



Discussion of Nonfinancial Performance Measures and Promotion-Based Incentives

MICHAEL GIBBS*

1. *Introduction*

Dennis Campbell's paper nicely extends a small literature on the use of qualitative performance indicators for the provision of incentives. He does so by studying promotions for a sample of managers of fast-food outlets and exploiting the company's balanced scorecard, which provides data on nonfinancial performance measures. The paper contributes to literatures in both accounting and economics on performance measurement, provision of incentives, and promotion systems.

It is well known that firms often use subjective performance evaluations, such as merit rating scales, for promotion decisions. However, almost all studies of this topic focus on middle-manager settings, where good numeric performance measures are unavailable. In the sample studied by Campbell, good measures *are* available, including store profit. Therefore, it is somewhat more surprising to find that nonfinancial performance indicators from the balanced scorecard do appear to be a factor in promotion decisions. This suggests that nonfinancial measures have information content beyond store profit, even in predicting future store profit. This is an interesting finding, especially since the role of qualitative performance measures has been given sort shrift in both accounting and economics.

*Graduate School of Business, University of Chicago

Once he demonstrates that promotions are related in part to nonfinancial performance indicators, Campbell then conducts a second interesting analysis. He examines whether *ex ante* incentives affect behavior, asking if stronger promotion incentives lead to greater improvement in qualitative performance indicators. He provides evidence that this is the case, which certainly suggests that promotions do affect behavior.

A final contribution of Campbell's paper is to explore a relatively new and interesting idea: the potential interplay between incentives and learning. The idea is that stronger incentives may motivate not just greater effort, but also greater learning. Such learning then yields persistent improvements in performance, even if incentives are eliminated. This is a plausible idea that I cannot recall seeing in the prior literature. It has some interesting implications for optimal incentive plan design.

My discussion of the paper covers each of these issues in turn. I first consider the hypothesis that frames the paper. I then consider the evidence presented on how financial and nonfinancial measures are used to determine promotions. Promotions may have multiple purposes, in particular incentives or assignment, which may sometimes conflict. The firm's choice of performance measure for promotion decisions may shed light on which purpose is more important in practice. This question of incentives versus assignment also affects how we view evidence on how promotion rewards may drive behavior. I finally turn to Campbell's idea of learning effects from incentives, which raises additional interesting questions.

2. Should Nonfinancial Measures Be Used for Promotion Decisions?

Not surprisingly, the accounting literature tends to focus on financial (and to a lesser extent, numeric) performance measures. After all, that is the purpose of the field of accounting. A similar focus tends to occur in economics as well, but for different reasons: Qualitative measures or subjective evaluations raise difficult issues of contractibility and verifiability. Such issues are hard to model. Similarly, in empirical work, data on nonfinancial measures are usually harder to find, and data on subjective performance evaluations are even scarcer still. Nevertheless, in practice, nonfinancial measures and subjective evaluations appear to be quite important in incentive provision and job assignments, despite their weaknesses as described by Campbell. Reflecting this, there is a small but growing literature on such issues (Medoff and Abraham [1980], Baker, Jensen, and Murphy [1988], Ittner, Larcker, and Rajan [1997], Ittner, Larcker, and Meyer [2003], Gibbs et al. [2004]).

Prior work on promotion systems has demonstrated that subjective merit ratings are correlated with promotions. However, very little evidence has been presented on what factors are considered in assigning such ratings. They may reflect a weighted combination of various financial or numeric performance metrics, for example. They may also be influenced by qualitative dimensions of performance. The Campbell paper begins with

the hypothesis that nonfinancial measures—service quality and employee retention—are inputs into promotion decisions. Conference participants were skeptical of this hypothesis, for *this* empirical setting. In the firm studied here, managers of fast-food outlets are considered for promotion either to consulting opportunities with other outlets or to run larger or multiple outlets. The firm seems to have an excellent performance measure to use in predicting the manager's ability to generate profits after promotion—profits in the outlet the manager already runs.

This is quite an unusual setting for studying promotions, compared to the more typical middle-manager setting. The job is very similar after promotion compared to before, except on a larger scale. The job entails little in terms of long-term investment in tangible capital—the store manager does not invest in new stores and is not a franchisee who profits from the long-term capital value of the outlet. There may be investments in intangible capital, such as brand quality, reputation for customer service, and employee relations. However, the first is largely controlled by the firm rather than the manager. The second and third may be important, but in a fast-food business there is often high turnover of both customers and employees.

