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RESEARCH

Effective Headcount: A Workforce Planning Strategy for Improved Quota Attainment

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About ClearCompany

For 19 years, ClearCompany has helped companies achieve their missions with software and best practices to recruit, ramp, recognize, and retain hundreds of thousands of A-players.

We designed and built a unified platform to deliver unparalleled hiring and onboarding experiences, exceptional headcount planning capabilities, and performance management, employee engagement, and company-wide goal alignment that drives companies forward. ClearCompany's TalentOS platform is the only product available which provides fully-automated Effective Headcount planning using live data from leading payroll systems including ADP and UKG.

Introduction

On January 1, the number one question on any CEO's mind is likely to be, "Will we make our plan this year?" For many firms, one of the most critical components of this is the performance of a sales team against a quota.

While sales team performance depends on a wide range of factors, from macroeconomic conditions to the competitiveness of the firm's product, firms often miss their targets because teams fail to achieve the productivity assumed in the plan.

While the cause of this is often attributed to chaotic and unforeseeable forces, we believe that one of the largest causes is the workforce plan itself. In this paper, we will discuss what we believe is a key source of error in these plans and present an alternative approach that accounts for this. Finally, we present a simulation to compare the performance of our strategy against other common approaches.

Key findings of the experiments detailed in this paper include:

- A widely-used strategy for sales headcount planning fails roughly 50% of the time.
- Our alternative strategies, which can be applied using only common tools and practices, successfully meet or beat quota in more than 95% of cases.
- Large quarterly swings in sales performance are explainable as a result of turnover, and our strategies can address this.
- Firms don't need to predict individual turnover in order to plan for it, only aggregate estimates to successfully minimize its impact.

Headcount is a Poor Predictor of Productivity

Many sales plans are built starting with two numbers–the headcount of people in a specific role (e.g. a Business Development Representative aka "BDR") and the expected productivity of one person in a given period of time (e.g. a monthly or quarterly number of sales opportunities created). Taken together, these provide a forecast of the production expected from a team. This approach, however, will only be accurate if the team neither adds new employees nor loses any existing ones.

The reason for this is that in most professional roles (and a great many skilled labor ones as well), an employee's productivity varies significantly with tenure. Human resource professionals typically consider an employee as being fully onboarded when they have completed all the paperwork and training required for compliance, but an employee at this stage is often just beginning to learn the basics of the job and may be incapable of doing it without close supervision. In most cases, it takes a new employee anywhere from weeks to months (or even a year) to reach full productivity.

In Figure 1, we illustrate the productivity of an employee who is hired in week 1, ramps up to full productivity over two months, and eventually becomes disengaged and leaves six weeks later.

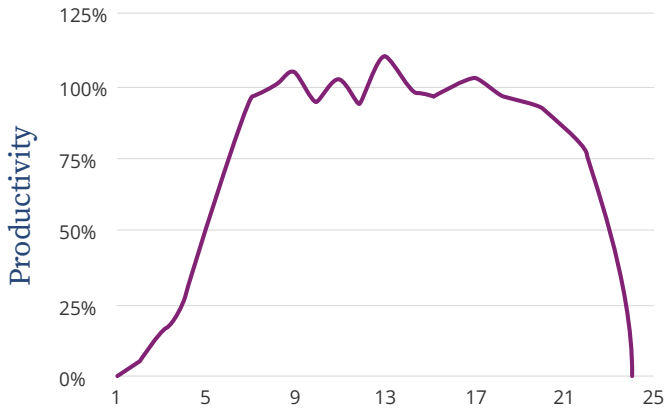

Figure 1

While a typical workforce plan would count this employee as one person for six months, their productivity would vary greatly over this time period.

This is illustrated in Figure 2, which shows the employee's performance against a monthly quota. In fact, over the full six-month period shown here, the productivity of this employee would only amount to slightly less than 75% of that of a tenured employee over the same period.

