when $\theta = \theta_L$. When $\beta = 1$, the two effects cancel each other out, so the wage is the same as if no one cared about the HP.

Figure 2 shows the relationship between employee wages and β, the relative HP parameter of the employee, for different values of m. The employee's wage is downward sloping in β, and owners with higher values of m pay their employees more as long as $\beta < 1$, i.e., as long as they value the firm's purpose more than their employees do and the purpose enhancement effect dominates. In the figure, $m_2 > m_1$, so the firm with the owner who has $m=m_2$ pays more than the firm with the owner who has $m=m_1$ for all $\beta < 1$. At $\beta = 1$, $w_1^* = w_2^* = \frac{X-y}{2}$, the wage that is

***Figure 2*: Relationship Between Wages and Relative Values Assigned to HP by Owner and Employee: Owners with Higher Values Attached to HP (m_2) pay More when $\beta < 1$ and Less When $\beta > 1$, Where β *is* How Much Employee Values HP Relative to Owner**



Notes:
$m_2 > m_1$
,

optimal when neither the owner nor the employee values the firm's purpose. For $\beta > 1$ (the values of β such that the employee values the purpose more than the owner), the wage minimization effect dominates and the m_1 owner pays higher wanges than the m_2 owner.

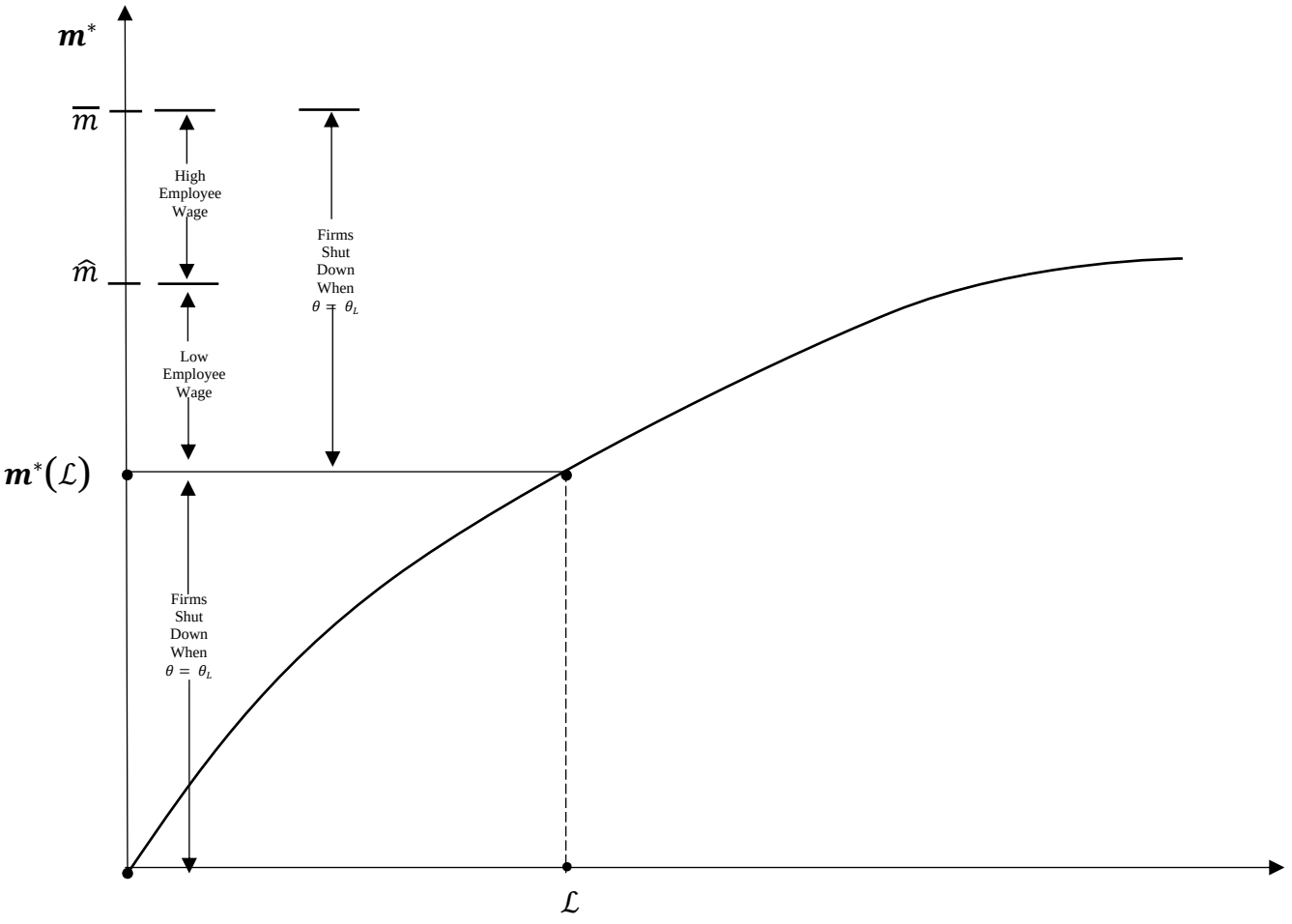
This proposition sharply distinguishes the analysis here from the literature on employment contracts in which firms that provide their employees partial or complete insurance against employment termination pay their employees less in exchange for that insurance. See, for example, the theories developed by Azariadis (1975) ad Baily (1974), and the evidence in Ellul, Pagano and Schivardi (2018), and Kim, Maug and Schneider (2018). This result in this literature is a consequence of an across-states-of-nature tax-cum-subsidy scheme — when the firm continues employment in a state in which it would rather fire the employee, it experiences a cost which is a "subsidy" for the employee, and it recovers this through a tax in the form of a lower (expected) wage. There is a variety of model-specific reasons for such schemes, and they range from employee risk aversion (e.g. Azariadis (1975) and Baily (1974)) to improving employee incentives to invest in firm-specific human capital (e.g. Jaggia and Thakor (1994)).

