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Learning from practice: how HR analytics avoids being a management fad

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INTRODUCTION

Far better an approximate answer to the right question, which is often vague, than an exact answer to the wrong question, which can always be made precise.
John W. Tukey, mathematician, 1962

Half a century later, Tukey's point is as relevant as ever. It helps explain why HR (human resources) analytics risks becoming a management fad, instead of providing powerful insights for general managers and HR leaders making key decisions about talent, incentive structures, organization design, allocation of training budget, etc. to support value creation and the business strategy. Management fads exist. Some fads become institutionalized within companies (e.g., MBO, matrix management, core competence); other fads fade (e.g., time management, zero-defects, T-groups). They are shiny new ideas that get attention but do not endure (e.g., learning organization, Japanese management, one minute manager, re-engineering). That HR analytics is one of the latest emerging fads is a paradox in itself. The promise of analytics is great: replace fads with evidence-based initiatives, data-based decision making, bridge management academia and practice, prioritize impact of HR investments, bring rigor to HR and supplement HR intuition with objectivity. Large parts of HR analytics, however, are not new and people have talked about HR metrics, utility analysis, HR scorecards, HR ROI (return on investment), personnel economics, and evidence-based management for years without a large noticeable step-change in the business impact of HR. So far the published evidence supporting the alleged value of HR analytics is actually quite slim — it is currently based more on belief than evidence, and most often published by consultants with a commercial interest in the HR analytics market, while organizations rarely share the same success stories of business impact, but typically share cases with turnover prediction (even if turnover is not an issue) or projects with a similar narrow HR focus. Rigorous analyses of loads of data on the wrong questions often have little practical value. Yet HR analytics tops most conferences this year (greatly helped by the many HR technology and consulting firms who see a major future business opportunity in selling data and statistics capabilities to a function that is short on both), and is also the dream of many management academics of how what they do finally becomes the center of the HR profession. We predict HR analytics in its current form will continue to fail to add real value to companies. We agree with those who argue that HR analytics is being taken over by other functions that are more mature in their analytics journey (in particular finance, IT, and marketing) and that this will happen sooner rather than later, but also that this is actually a good thing: HR analytics needs to evolve and transcend HR (as other functions' analytics will need to transcend their own functional boundaries), and will only become relevant when it takes an ''outside in'' approach, and is taken out of HR and integrated in existing end-to-end business analytics. In this paper we highlight

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what is contributing to HR analytics in its existing form becoming a management fad, what can help HR analytics deliver value by being part of end-to-end analytics, and illustrate this with two cases.

WHAT CONTRIBUTES TO MAKING HR ANALYTICS A MANAGEMENT FAD?

HR analytics in its current form has the risk of being a fad that fades. Here is a list of analytic pitfalls that will contribute to make it a fad:

(a) Lack of analytics about analytics. One colleague made a vehement case that HR work required more analytics and that rigorous analytics was the wave of the future for HR. We asked him a simple question, "what is your data that suggests that analytics is critical for the future?" Some who are enamored with analytics are not using analytics to justify analytics. They are analytical hypocrites who call for analytics, but do not use analytics to justify the use of analytics.

(b) Mean/end inversion or data fetish. Some are enamored with analytics, thinking that more data (or "Big Data") is always better. It is not about data, but about data for informed decision-making. For example, what separates distinguished academics like Daniel Kahnemann, widely known for his work on cognitive biases and how same can distort decision-making (see his bestseller *Thinking, Fast and Slow*), from less distinguished colleagues in academia is not having more or "bigger" data, but having the right data (including qualitative data or other data that is not readily available), asking the right questions, and interpreting the results and implications the right way. Analytics for the sake of analytics is not helpful. Analytics too often starts with data, when it should start with business challenges (hence all the analytics cases linking survey data to turnover because the data is readily available — while it does not yield new, insightful or value adding results). HR succeeds by adding value to business decisions — by informing how to make business decisions that intervene and create business success, not just by validating existing knowledge in practice. Think of the efficiency/effectiveness discussion in HR as an analogy: HR analytics is often preoccupied with "doing things right" with an "inside-out" HR perspective (e.g. do we use the right recruitment assessments? What is the ROI of our training programs? How efficient is our onboarding?), while it may create disproportionately more value when HR analytics applies an "outside-in" perspective and "does the right things" (How do we help transform the organization's culture so we can better deal with market consolidation and expected acquisitions the next 3–5 years? How can we grow critical technical talent faster, cheaper, better than the market to realize our growth strategy in a booming market and differentiate ourselves from the competition?).