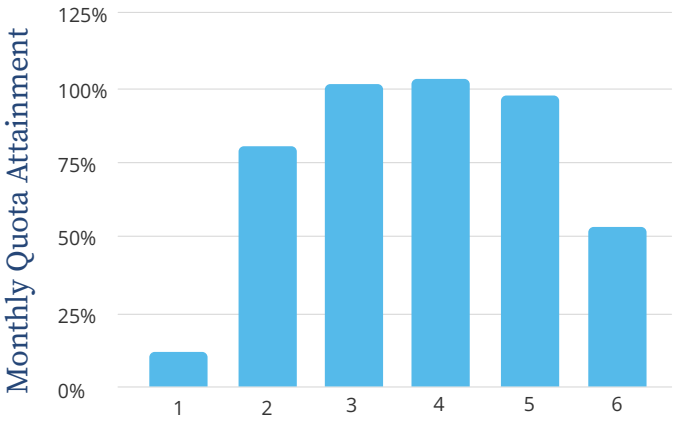

Figure 2

To further illustrate why this matters, let us consider the scenario where an employee is terminated and must be replaced. In Figure 3, we show what this looks like for a scenario where an employee gives two-week notice, the recruiting team is alerted immediately, and their replacement starts thirty days later.

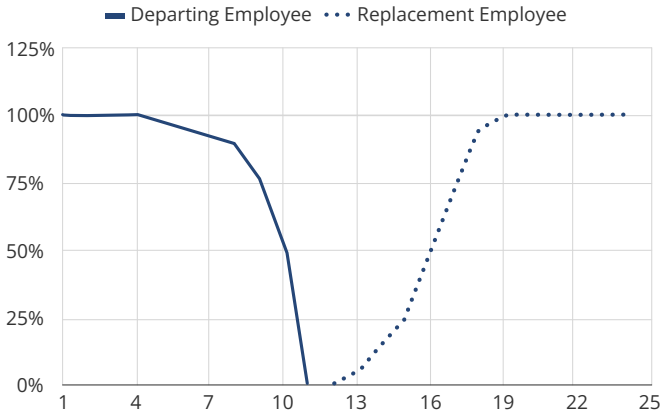

Figure 3

As this chart clearly shows, there is a roughly 10-week period starting in week seven when productivity is significantly impacted. Unless the new hire outperforms expectations, it is a virtual certainty that this shortfall will impact the month and quarter in which it occurs, possibly the entire year.

And this is only the effect of a single employee's departure. Applied to a team of just a dozen employees that experiences even relatively low turnover or growth, the impact of the gaps created by employee ramping quickly becomes large and difficult to overcome. If not accounted for in the firm's planning, this factor alone can guarantee failure.

The Planning "Fudge Factor"

Today, perhaps the most common way that Financial Planning & Analysis (FP&A) professionals account for this is by building a deflator into the model which assumes that a notional single employee in the plan will in reality be less than fully productive; a common value is 75-80%. This number is usually derived empirically from previous years' performance, and as such accounts for the effect that headcount growth or turnover had on performance during that period. We refer to this, herein, as the ***Consensus*** strategy because it is among the most widely-used in mid-size and smaller companies where workforce planning is typically led by generalist FP&A and HR teams.

While simple, this approach carries two significant flaws. First, the accuracy of this approach depends on a steady-state assumption: If either headcount growth or turnover exceeds that of prior years, then observed productivity will still lag behind plan. (This explains why many high-growth companies make a large investment in growing their sales teams but still fail to meet targets in the first year.)

The second flaw in this approach is that, by building in a margin for reduced productivity but failing to accurately name the source of it, it encourages complacency about a very large inefficiency in the firm's operations. As we will describe, however, it is possible to account for these effects more precisely, and thereby build a plan which delivers higher performance without a loss in efficiency.

The Effective Headcount Approach

To accomplish this, our planning approach uses a complementary measure we call ***Effective Headcount,*** which represents the number of ***fully effective employee equivalents*** on a team.