Our result is fundamentally different from this literature in that owners who provide insurance against employment termination may pay *more or less* than owners who do not provide such insurance. The reason is that our result is driven by an entirely different set of factors, namely the interaction between the purpose-driven values of the firm's owner and employee and the tension this produces between the wage minimization and purpose enhancement effects.

Putting together Corollary 1 and Proposition 4, we see that, for any given financial loss, say $\mathcal{L}$, from continuation in the θ_L state, firms fall into three groups: (1) those whose owners

have $m < m^*$ shut down their firms in the θ_L state; (2) those whose owners have $m \geq m^*$ continue in the θ_L state but pay their employees less than what firms who shut down pay their employees if $m \in (m^*, \hat{m})$ for some $\hat{m} \in (m^*, \overline{m})$; and (3) those whose owners have $m \in [\hat{m}, \overline{m}]$ continue in the θ_L state and pay their employees more than what firms that shut down pay. See *Figure 3*.

***Figure 3*: Cut-off m^* as a Function of the Continuation Financial Loss: Threshold That Owner's HP Value (*m*) Must Exceed for Firm To Continue in Bad State Is Increasing in Firm's Financial Loss from Continuation. Among Firms That Continue, Those With *m* values Modestly Above Threshold Pay Lower Wages Than Firms That Shut Down, and Those With *m* Values Well Above Threshold Pay More than Firms That Shut Down.**



Next I examine some comparative statics with respect to the owner's utility.

Corollary 2: *The expected utility of the owner is strictly increasing in m and in β, regardless of whether the owner can credibly pre-commit to continue in all states of nature.*

Thus, the owner enjoys a higher expected utility when she values the firm's HP more. The intuition for this straightforward — the firm's HP is a source of additional utility for the owner beyond the firm's financial payoff, and the more the owner likes the HP, the greater this additional source of utility. The reason why the owner's utility is increasing in β, and hence the value the employee attaches to the firm's HP, is that it makes both the wage minimization effect and the purpose enhancement effect stronger. The wage minimization effect gets stronger because now the employee works harder for any wage, so the owner can elicit any desired effort with an even lower wage. The purpose enhancement effect gets stronger because the greater effort elicitation increases the expected value of the purpose-driven utility of the owner. Thus, regardless of which effect dominates, the owner is better off.

