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Too Much of a Good Thing: The Tipping Point of Employee Voice

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Abstract

Extant voice research suggests that voice has a positive effect on organizations, which indicates that an unlimited amount of resources should be devoted to increasing employee voice. However, resources that can enable and facilitate voice - such as managerial attention and focus - can be costly to organizations. Given that there is a cost to increasing employee voice, the benefit of employee voice may not continuously justify the cost. From an interdisciplinary perspective using the Radner-Shepp-Shiryaev mathematical framework in finance, we find that employee voice is beneficial for an organization up to a point. Specifically, we find that employee voice, despite having a myriad of positive outcomes for organizations, reaches a tipping point where the cost of voice to the organization may outweigh its benefits. After this tipping point is reached, organizations do not benefit from investing to increase employee voice. The mere presence of employee voice, without regard to how much, may not be sufficient for enhanced organizational performance. Implications for this work are discussed.

Keywords: Employee Voice, Profit Maximization, Interdisciplinary Work, Liability of Voice

"We've got 25,000 people at Apple. About 10,000 of them are in the stores. And my job is to work with sort of the top 100 people, that's what I do. That doesn't mean they're all vice presidents. Some of them are just key individual contributors. So when a good idea comes, you know, part of my job is to move it around, just see what different people think, get people talking about it, argue with people about it, get ideas moving among that group of 100 people, get different people together to explore different aspects of it quietly, and, you know - just explore things."
– Steve Jobs

"Silence is a source of great strength." — Lao Tzu

INTRODUCTION

The global economy continues its rapid transition into a "knowledge economy," where knowledge can ultimately generate economic values (Drucker, 1969). With the knowledge economy becoming the more dominate economy, information shared by employees becomes more crucial to organizational success. Organizations are becoming increasingly reliant on employee input to implement effective strategies and processes. In particular, employee voice, or the discretionary and voluntary expression of information up the hierarchy that intends to improve

organizational processes or functions but may challenge the status quo (Detert & Burris, 2007) is tantamount to organizational performance. Extant literature finds that employee voice can lead to positive organizational outcomes such as innovation (Morrison & Phelps, 1999), organizational and team learning (Edmondson, 1999; Milliken & Lam, 2009; Morrison, Wheeler-Smith, & Kamdar, 2011) and sustained adaptability (Bartlett & Ghoshal, 1994).

EMPLOYEE VOICE REQUIRES ORGANIZATIONAL RESOURCES

While researchers have consistently shown employee voice to bring positive organizational outcomes that are crucial for sustained success, speaking up is a phenomenon that is fraught with risk and fear for many employees. Employees often find it difficult to speak up to their managers or up the hierarchy because it is viewed as risky (Ashford, Rothbard, Piderit, & Dutton, 1998; Morrison & Milliken, 2000, 2003). Employees may view speaking up to involve image risk, or the potential that their positive image may be questioned by others (Ashford et al., 1998; Dutton, Ashford, O'Neill, & Lawrence, 2001). For example, employees may perceive that if they speak up, they may be labeled as a troublemaker or a "problem" team member. Lack of psychological safety is also another deterrent to employee voice (Detert & Burris, 2007; Edmondson, 1999). When employees perceive that engaging in employee voice can incur personal harm, employees are less likely to speak up. A psychologically unsafe climate at either the organizational or group level can hinder employee voice (Morrison et al., 2011). Thus, while employee voice can lead to multiple positive organizational outcomes, employees may fail to speak up because of perceived risk and fear and the lack of a voice-conducive organizational or team climate.

Employees express voluntary input that can improve organizational functioning when they perceive the benefits of speaking up to outweigh its costs. That is, employees speak up when they perceive the voice calculus to lean toward benefits over risks. In order for employee voice to remain abundant, organizations may strategically reduce perception of risk associated with voice or increase benefits, or both. To facilitate more employee voice, however, organizational resources are likely necessary to affect change. For example, an organization can develop a psychologically safe climate where employees perceive an environment where taking the risk to speak up against the status quo will not result in interpersonal harm. Developing a psychologically safe climate can reduce the employee's perception of risk to speak up and lead to more employee voice within an organization. Developing or changing an organizational climate and moving toward a work place conducive to employee voice likely require significant resources. For example, managerial training or organizational programs and plans are possibly necessary to help create or enhance a climate of psychological safety.

