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NAVIGATING HUMAN CAPITAL RISK AND UNCERTAINTY THROUGH ADVANCED WORKFORCE ANALYTICS

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AUTHOR'S NOTE

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Some years back, the management of a global products company — that we'll call Digitt — faced an existential threat to its business. Earnings were negative and falling fast; debt was outsized and coming due. And the company's stock price was tanking. Billions of dollars in shareholder wealth had evaporated in short order. Beyond the frightening financials, the company's reputation was being shredded by a perception, among business analysts and reporters, of disarray within the company's executive leadership. A company that had been riding high not long before was nearing the point of no return. How had this happened so quickly?

The external drivers of Digitt's problems were well known. Like others in its sector, Digitt was facing a market in deep transition. The market for its products was being transformed by the digital revolution, rendering old product designs and associated business models obsolete. Further, the market was flush with competition: new, low-cost producers were entering. Price points were dipping even as the deployment of new technologies and re-tooling by incumbent firms required significant investment.

Digitt's leadership understood the size of the challenge these developments posed to their business and responded rapidly. They launched whole new product lines based on the new technologies, expanded the services component of their offerings and reorganized the business to emphasize and focus on their new product lines. They also launched a major marketing campaign to rebrand the company and introduced a new sales force model to help drive sales. Based on these actions, it seemed the organization was poised to meet the challenge of a changing marketplace. Yet the numbers told a different story: the verdict of customers and investors was that these actions were not enough.

One can argue as to what was the primary culprit of Digitt's near demise, but there is no question that a major contributing factor was management's failure to recognize and quickly address a large and looming form of human capital risk — namely, the swift, unanticipated depreciation in the value of its human capital. In effect, Digitt was experiencing rapid workforce obsolescence that mirrored the product obsolescence it was confronting. As the product market changed around it, Digitt failed to adapt its workforce and workforce strategy — largely leaving in place a workforce that simply lacked the knowledge, skills and expertise required to deliver on the new strategy. Thousands of technicians and engineers versed in the old technologies and business model remained in place, sustained by reward and performance management systems that continued to value them in precisely the same way as before. This system insulated these employees from market signals that would otherwise have told them their value was declining relative to those with skills and expertise in the new technology areas. Neither training investments nor rewards were adjusted to help transition this workforce to the required state.

While workforce obsolescence set in, no alarms went off in the Finance or Risk Management functions. No risk assessments were produced underlining this risk and pointing to the need to change a set of practices and a governing culture that were impeding the required transition. As was commonplace at the time — and, in too many organizations, remains the norm today — company leadership subordinated workforce management to other, presumably more important things, such as business strategy redesign, financial restructuring, new marketing campaigns, supply chain management and information technology alignment. Digitt acted as if the workforce would somehow magically come along with other business changes.

Although outside investors were not privy to detailed information on Digitt's workforce and workforce management practices, the market nonetheless received signals of this human capital meltdown. These came in the form of high and rising SGA costs, the financial reporting category that incorporates the cost of labor. These costs were significantly higher than those of Digitt's peers, particularly the newcomers to the market. They reflected, in part, the costs associated with a highly tenured workforce and their heavily back-loaded pay and benefits. They also reflected, as I'll show later in this paper, an incentive compensation system that even in this period of transition continued to direct scarce company resources to the "wrong" employees.

Change did finally come to Digitt. But it took many years, several management regimes and lots of squandered resources. The strong culture that contributed so much to the company's historic success became a liability at this time of business transformation; it impeded responsiveness to new information and blocked change. The system in place for managing human capital was deeply embedded in the culture — in fact, it largely defined the culture. The insulation from labor market dynamics thwarted the transmission of labor market signals that would otherwise have generated pressures for employees to adapt their skills if possible or move to areas where their old-line skills were better suited. Even when faced with clear indications that the company was investing in the wrong things — the past workforce rather than its future talent — the strong belief in the power of this culture made employees and function leaders essentially immoveable.

The Digitt story is more commonplace than one might think and has been playing out with increasing frequency in recent years in many sectors. In a fast-changing world characterized by rapid technological change, constant product innovation, economic globalization, and generational and cultural shifts, the life cycle of products and business designs is shortening. Companies are constantly obliged to adapt. It is often human capital, more than financial or physical capital that enables effective adaptation to these new realities. And it is often human capital that is at greatest risk of sudden depreciation within a business. At a time when so much value and competitive differentiation is driven by human capital and how it is managed, it is more important than ever for organizations to be able to identify, measure and mitigate risks emanating from their workforces. Unfortunately, those in the Finance and Risk Management functions traditionally in charge of risk management often lack the perspective and tools required to do this job.

TWO TYPES OF HUMAN CAPITAL RISK

A useful starting point to help address this gap in knowledge, perspective and tools is to establish a taxonomy of human capital risk that can help create a shared view, between Finance, Operations and HR, of the nature of human capital risk and the ways in which it manifests. Fortunately, organizations can draw from a substantial body of research and new analytical tools designed to support evidence-based approaches to human capital management.

The eminent twentieth-century American economist Frank Knight is best known for his enduring distinction between "risk" and "uncertainty."[1] Risk relates to fluctuations in business or economic outcomes that, although unknown before they materialize, nonetheless emanate from a known or knowable probability distribution. Such fluctuations can be identified and measured on the basis of the relative frequency of their occurrence, calculated historically, and addressed through optimization of decisions based on probabilistic models. In contrast, uncertainty pertains to situations in which not only the outcomes but their underlying probability distributions are unknown. The fluctuations in outcomes are so idiosyncratic or "one off" in nature, they occur with such infrequency that there is no reliable basis for deriving a probability distribution from which they can be generated. As such, these fluctuations cannot be anticipated on a quantitative basis or insured against either internally or by third parties. Knight demonstrated the implications for business decision-making for each type of risk, finding in economic uncertainty the very *raison d'être* for firms and the reason why economic profit persists even in competitive markets.

