Marketing analytics: Striking a balance between big data and traditional techniques

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About the EMC Academic Group

The European Marketing Confederation (EMC) is the organisation responsible for the bringing together marketing, sales and communication associations across Europe. The aim of the EMC is to share best practice as well as promote and develop marketing, sales and communication as a fundamental business process.

The EMC's Academic Group was created to provide practising marketers access to simple and straightforward academic marketing research, which could be used to enhance their own marketing strategies.

The group is made up of a pan-European network of senior marketing academics and practising marketers, who translate the latest marketing research into practice. Through their articles, marketers operating at the coalface of the profession can learn about the latest trends and developments affecting their sector.

Each month EMC member associations publish articles summarising the key aspects of each piece of research they have analysed, so that practising marketers can choose to implement changes within their own organisations based on informed research.

We'd like to thank the latest contributor to this edition.

Professor Yolanda Jordaan

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Professor Jordaan has a PhD Marketing Management and is currently professor and Head of the Department of Marketing Management at the University of Pretoria in South Africa.

Yolanda was the first academic to receive a reward from the South African direct marketing industry for her contribution to marketing education in South Africa. She is one of the founding members of the South African Consumer Satisfaction Index which was launched in South Africa in September 2012.

Yolanda has lectured at universities in the United States, Australia and the Netherlands. She is a recipient of the Mellon Foundation Award for research excellence. The university has also honoured her with an exceptional young researcher award and a Laureate Award for education innovation.

Her current research interests comprise; information privacy, services marketing, relationship marketing, consumer behaviour and higher education marketing.

Marketing analytics: Striking a balance between big data and traditional techniques

Technology has progressed at a radical pace in recent decades, and this has surpassed beyond what traditional marketing analytics can keep up with.

Small data sets, restricted platforms for analysis and limited implementation capacity are considered the distinguishing factors of traditional marketing analytics.

Big data, on the other hand, involves data management on extreme levels including large, complex and unstructured datasets.

These datasets are sourced from everything from social media, sensors, genome analyses and smartphone apps to internet-based data. Volume, variety, velocity and veracity are the characteristics that differentiate big data analytics from traditional marketing analytics.

The advent of the web 3.0 revolution and the digital economy has provided marketing managers with the opportunity to access consumer, market, competitor and new product insights in real-time.

This is because consumers can obtain information, communicate, connect and talk about their favourite brands and purchased products, all through the use of social media.

From this, text, sentiment and data mining are possible and can provide marketing managers with big data analytics tools to inform their new product strategies at a much faster pace.

To study the impact of the use of big data analytics on new product success, a recent study (2016) looked into the effects of using traditional marketing analytics, big data analytics, and a blend of the two.

The results of their study led them to the conclusion that a knowledge-fusion taxonomy of big data analytics and traditional marketing would lead to new product success.

This was based on applying both a complexity theory and knowledge-based view. The complexity theory suggests the occurrence of sudden, unpredictable changes where radical changes may occur in behaviour, and the knowledge-based view explains how organisations strive to accrue, protect or generate new knowledge, whilst complexity rules the process.

What the study established, were four strategic analytics options for marketing managers to choose from, each combining traditional marketing analytics, big data analytics, complexity theory and various knowledge types.

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The first option is known as the bystander strategy. In this instance, a manager's heuristic judgements are relied upon to make calls for marketing and new product decisions. However, use of this technique can contribute to low levels of new product success.

The explorer effect, however, allows managers to use big data analytics, blended with some or no traditional marketing analytics. This strategy benefits from the use of sophisticated algorithms which act as strong forecasting tools, generating automated knowledge that can contribute to improved product success.

In contrast, organisations that adopt a perfectionist strategy depend on traditional marketing analytics and ignore the big data analytics revolution altogether.

Traditional marketing analytics is reliable in providing propositional knowledge where responses are generated for specific questions. However, the perfectionist strategy is limited in its potential to help organsiations fully realise the success of a new product.

The fourth option is known as the pioneer strategy which combines both high levels of big data, traditional marketing analytics, knowledge and complexity.

This is the optimal strategy because it coordinates information technology capabilities with marketing techniques and customer knowledge, to produce an advanced degree of customisation.

Consumer-pleasing Netflix is a prime example of an organisation that depends on the pioneer position to drive new product success.

The web streaming media model utilises big data through knowledge fusion, by combining the knowledge of various stakeholders, including customers, marketing analysts and IT experts.

Corresponding traditional marketing analytics in the form of experiments and customer-lifecycle metrics also contribute towards uncovering the optimum customer-acquisition and customer-retention strategy.

