

Managing with Purpose

**How Managers Execute Firm's Strategies, as they either Empower their Stars,
Monitor their Guardians, or Supervise their Foot Soldiers**

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Abstract

When we “get under the hood” of different divisions within a very large bank and discern what managers do on the job and how they are paid, we see strong evidence that a manager’s “purpose” is very different across divisions with different strategies. This alone would not be a shocking point. We show how they matter across the three divisions: as managers execute the strategies of the firm, they either empower their stars, monitor their guardians, or supervise their foot soldiers. Furthermore, our estimated manager fixed effects show that managers matter, and by about the same amount, in the two divisions of PCB and Risk, even though managerial tasks are very different. For WM, their managers matter much less, which is a very important point regarding the “purpose” of managers. And lastly, given very little data on the productivity of white collar workers, and because few firms would claim to measure it, we have shown rich and up-to-date features of how manager jobs are designed.

Mid-level managers have often been thought to have general skills that would be valuable across all firms. In the business press, Google's "eight rules for being a highly effective manager" have been downloaded and mimicked hundreds of thousands of times. In research, Lazear points out that entrepreneurs and leaders are "generalists," needing to know the many functions of a firm.¹ But he applies this to all firm types. Also, Lazear, Shaw, & Stanton (2015) show that good bosses elevate the performance of their relatively low-skilled employees, but bosses are treated as being of one type, meaning some are high quality and some are low quality. Similarly, Hoffman & Tadelis (2020) confirm that good managers, defined as having people management skills or social skills like coaching, matter by lowering the turnover in a high-tech firm. In these last two papers, and increasingly so in research, economists study managers within only one firm, and thus cannot address the following question: do successful managers differ? And if they do, why?

Focusing on the differences in managers has been done when papers are about executives, not mid-level managers. Most path-breaking is Bertrand and Schoar (2003), who watch executives move across firms, showing that when they move to a new firm, they bring their "style" with them and change the way the firm performs. Some executives are very aggressive and some are more conservative.

The primary point of this paper is to show that the purpose of mid-level managers is to execute the strategy of their firm, and firms differ very widely in their strategies. In contrast, the reverse is true for executives – they determine the strategy of their firm. That is the point of Bertrand and Schoar (2003). Note that we use the word "strategy" to mean that there are different ways in which a firm creates a sustainable competitive advantage relative to peers or new market entrants. It is also important to point out that the demand for labor is derived demand, from the elasticity of its product and from other features of the product market. This point underlies our emphasis on the different "purpose" of managers across firms.

We show that managerial "purpose" varies widely across firm types due to the different strategic goals of their firms, and we show how this is reflected in manager behavior and pay. We identify three goals, or purposes, of mid-level managers as derived from strategy: managers will either empower their star employees, monitor their guardian employees, or supervise their

¹ Lazear (2005) and Lazear & Gibbs (2014).

foot-soldier employees. That is, there are three types of employees, also arising from the different strategies of their firms, and this helps determine managerial goals.

Some simple examples are needed to define the three employee types of star, guardian, and foot-soldier, which have different “job designs.”² At one extreme is the first employee type found in tech startups, whose strategy seeks to encourage risk-taking and research by employees, ultimately hoping for a product or service that becomes a revenue goldmine. The job design for these firms is labelled “star” herein, because these employees make decisions that aim to have projects payoff with big upside gains to the firm. Not all employees are stars, but employees have the potential to be stars when their ideas hit big. It would make sense then for these firms to be flat and have little managerial oversight; this means that managers of “stars” have large numbers of direct reports. These managers empower their star employees.

At the other extreme is the employee type found in a set of firms that could have downside losses if mistakes are made when implementing strategy. These firms would include pharmaceutical companies or airlines, whose strategy surrounding employees is to seek to avoid disaster and the exorbitant costs to their reputation and customers when employees make mistakes on the job. The payoff from an employee’s bad decision is very negative, or one of a large downside loss to the firm. The job design for these firms is labelled “guardian,” because these firms must guard their reputations. These firms train their employees extensively, hire carefully, and check employees’ decisions when possible. These firms monitor their guardian employees, and when compared to the first “star” job design, managers of “guardians” have a smaller number of direct reports.