Knight's distinction is a useful way to think about the risks associated with an organization's human capital. Accordingly, we can define two essential forms of human capital risk:

1. Volatility in cash flow related to changes in human capital and/or how it is managed
2. Threats to shareholder value stemming from an unanticipated loss of value in the organization's human capital assets

The first form can properly be called "human capital risk" and is amenable to probabilistic modelling based on relative frequency of past occurrences. The second is not — it requires alternative approaches and business processes, such as workforce planning, to protect against adverse outcomes, particularly extreme ones. We might classify it as "human capital uncertainty."

We will now examine each form of risk, providing concrete, real-world examples of how they materialized, how they were evaluated using advanced analytics and how they could have been mitigated through more effective workforce management, informed by analytical results.

[1] Knight F. *Risk*, *Uncertainty, and Profit*, Boston: Houghton Mifflin Co., 1921.

HUMAN CAPITAL RISK

Some forms of human capital risk can be measured and addressed in conventional terms, using a probabilistic lens and relying on methods of statistical estimation. In a stable or "steady state" environment, periodic fluctuations in workforce productivity related to changes in some observable workforce characteristic (average tenure, demographic mix, turnover rates, etc.) or management practice (average spans of control, staffing mix, pay competitiveness, etc.) may be modeled probabilistically. Consider, for example, the case of employee turnover. It is generally presumed that unwanted employee turnover is costly. Conceptually, the reasons are clear: turnover can disrupt production or service-delivery processes, destabilize teams, weaken customer relationships, undermine institutional knowledge, demotivate remaining employees, and so on. Moreover, the direct costs of replacing workers lost to turnover and the indirect costs of reduced productivity as newcomers get up to speed can substantially increase labor costs and damage business performance.

Of course, turnover can also have positive effects on an organization. It can help triage poor performers from the workforce, correct for poor matches of employees to jobs and organizations, open positions to enable career advancement in an organization hierarchy and thereby generate incentives for employees to perform well and stay. It can facilitate the entry of new blood into the workforce, protecting against stagnation and spurring greater innovation. It can help transmit signals about the market valuation of different types of talent and ensure the organization adapts to a changing environment. (Indeed, in the case of Digitt, it was, if anything, the absence of sufficient turnover that prevented adequate and timely adaptation of its workforce to business demands). Determining the actual cost of turnover is thus an empirical matter.[2]

In our work with client organizations over more than 20 years, Mercer's Workforce Sciences team has found wide variation in the business impact of turnover. These effects cannot be gauged on a conceptual basis alone, at least not in a way that permits organizations to insure against and mitigate the resulting consequences. Quantifying these effects through empirical methods applied to the organization's own historical data can go a long way toward helping organizations deal with such risk. It can also help organizations decide what is worth investing to stem turnover and bring it into an optimal range. Quantification is essential to dealing with turnover as an economic issue.

CASE EXAMPLE: HS-CO TAKES ON ITS TURNOVER PROBLEM

A national health services company — that we'll call HS-CO — was struggling with high and rising turnover. Leaders of line operations across the business were complaining to HR and pushing hard for action. Relying on commonly used rule-of-thumb benchmarks of turnover cost, the CHRO appealed to executive leadership to make turnover reduction a top business priority and allocate resources to address the issue. Leadership rejected this appeal. They expressed skepticism about the relevance of these estimates to their business and were unwilling to make the requested investments on such a flimsy basis.

Fortunately, HR was not obliged to rely on arbitrary cost estimates. HS-CO maintained a running record of business performance that could be modeled statistically to estimate the actual costs of turnover for the organization. Working with the HS-CO team, Mercer compiled longitudinal data on the month-to-month variation, over several years, of various financial performance and service quality measures. We also assembled monthly workforce data covering the same period. The goal of the modeling was to quantify the effects of month-to-month changes in voluntary turnover on the performance measures tracked, after accounting for other market, operational and human capital factors that also drive performance.

The results indicated that turnover within service delivery teams was extremely costly to the firm. Model estimates suggested that a modest 5-percentage-point reduction in the turnover rate would likely reduce unit costs by more than $65 million, improve HS-CO's operating margin by more than $30 million and increase a key quality measure (deadlines met) by about 5%. Further statistical tests that applied methods of Granger Causality supported the view that changes in turnover rates drove changes in business performance, not the other way around. Finally, we found that turnover anywhere in the service chain hurt these business measures. The costs were not driven by turnover in any one job family or career level in particular, reflecting perhaps the team structure of production at HS-CO.

[2] For a more detailed discussion of the costs and benefits of employee turnover and case examples reflecting each, see: Nalbantian H. "Why You Shouldn't Rely on Turnover Cost Estimates," *Human Resources IQ*, 23 May 2012.

Using these kinds of workforce analytics, the company identified a key source of volatility in performance emanating from its human capital. By quantifying the business impact, HS-CO produced a new understanding of the size of the risk it faced and, therefore, what it was worth to mitigate this risk. In essence, the company determined what kind of self-insurance "premium" it should be prepared to pay. The remaining question was what form this insurance premium should take — higher pay for employees, more generous benefits, greater investments in training and development, more rapid promotions? Here, too, sophisticated workforce analytics proved to be of value.

