



ROTTERDAM SCHOOL OF MANAGEMENT, ERASMUS UNIVERSITY

▶ Cross-sector partnerships key to sustainable development

Rebecca Morris talks with Rob van Tulder

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▶ Accounting fraud and the role of emotions

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▶ How to build ambidextrous teams

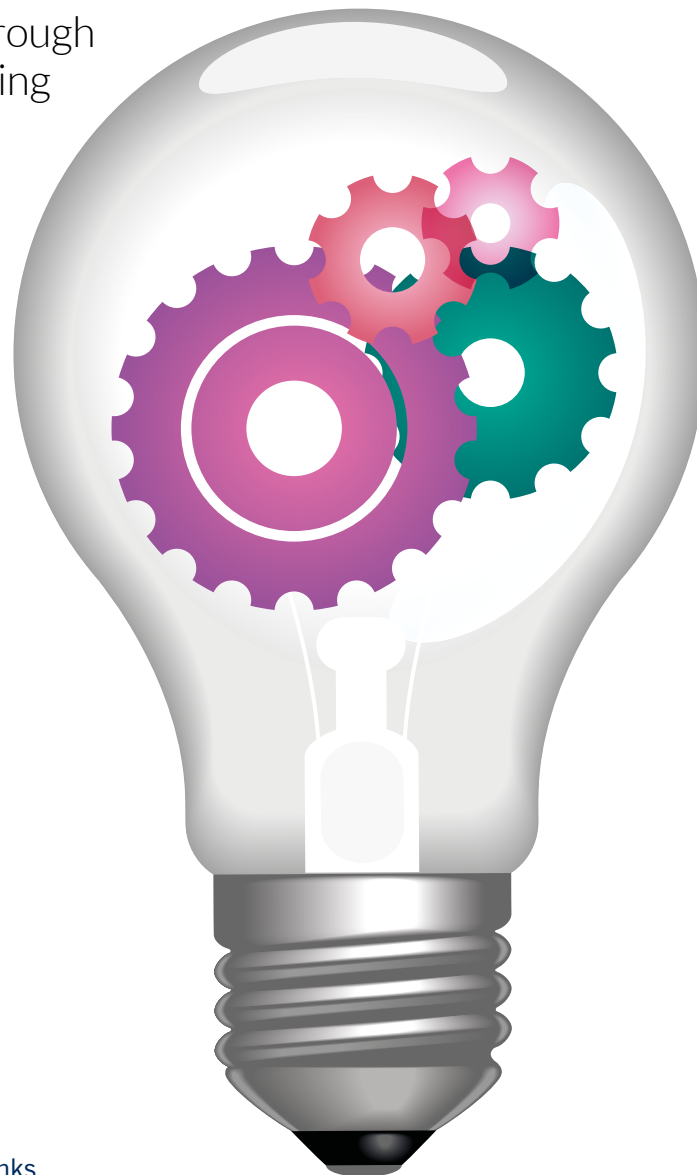
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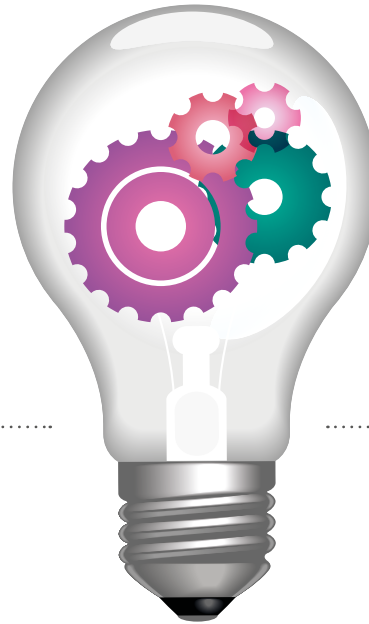
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▶ **How to build ambidextrous teams**

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One of the accepted truisms of modern business strategy is the importance of succeeding in the present while building for the future. This is one of the great challenges facing business,' says Justin Jansen, professor of corporate entrepreneurship at RSM, who labels this dual objective "ambidexterity". All successful organisations aspire to be ambidextrous. They want to focus on delivering superior customer value while giving equal time and resources to developing new products or discovering new ways to deliver value.

▶ **Why twice as fast doesn't always mean twice the value**

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Many people feel pressed for time these days. Not surprisingly, products are sold with the promise that they can do something faster than their competition, whether that's downloading data from the internet or printing a page, or even dicing cabbage.

▶ **The potential of computer-aided applicant pre-screening**

By Colin Lee page 21

Imagine what it would be like if accurate algorithms took over the recruitment process and were used to match potential applicants to work. Recruiters would no longer have to trawl through stacks of CVs or engage in swathes of interviews. Job seekers would be relieved of the time and stress involved in searching and applying.

Introduction



Competitive advantage is not enough

These days changes are abrupt, discontinuous, and seditious. Change itself has changed, and enterprises have to cope with more and more turning points. Changing competitive environments force enterprises to keep examining their strategy and organisational form with a critical eye. However successful firms may be, competitive advantages can be imitated or even improved increasingly swiftly. Products and services quickly turn into commodities; they become less distinctive, and consumers make their purchases more cleverly and cheaply.

Managers and management authors are in agreement that the way to future success lies in moving away from traditional prescriptions for strategy. Merely defending a competitive advantage is tantamount to stagnation. Inventing something new does not guarantee success, but nor does imitating one's rival. This raises the question of how a firm is to stay on its feet in a swiftly changing competitive landscape.

In this issue of *RSM Discovery* magazine you will find thought-provoking articles on how to do that. Prof. Rob van Tulder's message is to involve all your stakeholders, while Prof. Justin Jansen makes a plea for implementing ambidextrous teams that maximise exploitation as well as exploration. Moreover, Steve Kennedy and Paolo Perego stress the added value of integrated reporting and Prof. Wolf Ketter shows us how to use big data for solving wicked problems. Finally, Prof. Frank Hartmann warns us about the potential dangers when socially-skilled people give in to manipulation. I hope you will enjoy reading this issue.

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Cross-sector partnerships key to sustainable development

Rebecca Morris talks with Rob van Tulder

At the 2002 World Summit on Sustainable Development, alliances between business, government and civil society were declared key to achieving sustainable development. Yet they are difficult to implement successfully. RSM's Partnerships Resource Centre is helping to change that.



The years since the 2002 summit have seen a surge in the number of cross-sector alliances. These partnerships now sit at the heart of the UN's Sustainable Development Goals, formulated in 2015. Yet for all their promise, cross-sector partnerships are too often limited in scope and impact. They remain a complex managerial chal-

lenge for which there is no precedence and very little know-how – until now.