We define a recently-hired employee as being ***fully effective*** when they are capable of replacing an average tenured member of the team without any loss in performance.

Figure 4 illustrates the same employee replacement scenario as in Figure 3, except in this case the departing employee's replacement is hired well in advance of their departure. As a result, the replacement employee's productivity hits 100% just as that of the departing employee hits zero, and the team's performance as a whole is not adversely impacted by the turnover event. While it is intuitive that the scenario in Figure 4 is preferable, it may not be immediately apparent just how significant the impact is.

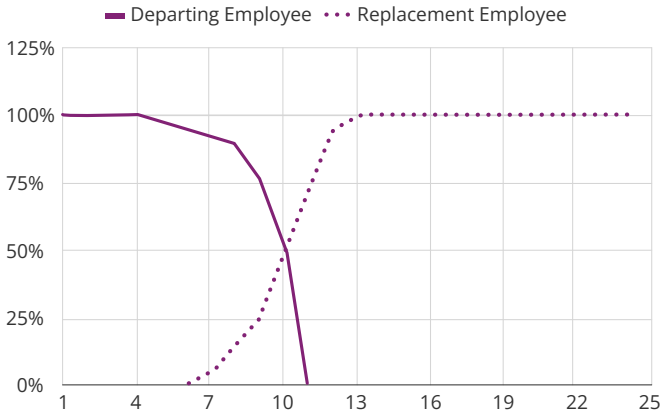

Figure 4

Figure 5 compares the cumulative impact of each of these two replacement strategies by looking at their performance against quota over the full period. The ***Reactive*** strategy (blue) is from Figure 3, where the firm waits for an employee to announce their departure to begin hiring their replacement, while the ***Effective*** strategy is shown in red and corresponds to Figure 4.

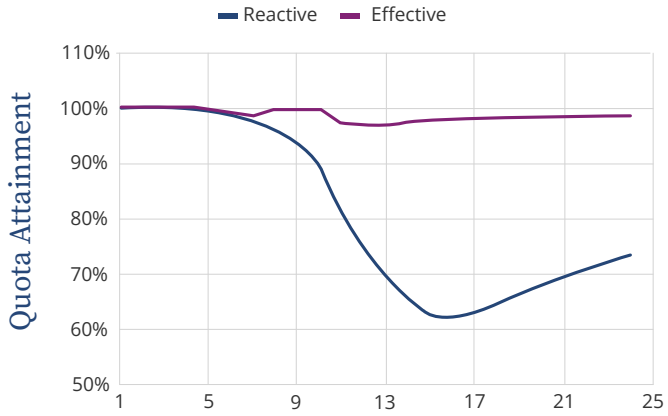

Figure 5

As this shows, the productivity hit from the loss of a fully-effective employee without a suitable replacement is large and carries across multiple quarters. Even if we extend the comparison out to a full year, the Reactive approach ultimately reaches only 87% of full productivity, while the Effective approach never drops below 97%, even in the period when the employee turnover occurs (data not shown). While the Reactive strategy would appear successful with an 80% productivity fudge factor built in (i.e. Consensus strategy), this illustration shows that significantly higher performance is in fact possible. Next, we will discuss two common objections to this and why they can be dismissed.

Turnover: It's Predictable Enough

The first objection to this is that ensuring the perfect "hot swap" replacement of employees as shown above requires the ability to predict turnover with very high accuracy. Indeed, systematically and accurately predicting whether each and every specific individual will quit in the next 3-6 months remains practically impossible.

But, this is a straw-man argument because for a team of any scale, we do not need to know precisely ***who*** will quit in Q2, only ***how many*** people are likely to.