(c) Academic mindset in a business setting. Some companies, e.g. Google, Shell, Aramco, PepsiCo, HSBC, are currently using/implementing human capital analytics as a way to bring more theory and rigor to the practice of management. One leading company in fast moving consumer goods hired some well-trained theorists and researchers who set about to predict turnover, consistent with published studies in the academic literature. After enormous effort, they were able to explain more than 70 percent of the variance in retention of human capital. But, when they shared their results, a thoughtful observer said, "so how serious is the problem of regrettable losses in the company?" The researchers responded that the company had less than 2 percent regrettable losses for the key positions and top levels. The academics who went into industry led with theory about what they had studied, not with questions about business challenges facing this company. This company was facing challenges of global market penetration, product innovation in declining markets, an activist investor who wanted to force management changes, and a culture of working within silos rather than collaboration. But, the theory based academics started their human capital work with a theory they were testing (turnover of firm specific assets), not with a deep understanding of business challenges. So even though academia and the accumulated science is an enormous resource for management practice (and an underutilized resource too), not understanding the differences between academia and practice — or academia and actionable analytics — may actually undermine the value of HR analytics. Academics like to create assumptions that allow them to test null hypothesis and offer incremental insights on theory. Business leaders face complicated problems that require integrated solutions. Academics like precision; business leaders require practical "good-enough" solutions. Academics start with theory; business leaders start with real challenges. Academics like to reflect; business leaders have to act.

(d) HR analytics run from an HR Center-of-Expertise (CoE). Recent evidence suggests that chief human resource officers with a clear business focus are still few and far-between (and hence receive a premium on pay). Practical experience tells us that HR CoE's with an "outside-in" approach and deep business understanding are even rarer. HR analytics CoE's will often use big data to discover insights that they will "push" out to the businesses. This is a bit like shooting a gun in the air and hoping a bird flies over. Dust bowl empiricism was popular with the advent of multivariate statistics when statisticians were seeking statistical relationships without a clear theory guiding their analyses, but when analytics are push, not pull, they risk the liabilities of dust bowl empiricism and rarely yield business value. Just as Kahnemann's distinguished work was more about his focus than amount of data, impactful HR analytics is more about strategic business focus than random patterns in big data.

(e) A journalistic approach to HR analytics. Politics and power are real phenomena in any organization. The philosopher Foucault noted that "power is knowledge," referring to the fact that power in part decides what knowledge creation will focus on or that "history is written by the victors." HR analytics can be misused to maintain the status quo and drive a certain agenda, i.e. when you know what story you want to tell, and you then go look for data to support same (e.g., requests to "validate the effects of our training"). Just like academia

suffers from publication bias, findings showing no effect or even value-destroying effects of HR processes or initiatives are sometimes not shared. In many cases, these require substantial energy devoted to stakeholder management (but are often among the most value-adding HR analytics findings). This is similar to the findings generated by various "think-tanks," in which the particular focus and interpretation are guided by a particular framework with the purpose of advancing particular points of view. HR should aspire to the ideal expressed by the Scottish novelist Andrew Lang in 1937: "I shall try not to use statistics as a drunken man uses lamp-posts, for support rather than for illumination." HR analytics departments need future funding to exist, and to do that they must balance good news and bad news about the HR organization, and chose their battles. In particular, there are still several HR initiatives around that are more based on belief than evidence (one of the authors recently encountered a company that uses handwriting analysis in selection during recruitment). This is why HR analytics needs to link company specific findings to published research, and always quote what the external and independent research finds on the investigated topic. This also highlights a big difference between HR analytics and independent academic research, and the value the latter brings to the former. One positive thing that HR analytics can take from journalism is the clear storytelling — if you cannot tell your story, including implications and recommendations in one slide (regardless of study complexity and amount of data used) then the odds of getting executive buy-in are slim. Very good HR analytics work often fails because it adopts the academic communication style and loses its business audience (also at times because it wants to show all the work done, which is really not relevant to share — effort really does not give you any points, only results and insights count).