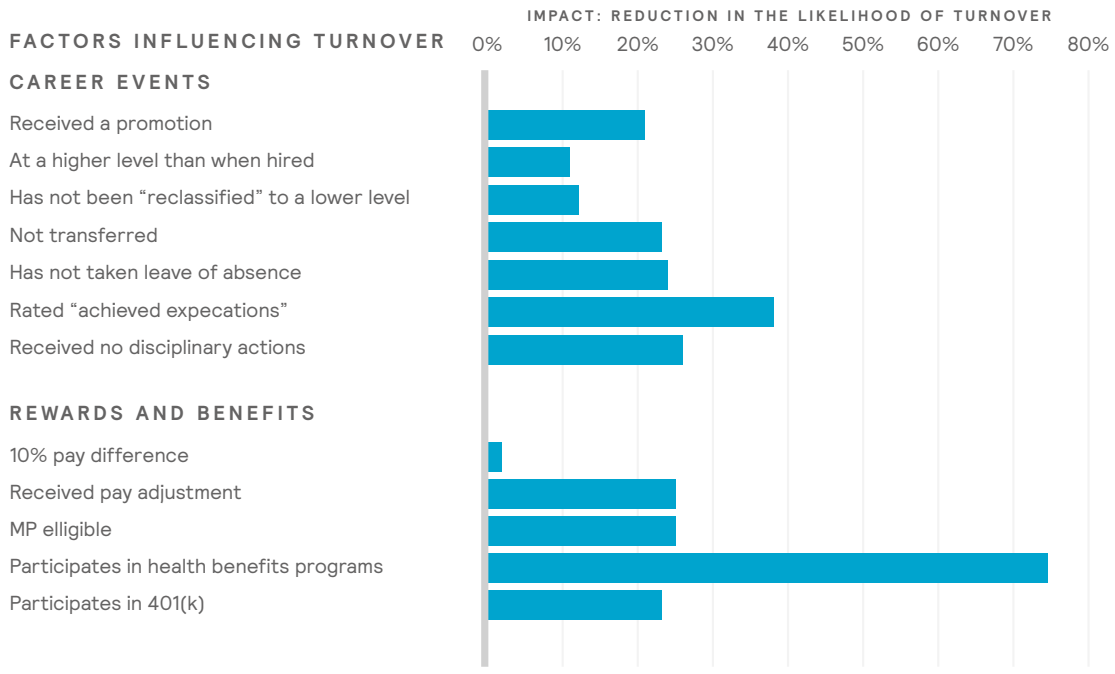
Modeling the Drivers of Turnover at HS-CO

Traditionally, getting at the causes of turnover has been a qualitative exercise, relying on exit interviews or employee surveys aimed at eliciting information on employees' "intent to quit." Today, many organizations rely on electronic information systems and routinely capture workforce data, so they can move beyond such qualitative assessments. Companies can statistically analyze the running record of actual stay/quit decisions by employees to identify and measure the predictive antecedents of actual turnover. In so doing, they can determine not only the probability of experiencing specified levels of turnover during a given time period, but how that probability distribution would likely change in the face of variations in workforce characteristics, workforce management practices and external labor market conditions.

HS-CO undertook such an approach.[3] Using methods of multivariate, logistic regression and tapping multiple years of workforce data, we estimated the drivers of voluntary turnover. The modeling established the conditional probabilities of employee turnover with respect to a set of observable environmental, workforce and management factors. Figure 1 represents a sample of key findings; each bar reflects the "elasticity" of turnover probability with respect to the specified factor, holding all else equal.

Figure 1. Turnover Drivers Chart

Selected drivers of employee retention at HS-CO; based on multivariate, logistic regression model accounting for multiple individual, organizational and external labor market factors



[3] For a more detailed discussion of the turnover modeling methodology used by this company, see: Nalbantian H, Szostak A. "How Fleet Bank Fought Employee Flight," *Harvard Business Review*, Volume 82: 4 (2004), pp. 116-125.

Modeling results indicated that employee turnover was most responsive to participation in various employee benefits and incentive compensation programs. In fact, the single biggest predictor of retention was participation in the company's health benefits program. All else being equal, those receiving benefits for at least one dependent other than their spouse were nearly 75% less likely to quit. Having more employees with dependents and getting them to elect coverage would likely reduce turnover dramatically. This was in stark contrast to results around pay: Our model estimates suggested that 10% higher pay across the board would reduce turnover probability by only 2%, making hardly a dent in the overall turnover rate.