In between these extremes are the typical employees found in standard firms, whose strategy implies that most employees are doing largely routine jobs. The label for this job design is “foot-soldier.” There are no large upside gains or downside losses due to decisions that these employees make. Most firms, and employees, would fall into this bucket. In these firms, managers supervise their foot-soldier employees to operate in the interest of the firm.

These three different strategies and job designs of employees will, in turn, dictate the purpose of managers, and thus the managerial job designs themselves, which includes how

² These examples are inspired by Lazear’s 1998 textbook *Personnel Economics for Managers*, but the “star, guardian, and foot-soldier” labels come from the textbook *Strategic Human Resources* by Baron and Kreps (1999). We combine their labels with the full theoretical model of Lazear (1999).

managers behave and are rewarded. As stated in the examples above, managers will empower their stars, monitor their guardians in large firms that have large potential downside losses, and supervise their employees in large firms that have mostly routine jobs. Firms with stars will be flatter and have fewer layers of managers, while guardian firms will be hierarchical and grant more decision-making authority to mid-level managers.

Having just given examples of three very different firms, we now turn to the very odd approach of using data from one large firm to test our hypotheses. We obtained all the personnel records from one very large Canadian bank. The reason that we feel we can use this data to test hypotheses about different firm types is that this bank has five different divisions within it, all having very different strategic goals. For this paper, we focus on three divisions.

In this large bank, the division with “stars” is Wealth Management (WM), where employees manage the portfolios of extremely wealthy clients. A significant proportion of WM employees earn commissions from their work, reflecting the possibility of very large potential upside gains as a result of serving clients. The WM strategy is to make money by allocating portfolios for high-end clients. In contrast, the division with “guardians” is the Risk division, where highly educated employees are responsible for ensuring the firm’s risk compliance. Risk’s strategic goal is to serve the internal customers of the firm – to watch that they meet the standards of the firm. The last division, the one with foot-soldiers, is Personal and Commercial Banking (PCB), where employees do routine tasks like arranging mortgages for the bank’s personal customers. Doing so proposes no significant upside gains to the firm as clients are served. PCB’s strategy is to give their personal customers the highest quality service, so that they return and continue depositing or borrowing money from the bank.

The key useful point in affirming that these divisions have very different strategies, and thus employee tasks, is that employees do not move between divisions – only 4.73 percent of employees change divisions over the five years. In personal interviews with employees at this firm, they have explained how they made money, and in particular, that promotions for individual managers occurred only within divisions, not across divisions.

We have a lot of data to show this and to test our models. Our monthly panel data covers the years 2013-2018, with data on approximately 40,000 total employees, or 700,000 month-person observations. Data are available on the identity of the manager to whom each employee

reports, tenure at the firm, tenure on the job, job rank, job type, performance evaluation, office type, base salary, bonuses, commissions, location, gender, and education.

Our findings are as follows. After outlining the strategies of the firm's divisions, we show in Section 4.1 that the pay distributions of employees follow those predicted from the star-guardian-foot soldier model. The pay distribution for WM has a very long right tail, with mean annual pay of \$209,148 and median annual pay of \$57,360. For the guardian jobs of Risk there is no long tail, but they are well-paid because they guard the firm's reputation and assets; mean annual pay is \$98,100, and median annual pay is \$89,292. Foot soldiers in PCB have low mean and median pay.

In Section 4.2, we show that managers are paid similarly to those employees who report to them, with a long right tail for managers in wealth management. Managers' mean and median pay in WM is \$332,916 and \$135,000, showing that star managers in WM have smaller relative upside gains than do their employees, mainly because commission pay creates some stellar individual contributors in WM. Pay for managers in the Risk division is \$124,428 and \$115,068 for mean and median pay, respectively. Thus, managers in Risk are not paid that much more than their direct reports: this is consistent with interview evidence that the managers and employees in Risk work together in small teams. Quite different is PCB. Managers in the lower ranks don't earn much, in mean or median pay, but there is a sharp tournament structure to pay, in which mean pay rises with the manager's rank in the firm.