Thus, a natural competing hypothesis is that promotion decisions are based *solely*, or at least primarily, on current store profits. This is especially so as the primary goal of the manager in the new store is to maximize current store profits (we can see this in the design of the manager's bonus plan). Therefore, Campbell's finding that nonfinancial performance indicators *are* used as important inputs for promotion decisions is interesting and more compelling evidence for the importance of nonfinancial measures than if he were studying a sample of middle managers, where good financial measures are rarely available.

Of course, this may simply reflect Holmstrom's informativeness principle (Holmstrom [1979]), so that any performance indicator with incremental information should be incorporated into the evaluation for promotion. Nevertheless, the apparent large weight placed on qualitative measures in this empirical setting seems surprising.

Along those lines, conference participants were curious about whether these factors do, in fact, predict future financial performance. Table 2 provides evidence that this is the case. After controlling for lagged profit, lags of service quality and employee retention are significantly correlated with future profit. This may suggest that managers can, in fact, make investments in intangible capital (with respect to customers and employees) that lead to future profits. If so, then using only current profits as a performance measure distorts incentives toward the short term. This is reminiscent of the evidence from the literature on franchising (e.g., Brickley and Dark [1987]), which finds that outlets with more repeat customers are more likely to be franchised, since repeat customers improve incentives for managers to maintain brand quality. In any case, this finding of Campbell's helps explain why this firm uses nonfinancial indicators as inputs in allocating job assignments.

3. *What Is the Purpose of Promotion?*

An important question that is begged by the paper is what kind of performance indicators are *most* strongly related to promotions. The paper demonstrates that both financial and nonfinancial measures are used. However, it would also be interesting to analyze whether short- or long-term measures are used for job assignments.¹ For example, does the firm base the promotion primarily or solely on the latest performance? Or does it use some average of performance over a longer period of time? This is important because, unlike other kinds of incentive systems like bonuses, promotions may play dual roles. Since they involve a change in job assignment, the primary purpose of promotions might be sorting of talent rather than provision of incentives. Conceivably, promotions may have *no role at all* in providing incentives in this firm (note that the firm provides a bonus plan based on store profits).

If the purpose of a promotion is to sort employees by their level of ability, then the best performance measure for promotion decisions is the one that is most correlated with ability, rather than effort. This might be longer-term average performance rather than short-term performance. By contrast, if the purpose of a promotion is purely to provide incentives, the best measure for promotion decisions might be recent short-term performance. Admittedly, the theory is not clear on these points, and there is controversy within economics on the importance and effects of these conflicting roles of promotions (e.g., Baker, Jensen, and Murphy [1988]). However, it would be quite interesting to use the data from this paper to provide some evidence on this question.

Some of the evidence in table 6 and elsewhere in the paper (and in Campbell's interviews with the firm's management) is suggestive that promotions play a sorting role in this company. Comparing panels A and B of the table, it appears that nonfinancial factors are more important inputs for promotion decisions to consulting opportunities or tier-1 units than for demotions, exits, or the granting of an additional store to the manager. This suggests that different criteria may be used for different job assignments. If the nature of the job varies at different hierarchical levels, sorting is more likely to be important for promotions.

4. *Does Manager Behavior Reflect Promotion-Based Incentives?*

An interesting contribution of this paper is to provide evidence that managers respond to promotion incentives by working harder and improving their performance measures. Few studies actually document changes in behavior due to variation in promotion incentives (though many studies have

¹ It might also be interesting to analyze whether levels or changes in performance measures are more closely tied to promotions. That, in turn, raises dynamic incentive questions, such as the "ratchet effect" (Gibbons [1987]).

been able to document behavioral changes due to other kinds of incentives). This part of the paper helps to complete the puzzle. Earlier results show that financial and nonfinancial indicators are correlated with promotions, but that does not in itself prove that promotions generate incentives to improve those indicators. The findings in table 7 do indeed suggest that weighting service quality for promotion decisions motivates managers to care about service quality. I have several concerns about the analysis in table 7.