Corollary 3: *The employee's participation constraints (7) and (13) are slack in equilibrium. Employees who work at firms that continue in all states enjoy higher expected utilities than employees who work at firms that shut down when* $\theta = \theta_L$.

It is intuitive that employees who work for firms that guarantee continued employment in all states of the world enjoy higher expected utilities than those who get terminated when $\theta =$

θ_L. The reason why both types of firms can co-exist is that we have implicitly assumed a plentiful supply of agents who can be employees, relative to the number of firms. This is what justifies defining the agent's participation constraint being satisfied as merely giving the agent at least his (exogenous) reservation utility of zero, which makes him indifferent between working and not working.[19]

Corollary 4: *When $\beta > 1$, a firm that adopts an organizational HP has lower wage costs than a firm that has no HP.*

This result explains the empirical evidence discussed in the Introduction regarding the impact of organizational purpose on wages.

B. Extension: External Financing

Suppose the owner needs to raise \$*I* in external financing for the project, and this is raised with equity. Let the investors the firm attracts attach a value $v\,\phi(y)$ to the firm's HP, and in general we can allow v to be bigger than, equal to or less than *m*; $v = 0$ is also allowed, in which case shareholders do not care about the firm's HP. Assume that once external financing is raised, shareholders do not have any control over the firm's operating decisions.

In terms of the sequence of events, external financing is raised at $t = 0$ before the wage contract is negotiated with the employee and investment in the project is made. Let $\alpha \in (0,1)$ be the share of ownership the owner gives up to outside shareholders to raise *I*. The capital

[19] This is a standard assumption in principal-agent contracting models.

market is competitive, so shareholders provide financing to receive an unexpected return of zero, including the value they attach to the firm's HP.

The owner now solves (assuming she can credibly commit to continuing when $\theta = \theta_L$):

$$\underset{w}{Max}[1-\alpha]\begin{Bmatrix}\lambda a\,(\theta_H)e_H[A-w] \\ +[1-\lambda]\,a\,(\theta_L)\,e_L[A-w]\end{Bmatrix} \tag{16}$$

subject to

$$\alpha\begin{Bmatrix}\lambda a\,(\theta_H)e_H\,[X-y-w+v\,\phi\,(y)] \\ +[1-\lambda]\,a\,(\theta_L)\,e_L\,[X-y-w+v\,\phi\,(y)]\end{Bmatrix} = I \tag{17}$$

and (5) – (7).

This now leads to:

Proposition 5: *With external financing, the optimal wage contract and effort choices are the same as with internal financing. The cost of external financing to the firm's owner, α, is decreasing in v, so external financing is more expensive when the outside shareholders care less about the firm's purpose.*

It is not surprising that wage contracting and employee effort choices are unaffected by the fact that external financing is being raised – maximizing the value of her ownership of the firm is the same as maximizing the value of the whole firm. The proposition does suggest, however, that there will be a "purpose clientele" effect whereby investors who attach the most value to the firm's HP (highest v) will become shareholders. There is cross-sectional heterogeneity in v, the marginal shareholders will have the lowest *v* among those who buy the firm's stock, and the inframarginal shareholders will have higher values. Thus, firms will seek out like-minded

shareholders who believe in its HP, perhaps through an assortative matching process. An example of this *4Ocean* whose HP of ending the global crisis of plastic pollution of the oceans attracts investors who believe in the same environmental cause.

The Role of Debt: What if external financing was in the form of debt as opposed to equity? With debt, if continuation in the θ_L state is financially dominated by shutting down, then there are likely to be covenants that make it more difficult for the firm to do so, consistent with theories of debt as a "hard claim" that constrains management (e.g. Hart and Moore (1995)). Note that this does not require contracting on θ. There may be noisy indicators of θ that are reflected in other signals that debt covenants could be written on. While this may still leave open the possibility that the firm could continue in the θ_L state, it would diminish it. This implies that more highly levered firms are less likely to protect their employees against layoffs even when they are purpose-driven. One way for purpose-driven firms to potentially lessen the impact of leverage in this context may be to use more relationship-oriented bank financing (e.g. Boot and Thakor (2000)), relying on banks to screen out bad apples *ex ante* (e.g. Ramakrishnan and Thakor (1984))[20] so as to have more confidence in providing continuation financing that may have to be secured by collateral if the bank is unwilling to provide this financing on an unsecured basis in some states of nature.[21]

[20] There is causal empirical evidence that the strength of bank screening and monitoring incentives is positively related to bank credit supply. See Choudhary and Jain (2022).