Additionally, our situation is even better, because there are two other sources of turnover which we can predict with fairly high precision. The first is terminations for cause: Sales managers typically monitor the performance of each salesperson closely, and thus have advance visibility of employees who are likely to be terminated for performance reasons. Second, companies that are experiencing high growth will often fill many new openings through internal transfers and promotions. (While positive for the individual employee and the firm, this internal turnover creates vacancies which must be backfilled.) In many cases, these movements can be timed with significant advance notice and thus permit time for replacements to be recruited and ramped.

Cost and Efficiency

The second major objection is that the Effective strategy is simply a case of "spending more to get more," or that it simply over-staffs a team to ensure a favorable result. This objection is significant because it is partially true.

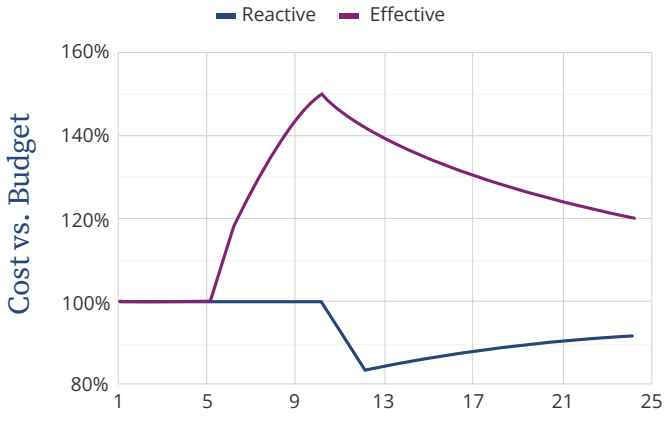

Figure 6

Figure 6 shows the cost of the two strategies against budget over time. Indeed, the Reactive model "saves" money, because there is a period of two weeks when the role is entirely vacant.

Likewise, the Effective strategy results in increased cost during the five-week period when we are paying for two employees simultaneously. While the spikes continue to moderate over time, it is true that a Reactive strategy will result in ongoing vacancy cost savings, while an Effective approach will have the opposite effect.

However, this isn't the whole picture. Among other things, the Effective strategy is only "over budget" if we choose for it to be–just as we can plan to hire replacements sooner to add productivity, we can plan to account for that cost in the budget as well.

Still, a critic might object that a higher cost is still higher, whether we plan for it or not. And it is true that in absolute dollar terms, the Effective strategy costs seven person-weeks of pay more than the Reactive strategy. But most firms are not optimizing solely for the absolute minimum cost, but instead are looking to maximize efficient results, particularly in roles that directly drive revenue. Therefore, we believe it is equally important to compare the strategies on a ***cost of sale*** basis, as shown in Figure 7.

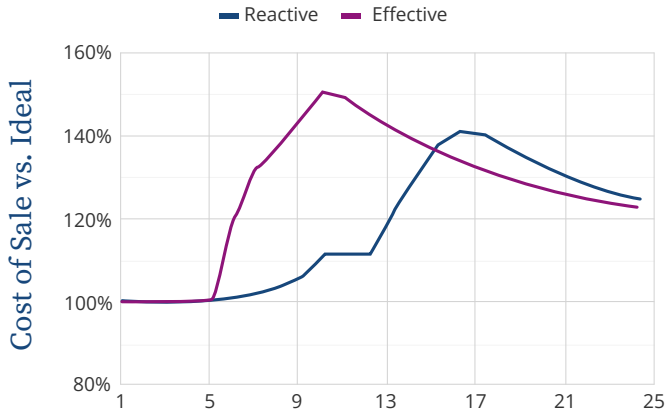

Figure 7

The reality illustrated by Figure 7 is not immediately intuitive, and merits further explanation. In both strategies, there is no difference in the first month: Our individual employee is engaged and fully effective, and thus performs exactly as expected, matching our cost expectations perfectly. The picture diverges from there, as the Reactive strategy continues to rely on a single employee whose productivity begins to decline (albeit only slightly), thus increasing the cost of sale until they leave.

The flat portion of the line shows the period where the role is vacant and the firm both sells nothing and pays nobody, until a replacement is hired and starts ramping.