Organizational resources can also come in the form of managerial attention and focus. Certain leadership behaviors have been demonstrated to enable more employee voice (Burris, 2011; McClean, Burris, & Detert, 2012). For example, managerial openness, or a manager's willingness and demonstration of openness to its subordinates' input and ideas, can lead to an increase in employee voice (Detert & Burris, 2007). Managerial openness is a behavioral phenomenon; managers who *say* they have an "open door" policy does not necessarily equate to *demonstrating* openness to their subordinates. Expression of managerial openness requires time and effort on the part of the manager. That is, active exhibition of managerial openness requires a certain amount of attention and focus from the manager.

Another study showed that voice leads to increased effectiveness when they are targeted at the focal leader of the unit, or the person who has the authority to make decisions and take action (Detert, Burris, Harrison, & Martin, 2013). When voice is directed at coworkers who have little power to change or make decisions, such as peers or those outside of one's focal unit, the unit's effectiveness decreased. In order for voice to be processed and a unit's effectiveness to be higher, the leader of the focal unit who can take action and make decisions are focused and paying attention to the employee's voice. This behavior from the manager necessitates time and attention and may divert the manager from other managerial duties. The managerial focus, attention and time are the cost of the unit's increased effectiveness that stems from the employees speaking up the hierarchy.

THE TIPPING POINT OF EMPLOYEE VOICE

Because of the high level of risk and fear associated with speaking up by employees, many organizations have not yet reached an optimal level of employee voice due to employee silence (Bashshur & Oc, 2014). Thus, many organizations can become better at enabling and facilitating voice. To enhance voice within an organization, there is often a cost to the firm. When employee voice freely percolates in an organization and remains abundant, significant organizational resources are likely to have been utilized to set up the appropriate organizational context conducive to voice and to reduce employees' perception of risk and fear associated with speaking up. How much resources, then, should organizations spend on facilitating and increasing the amount of voice? Extant voice research suggests that voice has a positive effect on organizations, which indicates that an unlimited amount of resources should be devoted to increasing employee voice. However, resources such as managerial attention and focus can be costly to organizations. Given that there is a cost to increasing and facilitating employee voice, the benefit of employee voice may not continuously justify the cost.

Because resources are necessary to enable and facilitate employee voice, there may be a saturation point where the amount of employee voice is no longer optimal. In other words, the assumption within most voice literature that employee voice is linearly positive for an organization should be examined. For organizations that have a low level of employee voice, it may be prudent to utilize resources to increase voice. As voice increases and organizations reap the benefits of voice, it may not be necessary to further utilize resources to enable and facilitate more employee voice. There may be a tipping point, or a "dark side" of employee voice, where organizations are better off cutting back on employee voice. This tipping point is where the cost of employee voice begins to outweigh the benefits. When organizations continue to expend resources to increase voice, it can lead to a suboptimal level of voice. This suboptimal level of voice can, over time, result in decreased organizational performance and ineffectiveness. We hypothesize the following:

Hypothesis 1: Employee voice and firm profits have a curvilinear relationship such that at a certain point the gains of firm profits decrease with additional voice.

Hypothesis 2a: There is an optimal level of voice where firm profits are maximized.

Hypothesis 2b: There are suboptimal levels of voice where there is either too little or too much voice and firm profits are not maximized.

METHOD

Using an interdisciplinary perspective, we use a finance model - the Radner-Shepp-Shiryaev mathematical framework - to analyze employee voice in organizations. This framework has been used to model risk-taking behavior (Sheth, Shepp & Palmon, 2011), infighting within firms (Sheth, 2012), hiring & firing (Shepp & Shiryaev, 1996), debt management within organizations (Guo, 2002), managerial behavior under financial distress (Sheth et al. (2011), and the optimal dividend policy for a firm (Radner & Shepp, 1996).

We apply this framework to examine the problem of voice optimization because speaking up, especially novel ideas and suggestions, is a risky behavior. This framework has been used to model optimization in organizations. We are utilizing this framework here to model optimization in voice in the organization. In this way, we combine the fields of mathematical finance and organizational behavior.

Using this framework, we test the above hypotheses by exploring the optimal amount of employee voice in a firm that is needed to maximize profits. We utilize profits as the organizational outcome of employee voice. We have two variables in our model, x (cash reserves) and u (voice), which we have modeled as a Brownian motion. We use a numerical technique described in Sheth, Shepp & Palmon (2011) to model firm profit maximization. We find that the hypotheses are robust to our analysis - the details of which can be found in the appendix. It should be noted that though our results are for a specific set of parameters that might work for a subset of organizations, our broad conclusion does not change when we change the parameters.