OUR SUGGESTIONS FOR MOVING HR ANALYTICS FROM FAD TO AN ONGOING PART OF MANAGEMENT DECISION-MAKING

On the positive side we also see a number of things pushing HR analytics in the right direction, both in terms of focus, setup, change management, and capabilities in HR.

- Start with the business problem. HR analytics should not start with data or a preconceived approach to business problems, but with a business challenge. This point is often noted in the analytics discussion, and is actually the application of the "outside-in" thinking to this particular area of HR, as illustrated in Figure 1. This highlights that analytics and data are really only smaller and integrated parts of the overall diagnostic framework — means and not ends. We also recommend that analytics focuses on the three to five big-ticket issues for the business. This means resisting the temptation to continuously pursue many smaller and less value adding issues (e.g., turnover prediction, learning ROI, simple survey linkage analytics etc. when same are not core for a business issue). Ask yourself: "What are the biggest challenges facing our business the next 3—5 years, and how can HR support the business on same?" — that is typically the best starting point for actionable analytics.

- Take HR analytics out of HR. This may sound drastic, but when HR analytics matures, it initially starts cooperating more with other departments' teams (in finance, operations, etc.), and eventually becomes part of cross functional/end-to-end analytics — looking at human capital elements in the entire value-chain. HR analytics must transcend HR issues and become part of existing cross functional business analytics, just like the analytics from other functions must transcend their functional areas. Analytics typically only yields truly new insights when multiple fields and perspectives are combined (investor perspective, customers, technology, human capital, safety, etc.), so any functional denomination prior to "analytics" is really just a sign that it has not matured enough yet to just be a natural part of "analytics." Most HR analytics functions are some years away from this, and perhaps need to be matured to some extent within the HR function first (this maturation can be accelerated by importing business analytics talent to run HR analytics — it is often easier to teach business analytics professionals HR than to teach HR professionals statistics and analytics). Technology is also driving the integration of functional analytics; historically, data platforms were limited so each function/line of business typically got its own and correspondingly developed its own reporting team and subsequently its own analytics team. The future belongs to the cloud, real-time data, and cross functional/line of business "enterprise" platforms (which also allows businesses to reduce cost by operating fewer platforms and systems) — and that paves the way for cross-functional, end-to-end analytics. It is time for HR to join the party and "get a seat at the analytics table" and not just sit at its own HR analytics table. This also solves the talent issue in HR analytics (people with statistical analytical capabilities and
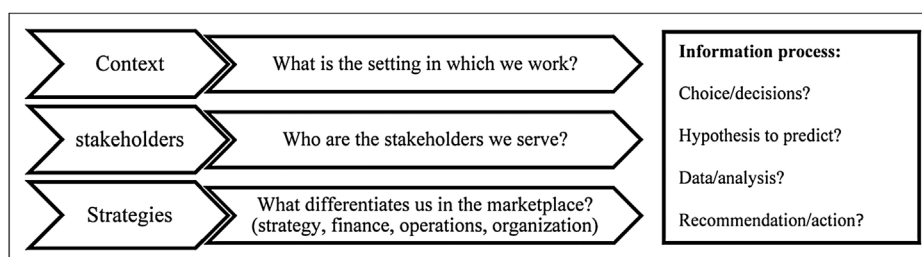
Figure 1 Information for decision making: the process starts with these key questions on context, stakeholders, and strategies. The information process proceeds with four questions: What choices do we need to make? What can we discover and test? What data can we collect and analyze? Which actions do we now recommend?

business understanding typically do not gravitate towards HR), while there may be some practical hurdles to overcome on data-privacy with an end-to-end analytics setup, as HR data is distinct from data used by other analytics teams. Finding a practical way to balance HR data privacy with the business value in insights from analyses of (anonymized) data is a growing issue in any case, but none the less a practical issue that can be overcome (Finance analytics teams face separate challenges, as the right aggregation of data actually can give them inside-trader status).