Because the new hire is less than fully effective, their cost of sale during the ramp phase is high, and thus the firm's sales efficiency gets worse until the replacement is fully ramped and they begin to pay back the debt. As a result, by the end of 6 months, the Reactive strategy has cost only 92% of budget but also delivered only 74% of quota, so the cost of sale ends up 25% higher than budgeted. Conversely, with the Effective strategy, there is initially a large hit to sales efficiency as we begin paying for 2 heads, one of whom is less than fully productive and thus much less cost-efficient. However, at the point where the departing employee leaves, the picture begins to flip.

By the end of 6 months, the Effective strategy has cost us 21% more than budget, but has also achieved 99% of quota, leading to cost of sale that is only 23% higher. Thus, we see that while the Reactive strategy costs less in absolute terms, the Effective strategy is equally (if not more) efficient.

Turnover Drives Cost of Sale

This analysis shines a light on the widely-overlooked fact that employee turnover can be a huge contributor to cost of sale (because of the productivity lost when it occurs). Whether we replace the departing employee quickly or slowly, the result is a 12-13% increase in cost of sale on an annualized basis.

This raises important implications for FP&A if the cost of sale model does not incorporate employee turnover costs. For example, imagine if a departing employee's manager came to Finance and requested a 10% raise because they knew the employee was beginning to consider other opportunities. Thinking in Reactive terms, the CFO might say "we can't afford to increase our cost of sale 10%" and deny the request. However, if the 10% raise was approved and the employee stayed, the company would have saved the significantly greater cost of recruiting and ramping a replacement to full equivalence.

A Simple Spreadsheet Model

Effective Headcount strategies can be incorporated into typical spreadsheet-based plans with nothing more than basic arithmetic. The key difference is that instead of applying a productivity deflator to the whole team, as the Consensus approach does, you apply a productivity deflator to individual employees.

Figure 8a illustrates one approach to building an Effective Headcount model in a spreadsheet. Terminations can represent an employee leaving for any reason, from likely turnover to planned promotions. In this simple example, new hires are treated as being 0% effective in their first month, 50% effective in their second month, and 100% effective by their third. Figure 8a shows the result of following a Reactive strategy that maintains a headcount of exactly 20 employees over time, but also results in a loss of approximately 6 person-months worth of production.

	Jan	Feb	Mar	Apr	May	Jun
Fully Tenured	20	19	19	18	18	19
Terminations	1		2		1	
New Hires (0% eff.)		1		2		1
Ramping Hires (50% eff.)			1		2	
People on Payroll	20	20	20	20	20	20
Effective Headcount	20	19	19.5	18	19	19

Figure 8a

Figure 8b illustrates an alternative approach where we instead schedule new hires to maintain an effective headcount of 20 or greater, resulting in a net gain of one person-month's worth of productivity versus the starting budget.

	Jan	Feb	Mar	Apr	May	Jun
Fully Tenured	20	19	20	20	20	20
Terminations	1		2		1	
New Hires (0% eff.)	1	2		1		
Ramping Hires (50% eff.)		1	2		1	
People on Payroll	21	22	22	21	21	20
Effective Headcount	20	19.5	21	20	20.5	20

Figure 8b

For roles of greater complexity and with longer ramp periods, further precision can be gained by breaking the ramp period into three or more stages rather than the two shown here. Likewise, different ramp schedules can be used for internal versus external hires in the scenario where an internal hire can be ramped significantly faster than an external one, as is true for many firms. This provides FP&A and HR managers with a very clear way to model and quantify the efficiencies the firm gains from internal mobility. (In fact, the firm typically gains twice–once because it reduces turnover in feeder roles, and a second time by reducing the cost of recruiting and ramp time in destination roles.)