RESULTS

Voice research consistently indicates a relationship between employee voice and positive organizational outcomes without examining a voice “ceiling” where employee voice does not lead to optimized outcomes for the firm. Our results support the notion that voice does not linearly correlate with positive firm profits. That is, there is a tipping point of employee voice that can lead to organizational ineffectiveness (see Figure 1).

In Figure 1 below, we see a three-dimensional function. We have voice (u) and cash reserves (x) on the two of the three dimensions, and we have $V(x,u)$ the value function which is the result of profit-maximization on the third dimension. As can be seen, maximal profits increase with voice; that is, $V(x,u)$ increases in u -- but only up to a point. After this point, maximal profits do not increase. In other words, it is no longer needed to generate more voice to increase profits. In the figure below, we use a set of parameters (shown below) to come up with specific numbers, but the results hold in all cases.

In Figure 2, we take the average across each value function in cash, $V(x)$, for each level of voice. We use this average to calculate the optimal level of voice for this particular firm. As can be seen, the maximum profits for this particular firm are at a voice level of 4.675. Note that each firm has its own set of parameters customized to its operations and its unique characteristics.

In Figure 3, we create an entire schematic based on the level of voice or cash the firm has. For instance, the red dot shown in the figure indicates that the firm needs to increase its level of voice and move into the blue zone, where it will function at a voice level that will allow the firm to generate profits and distribute them to owners.

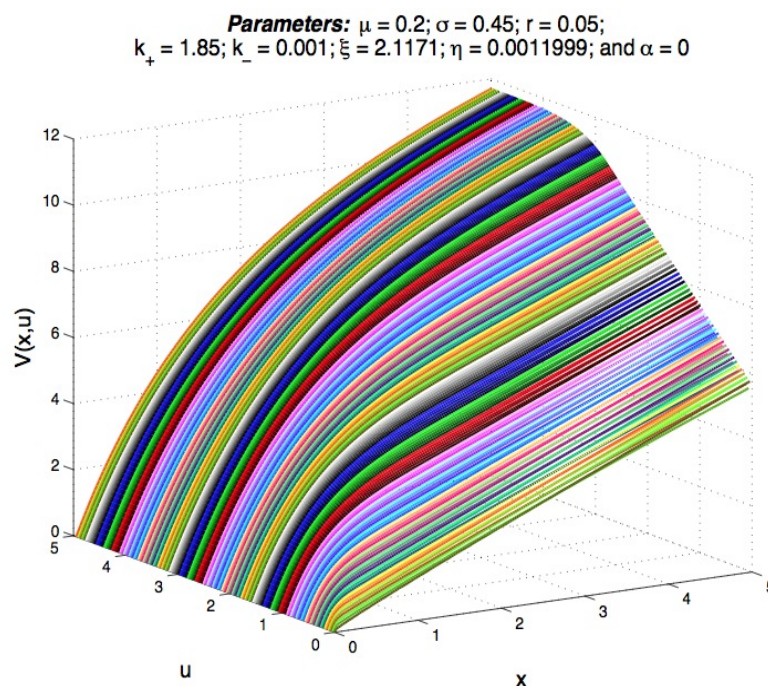


Figure 1: The value function, $V(x, u)$ showing the solution to the dividend maximization problem (u is voice, and x is the cash in the firm). Notice that the value function consistently increases as voice increases, though once we hit a certain point, the gain to the firms cash from additional voice decreases. With the set of parameters shown above, profits increase until $u = 4.675$. This is the optimal amount of voice that should be within this firm, for this particular set of parameters.