'From the moment the partnership movement began in 2002, it was clear there was a huge gap in knowledge and that this was a managerial challenge,' says Rob van Tulder, professor of international business-society management at RSM. 'It was an open op-

portunity for us as a business school: here was a demand and we had the expertise to meet it.'

Prof. van Tulder and his affiliates responded with the creation of the Partnerships Resource Centre (PrC), an academic consortium inaugurated in 2009 and led by RSM, with initial co-funding provided by the Dutch Ministry of Foreign Affairs. The centre's goal is to fill the knowledge gap on cross-sector partnerships. From the outset, the emphasis was on impact. 'When we started I didn't want to wait five years before establishing theories that organisations could use,' says Prof. van Tulder. 'Organisations couldn't wait and nor could we.'

Problems without solutions

Beyond philanthropy, the incentives for companies to partner up are compelling. Consumers are demanding products that contribute to societal well-being. Employees are asking what their organisations are doing to address sustainability challenges. Changing regulations require companies to adopt more sustainable practices. The result is that corporations are recognising the need for input from other sectors that have the complementary skills needed for long-term growth.

'Many of these new demands are better understood and implemented by government bodies and NGOs than by company executives,' says Prof. van Tulder. 'An NGO can point out flaws in a company's sustainability policy, for instance, that the company might not realise themselves.'

Cross-sector partnerships key to sustainable development *(continued)*

Rebecca Morris talks with Rob van Tulder

“Companies often don't trust a government body or an NGO that talks about partners on the one hand, and on the other describes the private sector's approach towards the environment as PR.”

Rob van Tulder, professor of international business-society management

NGOs and government bodies also lend credibility to a company's activities, he says: ‘NGOs are the voice of civil society and society trusts what they say, as opposed to company leaders.’

But partnering across societal sectors is much easier to endorse than it is to implement. The problems are more complex than the typical obstacles found within traditional public-private partnerships. Cross-sector partnerships usually involve multiple stakeholders. Stakeholders are often “unusual suspects” – small NGOs and the like. Their objectives are less clear and broader in scope, addressing complex and often interrelated issues.

One common challenge that arises is lack of trust, says Prof. van Tulder: ‘Companies often don't trust a government body or an NGO that talks about partners on the one hand, and on the other describes the private sector's approach towards the environment as PR.’

Hence the legion of cross-sector partnerships whose impact is a scratch on the surface of what is required to meet sustainable development goals. ‘Everyone is trying,’ says Prof. van Tulder, ‘but no one knows what to do.’

Establishing a platform

The PrC was formed at the request of a large number of stakeholders including the Netherlands' Ministry of Foreign Affairs. The demand was for a platform for the regular exchange of knowledge on cross-sector partnerships and the development of new knowledge on a subject on which there existed very little literature.

Led by Prof. Rob van Tulder, the PrC quickly established itself as a prolific resource centre with a broad portfolio of activities. It strives to help organisations in several ways: through applied and action research, teaching and training, and knowledge exchange and networking.

Research is commissioned on the study of various aspects of multi-stakeholder engagement and management, involving top scholars around the world. Much of this is action research. ‘I want to get stakeholders directly involved in action research initiatives,’ says Prof. van Tulder. ‘For me this is the most important challenge.’

The PrC is now the leading centre in Europe in cross-sector partnership research, with a large number of publications in peer-viewed journals. And its initiatives pave new ways of engaging stakeholders. ‘The PrC pioneers new formats for action research, teaching and stakeholder engagement,’ says Prof. van Tulder.

New ways of engaging

The PrC website shows just how outward facing the organisation is. Services offered include executive training modules and workshops as well as custom-made programmes. Fact sheets are available to download on partnership models in Asia, Latin-America, North Africa, sub-Saharan Africa and the Middle East. Research papers offer stakeholders insights into, for instance, the top-five success factors for partnering. Executives are invited to attend events such as Max Havelaar lectures on inclusive development. Eye-catching headlines invite stakeholders to participate in a “PPPCafe” event on Scaling, or one of six “Wicked Problems” meetings at the New World Campus in The Hague.

These latter events are connected to two of the centre's major action-research streams: the PPPLab



and the Wicked Problems Plaza. The PPPLab, which stands for Private Public Partnership Laboratory, is an action research and joint learning initiative that focuses on partnerships within water and food sectors, specifically those funded by the Sustainable Water Fund (FDW) and the Sustainable Entrepreneurship and Food Security Fund (FDOV).

The goal of the PPPLab is to enhance the effectiveness and quality of these Dutch-supported public-private partnerships. It has produced no less than 75 research papers collating its findings and recommendations. The PPPLab website reflects its focus on its stakeholders, with accessible, relevant content such as latest events, interviews with policymakers, and profiles of current initiatives.

The Wicked Problems Plaza is a unique methodology that brings stakeholders together to collaboratively brainstorm a “wicked problem” and devise solutions. The term “wicked problem” is used to describe the big issues related to sustainable development. Six Wicked Problem Plazas are scheduled for 2016, each related to one of the 17 Sustainable Development Goals of the 2030 Agenda for Sustainable Development. The events are organised in conjunction with the New World Campus (NWC) and the Netherlands Enterprise Agency (RVO).

And if there were any further doubts as to the centre's focus on impact, its latest project will dispel them. The centre is collaborating with four other institutions to develop an online platform that will offer a full informa-

tion, advice and networking resource for organisations looking to partner. ‘I am very proud of this Promoting Effective Partnering (PEP) Initiative, it's a great collaboration to be part of,’ says Prof. van Tulder.

Preparing to partner

Cross-sector partnerships are challenging, says Prof. van Tulder, but the obstacles are not insurmountable. The success of corporate giant Unilever in the sustainability stakes is largely

The partnership must also be one of equals. If it is merely a company funding a charity, for instance, the charity is unlikely to give constructive criticism for fear of the funding being withdrawn. Unilever, for example, allowed Oxfam to carry out an in-depth review of one of its Vietnam factories, revealing poor labour practices. In a bid to be transparent, Unilever agreed that Oxfam could publish the report and return two years later to assess its progress.

“I want to get stakeholders directly involved in action research initiatives. For me this is the most important challenge.”

Rob van Tulder, professor of international business-society management

down to effective partnering – offering lessons from which we can learn. ‘Unilever understands that partnerships take investment and are based on a common agenda and transparency,’ says Prof. van Tulder.

Respect is a key component of strong partnerships, he says. ‘Respect means that as a government organisation you respect that a company needs profit to be sustainable and that, as a company, you understand that a government body can be bureaucratic and must look at an issue from many different angles.’