[21] It is well known that a bank would be willing to lend on a secured basis when it would not extend an unsecured loan. Moreover, bank financing may be particularly useful in this context because Cerqueiro, Ongena and Roszbach (2020) have documented that banks are more efficient users of borrower collateral than non-bank lenders.

C. Higher Purpose, Private Benefits and Corporate Governance

I assumed in the model that the owner's pursuit of HP was authentic and may not only be valued by the firm's external financiers but may also enhance social welfare. This is the "serving the greater good" aspect of higher purpose that is widely discussed in the literature. But the elephant in the room is: how do we distinguish the firm's diversion of y to serve a higher purpose from the pursuit of a private benefit project dressed up to look like the pursuit of purpose? This has obvious governance implications.

This is why various papers (e.g. Song, Thakor and Quinn (2023)) emphasize that the purpose must be authentic and that the process of "connecting" employees to the purpose will enable verification of authenticity through a sort of internal governance process, as in Acharya, Myers and Rajan (2011), for example. While this is true, external financiers may be reluctant to rely too heavily on the efficacy of internal governance to ensure that wasteful private-benefits projects are not pursued by the firm's management. This suggests an elevated role for the board of directors in assessing the authenticity of HP investments, a task that will have to overcome career-concerns distortions (e.g. Dewatripont, Jewitt and Tirole (1999), and Song and Thakor (2006)).

D. Comments on the Model and Interpretation

I wish to make a number of comments on the model and its interpretation. First, while $m\phi(y)$ has been stated as a component of the value the firm's owner attaches to the chosen HP, it could also be interpreted as a social welfare benefit of the HP. In this case, if $v = 0$ (or generally $v < m$), the firm will incur a higher cost of external financing due to its pursuit of an HP that increases social welfare. While this may suggest a role for government subsidies in

financing, the possible unobservability of m and v can lead to the potential manipulation of subsidy schemes and unanticipated distortions.

Second, the model highlights a crucial difference between HP and CSR. A firm can be socially responsible without protecting its employees against layoffs and shutting down parts of its operations. Quinn and Thakor (2018, 2019) emphasize that the pursuit of HP is intimately connected to the firm's day-to-day operations, which means scaling back operations diminishes HP pursuit. The firm protects its workers against a layoff not because it "cares" about the workers *per se*, but because the pursuit of purpose requires operational continuity and this, in turn, requires the firm to not shut down, which protects the workers. Moreover, as Gartenberg, Serafeim and Pratt (2018) point out, unlike CSR, an HP does not even have to be prosocial.

Finally, I deliberately assumed that continuation in the θ_L state was financially dominated by the choice of shutting down. If this were not true, there would be no tension between shareholder value maximization and the pursuit of purpose, and absent such a tension, there would be nothing "special" about being purpose-driven. That is, while there are undoubtedly situations in which the pursuit of a HP is consistent with shareholder value maximization, the more interesting cases to examine are those where this consistency is absent, at least within the context of the decisionmaker's time horizon for the decision.

IV. EMPIRICAL IMPLICATIONS

The results in this paper are consistent with some existing stylized facts and also provide new testable predictions.

First, the model predicts that layoff insurance is more likely to be offered by firms whose owners attach sufficiently high value to the organization's HP. There is no existing evidence on

this prediction. To test it, one would need a reasonable empirical proxy for the value the firm's owner (or CEO) attaches to the firm's HP. In the case of normal operations, this cost may be unobservable to the empiricist, but an output shock may permit one to infer it. For example, if an output shock causes some firms experiencing the shock to lower employee wages and lay off workers, while some other firms experiencing the shock do not do this, then one can measure the cost to the firm of protecting workers such, and this can serve as a proxy for the expected cost to the firm of pursuing the HP.[22]

Second, the model predicts that unemployment risk imposes welfare losses on workers. This is consistent with the evidence in Low, Meghir and Pistaferri (2010); see the discussion following Proposition 3.