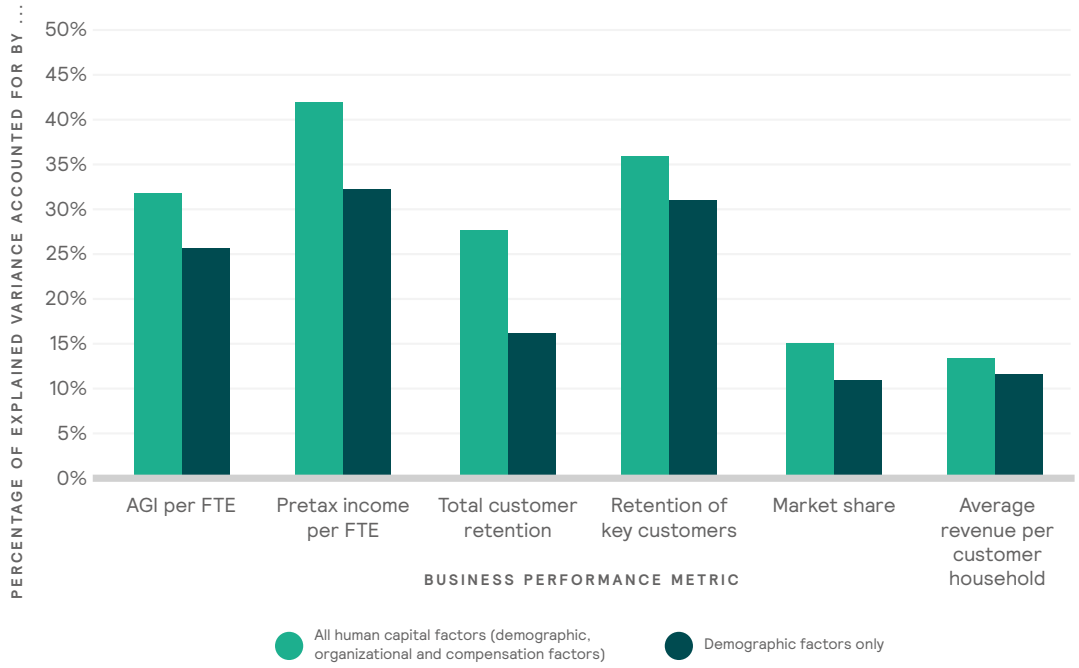
Mercer's analysis provided HS-CO's management with a clear road map for mitigating turnover risk. Quantifying the likely impact of specific interventions helped prioritize risk mitigation actions. The quantification was particularly important to HS-CO because the company was dealing with severe pressure to contain prices due to stiff competition and declining insurance reimbursements. For a low-margin business confronting such pressures, the idea of increasing workforce expenditures with more expansive and generous employee benefits was particularly unpalatable — in fact, unthinkable. Finance professionals are conditioned to think of benefits in terms of direct labor expense rather than behavioral impact. In this instance, HR had strong evidence with which to push back on this conventional thinking; indeed, considering benefits to be a form of insurance against human capital risk changed the whole nature of the discussion. Our modeling provided estimates of how much these benefits influenced turnover and how much turnover actually cost the organization in hard-dollar terms. These estimates could then be compared to the direct expense of expanding coverage and thereby inform the true economics of this decision. Substantial and speedy reductions in turnover in the aftermath of this decision — turnover was cut in half within a year — subsequently confirmed the effectiveness of such evidence-based decisions and the level of risk that had been averted.

Using such methodologies, organizations can focus on policy interventions that are more likely to mitigate a specific kind of human capital risk, in this case unwanted turnover. They can draw on modeling results to place a risk flag on individual employees, estimating flight risk of these employees based on the set of individual, group and labor market characteristics that define and influence them. This provides a basis for managers and supervisors to intervene in a targeted way to forestall imminent turnover. In the language of risk and insurance, developing such information can help address the classic challenges of "adverse selection" and "moral hazard" and lead to a more efficient and effective administration of self-insurance against a serious risk to their business. As HS-CO learned, paying an insurance premium induces employees with an inherently lower propensity to turn over to self-select into the organization and reduces the incentives of incumbent employees to exit, which can end up increasing the profitability of operations.

The HS-CO story is all about turnover risk and its impact on the business. Other kinds of human capital risk exist, beyond those related to turnover, that also can be treated and modeled in this way. For instance, statistical modeling of workforce data can identify drivers of the variation in absence, short- and long-term disability, individual performance and overall workforce productivity, among other things. To the extent these variations arise from differences in workforce characteristics and management practices, they can be classified as human capital risks and addressed either as part of an organization's workforce strategy or as part of a broader enterprise risk strategy. Similarly, we find that variations in the financial performance of "production" units — such as plants, stores, branches and offices — that are systematically driven by differences in workforce characteristics and practices can also be treated as "model-able" forms of human capital risk. For example, in one midsize regional bank, statistical modeling of longitudinal performance data revealed that the share of variation in performance across branches attributable to human capital management ranged from about 10% to over 40% depending on the particular performance measure examined (see Figure 2).

Figure 2. Sources of Variation in Branch Performance at FinanceCo

Percent variance of business performance measures, explained collectively by workforce demographics and workforce management practices; based on multivariate regression models applied to longitudinal data on each of the performance measures noted as well as workforce, locational and "operational" data.



In this particular organization — that we'll call FinanceCo — most of the variation was driven by employee demographics, of which employee tenure was by far the dominant factor. Specific management practices, such as use of incentive compensation and the magnitude of managerial spans of control, did have an impact but rather a small one compared to the value of homegrown experience. Numerous similar examples demonstrate that there are often sufficient regularities in business performance that permit a statistical approach to identifying and quantifying human capital risk.

HUMAN CAPITAL UNCERTAINTY

There are some forms of human capital risk that are not amenable to the same kind of modeling and probabilistic assessment illustrated above. The Digitt story is a classic example of this kind of risk. Digitt had no reliable data trail in its past business performance from which to derive a probability distribution of possible adverse outcomes of a similar nature — in short, the company had no way of anticipating, statistically, the meltdown that occurred. But does that mean that Digitt was doomed to be defenseless against an impending human capital implosion? Hardly! As with other forms of "hazard risk" and economic uncertainty, organizations have access to business processes that help gauge the likelihood and consequences of business crises brought on by misalignments in their human capital and develop plans to avert them or lessen their impact.

