

# Big Data: It takes two to tango

A lot has been written about the arrival of Big Data and the consequent analytics revolution in management. Some – mainly practitioners – predict management analytics has a very bright future. Others – mainly researchers – are concerned whether analytics will become yet another management fad. However most agree that management analytics is about replacing beliefs and guesses with much needed evidence and facts, and in its heart, i.e. down to its basics, it is about connecting people and performance to drive managerial decision-making. Though »big data« and »analytics« are mainly business terms, we see more and more researchers being attracted by the »big« and starting to explore the opportunities that the »bigness« could offer. Yet, both managers and researchers seem to be hitting the wall (Cascio and Boudreau, 2009; Rasmussen and Ulrich, 2015). In this editorial we argue that to move on, practitioners and researchers need each other – »it takes two to tango«.

### The Big Data challenge

Let us start with practitioners. Just to be clear: We do not know any managers in Denmark (or elsewhere), who are genuinely against analytics, who do not want to use data to document the value added by management practices, or who do not appreciate the value of data-driven decisions. Yet, our numerous conversations with managers in various companies highlight the main challenge: The step from metrics to analytics often proves too difficult. A 2013 study by Deloitte (Bersin *et al.* 2013) found for instance that the majority of companies (84%) use Human Resource data only for reporting, only 10% of companies are using analytics to solve talent challenges and only 4% are using true predictive analytics in relations to talent needs and results. Why this discrepancy between the promises of analytics reality in businesses?

One of the reasons is most likely that managers do not have readily access to existing advanced management research. Hence, they are not exploiting scientific knowledge, including analytics techniques developed by researchers, knowledge that when exploited correctly could help them to increase their competitiveness and profitability. Over the years, enormous amounts of models have been accumulated, tested and re-tested numerous times and in various settings.

If we look in relevant international peer-reviewed journals like the *Academy of Management Journal*, *Journal of Management*, the *Journal of Applied Psychology*, etc., we often find seemingly relevant meta-analyses, i.e. systematic reviews of the literature on the topic of interest undertaken to identify patterns among the various studies' results and sources of disagreement. However, most models are difficult to comprehend, and th meta-analyses are typically difficult to read and understand for someone without a specialized research degree in the area.

### **From research to practice**

To bridge the gap from promising ideas to practice universities could take a responsibility. Translating research based findings into practitioners' language on websites<sup>1</sup>, in blogs and media, proactively taking up the »so what« questions in our publications – all these will make research relevant for practice. Further, a proactive approach to dissemination of research but could potentially assist practice to advance from descriptive metrics to predictive analytics, from arguing with correlations to building causality.

»What's in it for me?« a typical researcher would wonder. Well, first and foremost, it's access to data and potentially Big Data. Actually we should rather talk about Smart Data. In the recent editorial of the *Academy of Management Journal*, the editors point out that for management research, »big« is not really interesting. We concur: the defining parameter is how »smart« the data are, i.e. how many insights that volume of data can provide. These insights are not possible to get if the researchers' aim is to get as much data as possible, run to their offices as soon as possible and shut their door with the label »Don't Enter – Running STATA«.

The typical statistical approach of data mining, searching for significant p-values and moving towards more and more sophisticated econometrics will probably result in a decent, perhaps slightly over-fitted statistical model (since with the immense volume of data, everything is significant), but it is very unlikely it will result in an impactful publication that would be acceptable by editors and reviewers in top journals. In the above referred editorial of the *Academy of Management Journal* the editors stress: »Given the unstructured nature of most big data, causality is not built into their design and the patterns observed are often open to a wide range of possible causal explanations« (George *et al.* 2014: 323). So, we are back to »square one« in our search of causality.

### **Back to the dance floor**

Our research intuition will guide us to expected relations, but how to get to those »novel theoretical contributions« editors and researchers are asking for? We need to

push to beyond prior research, we need an interesting angle, we need a dilemma to solve. All these, we argue, the researchers could get if they get back on the »dance floor« with practitioners. Practitioners could explain in detail the context in which relations are observed. This is much needed since greater contextualization is the key in today's management research. Indeed, we very seldom see contributions that are created from scratch. Most often, we see studies that aim at improving our understanding of what already exists. This is usually done by taking the established theory out of the context (Whetten, 2009), blending several contexts in which theories were formulated (Oswick *et al.* 2011) or introducing overlooked/emerging aspects of the context (Michailova, 2011).

Practitioners always start with a business challenge. Hence, they have and potentially – if you are a good »dance partner« – could share insights of what should work but does not. They do not have answers but – we promise – they have a lot of questions. It is clearly spelled out by David Whetten (1989) in his much cited paper on »What Constitutes a Theoretical Contribution?« that if we start with an interesting question and answer what, how and why in our theory development, we will not have (so many) problems justifying our value-added in our responses to editors and reviews.

Finally, practitioners do not have preferences in their research methods and accordingly are less likely to be bound by a certain research paradigm. Instead, they would look for evidence everywhere – what the CEO said, what an engagement survey showed, what customer research elsewhere indicated, what industry figures showed (= single source, different goals, different levels of analysis, unrelated observations, biased sample, messy data). Instead of disregarding all these as »unscientific«, researchers should use this opportunity to collect and analyse this multidimensional, unrelated and voluminous data to look for potentially important factors and underlying patterns because »once such variables capture a researcher's attention, the relationships between them can be explored and the contextual conditions under which these relationships may or may not hold can be examined« (George *et al.*, 2014: 324).

Practitioners can point to the dots, but researchers should aid in connecting them. Thus, drawing on the arsenal of methodological techniques ranging from tools for content analysis of archival data to longitudinal and multi-level research and social network analysis. And that's the kind of research we hope to see in DJMB in the future: research showing innovative use of data, research studying how management processes and practices evolve over time, research analysing how team dynamics emerge, and most of all research that starts and finishes with interesting and relevant management questions.

## References

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## Notes

- 1 For example, the Human Capital Analytics Group at CBS has established a website that offers executive summaries of the most recent and most relevant articles (see [www.cbs.dk/hc-analytics](http://www.cbs.dk/hc-analytics) under »Research Insights«.