- Remember the "human" in human resources. HR analytics forgot about the H of HR — data and evidence does not change anything, as neither people nor organizations are completely rational. Sometimes it actually just makes it harder to change the status quo. At best, HR analytics provides input for management discussions that can elevate the decision quality, but there is rarely a straight line from data and analyses to action. We can learn a lot from the traditional change management literature and from Festinger's findings on cognitive dissonance. These findings highlight that for most people, given the choice between existing beliefs and new data showing your beliefs are misguided, people will choose their belief system and reject the data. (In Festinger's research, when the members of a UFO cult realized that there would be no Armageddon on earth and Messiah on a spaceship coming to save them on the predicted date, they concluded that actually because they had been so strong in their faith — instead of reaching the logical yet more painful conclusion based on the data, that their belief system just could be wrong). The tendency to reject data that threatens existing beliefs is strong if people have invested time/effort/identity in projects or ideas. That is the case for most HR initiatives, which typically have a proud sponsor or owner, often a senior leader who may not particularly like findings from HR analytics casting doubt on the value of his or her initiative. This is why data and evidence from HR analytics often has little impact — it is not just about science and data — it is about activism and having a point of view, about intervention and change. HR analytics findings are products that have to be sold to have any impact. This is easier if HR analytics also includes qualitative data, intuition, experience and — most of all — if it works on co-creating a coherent story with the key stakeholders. And this story should always start with the business challenge.
- Train HR professionals to have an analytical mindset. Let's be honest — most HR professionals are not attracted to HR because of the opportunity to work with data and analytics as part of their role. There is, however, a growing appetite amongst HR professionals to acquire analytical capabilities, in particular when they experience firsthand how it helps them support their business. There are few courses in HR analytics, and those that exist may be superficial. A course in HR analytics would include: deploying a diagnostic framework (see Figure 1), basic training in statistics and science methodology (or perhaps just a recap for some), change management, and storytelling. It is important to be realistic: we typically see a 20—60—20 split between groups of HR professionals who get it, those who can be taught, and those who will never get it. We recommend that you focus on the first two groups, and

supplement training with hands-on projects, and closer cooperation with academics. In addition, we would argue that 80 percent of analytics is similar across functions/lines of businesses. The majority of analytics training should ideally be cross-functional, and only a smaller part of the training should be HR specific (or specific for other functions/lines of business).

TWO CASES SHOWING THE VALUE OF EMBEDDING HR ANALYTICS IN BUSINESS ANALYTICS

In the following we will illustrate two cases of HR analytics being successfully integrated in business analytics and leading to impactful interventions on offshore drilling performance optimization and technical talent development, respectively:

Case 1. Leadership quality, crew competence, and outcomes on safety, operational performance, and customer satisfaction.

Maersk Drilling, a leading offshore drilling company and a business unit in the A.P. Moller — Maersk Group, experienced considerable variance in performance between similar drilling rigs operating under similar conditions, and at the same time faced the challenge of growing 40 percent within a four year period. Top management, including the CHRO, was interested in identifying: (1) What explains variance in performance between rigs? (2) How can that knowledge effectively be deployed to new rigs brought into operation?, and (3) How can the results be used to help convince prospective clients that the company will deliver on promised performance standards while growing considerably in a hot market? Business analytics using both qualitative and quantitative data, experience from the business, and offshore leaders' intuition about what drives performance found strong and significant links between leadership quality (measured via a yearly people survey), crew competence (documented according to the industry standards and requirements), safety performance (from the company's safety system), environmental performance (spills documented in the company's health, safety, and environment (HSE) system according to the offshore industry standards), and outcomes on operational performance (via the company's operational business intelligence system) and customer satisfaction (via the company's commercial customer relationship management (CRM) system) across units in the company fleet. The findings were integrated in an end-to-end value chain analysis, and compiled into one coherent story: Customer satisfaction is about operational performance (in this case drilling performance/uptime), but other factors also matter for company success: leaders assessed more positively (on various standard leadership tasks) by their direct reports have lower crew turnover, lower turnover is associated with higher crew competence (fewer new people to train), which in turn is related to better safety performance, fewer spills, and fewer maintenance hours outstanding (i.e. the time it takes to fix stuff) which impacts customer satisfaction. Recommended action is to focus on leadership quality (training and selection), crew
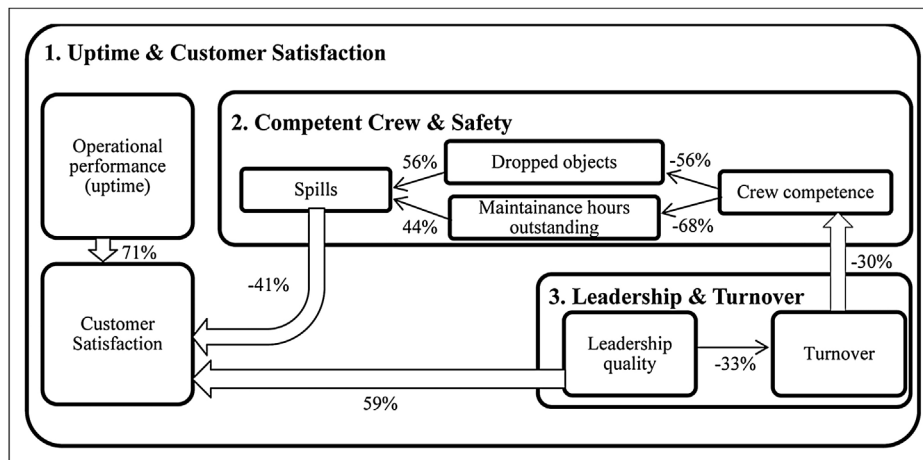
Figure 2   HR analytics in Maersk Drilling. Percentages shown are the squared correlations, i.e., amount of variance explained. Often HR Analytics would only link leadership quality and turnover (box 3), while a broad analytics approach like below looks at the entire value chain

