



“Summary of article by Brian G. M. Main, Charles A. O’Reilly III, and James Wade: Top Executive Pay: Tournament or Teamwork?” in Frontier Issues in Economic Thought, Volume 5: The Political Economy of Inequality. Island Press: Washington DC, 2000. pp. 88-91

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Economists often explain the structure of pay among top executives in terms of “tournament theory,” in which the lure of a large prize for the winner motivates competition among many contestants. A CEO salary far above the individual’s marginal product might be economically efficient if it provides an incentive for other executives to work hard, at salaries below their marginal products, in the hopes of winning promotion.

While tournament theory suggests that large salary differences among top executives may be efficient, an alternative theory suggests just the opposite. If the success of a corporation requires cooperation among its top management, then huge rewards for promotion may inspire excessive rivalry among individual executives; on this interpretation, a more compressed executive pay scale would be more efficient because it would promote teamwork.

This article tests both theories empirically, finding support for tournament theory, but failing to demonstrate any efficiency gains from compression of executive pay differentials. The concluding comments suggest changes that are needed to make tournament theory more realistic.

The Tournament Model

Theoretical discussion of the tournament model has identified many situations in which it would be efficient to base remuneration on rank-order, rather than absolute, performance. In terms of the structure of rewards, it has been argued that contestants proceeding through the rounds of a multi-stage tournament require ever-larger increases in prizes to motivate further effort among the winners of the early stages. This implies that, if executive compensation is viewed as a tournament, there should be greater salary differentials between ranks as one moves toward the top of the corporate hierarchy.

Some empirical work has supported tournament theory; for example, contestants in professional golf tournaments have better (lower) scores when the prize money is skewed toward relatively large prizes for the winner. Evidence on executive compensation supports the theory in some cases, but not others.

Among the contrary evidence is previous work by two of the authors. They found that, after controlling for corporate size and performance, top executive pay is influenced by the level of pay that outside members of the board of directors receive from their own companies – a finding

which “is difficult to understand ... unless one resorts to a nonoptimizing story such as one involving social comparisons.” (610) The same study also found that the differential between the pay of CEOs and senior vice-presidents, i.e. the prize for the final round of the tournament, was not related to the number of vice-presidents in a company. This is at odds with the prediction of tournament theory that the prize should increase with the number of contestants.

A New Empirical Test

Survey data on the compensation of top executives at over 200 corporations for the years 1980-84 provides the basis for a new empirical examination of tournament issues in pay structures. It is true, as predicted, that the average percentage difference in compensation between levels is greatest at the very top of the pyramid. In 1980, for example, the base pay plus bonus for the top level (CEOs) averaged 141% greater than that of the second level (largely vice-presidents); the second level’s average compensation was 75% above the third. The third level was 44% above the fourth, which was, in turn, 28% above those below them. The data are very similar for other years. This pattern contradicts earlier models of executive compensation, which predicted relatively stable percentage differentials between levels of an organization.

A different and seemingly inconsistent picture emerges from data on actual promotions from vice president to CEO, an event which occurred only 28 times in the survey period. The increase in compensation accompanying these promotions averages less than 20% – much less than the 141% reported above, and small enough to raise questions about the applicability of the tournament model.

The two pictures can be reconciled if the typical promotion moves an individual from the top of level 2 to the bottom of level 1, receiving a pay increase much smaller than the average difference between levels. This implies that there are important changes in salary within broad organizational levels, as well as between them. It also means that the value of becoming CEO is far greater than the one-year increase in compensation.

In fact, the value to an individual of holding the top job rises quickly over time. A further empirical analysis estimates the gap in pay between the CEO and the average vice president of the same firm, controlling for firm size and other effects. The gap is a rapidly increasing function of both the CEO’s total work experience and his tenure as CEO. Using this relationship, it is possible to calculate the expected value of the gap for each CEO in the survey, for every year from the time of his promotion until his assumed retirement at age 65. The present value of the lifetime gap between CEO and vice presidential compensation averaged \$4.6 million for those holding the top jobs in 1984. With an added estimate of the value of CEO stock options (most compensation data discussed here does not include stock options), the average present value of the lifetime gap rises to \$6.2 million in 1984 -- surely a large enough prize to motivate many contestants.

Moreover, the present value of the CEO’s lifetime pay gap increases when there are more vice presidents, as predicted by tournament theory. For each additional vice president, the pay gap (including stock options) goes up by \$186,000.

The Effects of Wage Compression

Alternative theories examine executive pay structures from a different perspective, emphasizing the importance of equity and social comparison processes. In an interdependent, status-conscious group, individuals are more likely to be satisfied with their own pay, on average, if there is less rather than more wage dispersion. More employee satisfaction can lead, in turn, to greater productivity, because better social relations in the workplace should reduce the incidence of unproductive office politics. In short, wage compression can enhance output, by minimizing the loss of productivity due to overly competitive workplace rivalries.

A firm's top management engages in work that requires a high degree of interdependence and encourages social comparison. Moreover, the top executive ranks are filled with extremely competitive people, who may be prone to excessive rivalry. So the benefits of wage compression could be particularly important, perhaps more important than the incentive effects of unequal, tournament-style rewards. This argument leads to a potentially testable proposition: when there is a high degree of executive team interdependence, wage dispersion should have a negative effect on corporate performance; when there is less interdependence among executives, wage dispersion should have a positive effect on performance, through its tournament effects.

Unfortunately, the survey data provide only a very indirect measure of executive team interdependence. Firms in the survey varied widely in the proportion of executives whose titles indicate that they are profit-center heads. If running your own profit center is a sign of relatively separate, independent work, then the higher the proportion of executives who are profit-center heads, the lower the degree of team interdependence. However, this measure of interdependence has no significant effect on the firm's performance, as measured by either stock market returns or accounting calculations of return on assets. In contrast, the dispersion of executive salaries does have a positive effect on the firm's return on assets, consistent with tournament theory.

The lack of empirical support for the wage compression theory could result from the imprecision of the measure of interdependence. It could also reflect the fact that those who make it to the upper echelons of a large company are already so competitive that their behavior is unlikely to be moderated by any simple incentives.

Conclusion

Although arguments can be made for both theories, the evidence provides much stronger support for tournament theory. Yet the unadorned tournament model appears implausible on several grounds. It ignores the fact that top managers must frequently operate as a team, not as competitors. Moreover, it makes the unreasonable assumption that effective long-run motivation for senior executives can emerge from infrequent chances to enter crowded contests for huge additional pay increases.

It is more effective to motivate people with smaller, more frequent raises and promotions – not least because many valuable executives will fail to win the occasional big promotions. Psychological studies have shown that people often prefer a more certain chance of winning a small prize now to a riskier chance of winning a big prize later. The survey data on executive

salaries showed that the actual pay increase at the time of promotion to CEO is surprisingly modest, with much of the benefit of the position coming later; this is consistent with the notion that rising through a corporate hierarchy and pay structure involves many small steps, not just a few huge ones.

None of this denies the existence of tournament structures within managerial career paths, but it does suggest that any tournaments are likely to be of a sequential nature. Winning at one stage leads to pay rewards and enhanced promotion prospects. But losing still permits the loser to try again, with even the prospect of “leapfrogging” earlier winners. Such a model, while lacking the elegance and parsimony of either tournaments or industrial politics, seems consistent with both the data and a large body of sociological and psychological research on pay. (625-626)