Third, the model predicts that the wages paid by firms that offer layoff insurance may be higher or lower than those offered by firms that do not offer such insurance. This explains the conflicting findings in the empirical literature. For example, Kim, Maug and Schneider (2018) find that firms that protect their employees' protection against layoffs during adverse industry shocks pay lower wages, whereas Bena, Ellul and Pagano (2023) find no evidence that such protection is priced in average wages. What the analysis in this paper reveals is that the empirical relationship that is documented between wages and layoff protection will depend on the values the firm's owner/CEO *and* its employees attach to the firm's purpose[23]. In that sense,

[22] For example, in the context of the earlier example of DTE Energy, the foregone cost savings due to the decision to not shut down plants and lay off workers would be such a proxy.

[23] Designing an empirical test to do this is likely to be challenging. One proxy for the value employees attach to the firm's purpose may be to use the "100 Best Places to Work For in America" as measuring he value employees attach to the firm's purpose, and determine the owner's purpose based on our discussion above related to the first prediction. See Edmans (2011), who shows that the shareholders in a value-weighted portfolio of companies on the "100 Best Companies" earned positive alphas.

the precise prediction in this paper awaits future testing, but it points out that the documented findings can differ across studies when purpose-related variables are not explicitly and carefully controlled for.

Fourth, the analysis explains why employees work harder in firms in which the owners/CEOs value the firm's purpose relatively highly. This is consistent with the evidence in Grant et al (2007) and Hedblom, Hickman and List (2019).

Fifth, the model predicts that the firm's cost of external financing increases as its shareholders attach lower value to the firm's purpose. This prediction awaits testing. Given the obvious endogeneity concerns, such a test will have to overcome identification challenges.[24]

V. CONCLUSION

In this paper I have presented a simple model of optimal contracting with organizational HP in the firm's objective function. The HP is presented at an abstract level as the pursuit of the "greater good". For example, if one takes the example of DTE Energy discussed earlier, then it would be making a contribution to the growth and prosperity of the communities in which the company operates. I have shown that some firms adopting a HP will insure their employees against layoffs in future low-output states of the world, whereas others will not, and the firm's leverage will affect this choice. Whether purpose-driven firms will offer their employees layoff insurance depends on how much the owner/CEO values the firm's HP. Whether firms offering workers protection against layoffs will pay their workers more or less than firms that do not depends on the relative purpose-linked utilities of their owners and workers.

[24] One possible endogeneity concern arises from the difficulty in determining whether the firm chose its policy to cater to the preferences of an existing clientele of shareholders or the firm's HP policy attracted these shareholders.

This model is a modest step in the direction of developing a theoretical framework to analyze the effect of organizational HP on the firm's contracting and investment decisions and explaining the link between the pursuit of purpose and employee layoff insurance. Much additional research is needed to more fully flesh out these and other ideas related to the role of HP in the firm's operating decisions. For example, while the analysis in this paper highlights the tension between the pursuit of purpose and the pursuit of profit, it does not explain why some firms that pursue purpose also produce higher profits and shareholder value than firms that do not[25]. This limitation of the analysis here may be a good starting point for future theoretical research.

[25] One possible reason for this, consistent with the survey evidence in Bunderson and Thakor (2022), is that the pursuit of an authentic HP also builds employee trust, and this has long-lasting value-enhancing effects. See, for example, Thakor and Merton (2023a) for a theoretical analysis of the relationship between trust and complexity in product design and how this enhances sellers' profits, and Thakor and Merton (2023b) for a theoretical analysis of the emergence and effect of trust, the difference between reputation and trust, and the manner in which trust increases the profits of intermediaries by reducing their funding costs, in the context of credit markets.