The next hypothesis regarding managers, tested in Section 4.3, is that their star employees in WM are empowered, whereas they are monitored in Risk and supervised in PCB. The simplest evidence for this is that average team size is 9 people (not including the manager) in WM, and in Risk, the average team size is 4 people. Foot-soldiers teams have 5.5 people. The implication is the managers in wealth management act more like coaches, and those in Risk monitor carefully for quality work.

Thus, at this point of the paper we have shown in means, medians, and regressions that managerial purpose differs across divisions, and that this feeds into their job design. Job design refers to tasks and the myriad of pay alternatives. Specifically, we suggest that managers empower their stars in WM, monitor their guardians in Risk, and supervise their workers in PCB.

We turn next to machine learning methods in Section 5 to identify the tasks, or job duties, of managers across the three divisions. Our goal is to use machine learning to extract what

managers do as defined by the firm. Thus, we create a completely different dataset that contains information on managerial activities by web scraping job postings weekly from this firm starting in May 2021, taking care that the managerial job titles gathered from May 2021 through December 2021 also match those in our 2013-2018. Using this new job postings dataset, which benefits from its granularity, we conduct two sets of analyses: (1) we calculate how frequently text phrases in job descriptions appear in the job postings; and (2) we rank these to identify the key phrases that define the tasks that managers do.

When doing machine learning, term frequencies in our first set of analysis reveals how often a certain term or phrase appears in a collection of texts. After removing duplicates and near-duplicate job postings, we use unique job position data that reveals how the firm itself most often defines preferred managerial tasks. We ultimately see differences in the two-word term (bigram) frequencies by platform that are in line with our managerial job design predictions; top terms for WM include themes of coaching, while PCB implies more direct employee engagement. Risk managers are heavily focused on operational compliance and review.

Using term frequencies is not definitive, and human bias can certainly affect interpretation. We thus train two sets of textual classification models, one to determine general managerial tasks and the other to note similarities and differences of managerial tasks by platform. Our first set predicts that managers generally lead, direct, and work with teams, which is in line with past social skill results. Our second set finds themes of “mentorship” in WM, while ensuring client experience and improvement are important for PCB managers. Risk managers are solely focused on compliance. Our machine learning analysis, in sum, documents that the types of skills required for managers differ by division in a way that is consistent with the distribution of potential revenue.

Our last section of empirical work, Section 6, estimates manager fixed effects with the primary goal of modeling manager-working matching. Using pay regressions with only managers, we estimate the fixed effects for managers and save them. Because monthly pay varies much more for those on commission in Wealth Management, we separately analyze managers with who receive commission, but our fixed effects results don’t differ noticeably.

We first show that manager fixed effects in pay regressions explain a large part of the variance in manager pay in all divisions, but the least in WM. In WM, pay for employees and pay for managers is not as highly serially correlated within person, and thus person fixed effects

explain less of the R-squared in pay. This result again affirms that workers and managers in WM are “tubs on their own bottom,” meaning they work for themselves.

But, the primary use of the manager fixed effects is to use them to identify worker-manager matching, as is done in Subsection 6.3. Using our estimated manager fixed effects from their pay regressions, we create a dummy variable to identify managers in the top quartile of their rank and job role over time. Using pay should still identify high-quality managers, assuming that pay is correlated with ability. We incorporate this dummy variable in our pay regressions for all workers. Across all divisions, the “manager in top quartile” dummy has a positive effect on the pay of their direct reports: workers who work for better paid managers will make more themselves in their pay. Do top managers make their employees more productive? Lacking productivity data for most workers, we cannot answer that, but we do have evidence on sorting or matching.