Implementing the discipline of strategic workforce planning and embracing it as a key business process is one such method. Properly designed and implemented, strategic workforce planning enables organizations to identify and manage human capital uncertainty more effectively. In the case of Digitt, a well-formulated process would certainly have exposed the vulnerability of the company's human capital assets in the face of a quickly changing business environment. As a matter of course, the company's leaders adapted their strategic, financial and marketing plans to deal with these new realities. As part of that process, they also needed to systematically translate new business requirements into supporting workforce requirements. In effect, they needed to create a "workforce blueprint" that laid out specifications for the required workforce — what the organization would need in and from their future workforce to successfully execute the planned business transformation. The blueprint would also have spelled out the set of policies and practices necessary to deliver on those specifications, including practices related to recruiting, selection, training, career development, supervision, performance management and rewards. The practices selected would align both with the workforce requirements and with each other; they would be designed to be mutually reinforcing. In fact, in the best of all worlds, strategic workforce planning would generate a number of such blueprints to reflect potential contingencies that could reshape the business and put the company's human capital at risk. Unfortunately, at Digitt, a clear-cut workforce blueprint was nowhere to be found.

Digitt was not unique in this behavior — it was a business practice norm then and largely remains so today. Effective risk management necessarily involves consideration of multiple scenarios that could put an organization at extreme risk and spells out plans to deal with them. Somehow, risk scenarios considered by organizations today rarely invoke human capital uncertainty or incorporate strategic workforce planning to assess and address it. And rarely does the more traditional workforce planning conducted by Operations or HR rely on objective empirical analysis. Seldom does it go beyond anticipating headcount needs and future talent requisitions to directly measure exposure to external and internal contingencies that can affect the organization's human capital.

Ironically, in this respect, Digitt was actually much more advanced than most organizations. It undertook a comprehensive statistical analysis of the dynamic patterns of hiring, turnover, promotion, performance and pay — what we call an Internal Labor Market (ILM) Analysis® — to gauge where these talent flows and rewards were taking the company's workforce.[4] The analysis exposed some serious risks affecting their current workforce and its future trajectory. Specifically, it revealed that tens of millions of so-called "pay for performance" dollars were flowing to chronic low performers — those who were in the lower quartile of individual performance year over year.[5]

[4] The concept of the ILM utilized here departs significantly from the original one developed by Doeringer PB and Piore MJ in *Internal Labor Markets and Manpower Analysis*; Lexington, MA: Heath, 1971. A discussion of the differences can be found in Nalbantian H, Guzzo R, Kieffer D, Doherty J *Play to Your Strengths: Managing Your Internal Labor Markets for Lasting Competitive Advantage*. New York, McGraw Hill, 2004.

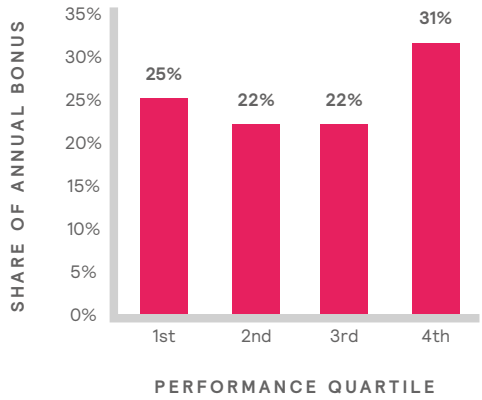
[5] For a more detailed explanation of the methodology behind ILM Analysis, see: Nalbantian H, Guzzo R, Kieffer D, Doherty J, 2004.

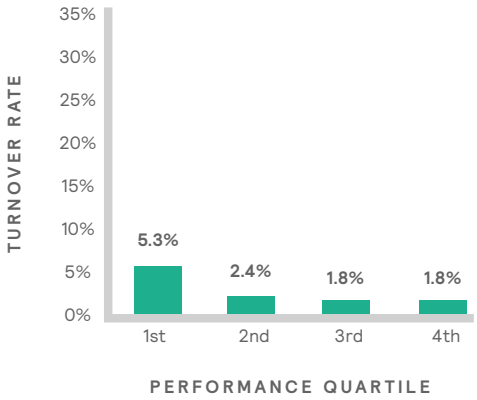
Figure 3. Allocation of Variable Pay at Digitt

Percentage of variable pay dollars allocated to each performance quartile and turnover rates of each quartile

A significant percentage of variable pay is distributed to sub-par performers.

Not surprisingly, few of the sub-par performers leave.





Why was this happening? Statistical modeling of the drivers of pay revealed that under prevailing incentive compensation systems, the dominant drivers of rewards at Digitt were years of service and business unit performance. That meant that employees in the old-line businesses (that were in decline but still a source of cash) were receiving significant bonus payouts, even if as individuals they were underperforming or had skills and capabilities that were not aligned with the new needs of the business. Not surprisingly, turnover among this population was exceedingly low — far too low to accommodate the necessary workforce transformation. As such, the company had insufficient resources to support new talent entering the organization with the right capabilities or high-performing incumbents.

In effect, at Digitt, it mattered more where you were than what you did or how well you did it. Those in the up-and-coming businesses had no comparable subsidies. Their businesses were in their infancy, not nearly profitable as yet. So these businesses did not afford similar bonus opportunity. Rather than being subsidized by the old businesses, this new talent, representing the workforce of the future, was financially penalized relative to their counterparts versed in the old technologies. This was hardly the way to engage and retain the talent of the future. Essentially, the pricing mechanism of Digitt's ILM was not functioning efficiently to revalue human capital in a way that aligned with business requirements.