Stress Testing: Three Staffing Strategies Compared

Despite the clear and obvious benefits the Effective Headcount strategy provides on paper, many sales leaders and finance professionals have remained dubious of its feasibility or performance under real-world conditions. In particular, there is a belief that both turnover and individual performance are difficult to predict, and that the natural variations in these would overwhelm whatever gains an Effective Headcount strategy would otherwise provide. A further objection is the belief that turnover is concentrated among low performers, and therefore the real productivity cost is lower.

To address these and other possible criticisms, we created a simulation which models the performance of staffing strategies discussed in this paper across 10,000 different scenarios, each one representing a sales team comprising a unique set of 20 employees with varied tenure and performance based on real-world observations. The simulation was built as an iterative game where the strategies had knowledge of the past and present but not the future.

Simulated employee tenure is driven by three components. First, to account for the unpredictable, employees are randomly assigned a baseline propensity to churn. Second, we assume the existence of a tenure cliff, beyond which employees' propensity to churn increases sharply–an occurrence which is widely observed in junior- to mid-level sales roles, where an employee is expected to spend 1-3 years demonstrating success before moving to more senior roles. Finally, we assume that employees will be terminated after 12 consecutive weeks of performance below an acceptable threshold.

Our simulation tested the four strategies across 10,000 scenarios, over the course of eight years each. For each scenario, the simulation begins with the same pool of potential employees, from which replacements are drawn in the same order, such that the first or tenth replacement employee will be the same "person" for all strategies (i.e. further ensuring that any difference in outcomes is attributable to the strategy rather than luck of the draw with employees).

The following strategies were tested:

Reactive: The Reactive strategy does not attempt to anticipate anything, and simply opens a req immediately after an employee quits or is terminated. As with the other strategies, we assume a replacement employee will start 5 weeks after the req is opened.

Consensus: The Consensus strategy maintains a headcount surplus "fudge factor" to ensure that the number of people on payroll does not drop below the budgeted number when turnover occurs. This surplus is even throughout the year and does not attempt to account for when that turnover might specifically occur.

Effective: This strategy attempts to anticipate likely turnover due to employees reaching the tenure cliff or to performance dropping below a threshold level, and will open reqs as far in advance of those as necessary to maintain the target Effective Headcount level.

Effective+: This strategy follows the Effective strategy, but adds a surplus sufficient to maintain the desired Effective Headcount in the face of consistent but unpredictable turnover.

Figure 9 illustrates the median yearly performance of the four strategies across the 10000 tested scenarios. It is immediately apparent that the strategies based on Effective Headcount outperform the Consensus and Reactive strategies by large margins in all scenarios, particularly less-favorable ones. The Consensus strategy attains 90% of quota or better only 50% of the time, while the Effective strategy does so in nearly 100% of cases and the Effective+ strategy delivers over 120% of quota in approximately 4 out of 5 cases.

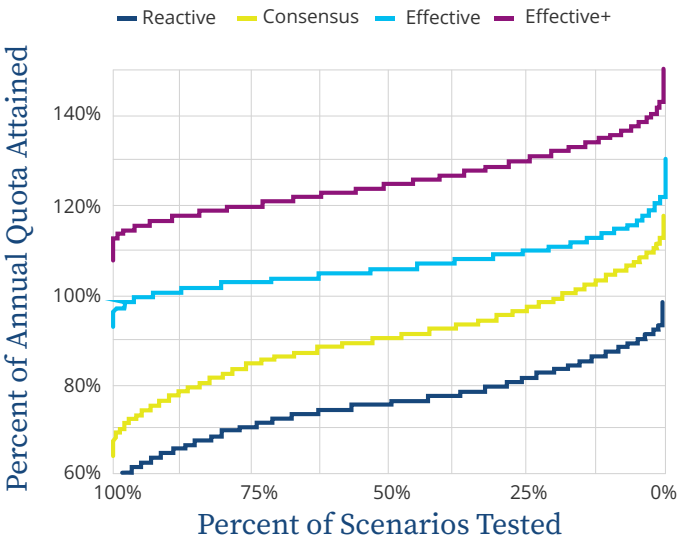

Figure 9

Likewise, it is noted that (as expected) the Reactive strategy is a guaranteed loser, falling below 80% of quota about 75% of the time. While this strategy may be dismissed by some as unrealistically pessimistic, some firms will at times unwittingly employ it when they institute an across-the-board hiring freeze. This simulation demonstrates that, though doing so will result in short-term cash savings, this comes at a steep cost to future results.