‘The CEO of Unilever, Paul Polman, is considered by far the most sustainable business leader in the world and what he says is that Unilever is not there yet. That's a sign of true leadership. Leaders accept criticism and grow from it. Partnerships offer a space for organisations to receive and discuss such criticism; to join forces for a better world.’ ■

For more information on RSM's Partnerships Resource Centre, visit

WEB www.rsm.nl/prc

Using big data analytics to solve wicked problems

By **Wolf Ketter**

Global warming, sustainable energy production, financial market volatility – we don't have the answers to most of these problems yet, but most experts in these fields agree that they will only be resolved through the positive interaction of hundreds of social, economic, political, and technical factors.

Humanity may have created these “wicked problems,” as these kinds of challenges are called, but we seldom have a good idea about how to solve them. Where should you start? What should you do? There are too many connections and too many interdependencies for anyone to grasp the entire ecosystem at once. Traditionally, policymakers only learned after the fact whether they had done the right thing – and even in hindsight, the causation was often debatable.

searchers to build models that incorporate data from a variety of sources, such as usage data from customers, production patterns from producers, and regulatory constraints. Using past and present data gives us the opportunity to test alternative futures, the counterfactual risks.

From big data to big ideas

In our recent paper, *Competitive Benchmarking: An IS Research Approach to Address Wicked Problems with Big*

solving business by accident. We began entering artificial intelligence competitions in the 1990s, but in the 2000s realised that our methods could be used to study real-world problems, such as modelling supply chain risk.

Using this set of tools to look at supply chains was very successful, and in 2009, during a workshop on sustainable energy in Germany, we were encouraged by the German government and other energy stakeholders to apply the CB technique to understanding smart grids.

Eventually, this project grew into the Power Trading Agent Competition (Power TAC), a competitive simulation of retail electric power markets that helps us evaluate market-based approaches to energy sustainability. By using real data to model an electric distribution system, the economic system, and retail electricity tariffs on this common platform, Power TAC participants are able to learn more about how those moving parts interact, and test ways in which multiple markets might be tweaked toward greater levels of sustainability and stability.

Some 17 research groups around the world have participated in one or more competitions, and many more use it for their own research outside the context of the annual tournament, including scholars, utilities executives, and energy customer lobby groups.

What's unique about the Power TAC system is not that we've built a market model – people build all kinds of models these days – but that CB allows us to compare market designs and study the decision problems that

“Competitive Benchmarking enables us to pit business strategies against each other in order to understand what business opportunities might open up as the energy market evolves...”

We have developed a tool that we believe makes responding to wicked problems somewhat easier: Competitive Benchmarking (CB) is a software modelling tool that allows re-

Data and Analytics, my co-authors, Alok Gupta and John Collins of the University of Minnesota, reviewed the two decades of work that led to CB. John and I got into the global problem-

might arise as the proportion of renewable energy resources, electrified transport and climate-control options grows. CB enables us to pit business strategies against each other in order to understand what business opportunities might open up as the energy market evolves from centralised monopolies that send energy out to the system's edge to a decentralised system of *prosumers* who both use and produce power.

It has helped our understanding of which regulatory structures would work best as the dynamics of this new market are largely uncharted territory: in Germany, for instance, where there were once four energy companies, there are now over a thousand.

Every year, we have kept working to make the process more realistic. In 2012, we changed the pricing and tariff structure. In 2013-4, we built behavioural models that operate within the simulation framework, whose behaviour closely matches the observed behaviour in these datasets on users of thermal and battery storage. And in 2014-2015, we introduced statistics on driving behaviour

to better understand how people might use electric cars. This year, we are adding peak-demand pricing as a way to manage demand spikes, a key issue faced by most power grid managers.

The Competitive Benchmarking simulation we use for the Power TAC is divided into three parts:

The alignment: real-world data from a variety of sources, such as a social media experiment on electric-vehicle recharging preferences, which is integrated into the model.

The platform: a simulated competitive retail power market in a medium-sized city, in which consumers and small-scale producers may choose from among a set of alternative electricity providers – autonomous software agents programmed by individual research groups.

The process: a model of a regulated utility that owns and operates the physical facilities of the infrastructure and manages the supply and demand of the distribution network.

In its current incarnation, Power TAC models the economics of an electric distribution system but not its actu-

al physical flows. This is because much work has already been done on the physical flows, but very little has been done on alternative market designs and policies. In particular, it models future retail electricity markets, allowing us to experiment with alternative policy scenarios that improve sustainability but are too risky to immediately apply in the real world.

Tournament scenarios typically simulate two months of market dynamics in two hours of real time activity, pitting intelligent agents programmed with a wide variety of kinds of expertise to study the effect of the competitive market on brokers, markets, and customers.

Everybody wins

Although we call Power TAC a competition, everybody wins: all the data from championship tournaments are publicly available for analysis. If somebody wins in a way that turns out to be counterproductive, that tells us all that we need to change the rules a little. For instance, two years ago, we found that one of the agents had discovered ▶



a way to exploit tariff terms so as to extract rents from customers in a way that shouldn't have been possible.

One advantage of the CB process is that it makes it easier for researchers to profit from domain knowledge of other stakeholders. Having all that is known about the functioning of a system gives researchers a better idea earlier about what areas are likely to be the most common and interesting problems, and helps give them a common vocabulary and view of

bers. (We've even met a few people at non-TAC events who tell us, when we tell them we work on the energy market, about a nifty tool they've found – which turned out to be the Power TAC!)

CB is not for everybody. Building a platform like Power TAC requires real expertise, specialised knowledge, and a lot of co-operation among a large number of different groups. However, given that wicked problems are by definition more than one organisa-

The paper *Competitive Benchmarking: An IS Research Approach to Address Wicked Problems with Big Data and Analytics*, written by Wolfgang Ketter, Markus Peters, John Collins, and Alok Gupta, is forthcoming in the journal *MIS Quarterly* and may be downloaded from [WEB http://ssrn.com/abstract=2700333](http://ssrn.com/abstract=2700333)

More information about Power TAC can be found at [WEB www.Powertac.org](http://www.Powertac.org)

“It has helped our understanding of which regulatory structures would work best as the dynamics of this new market are largely uncharted territory...”

the system's overall structure. A robust CB platform also makes it easier for researchers to test their theories because they don't have to take time to build and test a new set of applicable benchmarks.

Now in its seventh year, Power TAC is starting to see more utility industry participation as well as entrants from outside energy altogether; machine learning experts, for example. Indeed, such as a team from Essen, Germany, actually won on its first try.