Table 1   Outcome of Specialist trainee program compared to peer-group.

KPI	Specialist trainees	Peer group	Difference
Retention after 5 years	63%	60%	3% better retention
Time to develop into Lead Specialist	6.6 years	10.2 years	3.6 years less
Total cost pr. person prior to Lead Specialist position	1,882,500 USD	2,850,000 USD	967,500 USD per trainee
Performance average in Lead Specialist position 2010—11	3.3/3.5	3.2/3.2	+2%/6% performance
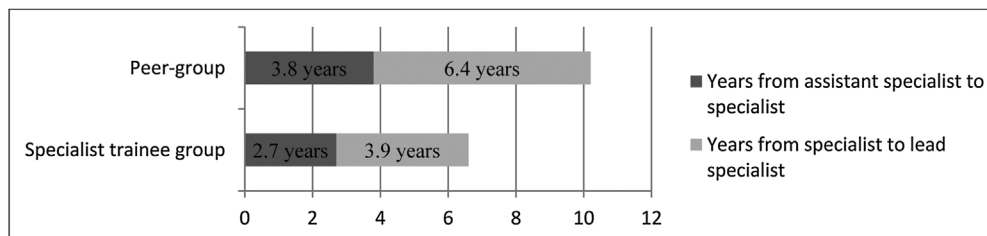
Figure 3   Development time to target position

competence (training budget and controls) and maintenance hours outstanding across the fleet by placing same on unit scorecards, and to communicate the findings throughout the company to all leaders and employees and to existing and prospective clients.

Even though advanced statistical methods were used (logistical regression models on longitudinal data), the presentation just showed the r-squared values between the different elements, keeping in mind that this was not for an academic audience. It was to support storytelling for a (technical) business audience, and emphasizing the importance of co-creating the story with the many stakeholders. The analytics were part of a change management process Figure 2.

Case 2. ROI and Strategic Impact of Technical Trainee Acceleration Program

The same offshore drilling company, Maersk Drilling, had challenges filling lead specialist positions due to industry talent shortage and growth. It had experimented with a strategic initiative to develop technical talent for the senior specialist target positions. Business analytics was used to identify that the company graduate program for Specialist Trainees showed desirable results on key outcomes compared with their peer-group (see Table 1 and Figure 3). In addition to showing simple training ROI, the findings fed into a strategic talent discussion (build/buy/borrow). The company decided to double the graduate program intake to sustain its growth plans. Again, simple statistics were used to support the story (see Table 1 and Figure 3). In this case, it was also the co-creation of the story — backed by data and analytics — and that analytics was treated like a change management process that paved the way for the results to have a positive business impact.

CONCLUSION

We experience that as soon as we question the analytics movement, we get labeled troglodytes who live in the past and are out of date with modern HR. We disagree. The HR field is littered with good ideas that have not been institutionalized. We hope that our recommendations offer a way to make HR analytics a realistic and ongoing part of improved HR impact.

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