The ILM Analysis of Digitt's workforce uncovered a real threat to the value of its human capital. Unfortunately, Digitt lacked an effective workforce planning framework to link these risks to business requirements and galvanize speedy change. Its risk management function contained no workforce planning process to absorb and synthesize these findings in a way that would highlight the risks posed and make them central to an enterprise risk management strategy. The institutional recognition of the significance of human capital risk and uncertainty was simply lacking.

Remarkably, this remains the norm for businesses today. The sheer number of company meltdowns that have originated with problems in human capital management makes it inarguable that the failure to embed human capital risk assessments within the Risk Management function is a major and very dangerous omission.

HOW RETIREMENT PLAN DESIGNS INFLUENCE HUMAN CAPITAL UNCERTAINTY

Sometimes organizations undertake actions to reduce financial risk that actually end up increasing human capital uncertainty. A glaring example of this phenomenon relates to pensions. Some organizations today are encountering a form of human capital uncertainty that is the outgrowth of earlier decisions to fundamentally change their retirement plans. Since the 1990s, many companies have been freezing or abandoning their defined benefit (DB) pension plans — plans that provide employees an annuity income based on age, length of service and some measure of final average salary — in favor of defined contribution (DC) plans, other account-based plans (e.g., cash balance plans) or, sometimes, nothing at all. DC plans involve contributions to individual employee accounts with employers commonly offering some level of match to employees' tax-deferred contributions.

Conventional thinking argues that account-based plans are favorable to employers because they eliminate uncertainty about future liabilities and immunize them from risks associated with changing interest rates and assumptions about longevity. They are also presumed to be favorable to employees because they are easy to understand, portable and ultimately under employees' own control. Looking solely through the lens of financial risk, it is hard to argue against these points. No wonder so many companies followed the herd in abandoning their DB plans. Unfortunately, too many organizations failed to anticipate and take account of the likely workforce impact of this shift — and the workforce impact can be very consequential.

Though DB plans do expose employers to certain financial risks, they can actually reduce human capital uncertainty by according the employer more direct influence over the timing of their employees' retirement. Under a DB plan, once an employee becomes retirement-eligible they start to forfeit income they could be earning without delivering any labor services to their current employer. In effect, they are subject to a tax on their current wage or salary equivalent to the value of current retirement income forfeited — income that will never be retrieved. Of course, the longer they work, the greater their accruals will be under most DB formulas. Moreover, many employees work for reasons well beyond the income produced. Various tangible and intangible benefits come from continuing to work beyond the age of retirement eligibility. Ultimately, however, employees arrive at a crossover point where the "option value" of continuing to work will be less than the value of retiring and drawing pension benefits.[6] Employees will have a clear incentive to retire. That crossover point will vary across employees, affected by multiple factors, including employee discount rates for future income, health considerations, family situations and the "psychic" returns from working. By manipulating DB plan formulas, employers can influence the specific age and tenure at which that crossover point and, therefore, the incentives for employees to retire appear.

In contrast, there are no inherent retirement incentives in the structure of common account-based plans. The financial inducement to retire is influenced by the size of the account balance and the adequacy of the retirement income it will produce. The vicissitudes of equity markets can affect income adequacy more than any account-based plan design component. Why does this matter? Because having substantial influence or control over the timing of retirement is an important instrument for managing the overall dynamics of the ILM that produces an organization's workforce. If employers don't influence the volume and timing of exits, their ability to optimize hiring, promotions and lateral moves is also likely impaired.

[6] For an articulation and empirical testing of the option value model of traditional pension plans, see: Stock JH, Wise DA. "Pensions, the Option Value of Work, and Retirement," *Econometrica*, Volume 58: 5 (1990), pp. 1151–1180.

The post-financial-crisis environment of low growth and weak labor markets has brought home the seriousness of this talent problem to some organizations, particularly those that pursue a "build from within" strategy of talent management. Such organizations focus their hiring on lower career levels and rely on training and career development to build the capabilities of their workforces. Opportunities for promotion and lateral moves are pivotal to making this system work efficiently. They constitute the core incentives that motivate employees to stay, grow and perform with the organization. As such, "build" organizations require reasonably high-velocity talent movement to sustain their talent strategy. In a world of robust growth, the creation of new positions across the career hierarchy can deliver the opportunities that make this system work. But what happens when growth stalls as it did in the aftermath of the 2008 crisis? If new positions aren't being created, the organization needs adequate exits of incumbent employees to sustain career momentum for others. Timely retirement becomes a necessary condition for the build strategy to function — for up-and-coming talent to have a chance to grow and advance. Unfortunately, the post-crisis economy accentuated incentives for retirement-eligible employees to stay on in their jobs, particularly if they worked under an account-based plan. With plan balances down due to sagging equity markets, grim future employment prospects and no financial penalty for continuing to work for their current employer, these employees had strong motivations for delaying their retirement.

In this environment, systematic delays in retirement can bring a firm's ILM dynamics to a standstill.[7] For a build organization, each delayed retirement can cause incumbents in feeder roles to remain in position as well, creating a cascade of lost advancement opportunities. As a result, the overall velocity of talent movement slows and career "choke points" form, sometimes at relatively low levels of the organization hierarchy. Suddenly, those in the leadership or technical talent pipeline find themselves stalled. They have nowhere to go, and often their pay languishes as well because in build organizations, salary is usually linked to career level. Under such conditions, the likelihood of turnover of up-and-coming talent — those with the best prospects elsewhere — will rise. And for those who are left behind, engagement will likely fall, with negative consequences for workforce productivity. All of these are the costly, unintended consequences of a decision that effectively removed management's ability to directly influence employees' incentives to retire.[8]

CASE EXAMPLE: DELAYED RETIREMENT AND ITS CONSEQUENCES AT CONSUMERCO

ConsumerCo, a global consumer products company and Mercer client, has been dealing with the unintended consequences of losing control over the retirement decisions of its employees. The company froze its DB plan in the late 1990s, moving to a DC plan with a profit-sharing component. For a while there were no problems — but then the economic crisis hit. Employees' DC account balances declined dramatically, making it difficult for retirement-eligible employees to exercise their option to do so. Uncertainty about future job prospects in a time of extraordinary labor market weakness compounded employees' risk aversion and induced many to hold on to their jobs. Average retirement age increased significantly. Delayed retirement was not an inherently bad thing for ConsumerCo, but given the particular circumstances of the company, it had far-reaching negative effects.