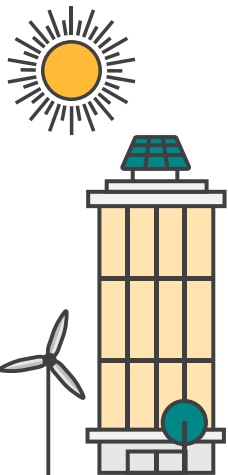
Best of all: scholars not directly involved in the project have still benefited from it. Our results have been cited in over 150 papers, not including the work of core competition mem-

tion can handle, CB seems to us better than a lot of the alternatives. As the American cynic H.L. Mencken once said: 'For every complex problem there is an answer that is clear, simple – and wrong.' By inspiring multiple questions rather than one question and multiple answers rather than one answer, Competitive Benchmarking offers a more effective way forward. ■

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▶ The Four Steps of Competitive Benchmarking

- **Design:** Several groups design algorithms -- autonomous software agents -- that are programmed to respond to particular patterns in the data.
- **Compete:** Participants pit their agents against each other in a formal tournament.
- **Analyze:** The system ranks the strategies and prepares to release it to the all the participants.
- **Disseminate and realign:** The analysis is released to researchers and stakeholders, who then make recommendations on how to adjust refine the model next time round.



Value creation through integrated reporting

By **Steve Kennedy and Paolo Perego**

The phenomenon of Integrated Reporting is slowly but surely making its mark as not only an external communications tool but above all a genuine agent for internal change within firms. However, academics and business practitioners need to keep working in tandem to ensure that this new approach to financial and non-financial corporate reporting continues to have an impact on in-house strategy and processes and not run the risk of becoming a mere PR stunt.

It has only been in the past few years that Integrated Reporting has begun to be embraced by companies, with multinationals like Novo Nordisk, SAP, Tata Steel and more recently General Electric as early adopters. Comprising a financial and non-financial report on business performance for internal application and external publication, this new approach brings together not just the financial capital coming in and out of organisations but also the social and natural capital it affects and depends upon in order to illustrate with complete transparency the level of success of a company's strategy.

Legislation is starting to come into place to make this practice a more formal obligation, most notably in South Africa under the King IV report. Statistics indicate that about 10 per cent of corporate reports published in 2015 by large firms provided some form of integration in their external reporting. However, some firms engaging in Integrated Reporting are yet to make the very most of what it offers in-house.

Internal reporting drivers

Integrated Reporting offers numer-

ous potential benefits to firms, ranging from facilitating better allocation of capital, easier access to financial capital and a way to break down internal functional silos in order to unlock previously hidden understandings of strategic risks and opportunities. Yet

firms need to weigh these advantages against the reality of an onerous exercise in data collection, validation and assurance, and ultimately raising stakeholder expectations of multi-faceted performance.

Research points to the size of the overall organisation and its board and the degree of gender diversity within as important factors to Integrated

Reporting being adopted and effectively applied. Firms backed by investors with a longer-term, less opportunistic working relationship are also more likely to buy into the concept, the human-hours that it involves, and reacting to the outcomes. Geographical position and the legislation in place within the country in question are also important aspects in determining whether a firm will be at ease with the transparency issue.

In general, countries where higher investor protection is common practice and where stronger indices of law and order exist offer the most conducive conditions to encourage firms to go down this route.

“Asset-intensive firms will benefit from the 360-degree vision this form of reporting provides in order to mitigate the risks attached to capital investment decisions.”

Clarity is the key

Positive signs of uptake are emerging in some parts of the world, namely South Africa and the EU. In the former case, multinationals are now obliged to perform fully integrated reporting whilst in the latter case non-financial reporting will be mandatory for large companies by 2018. In addition, work is underway to pull together and give ▶

Value creation through integrated reporting *(continued)*

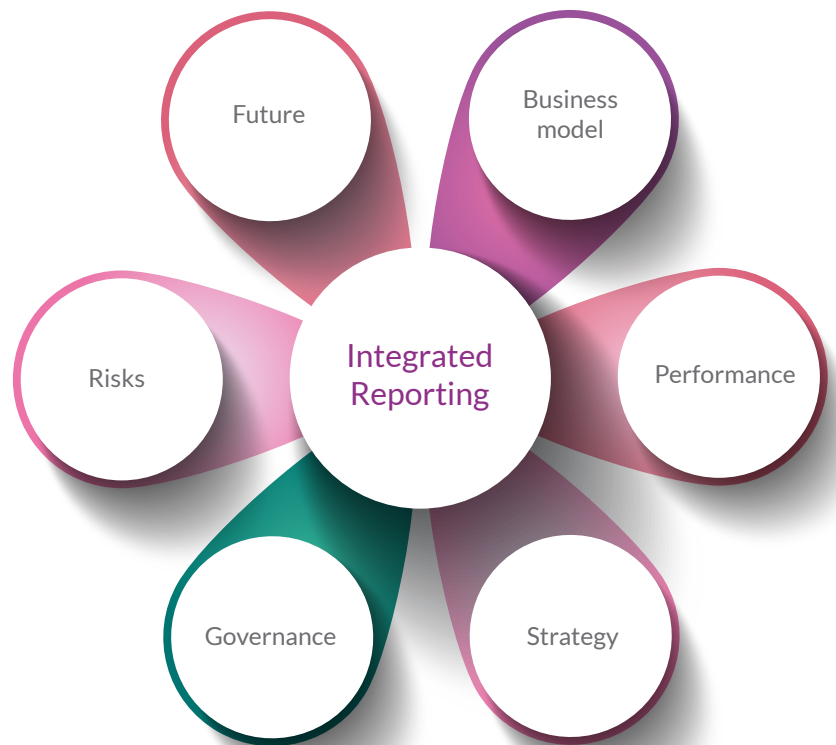
By **Steve Kennedy and Paolo Perego**

greater clarity to the plethora of reporting guidelines currently available. The World Business Council of Sustainable Development is due to release a beta version of their comprehensive data mapping initiative *The Reporting Exchange* in December 2016, which will present and explain current and expected legislation on a country-to-country basis. Clarity is the key and, at present, one of the biggest hurdles to firms voluntarily engaging.

Hurdles to overcome

The current pitfalls linked to Integrated Reporting concern not only the content of the reports produced but also the nature of the firms involved and the in-house use made of report findings upon publication. By definition, Integrated Reporting represents a higher-than-normal level of information disclosure, one that the boards of some participating firms may not be entirely comfortable with. Consequently, a good many reports tend to veer too much towards the investor perspective at the expense of other stakeholders, resulting in a less complete picture of a firm's activities and how they link in with the overall business model and strategy.

In addition, firms are inevitably competing for funding, meaning the level of objectivity and completeness of such reports is potentially under threat. Moreover, even in the case of comprehensive integrated reports, it is the use made of them that can tip the balance between an external PR exercise designed to paint a firm in a responsible, sustainable light (so-called



“greenwashing”) and a genuine tool to bring about change within.