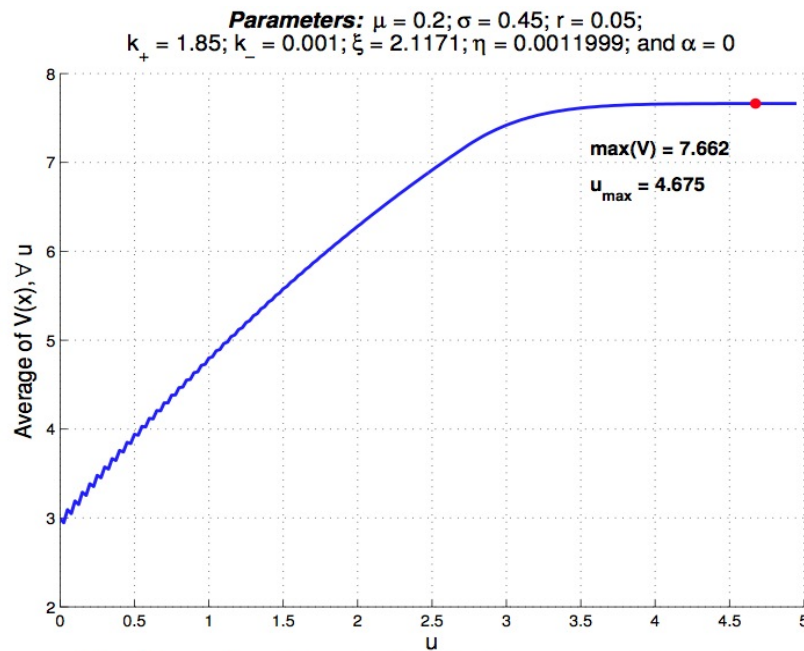


Figure 2: This figure shows the value function increasing up to a point as voice increases, but it reaches its maximum value ($V(x, u) = 7.662$) when voice, $u = 4.675$. This is the optimal amount of voice that should be generated for a firm with this set of parameters.

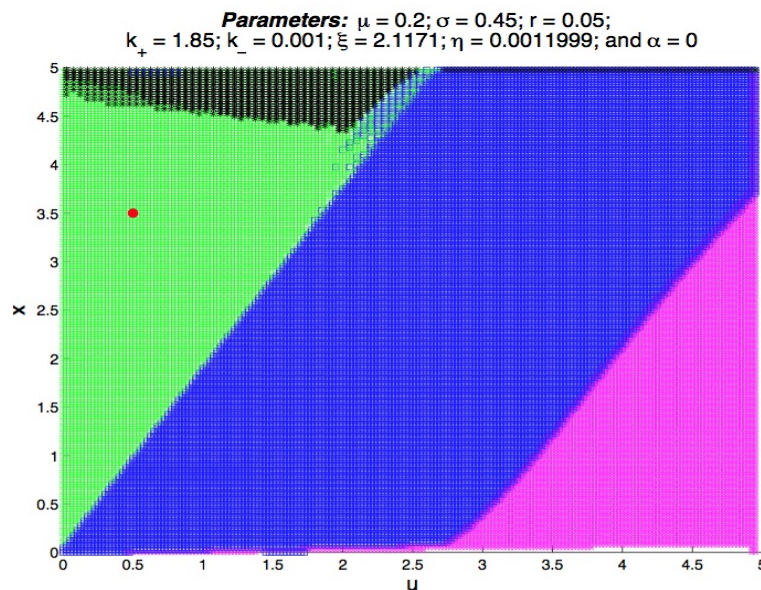


Figure 3: This figure shows the optimal operating policy at each level of voice, and at each level of the firms cash. For instance, the red dot is placed at when the voice level is at 0.5, but the cash level is at 3.5. Since this falls in the green zone, this indicates that the company should spend to increase voice, and move into the blue zone where it is optimal to operate. Companies that are in the blue zone are at their optimal level of voice. Their revenues will increase with normal operations, and move them up to where $x = 5$, and this will allow them to pay out profits to the owners.

DISCUSSION

Our results show that there is an optimal and two suboptimal levels of employee voice. The optimal level is where organizations can best maximize their profits given the cost of enabling and facilitating voice. At the optimal level, organizations are receiving a sufficient amount of employee voice to maximize firm profits. At this level, organizations are spending the appropriate amount of resources to generate a favorable level of employee input. There are two suboptimal levels of voice where there is either too little or too much voice and firm profits are not maximized. At the level where there is too little voice, profits are not yet fully maximized and an increase of

employee voice can further raise profits. This is an organization where employees are not sufficiently speaking up and the organization is not receiving the employee input it needs to be optimally effective. Such organizations should devote more resources to increase voice within the organization in order to maximize firm performance. For example, organizations that have a low level of employee voice can spend resources to increase creativity by installing an idea generation system where employees can speak up about risky, innovative ideas.