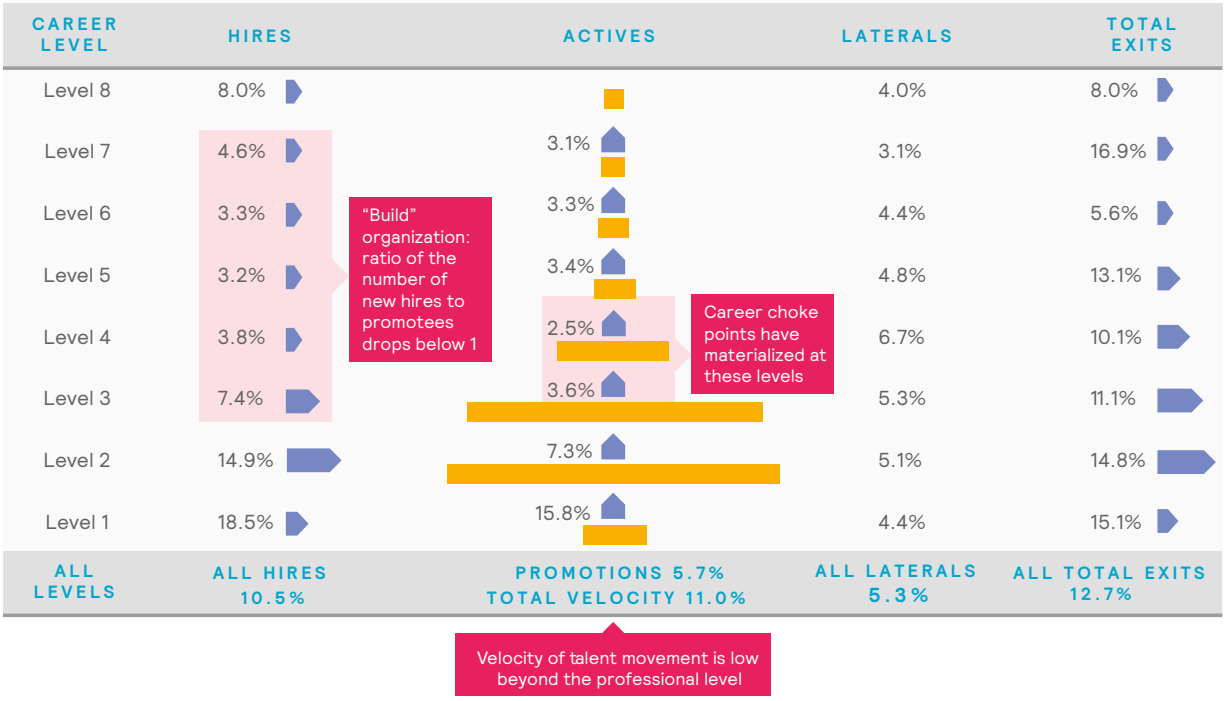
Specifically, because ConsumerCo prefers to build its workforce from within, maintaining ample velocity of talent movement through and up the organization is a critical ILM parameter influencing the success of its talent strategy. In the low-growth environment, ConsumerCo had little opportunity to introduce new positions in the middle and upper career levels and to grow headcount. As such, delays in retirement substantially reduced the rate at which existing positions opened up. As the ILM map of ConsumerCo in Figure 4 shows, the net result was a very low velocity of talent movement within the firm's labor market. Promotions and lateral moves hovered around 11% globally (less than 10% in the US) combined, and career choke points were created at the lower levels, blocking opportunities for advancement.

[7] A parallel view of the role and importance of retirement is found in Edward Lazear's seminal article: Lazear E. "Why Is There Mandatory Retirement?" *The Journal of Political Economy*, Volume 87: 6 (1979), pp. 1261–1284.

[8] For a further discussion of this issue, see: Weber L. "For Employers, a Hidden Downside to 401(k) Plans," *Wall Street Journal*, 17 June 2014, available at http://blogs.wsj.com/atwork/2014/06/17/for-employers-a-hidden-downside-to-401k-plans.

Figure 4. ConsumerCo ILM Map

Annotated ILM map showing the distribution of workforce across career levels as well as average annual rates of entry, promotion, lateral moves and exit



Indeed, at ConsumerCo, the probability of promotion in the lower/middle parts of its career hierarchy, between Levels 3 (Senior Professionals) and 4 (Manager) and between Levels 4 and 5 (Senior Manager), fell below 4% and 3% per year, respectively — remarkably low promotion rates for a build organization. Not surprisingly, modeling ILM dynamics showed that up-and-coming talent — that is, high performers and high potentials, especially coveted female and minority talent — were more likely to exit the organization at these levels. In effect, the lack of incentives to retire was serving to retain retirement-eligible employees at the expense of up-and-comers. The past was crowding out the future. As for the more junior talent that didn't leave the organization, how would motivation and engagement fare when so few were moving and opportunities for advancement and learning were becoming so rare?