Agent of change

The challenge for academic researchers and business practitioners is to spread the word and therefore encourage adoption of Integrated Reporting as a serious tool serving to highlight required organisational overhauls, and better align the interests of the firm as a whole with its shareholders, potential investors and wider stakeholders.

Integrated Reporting is often referred to as a “value creation story”, where the ability to accurately and openly tell the story depends upon a firm's desire and capacity to present and analyse its performance from all perspectives. The long-term view involved is also of great potential use to firms of all shapes and sizes. Asset-intensive firms will benefit from the 360-degree vision this form of reporting provides in order to mitigate the risks attached to capital investment decisions. Firms from lower-resource in-

dustries can learn from the findings of such reporting when faced with social and environmental capital problems. This calls for companies to ensure a minimum level of separation between reporting channels and strategic decision making, so reporting outputs such as integrated risk assessments and materiality exercises are utilised internally and provided at the right timing and frequency to support decisions.

what kind of concrete changes this can bring about within firms and who are the members of firms genuinely calling out for this new way of analysing and presenting business performance and strategy.

The workload involved in such a process is inevitably more complex than the more traditional, long-established and standardised financial approach to corporate reporting.

Getting on board

Firms wishing to get involved should start by concentrating on the required internal processes before moving on to the second step of external diffusion. Communicating results externally is a valuable opportunity not to be missed, especially if assured to be “investor-grade” information, but not to be taken until the participating firm has got its house in order. It is for these reasons that the term “Integrated Thinking” is often used as it reflects much more the internal repercussions it can have on strategic and tactical decisions than the final extra-firm publication. However, to push this agenda forward, academics and managers have a responsibility to work together to clarify guidelines, defragment the way in which Integrated Reporting is being practiced and harmonise the vocabulary and processes required to fully embed sustainability in business. ■

“Research points to the size of the overall organisation and its board and the degree of gender diversity within as important factors to Integrated Reporting being adopted and effectively applied.”

Avenues for exploration

Given its relatively novel status, Integrated Reporting still has some way to go before being accepted and practiced by the majority of firms. Academics, through research and executive education, and business practitioners, by adopting, diffusing and making full internal as well as external use of such reports, have key roles to play. However, both of these populations are faced with major theoretical and practical issues that require exploration and application in order to bring Integrated Reporting forward. In real terms, it needs to be established

However, what this new alternative offers among many benefits is to encourage business theorists and practitioners to re-think how firms are performing on issues related to sustainability. Integrated Reporting is frequently viewed as an exercise in corporate accountability. This is true but only part of the story. It is above all a means of getting the many players within a firm to connect with stakeholders more effectively, take a more global perspective on operations across the whole chain, and better understand their business model and the capitals affected and needed by a firm.

This article draws inspiration from the paper *A Lot of Icing but Little Cake? Taking Integrated Reporting Forward*, written by Paolo Perego, Steve Kennedy and Gail Whiteman and published in the *Journal of Cleaner Production* (2016). DOI: 10.1016/j.jclepro.2016.01.106

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Accounting fraud and the role of emotions

By **Frank Hartmann**

The traditional view of accountants has become almost a caricature. They prefer numbers to people. They do not understand business. They are incapable of formulating strategic vision. In order to address this perception, the long-term trend in modern people management has been to encourage the development of greater humanity in the world of bookkeeping. Our contrarian view is that this is not necessarily a good thing.

Our view – backed up by scientific evidence – is that selecting people to become accountants who are more emotional and empathetic than the traditional representation of the profession's members as unthinking calculating machines could in fact lead to unforeseen problems. In certain business conditions emotional social pressure can lead to the manipulation of corporate performance and investment numbers. And what might start as a minor, misguided misrepresentation of reality could well terminate in outright lying, cheating and fraud.

The dangers inherent in the potential for – and the impact of – even minor infractions to strict accounting rules and other formal constraints on corporate behaviour cannot be overestimated. Enron springs immediately to mind as an example of the former, abusing as it did accounting devices to overstate profits and mislead outsiders as to the actual source of those profits. Business unit (BU) controllers play a fiduciary role in ensuring the integrity of financial reporting; however, they often face social pressure from their BU managers to misreport.

It is against this backdrop that a number of colleagues and I carried out a laboratory-based brain study to establish scientifically whether some people are biologically inclined to resist social pressure or whether they can be swayed in the direction of this pressure.

In our paper, Philip Eskenazi, Wim Rietdijk and I considered the results of this unique brain study in formal academic terms. We set out to determine if we could draw a relationship between the personality and likely behaviour in a defined set of commercial circumstances that involved manipulating data and sentiment (the human mirror neuron system – hmNS – is the part of the brain responsible for processing emotions).

Yielding to pressure

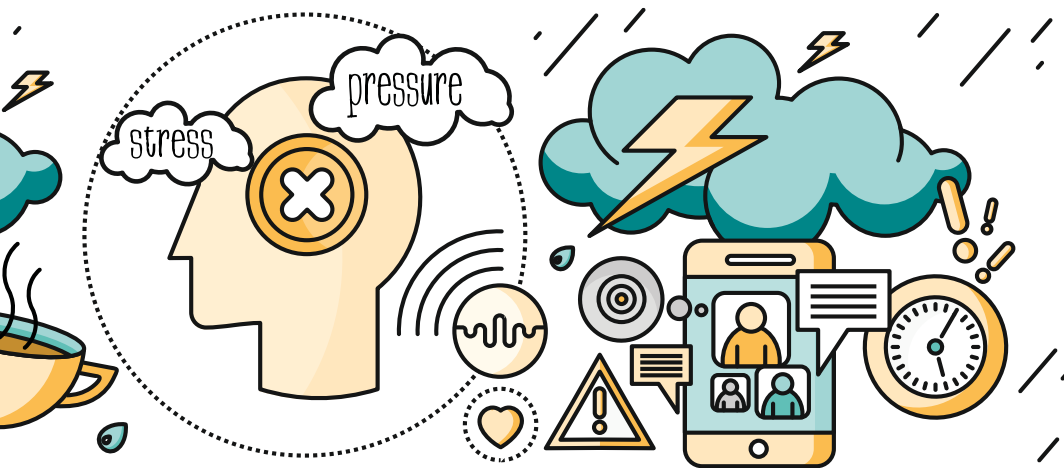
We measured the reactions of 29 professional internal financial controllers during an emotional expressions observation task. Their inclination to misreport was measured using scenarios in which controllers were being pressed by their manager to misreport. We observed brain responses and identified

a positive association between the mirror neuron system functionality of controllers and their inclination to yield to managerial pressure.