First, the analysis focuses solely on whether stronger promotion incentives lead to improvements in service quality. Why not also ask whether promotion incentives lead to improvements in employee retention? Further, why not analyze whether promotion incentives motivate improvements in financial performance? It would be interesting to see how the incentives affect motivation on each of the performance dimensions, relative to each other.²

Second, table 7 ignores the other important source of incentives for store managers: their short-term bonus. This bonus is based on store profits, and so provides little or no incentive to improve service quality (or employee retention) to grow future profits. Since bonus potential varies from store to store in a way that is observable in the data, the analyses in this table might be improved by controlling for the incentives to maximize short-term store profits implied by the manager's bonus.

Taking that a step further, *if* a purpose of promotions is to improve incentives, the firm would design the bonus plan and evaluation criteria for promotion simultaneously. When incentives from the bonus plan are too distorted toward short-term financial performance, the firm gives greater weight to nonfinancial performance for promotion decisions, and vice versa. This idea is testable by including measures of the strength of incentives from the bonus plan, interacted with the financial and nonfinancial indicators, in the analyses in table 6.

Finally, though the results in table 7 do indeed suggest that the strength of the reward from promotion and the likelihood of winning promotion affect the manager's incentives to improve service quality, another interpretation is suggested by the question of sorting versus incentives raised above. Suppose that effort and incentive provision play no role in this firm. Instead, financial and nonfinancial performance (or growth in performance) depend on the manager's innate ability. The results in table 7 could still arise if the firm promotes managers with higher estimated ability, which are those with better performance prior to promotion. Disentangling incentive and sorting stories is a classic, difficult problem in labor economics (Prendergast [1999], Lazear [2000]), and this study is no exception. One way to try to unweave the two is to ask whether performance rises particularly quickly

² It would be interesting to study multitask incentives in such a setting. Unfortunately, since the sample involves data from a single firm this is not feasible. There are only a small number of different job assignments to study. There may be variation in the criteria used for allocating the same type of job assignment within this firm, but such variation is likely to be small if it exists at all. However, see the next comment on the mix of promotion and bonus incentives.

in periods right before a promotion is awarded (especially if promotions are based most heavily on recent performance; see the discussion of that question above). A pure sorting story should yield no spike in performance right before promotion, whereas an incentive story almost certainly will.

Fortunately, the results in table 8 do help disentangle sorting from incentives, in a different way. In that table, the performance of managers who are never promoted is examined before and after a promotion that they are eligible for is rewarded. Campbell finds that performance does indeed fall after the manager is passed over for promotion. This is difficult to explain in any way except that incentives are lower after the promotion chance disappears. This is a nice piece of evidence distinguishing incentives from sorting.

5. *Learning and Incentives*

The discussion above emphasizes two classic questions in labor economics, incentives and sorting. A very interesting innovation of Campbell's paper is to bring in a third classic question: human capital or learning.³ He points out that incentives may motivate an employee not only to provide more effort, but also to try to learn how to perform the job better in the future. This idea is quite plausible and appealing, and I am unaware of its consideration elsewhere in accounting or economics. One might imagine a multitask incentive model, where the manager can exert effort toward current performance or toward learning new methods that improve future performance for the same level of effort. If the manager expects to be offered pay for performance in the future, he has some incentive to exert effort toward learning, not just toward current production. Alternatively, one might assume that learning by doing is greater, the larger the total effort or output of the employee. In either case, the prediction is that stronger pay for performance today increases *future* performance, all else equal. This is in fact what is observed in table 8.

First, a quibble, since labor economists like to quibble about this issue. It is conceivable that this result merely reflects sorting (once again). Suppose managers differ in their innate ability to improve performance over time. If the firm bases promotions on its estimation of the manager's ability to improve performance, we would expect higher rates of growth in performance for managers in regions where promotions are more likely—even for managers who do not get promoted during the observed period.

More importantly, the idea that incentives (be they from promotion or some other mechanism) may motivate the employee to learn is an interesting one that is worth exploring in future theoretical and empirical research. Here, I briefly sketch a couple of thoughts that come to mind.

³ The term "learning" in labor economics usually means learning about the employee's ability, which I call sorting here. Campbell uses the term to mean learning by doing, in effect on-the-job training. I use the term learning in the same way that Campbell does.