Interestingly, there is a point at which an increase in employee voice no longer augments profits. At this level, there is too *much* voice and firms devoting more resources to increasing voice fail to reap additional benefits of employee voice. In other words, there is a “ceiling” to the benefits of employee voice. Organizations that have reached the tipping point of voice can further spend resources to increase voice but firm profits do not increase correspondingly. These organizations already have employees that are speaking up the hierarchy; spending more resources to increase voice becomes a liability for the firm. Organizations that are in this level of suboptimal voice can reduce the amount of resources utilized to enable voice. In this situation, a reduction in the amount of voice can *increase* firm profits.

Our study intends to contribute to the voice literature in several ways. First, extant literature assumes employee voice to have a positive, linear effect with some organizational outcomes, including performance. But employee voice can have a curvilinear effect on firm profits. There is a tipping point to the benefits of employee voice and the benefits do not accrue indefinitely. Further, while the cost of employee voice continues to accrue, the benefits of having employee input do not. Over time, it can lead to organizational ineffectiveness. For example, too much managerial attention and focus toward employee input can take away from more immediate, urgent tasks. Substantial threats from the external environment may be missed by managers, whose attention has been occupied by dealing with employees’ input.

Second, our results indicate that organizations should not only consider ways to increase or decrease employee voice, but they should strategically plan the optimal level of voice to maximize profits. An appropriate allocation of resources to enable and facilitate the optimal amount of voice requires deliberate planning and thought. It is important to note that employee voice leads to a myriad of positive outcomes, including those that are crucial for sustained organizational performance. Many organizations linger in the suboptimal range of too little voice and can benefit with an increase of employee input. However, voice should be viewed as a generally positive phenomenon that incurs costs as well as benefits. Firms are better served to proactively assess current levels of voice *and* to determine an optimal level that can maximize organizational performance. That is, organizations should set a strategic goal to reach a level of voice where it can best maximize profits given the cost of voice. Blindly increasing voice without considering an optimal level may harm organizational performance and effectiveness and incur unnecessary costs.

LIMITATIONS OF STUDY

This study utilizes a mathematical framework and thus exists only theoretically. While the framework demonstrates the optimal and suboptimal levels of voice, real-world data can further strengthen our findings. For future studies, we plan to explore empirical data and test “real world” firms by using archival data to analyze employee voice patterns and organizational performance.

APPENDIX

We start with a simple stochastic model that includes a cost to both encouraging employee voice, as well as discouraging it:

$$dX_t = U_t(\mu dt + \sigma dW_t) - k_- d_- U_t + k_+ d_+ U_t - dZ_t$$

Here, X_t are the company's cash reserves, U_t represents the level of voice generated within a specific company. This is multiplicative as we start with the assumption that generating greater voice within a firm will result in

greater cash, and therefore, greater profits to the firm. Additionally, Z_t are the profits taken out¹. W_t is a standard Brownian or Wiener process, and k_- and k_+ are the costs of encouraging idea generation, and discouraging it, respectively, and finally, the (μ, σ) pairs represent risk-return characteristics of the current investment. This investment could, with equal likelihood, be a project of some sort (e.g., manufacturing, expansion, etc.) or a portfolio of financial securities, if the firm is a financial one.

The objective is to maximize the expected discounted dividends (or profits for a privately-owned firm), dZ_t over the life of the firm:

$$V(x) = \sup_{Z_t, U_t} E_{x,u} \int_0^\infty e^{-rt} dZ_t \text{ where } x = X_0 \text{ and } u = U_0$$

Mathematical tractability makes this problem difficult to solve in closed form, and to overcome this, we devise a numerical technique to solve this problem, along the lines of Sheth, et al. (2011). In testing this technique to solve problems with known solutions, we get errors that are in the range of 10^{-4} to 10^{-6} and we are confident of the results of using this technique to solve the problem under consideration here.

Note that this is a "1.5-state" problem, since while X_t is stochastic, U_t is not. As a result, we approach this by solving for a stochastic X_t , $\forall U_t$. Thus, we have separate dividend policies for each level of voice and cash.

We start by creating a process Y_t , such that:

$$Y_t = \bar{V}(X_t, U_t)e^{-rt} + \int_0^t e^{-rs} dZ_s$$

This process represents the future and past discounted dividends, and \bar{V} is a guess to the true value function such that $EdY_t \leq 0$, i.e., the process is expectation-decreasing (a supermartingale). In order to proceed, we use the following lemma from Shepp and Shiryaev (1996):

Lemma 1

Suppose that $\bar{V}(x, u) \geq 0$ is such that for any choice of U_t or Z_t , the process is expectation-decreasing. Then $V \leq \bar{V}$.