In one scenario, Jim is a business unit manager and direct supervisor of BU controller Carl. For most of the current year, the BU's performance was quite good. In large part this is due to Jim's excellent management skills. However, a major production problem in December threatens the BU to face a loss this year. This would cost Jim his full bonus for the year. He was counting on the bonus, so this prospect seriously distresses him, as his family situation is problematic. Jim proposes to release part of an existing provision to improve the BU's bottom line. The provision is in a grey area, so that accounting rules allow interpretation both ways.

In another scenario, Victor is BU manager and direct supervisor of BU controller Bob. The BU has shown three years of solid performance. Victor has been working very hard in this period and turned the BU into a successful business. However, this year the BU is about to end below the sales target. This would strongly decrease Victor's





"...the findings show that we should be careful to always *consider humans as rational beings* who will consciously respond to management instructions."

chances of getting the promotion he was hoping for. Victor is very excited about a possible step up the hierarchy in the company, and is very keen on making the target. Victor asks Bob to authorise a sharp price discount for a sales promotion in December, which would ensure the BU meets its target, even though sales in early next year would suffer.

Conclusions

What can we conclude from the scientific evidence gathered? The lessons are both academic and practical, although it has to be conceded that while our theory and method are fully in line with state-of-the-art investigations in this

field of neuroscience, some care is required in interpreting our findings. The very use of an EEG-based analysis to test a neurobiological theory limits the ease of understanding the implications of our findings. Neuroscience is a rapidly developing field that continues to discuss the nature, consequences and measurement of fundamental neurobiological processes.

Nevertheless, the findings show that we should be careful to always consider humans as rational beings who will consciously respond to management instructions. In certain circumstances people will act according to instinct rather than in a conscious manner and fail to heed instructions. People do not

realise they are doing anything wrong (or at least anything more wrong than other people are doing) and the sensitive types gave in more easily.

It is no exaggeration to say that for operational and commercial success it is essential to be able to determine at which end of the behavioural spectrum an individual will most likely sit. As socially skilled people are more likely to give into manipulation to deliver accounting reports that are not entirely truthful, companies who value such attributes in their accountants might want to reconsider their modern hiring practices.

To put it in formal terms, the recruitment of more socially competent controllers may come at the cost of an increased fiduciary duty threat. In simpler language, an excess of emotions causes accounting fraud. The inescapable conclusion is that it might be better to cherish coldness and aloofness in a prospective accounting employee. ■

This article is based on the paper *Why controllers compromise on their fiduciary duties: EEG evidence on the role of the human mirror neuron system* written by Philip Eskenazi, Wim Rietdijk and Frank Hartmann, and published in the journal *Accounting, Organizations and Society*, Vol 50, April 2016, p41-50.

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How to build ambidextrous teams

Chris Murray talks with Justin Jansen

One of the accepted truisms of modern business strategy is the importance of succeeding in the present while building for the future. 'This is one of the great challenges facing business,' says Justin Jansen, professor of corporate entrepreneurship at RSM, who labels this dual objective "ambidexterity". All successful organisations aspire to be ambidextrous. They want to focus on delivering superior customer value while giving equal time and resources to developing new products or discovering new ways to deliver value.



Unfortunately, many companies may believe that they are successfully managing the trade-offs of *exploiting* the present while at the same time *exploring* the future. In truth, however, they focus much of their attention and resources on the present. The reasons are obvious: the present is predictable, familiar and comfortable; the future is uncertain and risky. An investment

on the exploitation side – a marketing investment, for example – brings immediate results. An investment on the exploratory side – in R&D, for example – will bring returns in five years or more... maybe. Especially when resources are scarce, the default choice is obvious, which is why, Prof. Jansen says, organisations focus 90 per cent of their efforts on exploiting the present.

The rush to separate

In an effort to better manage the trade-offs between exploiting the present while exploring the future, many companies tend to separate or differentiate between the two functions. In this way, they can avoid the clash of opposing priorities.

While a single top-management team will develop both short- and long-term strategies, the implementation of those strategies will be split among teams focusing on the short term, and teams focusing on the long term. This is where the differentiation or separation between exploitative and explorative learning occurs. Certain teams will be focusing on searching for, experimenting with and developing new knowledge and skills in support of long-term goals. Other teams will be focused on refining, recombining and implementing existing knowledge and skills in support of shorter-term goals.

For Prof. Jansen, a more effective and efficient way to organise the competing imperatives of supporting the present and building for the future is to bring both objectives into single teams. Prof. Jansen, working with co-researchers Konstantinos Kostopoulos of University of Piraeus, Oli Mihalache of Wilfrid Laurier University and Alexandros Papalexandris of the Athens University of Economics and Business, recently published a study that, he says, 'is the first paper to say, "don't differentiate".'

Why differentiation fails

There are several problems with the differentiation approach, Prof. Jansen

argues. First, sooner or later, even the longest-term initiative has to be brought back into the core of the organisation. 'If you develop a new prototype, you eventually have to bring it back to operations,' Prof. Jansen says. Why not have operations involved in the new product development (NPD) team?

Prof. Jansen offers the real life example of an NPD team in a high-tech company with 25-30 people. That team, he says, is responsible for both the development and the exploitation of new technology: 'They are responsible for the whole process, through to commercialisation.' When they are ready to market, 'they bring in marketers. They do not throw the new product over a wall to marketing.'

because the exploitation people are in contact with customers,' he says. 'When a customer complains, or when a customer wants additional features, that information should be transferred to the exploratory guys.'

Of feelings and emotions

While creating ambidextrous teams may be more advantageous than pursuing a differentiation strategy, managing the exploitation versus exploration trade-offs within such teams is a significant challenge. The ability for team members to work together effectively – supporting each other while not being afraid to air concerns or offer new solutions – is of particular importance when negotiating the complexity of ambidexterity. 'This is not about for-

think and feel about each other (the psychological part).

Previous research has shown the importance of *cohesion* (a shared attraction among team members) and *efficacy* (the team's collective belief that it can accomplish the task at hand) on team effectiveness, especially in terms of performing highly interdependent and complicated tasks.

Cohesion rules

The study that Prof. Jansen and his colleagues recently published confirmed that team cohesion was a key success factor for ambidextrous teams. Based on survey results from 87 teams within 37 high-tech and pharmaceutical companies, the study showed that the greater the mutual respect, affection and support among team members, the greater the team's competence in both exploratory and exploitative learning.

In the study results, however, efficacy did not show a significant influence on the ability of a team to be ambidextrous. In other words, the fact that a team's members are highly experienced and skilled does not seem to help them manage the complexity of the dual, opposing goals of ambidexterity – at least according to the data that Prof. Jansen and his colleagues collected.