APPENDIX (PROOFS)

Proof of Lemma 1: The first-order condition (FOC) for the employee's choice of effort uses (3):

$$a(\theta_i)\,[w + \beta m\phi(y)] - e(\theta_i) = 0 \qquad \text{(A-1)}$$

which yields (5). The second-order condition (SOC) for a unique maximum is satisfied since:

$$-1 < 0 \qquad \text{(A-2)}$$

■

Proof of Proposition 1: The FOC for the optimal wage contract uses (6), and we now substitute (5) in (6) to write (6) as:

$$\lambda\,[a\,(\theta_H)]^2\,[w + \beta m\phi(y)][A - w] + [1 - \lambda]\,[a\,(\theta_L)]^2\,[w + \beta m\phi(y)]\,[A - w]$$

$$= \{\lambda\,[a\,(\theta_H)]^2 + (1 - \lambda)\,[a\,(\theta_L)]^2\}\{w + \beta m\phi(y)\}\{A - w\}$$

$$= \quad B\,[w + \beta m\phi(y)]\,[A - w] \qquad \text{(A-3)}$$

Now the FOC for the optimal is:

$$B\,\{[A - w_1^*] - [w_1^* + \beta m\phi(y)]\} = 0 \qquad \text{(A-4)}$$

which yields:

$$w_1^* = \frac{A - \beta m\phi(y)}{2} \qquad \text{(A-5)}$$

and substituting for *A* from (8) into (A-5) yields (9).

To verify that the SOC for a unique maximum holds, use (A-4). The SOC is

$$B\,[-2] < 0 \qquad \text{(A-6)}$$

Next, the owner's expected utility is expressed in (A-3). Substituting for w_1^* in (A-3) gives us

$$U_1 = B\left\{\left[\frac{A + \beta m\phi(y)}{2}\right]\left[\frac{A + \beta m\phi(y)}{2}\right]\right\} \qquad \text{(A-7)}$$

Substituting in (A-7) for *A* from (8) give us (10). It is easy to verify that (7) is satisfied. ■

Proof of Proposition 2: The FOC for the optimal *w* uses (12). After substituting from (5) into (12) and simplifying, we have:

$$\lambda\,[a(\theta_H)]^{2}\,[w\,\beta m\phi(y)\,][A-w]+[1-\lambda]K \tag{A-8}$$

The FOC for the optimal *w* is:

$$\lambda\,[a(\theta_H)]^{2}\{[A-w_2^*]\,-[w_2^*+\beta m\phi(y)]\}=0 \tag{A-9}$$

which yields

$$w_2^*=\frac{A-\beta m\phi(y)}{2} \tag{A-10}$$

Using (A 9), the SOC for a unique maximum is:

$$\lambda[a(\theta_H)]^2\,[-2]<0 \tag{A-11}$$

Substituting for w_2^* in (A-8) gives us (15). It is easy to verify that (13) is satisfied. ■

Proof of Proposition 3: We need to compare (10) and (15). Note that $U_1 \geq U_2$ when:

$$B\left[\frac{X-y+[1+\beta]\,m\phi(y)}{2}\right]^2 \geq \lambda[\alpha(\theta_H)]^2\ \left[\frac{X-y+[1+\beta]\,m\phi(y)}{2}\right]^2+\,[1\,-\,\lambda]K \tag{A-12}$$

Now *m** is the value of *m* at which (A-12) is an equality. Substituting for *B* and simplifying, we see that (A-12) holds if:

$$[a\,(\theta_L)]^{2}\ \left[\frac{X-y+[1+\beta]\,m\phi(y)}{2}\right]^2 \geq K \tag{A-13}$$

A little bit of algebra shows that (A-13) will hold whenever $m \geq m^*$ where

$$m^*=\left\{\frac{[2\sqrt{K}/a\,(\theta_L)]-[X-y]}{[1+\beta]\phi(y)}\right\} \tag{A-14}$$

Given 2 (b), we know that $m^* \in (\underline{m}, \overline{m})$ ■

***Proof of Corollary 1*:** Define the financial loss from continuation when $\theta = \theta_L$ as

$$\mathcal{L} = K - a\,(\theta_L)e_L[X - y] \tag{A-15}$$

where e_L is the employee's effort when $\theta = \theta_L$. Thus, $\partial\mathcal{L}/\partial K = 1$. Now differentiating (A-14), we see that

$$\partial m^*/\partial \mathcal{L} = \partial m^*/\partial K > 0 \tag{A-16}$$

Moreover, (A-17)

$$\partial^2 m^*/\partial K^2 < 0 \quad \blacksquare$$

Proof of Proposition 4: Consider first the optimal wage in (9) in Proposition 1 and the optimal wage (14) in Proposition 2. Note that

$$\partial w_1^*/\partial m = \partial w_2^*/\partial m = \frac{\phi(y)[1-\beta]}{2} \tag{A-18}$$

If $\beta < 1$, then $\partial w_1^*/\partial m > 0$, $\partial w_2^*/\partial m > 0$. Since the owners who do not shut down in any state of the world have higher values of m than the owners who shut down when $\theta = \theta_L$, it follows that the firms that credibly commit never to shut down pay their employees more than firms that shut down when $\theta = \theta_L$.