Cost and Efficiency

As predicted by the thought experiments earlier in this paper, there is no free lunch: Hiring ahead of turnover results in increased cost. However, all four strategies result in functionally-identical efficiency on a unit basis as you both spend more and get more with each step up the strategy ladder.

Effective Headcount Can Explain Quarterly Misses

It is widely observed that well-run sales teams often experience large swings in performance from one quarter to the next. When results are soft, the causes are invariably attributed to a range of chaotic and unpredictable forces, while a banner quarter proves that management's wise decisions are finally paying off. To be sure, sales is often the first group within a company to sense shifts in the macroeconomic and competitive landscape.

But we believe that these variations can also be explained by large and hitherto-unseen swings in Effective Headcount. To wit, if a team's Effective Headcount drops by 20% during one quarter, then it is likely that team's productivity will decline by a proportionate amount. If that firm does not monitor Effective Headcount, then it runs the risk of attributing that quarterly miss to incorrect causes.

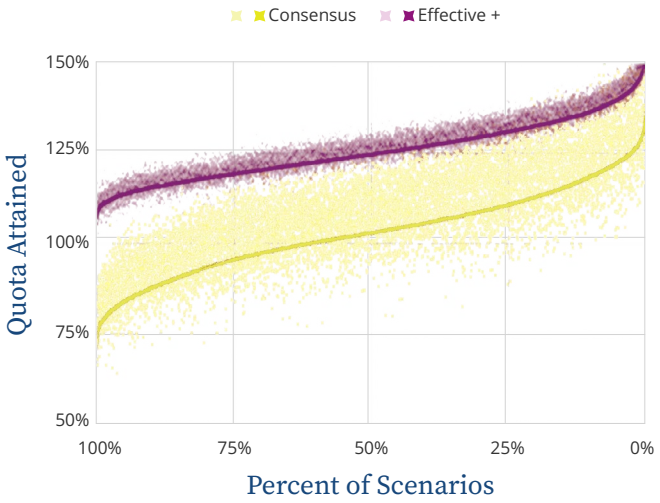

Figure 10

Figure 10 illustrates this effect by combining annual results (solid lines) with quarterly results (scattered points) for the Consensus strategy (which ignores Effective Headcount) and the Effective+ strategy (which targets it aggressively). Our simulation shows that, with the Consensus strategy, a single quarter will often range from 25% above to 15% below the annual result for that year.

Even in years when the team makes its annual goal, it is not unusual to have a quarter below quota–just as years that miss the annual goal can still have quarters at 120% or better. The Effective+ strategy, however, shows quarterly results clustering far more tightly to the annual outcome.

Applicability of Our Research

Our simulation was built on assumptions most applicable to junior- to mid-level sales positions, where employees require at least two months to reach full productivity and remain in a role for one to three years before being promoted or churning out. Longer ramp periods, shorter tenure, or higher turnover will all increase the benefit of Effective Headcount to forecast accuracy.

Effective Headcount For Non-Sales Roles

We focused on sales planning in this paper because it is an area of acutely intense interest to the widest audience. However, our methodology and findings can be applied equally well to almost any role where a number of employees are performing substantially the same job to achieve the same outcome.

For instance, this model would apply equally well to customer helpdesk agents at a software company, or to skilled machinery operators at a manufacturer.

Upcoming Publications

This paper is intended to provide a summary of our results for a general business audience. For those interested in a deeper discussion of our modeling techniques and assumptions, a subsequent paper will be published in 2023.