When we control for the employee’s fixed effect, the “manager in top quartile” dummy is no longer significant in worker pay, suggesting that there is “matching” between employees and managers. Consider first the PCB division. In that division, top managers want great employees to report to them, and this is what we find. Even more important, when we look at managers in the very top ranks, we see the most positive assortative matching between worker and manager – high ranking managers want great team members, and great employees want to sort to the best managers. Turning to WM, results are very different. For the Wealth Management division, we have data on commissions received by employees, a measure of their personal productivity. If we restrict the regression analysis to employees who received commissions, the “manager in top quartile” variable is not significant in their workers’ pay, with or without including the employee fixed effect. In other words, when workers are paid for performance, through commissions, the quality of their manager is not important in our regressions.³

In conclusion, when we “get under the hood” of different divisions within a very large bank and discern what managers do on the job and how they are paid, we see strong evidence that a manager’s “purpose” is very different across divisions with different strategies. This alone would not be a shocking point. But our estimated manager fixed effects show that managers

³ This point raises the following question: if managers don’t matter in Wealth Management, why is there a large variance of pay for managers in WM who manage the commission-based employees? We are looking into this question, altering functional forms for regressions and considering other factors. But the point is, there is not significant worker-manager matching in WM.

matter, and by about the same amount, in the two divisions of PCB and Risk, even though managerial tasks are very different. For WM, their managers matter much less, which is a very important point regarding the “purpose” of managers. And lastly, given very little data on the productivity of white collar workers, and because few firms would claim to measure it, we have shown rich and up-to-date features of how manager jobs are designed.

Using data from one large firm has many positive features. This is primarily because we can still compare managerial quality across job design and division type. Though reasonable measures of personal employee productivity are not present, the vast majority of employees can be ranked on relative scales, both within and even outside their division. Pay practices within the firm are structured and organized into nine ranks. Additionally, a very large number of employees are working essentially identical jobs.

Related Literature

Our paper contributes to several literatures. First, it relates to the literature on the impact of managers on performance. We have previously mentioned the work by Bertrand & Schoar (2003) and Lazear, Shaw, and Stanton (2015). We expand on both by highlighting mid-level managers matter when they match the strategy set out by executives, and that there is not just one type of effective manager.

Second, we contribute to the literature on what successful managers actually do. For example, Bandiera et.al. (2020) use CEO diary data and find that CEOs who focus on high -level agendas perform better than those who concentrate on functional management. Hansen et.al. (2020) use a unique dataset on job descriptions for C-suite positions to document skills requirements in top managerial occupations across a large sample of firms. They find an increasing relevance of social skills (Deming, 2017) in top managerial occupations. For non-executive positions, Deming and Kahn (2018) document a positive correlation between cognitive/social skills and project/people management. Hoffman and Tadelis (2020) also comment on social and people management skills. Friebe, Heinz and Zubanov (2022) use a RCT in a retail chain and find that when managers are encouraged to reduce employee turnover, they reallocate their time from interacting with customers to HR activities, succeeding in reducing turnover. A related paper by Brahm, Dessein, Lo, and Minami (2021) finds that, under low time

stress, sales and retail managers divert their attention away from their area of expertise, implying that job design can be an endogenous variable. Benson, Li and Shue (2020) use microdata on the performance of sales workers at 131 firms and find that top-performing sales workers do not make the best managers. In our paper, we document the types of skills that managers need to increase revenue in their respective divisions. Using a machine learning algorithm to study the company's job postings we find that social skills are important for managers in some but not all divisions of the firm while other types of managerial skills are important for other divisions, and, importantly, these differences can be explained by differences in strategy across divisions.

Third, our paper contributes to the literature on compensation in firms (e.g. Baker, Gibbs and Holmstrom, 1994). We document heterogeneity in the distribution of rewards within divisions with some divisions relying on commissions to incentivize employees and others having less variable pay. This heterogeneity is explained by the types of jobs that are present in each division.

Fourth, our paper contributes to the literature on span of control (the number of direct reports that a manager has). For example, Smeets, Waldman and Warzynski (2019) use detailed personnel data on one firm to provide empirical evidence on the scale of operations effect whereby more productive managers are predicted to have more subordinates. They find that changes in span of control are positively correlated with managers' performance ratings. We contribute to this literature by showing how the number of direct reports (the flatness of the organizational structure) differs across divisions in a way that is consistent with the business strategy and the distribution of rewards in the division.

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