Further, if $\beta > 1$, it follows that $\partial w_1^*/\partial m < 0$, $\partial w_2^*/\partial m < 0$. In this case, the firms that credibly commit to never shut down pay their employees less than the firms that cannot commit, since firms with higher values of m pay less.

Finally, when $\beta = 1$, we have:

$$w_1^* = w_2^* = \frac{X-y}{2} \quad \text{(A-19)}$$

So both types of firms pay employees exactly what a firm whose owner and employee do not care about the firm's HP would pay. ■

***Proof of Corollary 2*:** Consider U_1 in (10) and U_2 in (15). We see that:

$$\partial U_1/\partial m = B\ [X - y + (1+\beta)\, m\phi(y)][1+\beta]\phi(y) \quad \text{(A-20)}$$

$$> 0.$$

$$\partial U_1/\partial \beta = B\ [X - y + (1+\beta)\, m\phi(y)]\, m\phi(y) \quad \text{(A-21)}$$

$$> 0.$$

$$\partial U_2/\partial m = \lambda[a\,(\theta_H)]^2[X - y + (1+\beta)\, m\phi(y)][1+\beta]\phi(y) \quad \text{(A-22)}$$

$$> 0.$$

$$\partial U_2/\partial \beta = \lambda[a\,(\theta_H)]^2[X - y + (1+\beta)\, m\phi(y)][m\phi(y) \quad \text{(A-23)}$$

$$> 0.$$ ■

***Proof of Corollary 3*:** Consider first the employee's participation constraint (7) for firms that continue in all states of nature. Substituting for e_H from (5), the employee's utility is:

$$\lambda \left\{[a\,(\theta_H)]^2\,[w + \beta\, m\phi(y)]^2 - \frac{[a\,(\theta_H)]^2\,[w+\beta\, m\phi(y)]^2}{2}\right\}$$

$$+ [1 - \lambda]\left\{[a\,(\theta_L)]^2\,[w + \beta\, m\phi(y)]^2 - \frac{[a\,(\theta_L)]^2\,[w+\beta\, m\phi(y)]^2}{2}\right\}$$

$$= \left\{\frac{[w+\beta\, m\phi(y)]^2}{2}\right\}\ \{\lambda[a\,(\theta_H)]^2 + [1-\lambda][a(\theta_L)]^2\} \quad \text{(A-24)}$$

$$> 0$$

Similarly, using (13) we can write the expected utility of the employee working for a firm that shuts down when $\theta = \theta_L$ as:

$$\left\{\frac{[w + \beta\, m\phi(y)]^2}{2}\right\} \{\lambda[a\,(\theta_H)]^2\} \quad \text{(A-25)}$$

> 0

Comparing (A-24) and (A-25), it follows that those who work at firms that continue in all states enjoy higher expected utilities than those who work at firms that shut down when $\theta = \theta_L$.

■

Proof of Corollary 4: Follows immediately from Proposition 4 since the wage with $\beta = 1$ equals the wage paid by a firm whose owner and employee do not care about any HP. ■

Proof of Proposition 5: Take the wage contract and effort levels at their equilibrium values and express (17) as:

$$\alpha = \begin{Bmatrix} \lambda\, a(\theta_H)\, e_H\, [\, X - y - w + v\, \phi\, (y)] \\ + [1 - \lambda]\, a\,(\theta_L)\, e_L [\, X - y - w + v\, \phi\, (y)] \end{Bmatrix}^{-1} [I] \quad \text{(A-26)}$$

It follows now that maximizing (16) is equivalent to maximizing (6). Therefore, effort and wage levels will remain unchanged.

Clearly, $\frac{\partial \alpha}{\partial v} < 0$. ■

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