This begs the question: To what extent are companies that switch from DB to account-based plans actually offloading risk, as their Finance leaders claim? True, they eliminate the financial risks associated with interest-rate fluctuations or incorrect longevity assessments. But in the process, they expose themselves to new risks associated with loss of control over their ILM. In essence, these companies shed financial risk only to increase human capital uncertainty. For a talent-driven business, this can be a dangerous move.

But it is a move that many organizations have made and continue to make. Relentlessly! Why? One must question the wisdom of companies forfeiting their influence over the only market they can actually control — their ILM. Why would management constrain its ability to shape a prime driver of business success (its workforce) to limit future financial risks, some of which are often manageable through other financial strategies and instruments? There may be better ways to offload this and related financial risk than to cripple the navigation system of an organization's ILM, effectively rendering the future composition and capabilities of its workforces a random outcome.

WHAT IS AN ILM MAP?

An internal labor market (ILM) map represents the distribution of employees across career levels and the average annual rates of movement into (new hires), out of (turnover) and through (promotions, transfers, etc.) these levels over the period analyzed, usually three to five years. It offers a "system at a glance" view of the dynamic process of talent flows that actually create an organization's workforce. ILM maps across and even within organizations can differ in shape, relative orientation of "buying" versus "building" talent, overall velocity of talent movement, the degree and location of career chokes points, and concentration of hiring and/or exits at particular levels, among other things. Observations on these descriptive characteristics can be very revealing about critical human capital issues. Even more powerful is knowledge that comes from statistically modeling the drivers of these talent flows and associated rewards to explain why the internal labor market functions as it does and which workforce characteristics and practices are most influential in driving observed outcomes.[9]

[9] Nalbantian, 2004.

CONCLUSION

In this age of human capital, the oft-repeated corporate mantra of "people are our most important asset" is no longer simply lip service to the value of employees or a slogan to convey a commitment to "corporate social responsibility." Rather, it has become an articulation of hard fact, the reality that effective management of human capital assets and their risks is central to driving and safeguarding shareholder value. For companies like Digitt, understanding and embracing this reality can be a life and death issue.

And yet, there is still no accepted, core business process and methodology in place to help organizations address human capital risk and uncertainty as part of their overall risk management strategy. This omission is hard to explain and harder still to accept. The advent of sophisticated workforce analytics makes the identification, quantification and management of human capital risk and uncertainty eminently achievable. The required data, technology, statistical methods and models are readily available to most organizations. That such analytics are still not being deployed pervasively for risk management purposes has more to do with the prevailing mindset around corporate governance than with any lack of capability.

A major part of the problem is the kind of thinking that still dominates the Finance function. Consider again the situation at HS-CO: Investing heavily in benefits in a low-margin business is clearly a hard sell to those who take an "expense view" of labor cost — that is, to those who equate labor cost with labor expense. In contrast, those who adopt an "investment view" of labor — one that recognizes that real labor cost is, in fact, labor productivity — have no trouble accepting the argument that increasing spending on employee benefits can actually reduce labor cost if, as in the case of HS-CO, by reducing turnover it significantly increases labor productivity. From this perspective, increasing benefits at HS-CO is no different from buying an insurance policy against a potentially costly but insurable business risk. Indeed, if expanded or accelerated benefits coverage reduces the probability of unwanted turnover both by selecting into the organization employees who are more likely to stay and enhancing incumbent employees' incentives to stay, thereby stabilizing the workforce and increasing labor productivity, this investment in benefits will likely pay off. Like any well-designed insurance policy, it helps address both the selection and incentive problems that drive turnover. Of course, the value of such insurance depends on the true cost of turnover for the organization. If employee turnover strongly diminishes labor productivity, spending more on benefits to reduce turnover makes economic sense. The only way to know this reliably is to model and quantify both the drivers of turnover and its relation to productivity.

The HR function is gradually coming to understand this. Indeed, HR leaders' thinking has seen a "sea change" over the past 20 years or so. HR professionals are increasingly sophisticated in their approach to human capital management — the burgeoning discipline of workforce sciences and increasing presence of in-house workforce analytics functions in large enterprises are a testament to this evolution within HR. But these views and methods have still not penetrated the Finance and Risk Management functions. Although many firms and consultancies talk about enterprise risk management, few have actually embedded human capital risk identification and measurement in their Risk Management functions. As such, even in those organizations with very sophisticated workforce analytics, their full value is seldom realized.

This situation won't change without a similar revolution in the mindset of Finance and a structural adaptation of corporate governance to accept that human capital management is the newest, often most important and surely most complex form of asset management. When it comes to human capital management, the accounting lens has to be displaced by the economics lens. Finance must adapt or cede this part of corporate asset management to HR or Operations. In the age of human capital, advanced workforce analytics are destined to become a core part of the risk management toolkit.

ABOUT THE AUTHOR

Haig R. Nalbantian is a senior partner at Mercer and co-leader/co-founder of Mercer's Workforce Sciences Institute. A labor/organizational economist, he has been instrumental in developing Mercer's unique capability to measure the economic impact of human capital practices. Haig has applied those capabilities in numerous projects he has directed for leading organizations in the US and abroad across a wide range of industries as well as public and not-for-profit organizations. In more than 25 years of consulting, he has worked with many high-profile organizations to introduce or strengthen their use of evidence-based human capital management.

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Haig earned his BA in English and economics at New York University and his graduate degrees in economics from Columbia University.

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