Prof. Jansen cautions, however, that efficacy may still count; in this particular study, he explains, the efficacy factor may have been overwhelmed by the presence of team cohesion in the results. Further studies would be required in which team efficacy is the

“This is not about formal mechanisms, nor about hierarchy. It’s about how people think about each other, about feelings and emotions.”

Another disadvantage is the loss of synergies between the present-focused exploitative learning and the future-focused exploration learning. Prof. Jansen warns of new product development teams, for example, that are so lost in their future world that they have disconnected from today's customers. 'What most people forget is that there could be a lot of synergies

mal mechanisms, nor about hierarchy,' Prof. Jansen explains. 'It's about how people think about each other, about feelings and emotions.'

In short, managing the tensions between the competing goals of an ambidextrous team requires a *socio-psychological* perspective that focuses on how people collaborate and communicate (the social part) and how they

How to build ambidextrous teams *(continued)*

Chris Murray talks with Justin Jansen

only variable to truly measure the impact of efficacy on ambidexterity.

In practical terms, this means that cohesion is the overriding concern for leaders who are creating teams that will have both exploitative and exploratory goals. They should invite to the team people who like each other and have worked well with each other in the past. One would expect that skills, knowledge and experience would enhance the team member collaboration required in ambidextrous teams; however, as emphasised by the study, knowledge and experience will not overcome any lack of cohesion.

In sum, the success of an ambidextrous team depends in great part on whether company leaders choose the right people for those teams.

A delicate balance

Once the team is chosen, the next issue for the company's top leadership is how to manage the team. To ensure team cohesion, Jansen says, the leadership must be fully supportive. This entails leadership behaviours such as clarifying responsibilities, emphasising the importance of group relationships, and demonstrating complete trust in the team's members. Team members in ambidextrous teams will have potential conflicting tasks; helping to ensure a harmonious relationship is thus a key role of leaders.

Prof. Jansen's study on ambidexterity confirmed the importance of top leadership support in ensuring team cohesion. However, it also revealed an unexpected paradox: supportive top leadership will actually *undermine* team efficacy. Members of a team who are confident that their knowledge and skill-set enables them to accomplish their tasks and achieve their goals will chafe under a leadership that demonstrates too much support. The reason is that team members view supportive leadership as a sign of lack of trust. In their minds, they think, 'I know what I'm doing. I don't need your help.'

While team cohesion is a dominant success factor for ambidextrous teams, as described above, team efficacy is still an important issue. Members of a team were undoubtedly chosen because they had valuable skills and knowledge to bring to the team. As a result, senior leaders must maintain a 'delicate balance,' Prof. Jansen says, between offering support – and thus reinforcing the cohesion of the team

– and stepping back in order to avoid undermining team efficacy.

In addition, a team is always a collection of individuals with different strengths and weaknesses. 'In every team, people are different,' Prof. Jansen says. 'Within a team, you need to dedicate time and effort to those people who have less self-efficacy. But if you know they think they can do the job, leave them alone.'

Prof. Jansen urges companies not to separate exploration and exploitation activities. Ambidexterity works if top leaders choose the right people to be on a team – people who have a track record of working well together – and know when to be supportive and when to leave the team alone. Another truism of business, and life in general, is that everything is easier said than done. However, Prof. Jansen has witnessed numerous teams in a variety of industries who prove that ambidexterity can be achieved. ■

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The paper, *A Socio-Psychological Perspective on Team Ambidexterity: The Contingency Role of Supportive Leadership Behaviours*, written by Justin J. P. Jansen, Konstantinos C. Kostopoulos, Oli R. Mihalache and Alexandros Papalexandris, is forthcoming in the *Journal of Management Studies*. DOI: 10.1111/joms.12183



Why twice as fast doesn't always mean twice the value

By **Stefano Puntoni**

Many people feel pressed for time these days. Not surprisingly, products are sold with the promise that they can do something faster than their competition, whether that's downloading data from the internet or printing a page, or even dicing cabbage.



Unfortunately, you may not be getting the performance you imagine you're getting. Consider Ann, who prints 100 pages a day and owns a printer that prints five pages per minute. To reduce her printing time, she considers buying a printer that speeds up her printing from five to 10 pages per minute (ppm). This would save her 10 minutes ($100/5 - 100/10 = 10$). So should she be willing to pay six times more for a 40ppm printer? Maybe not: an upgrade from 10 to 40 ppm would

save her only 7.5 additional minutes ($100/10 - 100/40 = 7.5$).

The market is full of productivity metrics like this, which put units of output in the numerator and one unit of time in the denominator – pages per minute; megabytes per second – but they misunderstand the way the maths works. To estimate actual time savings, we need to take into account not only the proportional time change, but the change in the base time.

Even when the calculation doesn't involve time, ratios often confuse people. Many consumers, for example, will conclude mistakenly that a price increase of 25 per cent followed by a decrease of 40 per cent yields a higher final price than an immediate price decrease of 25 per cent. However, we seem to have particular difficulty when the ratio involves productivity.

Productivity and judgement

To learn more about why consumers make this error, my colleague Bart de Langhe, an assistant professor of marketing, Leeds School of Business at the University of Colorado at Boulder, and I recruited a number of US residents through Amazon's Mechanical Turk service for several online surveys.

Our first study concerned willingness to pay more for higher modem speeds. We asked respondents how much they would be willing to pay for a higher speed service before and after they had experienced how long it actually took each service to download a 50 Mb file. Once they had experienced the actual difference, fewer said they would be willing to pay for a high-speed service. This confirmed our hypothesis that people tend to assume that a productivity ratio will be directly proportionate to time savings, but will change their mind if they see that the actual difference is not as dramatic as they had believed.

In a second study, participants were asked to choose among four food processors, each with a different speed. We compared interest in each model when they were introduced with or ▶

Why twice as fast doesn't always mean twice the value *(continued)*

By **Stefano Puntoni**

“As the evidence grows that consumers have a flawed understanding of productivity and time, using productivity metrics as a point of differentiation is a decision with ethical implications.”

without a time productivity metric, such as revolutions per minute. When, along with the productivity metric, we also mentioned the actual time a task would take for each model, the subjects' willingness to pay for a more powerful processor declined. This was consistent with our hypothesis that in the absence of time metrics, consumers don't understand that additional increases in productivity will yield lower time savings as the initial level of productivity increases.

Marketing illusion

Another reason consumers make this mistake is because a lot of product pricing encourages them to think this way. Although they are presumably better at maths than consumers, marketers reinforce this illusion of linear gains.

In printers, for example, we found that manufacturers maintain a simple linear relationship between printer speed and the retail price, although productivity increases offer sharply declining returns in time savings. Even when we conducted a regression analysis that looked at eight other points of differentiation, such as text cost and copy quality, print speed remained the most important predictor of price.