Proof

Note that $EY_0 \leq EY_\infty$, but $EY_0 = \bar{V}(x, u)$ and $EY_\infty = E \int_0^\infty e^{-rs} dZ_s$. Since this holds for every of U_t and Z_t , it shows that $V(x, u) \leq \bar{V}(x, u)$.

Lemma 1 shows that $V \leq \bar{V}$. Since our guess is an upper-bound in the optimal solution to the problem of maximizing dividends, the true solution will be the smallest upper-bound. Thus, if we minimize our guess, we will get the true solution and to do this, we use linear programming.

Before we do this, we must find the conditions under which the process Y_t is a supermartingale. To that end, we must first find dY .

¹ For a publically traded company, these could be interpreted as dividends.

$$\begin{aligned} dY_t &= d\bar{V}e^{-rt} + d\left(\int_0^t e^{-rs}dZ_s\right) \\ &= d\bar{V}e^{-rt} - re^{-rt}\bar{V}dt + e^{-rt}dZ_t \end{aligned}$$

We apply $d\bar{V} = \frac{\partial \bar{V}}{\partial X_t}dX_t + \frac{1}{2}\frac{\partial^2 \bar{V}}{\partial X_t^2}(dX_t)^2 + \frac{\partial \bar{V}}{\partial U_t}dU_t$ (Itô's Lemma) to get $d\bar{V}$.

And since:

$$\begin{aligned} dX_t &= U_t(\mu dt + \sigma dW_t) - k_-d_-U_t - k_+d_+U_t - dZ_t \\ (dX_t)^2 &= \sigma^2 U_t^2 dt \\ E(\bar{V}_X U_t \sigma dW_t) &= 0 \end{aligned}$$

We get that:

$$\begin{aligned} EdY_t &= e^{-rt}\{(1 - \bar{V}_X)dZ_t + (\bar{V}_U - k_+\bar{V}_X)d_+U_t + (-\bar{V}_U - k_-\bar{V}_X)d_-U_t \\ &\quad + (-r\bar{V} + \mu U_t \bar{V}_X + \frac{\sigma^2}{2}U_t^2 \bar{V}_{XX})dt\} \end{aligned}$$

where $\bar{V} = \bar{V}(X_t, U_t)$; $\bar{V}_X = \frac{\partial \bar{V}}{\partial X}$; $\bar{V}_{XX} = \frac{\partial^2 \bar{V}}{\partial X^2}$; and $\bar{V}_U = \frac{\partial \bar{V}}{\partial U}$.

So to have $E_{x,u}dY_t \leq 0$, we need that:

1. $M\bar{V}(x, u) = 1 - \bar{V}_x \leq 0$
2. $H\bar{V}(x, u) = \bar{V}_u - k_+\bar{V}_x \leq 0$
3. $F\bar{V}(x, u) = -\bar{V}_u - k_-\bar{V}_x \leq 0$
4. $L\bar{V}(x, u) = -r\bar{V} + \mu u \bar{V}_x + \frac{\sigma^2}{2}u^2 \bar{V}_{xx} \leq 0$

Once the above constraints are fulfilled, we get a \bar{V} such that (by Lemma 1). And by minimizing the \bar{V} , we get the optimal solution. To do this, we use linear programming and solve the following minimization problem:

$$\begin{aligned} &\min \bar{V} \\ &\text{subject to} \\ &M\bar{V}(x, u) : 1 - \bar{V}_x \leq 0 \\ &H\bar{V}(x, u) : \bar{V}_u - k_+\bar{V}_x \leq 0 \\ &F\bar{V}(x, u) : -\bar{V}_u - k_-\bar{V}_x \leq 0 \\ &L\bar{V}(x, u) : -r\bar{V} + \mu u \bar{V}_x + \frac{\sigma^2}{2}u^2 \bar{V}_{xx} \leq 0 \end{aligned}$$

We refer to the constraints above as the behavioral constraints. When the M , H , F and L constraints are strictly equal to zero, it is optimal for the manager to, respectively, take profits, encourage voice, discourage voice, and operate the firm using the investment set.

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