First, this provides an added benefit to providing incentives. Productivity would rise now, and also in the future. Second, learning has implications for the design of optimal incentive schemes. For example, the firm should offer stronger incentives to those with less tenure (or job-related experience), because those workers have more scope for additional learning. This is especially so in firms where worker turnover is lower, since the future productivity gains from today's incentives are greater.⁴ Similarly, incentives should be stronger in jobs which, by their nature, have more scope for learning. These would tend to be jobs and firms where there is greater emphasis on continuous improvement (Gibbs, Levenson, and Zoghi [2007]).

Third, learning effects from incentives might have implications for optimal performance measurement. For example, the firm might make greater use of changes in performance rather than levels, if it is interested in motivating more focus on learning. Finally, the dynamic incentive aspects of incentives-induced learning seem interesting and complex. A firm might offer stronger initial incentives to maximize learning, and then lower incentives gradually as the employee moves further up the learning curve. Career concern incentives are affected by learning as well. Employees might "over-invest" in initial learning so that their growth rate in performance is higher, if that leads to better job assignments. It is not clear how these issues play out, but there seems to be a rich set of theoretical and empirically testable questions related to the interactions between learning and incentives.

6. *Summary*

Campbell's paper makes important contributions to the literatures on qualitative performance evaluation, promotion-based incentives, and the interactions among incentives, sorting, and learning. These results will be of interest to many researchers in accounting and economics. While it is not surprising that qualitative measures are inputs into promotion decisions, the apparent weight given to them in this empirical context does seem surprising—the firm has excellent "objective" measures in store profits, which they already use for the bonus plan. This is compelling evidence that qualitative performance indicators have informativeness beyond profits, for long-term profit growth. Campbell reinforces this conclusion by showing that future profits are predicted by lags of qualitative measures, after controlling for lags of profit. Campbell also shows that promotions do appear to motivate managers to improve performance; his results are difficult to explain solely by a sorting mechanism. Finally, Campbell introduces a very interesting idea, that incentives may motivate employees to increase their on-the-job learning in order to increase future productivity. His empirical results are consistent with this idea. The bad news is that this idea makes our understanding of promotion systems even more complicated than before, since now we need

⁴ Assuming that the learning is at least partly firm-specific.

to consider the interplay among sorting, incentives, and learning. The good news is that interactions between incentive compensation and learning raise interesting questions for future theoretical and empirical research.

REFERENCES

- BAKER, G.; M. JENSEN; AND K. J. MURPHY. "Compensation and Incentives: Practice vs. Theory." *Journal of Finance* 43 (1988): 293–316.
- BRICKLEY, J., AND F. DARK. "The Choice of Organizational Form: The Case of Franchising." *Journal of Financial Economics* 2 (1987): 401–20.
- CAMPBELL, D. "Nonfinancial Performance Measures and Promotion-Based Incentives." *Journal of Accounting Research* 46 (2008): this issue.
- GIBBONS, R. "Piece Rate Incentive Schemes." *Journal of Labor Economics* 5 (1987): 413–29.
- GIBBS, M.; A. LEVENSON; AND C. ZOGHI. "Why Are Jobs Designed the Way They Are?" Working paper, University of Chicago (2007).
- GIBBS, M.; K. MERCHANT; W. VAN DER STEDE; AND M. VARGUS. "Determinants and Effects of Subjectivity in Incentives." *The Accounting Review* 79 (2004): 409–36.
- HOLMSTROM, B. "Moral Hazard and Observability." *Bell Journal of Economics* 10 (1979): 74–91.
- ITTNER, C.; D. LARCKER; AND M. MEYER. "Subjectivity and the Weighting of Performance Measures: Evidence from a Balanced Scorecard." *The Accounting Review* 78 (2003): 725–58.
- ITTNER, C.; D. LARCKER; AND M. RAJAN. "The Choice of Performance Measures in Annual Bonus Contracts." *The Accounting Review* 72 (1997): 231–55.
- LAZEAR, E. "Performance Pay and Productivity." *American Economic Review* 90 (2000): 1346–61.
- MEDOFF, J., AND K. ABRAHAM. "Experience, Performance and Earnings." *Quarterly Journal of Economics* 95 (1980): 703–36.
- PRENDERGAST, C. "The Provision of Incentives within Firms." *Journal of Economic Literature* 31 (1999): 7–63.