Nor were printer manufacturers alone in not correcting for this error. After performing linear and quadratic equations on the relationship between price and high-speed cable modem download speeds among 77 providers in 24 cities in 2014, we found that they all maintained a linear relationship between price and speed, not the curvilinear connection you would find if the price reflected the reality of the diminishing marginal utility of faster download speeds.

Our studies covered consumer electronics and cooking appliances, but the findings are relevant in other contexts as well. For example, many banks now offer consumers the possibility of goal-specific savings plans, to help buy a car, save for a child's college tuition, or retire. Often, consumers can choose between different options with different expected rates of return per unit of time, such as annual interest rates. In fact, consumers might care more about knowing, for instance, precisely when they will be able to buy that new car.

Time's up

Everyone wants to be able to do more in less time. Unfortunately, although there is a relationship between pro-

ductivity metrics and time savings, consumers tend to systematically overestimate the benefits of productivity increases at high productivity levels and underestimate the value of productivity increases at low productivity levels.

For consumers, the lesson of these experiments is simple: let the buyer beware. Be very careful when making a purchasing decision by comparing options in terms of a particular performance metric, such as Mbps, because unless you do the maths right, you won't actually learn how much time you will save with each one of a range of products when you compare its performance to that of your current model.

For marketers, the implications of our work are also serious. As the evidence grows that consumers have a flawed understanding of productivity and time, using productivity metrics as a point of differentiation is a decision with ethical implications. We hope that governments, consumer advocacy groups, and companies will all consider the use of time metrics instead. ■

This article draws its inspiration from the paper *Productivity Metrics and Consumers' Misunderstanding of Time Savings*, written by Bart de Langhe and Stefano Puntoni and forthcoming in the *Journal of Marketing Research*, 13, 2016, DOI: 10.1509/jmr.13.0229

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The potential of computer-aided applicant pre-screening

By **Colin Lee**

Imagine what it would be like if accurate algorithms took over the recruitment process and were used to match potential applicants to work. Recruiters would no longer have to trawl through stacks of CVs or engage in swathes of interviews. Job seekers would be relieved of the time and stress involved in searching and applying.

Although it seems far from reality, the technology is available and a recent study provides promising results. There is no doubt that the internet has increased by incalculable proportions the visibility given to job vacancies. It has also facilitated the task of searching and applying. Job boards and other online media have made vacancy and applicant data more accessible.

Companies often integrate these platforms into applicant databases, called Applicant Tracking Systems (or ATSs), so that the various recruitment channels can be utilised from a single

interface. This has opened up the job market as it provides more choices to both parties and connects applicants and vacancies on an unprecedented scale. However, one of the less positive outcomes is the now vast number of applications with which recruiters have to deal.

To leverage the increased openness of the job market, yet keep down the number of promising applicants accepted for an interview to a manageable level, pre-screening has become an ever more important practice.

A magic formula?

Using a formula to filter the applicant pool to something smaller but more appropriate could save firms a lot of time, energy and money. However, a single formula that works for all jobs has yet to be found. Different jobs have different requirements and this variation has long provided a hurdle to the widespread use of formulas in support of applicant pre-screening.

Obtaining a valid formula for just a single occupation at a specific company requires large, expensive validation studies, making it an option that is only available to sizeable, affluent organisations. However, in the 1950s a method called Synthetic Validity was developed and it could prove to be extremely valuable in applicant selection.

The basic idea for Synthetic Validity comes from a technique used to predict how long it would take to complete work projects. This technique, called Synthetic Time, entails cutting up each project into separate tasks. Next, one would try to find predictors to help determine how long would be spent on each task. Finally, these predictors would be integrated into a "synthetic" formula, by considering the relevance of the task to the project as a whole. Similarly, in Synthetic Validity each job is broken up into the same set of work activities, including activities such as repairing and maintaining equipment, analysing data, or influencing others. Next, one finds predictors that can help determine the applicant's performance on each activity. Finally, when one knows the importance of each work activity for a certain job, a ▶



The potential of computer-aided applicant pre-screening *(continued)*

By **Colin Lee**

synthetic formula tailored to that job can be created.

Since all jobs can be reduced to and weighted on these work activities, this technique allows the prediction for one occupation to be transferred and adjusted to another occupation very effectively. Since one only needs to know the importance of the work activities to create a job-specific selection formula, one can even attain predictions for completely new jobs. The method requires sufficient data to establish relationships between work activities and predictors and this has possibly restricted the use of the method in the past. However, as shown in a recent study, this is no longer a concern in the era of big data.

one, the algorithms were trained using the first 90 per cent of the applicants per company.

Predictors included applicant demographics (age, gender, nationality, distance from recruiting firm), applicant biodata (prior professional experience and educational background), characteristics of the application (internal or external, timing before or after the deadline), and characteristics of the applicant pool (volume of applications, average percentage invited for an interview, occupation vacancy rate). The jobs from the vacancies were matched to existing occupations that had been rated on 42 different work activities. This made it possible to establish how the importance of the predic-

rectly identified. Moreover, for those vacancies where no cover letter was required, the accuracy was even higher with 82.5 per cent invited and 80.3 per cent not invited but correctly identified.

Pre-screening to selection

The implications of this study are of especial interest to large firms having to deal with sizeable applicant pools and for whom the screening and assessment process can be very costly. The approach offers a way to prioritise time spent on applicants, such that the recruiter can focus on the boundary cases that require most deliberation. This does not only save time, but could also help make pre-screening decisions more consistent.

However, the million-dollar question for both recruiters and researchers for the future remains. An improved understanding of application criteria is the first step, but what guarantee does this offer that recruiters choose the right person for the job...? For this next step theorists and practitioners will have to move beyond the prediction of the pre-screening decision and engage in predicting applicant performance. ■

“The implications of this study are of especial interest to large firms having to deal with sizeable applicant pools and for whom the screening and assessment process can be very costly.”

Computer-aided pre-screening

Using data from the Applicant Tracking Systems of 48 companies, the study built on 441,769 applications to 21,694 distinct vacancies, focusing on predicting the pre-screening decision: whether the applicant would be invited to a job interview. For each applicant the actual decision had been recorded in the ATS system. In stage

tors varies with the importance of the work activities.

In stage two, the algorithm was used to predict whether the applicant would be invited or not and we compared this prediction to the actual pre-screening decision. The accuracy of the decision proved promising, with 69.5 per cent of those invited correctly classified and 68.8 per cent of those not invited cor-

This article draws its inspiration from Colin Lee's PhD thesis *Big Data in Management Research - Exploring New Avenues*. It can be freely download at <http://repub.eur.nl/pub/79818>

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