Unpicking complex incentive mechanisms that reward top managers handsomely

One distinct feature of the rise in income inequality over recent decades is the surging incomes of the working rich, particularly the pay of a class of top managers. A popular view stresses the role of performance-related pay in generating this feature. According to this view, the pay of many top managers is **high-powered** (i.e., with incentives tied to firm performance). In good times, the managerial pay is boosted by firm profits, while in bad times, top managers are barely punished because of limited liability. Such an incentive structure generates excess pay to top managers, dwarfing the pay to salaried workers.

However, reality is more complex than the above view. Neither a high-powered incentive nor a managerial job guarantees a high level of pay. An obvious example is owners of small businesses such as farms, grocery stores, laundry shops, and local bakeries. They are **residual claimants**—who claim on a firm's net cash flows after the deduction of precedent agents' claims. Thus, their income is entirely tied to firm performance and extremely high-powered; yet they earn less than an average mid-level manager. The U.S. Occupational Survey data show that among production workers, the ones paid by time earn $15.77 per hour while the ones paid by incentives earn $16.03; the wage difference between these two types of workers among clerical and administrative workers is even smaller.

The following figure plots the managerial wage premium — defined as the difference in the annual real (CPI-adjusted) wages between managers and production/clerical workers — over the 1997-2014 period in the US. The wage premium for salaried managers rises from approximately US$ 20,000 in the 1990s to more than US$ 30,000 in the 2010s. The premium for top managers (CEOs and general managers) more than doubles during the sample period, whereas the premium for mid-level managers (division managers and plant managers) rises far more modestly. Isolating low-level managers (first-line supervisors and administrative managers) shows that their wage premium barely changes over time.

Figure 1. Differences in real wages from 1997 to 2014

Data source: US. National Occupational Compensation Statistics, U.S. Bureau of Labor Statistics.

To explain the above data pattern and address the debate regarding how a high-powered incentive structure drives increasing wage inequality, two basic economic questions need to be answered. The first question concerns how various pay structures emerge from firm management and market competition. The second concerns to what extent the use of incentive pay causes a trade-off between efficiency and inequality.

To address these questions, I develop a theory that links worker ability, pay-performance sensitivity, and pay level across a wide range of jobs. The aim of the theory is twofold. First, in the market, it aims to efficiently match individuals with different managerial ability to owners of productive assets. Second, within firms, owners aim to mitigate moral hazard or managerial slack by designing optimal pay contracts. The key contractual constraint facing firm owners is limited liability in the sense that a firm cannot punish its manager beyond a certain limit even when the manager fails to improve the firm's profitability.

Under the limited-liability constraint, three pay contracts can be used to elicit managerial effort. Without limited liability, an owner can transfer the ownership of the firm to the manager who then becomes a residual claimant. This contract achieves the first-best efficiency, but under the limited-liability constraint, it is only feasible when firm size (determined by managerial talent in the first place) is sufficiently small so that the manager can buy it upfront with his or her future income.

When firm size is too big to permit ownership transfer, providing incentives to managers involves a structure of contingent pay and requires a cost of paying above managers' outside options. However, for a medium-talent manager, the value of managerial effort is not sufficient to outweigh the cost of providing a high level of incentive. Thus, the owner optimally uses a contingent-pay structure tied to the manager's outside option. This type of contract is relatively low cost and has modest benefits. By contrast, a high-talent manager creates a sufficient surplus such that the owner is willing to offer a part of firm profit to managers. Such a profit-sharing contract incurs a high cost but has a large benefit.

The solution to the managerial problem within firms and the matching problem in the market generates a pattern that sorts individuals – on the basis of managerial ability – into three types of employment status: production workers, small business owners, and salaried managers, corresponding to three basic types of incentive contracts: fixed salary, residual claim, and contingent pay. As a result of this sorting pattern, a range of less-talented individuals with different abilities is rewarded by different incentive structures but receives a similar level of pay. An alignment between incentive structure and pay level occurs only to high-talent managers, who manage large businesses and also share their employers' profits.

The theory posits a trade-off between wage inequality and economic efficiency. Changes in technology and market conditions that improve economic efficiency inevitably increase wage inequality. In particular, productivity-enhancing technological progress causes disproportionate growth in firm size, favouring more-productive firms. Thus, technological progress increases the value of managerial efforts in big firms.

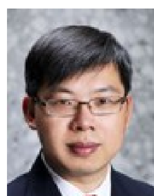
This induces resources to be reallocated from small firms (run by low-talent managers) to big firms (run by high-talent managers). In consequence, three effects occur: (1) a shrinking fraction of small business owners in the managerial occupation, (2) an expanding fraction of high-talent managers who share firm profits, and (3) an increase in the level of incentives offered to managers. These three effects jointly contribute to a highly skewed wage distribution in favour of top talent.

Similarly, the theory predicts that product competition contributes to a highly skewed wage distribution. This is because stiffer competition triggers production factors to be reallocated from smaller to larger firms. As a result, larger firms offer greater incentives to their managers while smaller firms and less-talented managers exit the market. Thus, both efficiency and inequality increase. This prediction has implications for policies regarding international trade. For instance, an economic sector that is subject to more intense import competition should witness greater income inequalities among workers.

Is it possible to obtain more efficiency and less inequality at the same time? According to the theory, one such possibility is to enhance managerial liability, that is, to permit firms to punish managers when they fail to improve firm profitability. In this way, a firm can align managerial incentive with its objective without giving away too much rent to its manager. Then, economic efficiency is improved, firms keep most surplus, and managers' wages are largely disciplined by their outside options.

Notes:

- *This blog post is based on the author's paper "Incentive Contracts and the Allocation of Talent," Economic Journal, 127(607): 2744-2783, December, (2017).*
- *The post gives the views of its authors, not the position of LSE Business Review or the London School of Economics.*
- *Featured image credit: Business, by geralt, under a CC0 licence*
- *When you leave a comment, you're agreeing to our Comment Policy.*



Yanhui Wu is an assistant professor of finance and business economics at the Marshall School of Business, University of Southern California. He received his Ph.D. in Economics at LSE in 2011. Prior to his doctoral study, he was an award-winning financial journalist in China. His research focuses on the organisational design and market structure of knowledge-intensive firms, the political economy of mass media, and the Chinese economy.

Date originally posted: 2018-02-15

Permalink: http://blogs.lse.ac.uk/businessreview/2018/02/15/unpicking-complex-incentive-mechanisms-that-reward-top-managers-handsomely/

Blog homepage: http://blogs.lse.ac.uk/businessreview/