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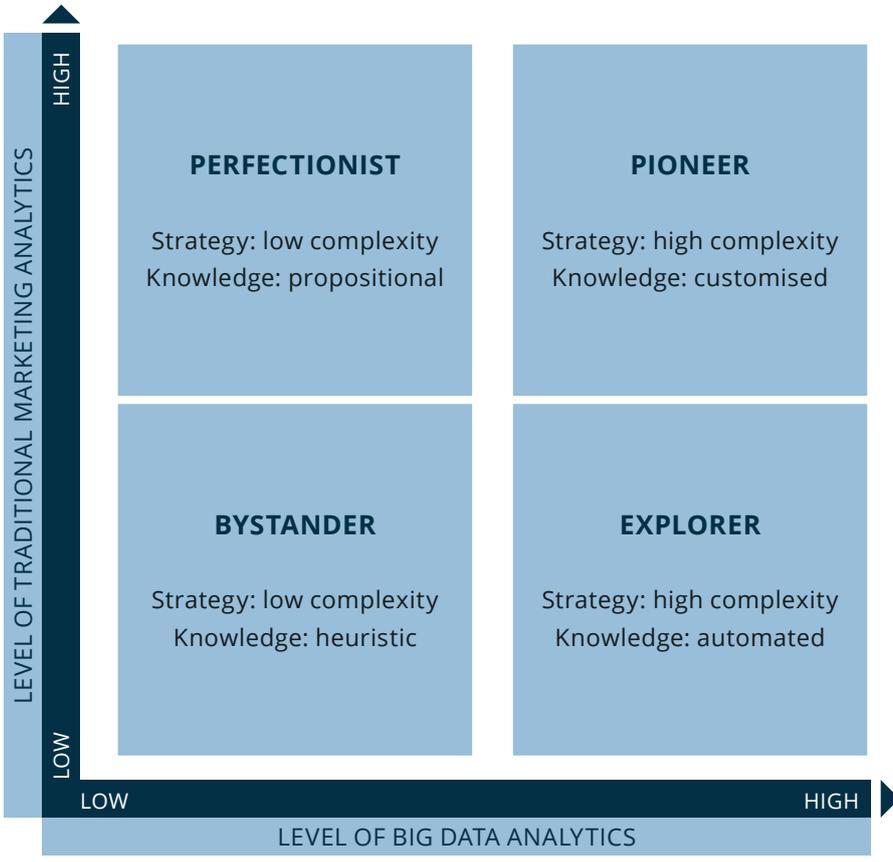

So what does all this mean for the marketing manager?
The results of the study carried out here, concluded that there was a positive association between the use of traditional marketing analytics together with big data analysis, when it came to the success of a new product.

Bringing together big data analytics and traditional marketing analytics is therefore advised if you want to develop a proactive marketing strategy.

However, the cost of collecting and analysing both types of data needs to be justified within every industry and market.

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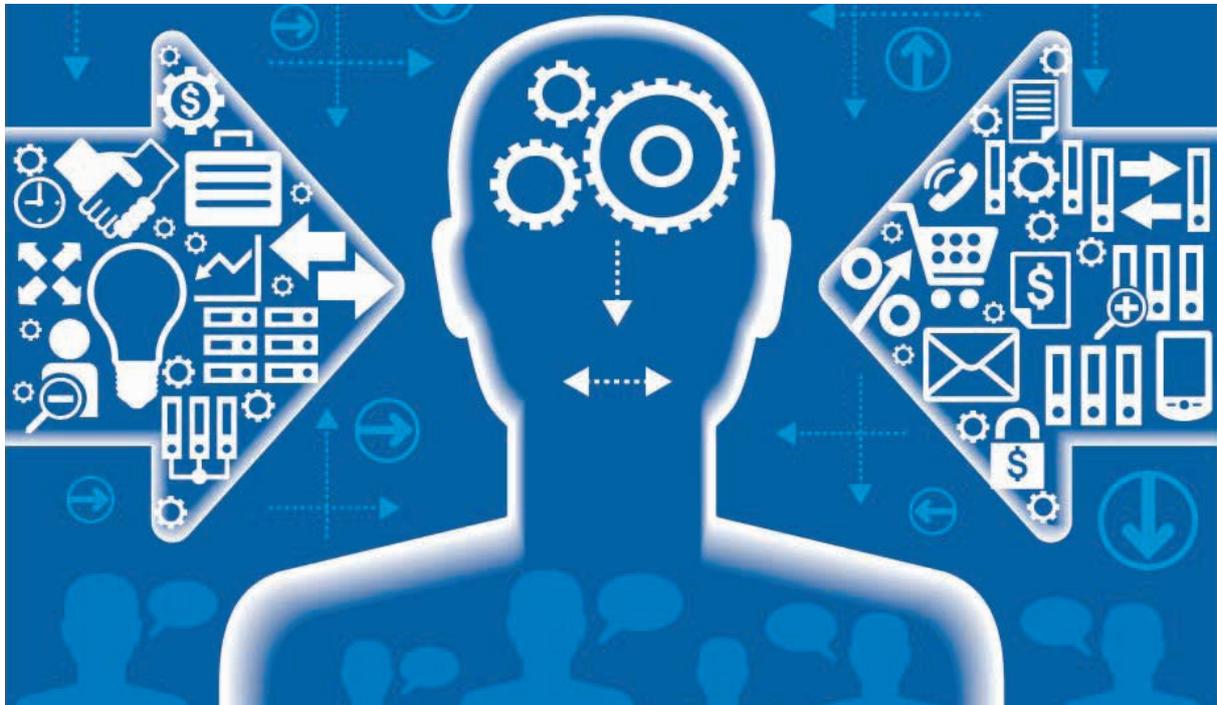
For example, smaller and more passive markets might execute successful new product development through traditional marketing analytics.

Larger, more invasive markets on the other hand, need to remain more agile and also acquire information from social media and digital sources in order to react in an opportune way to change.

Marketing managers will benefit from using the knowledge fusion taxonomy to successfully bring together big data and traditional marketing analytics.

This will create effective business intelligence and solutions, and will empower organisations to develop new products that their consumers are more willing to buy. The net result? Product success.

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The full reference for this study:
Xu, Z., Frankwick, G.L. & Ramirez, E. 2016. Effects of big data analytics and traditional marketing analytics on new product success: A knowledge fusion perspective. Journal of Business Research, 69, 1562–1566.

Q&A

We asked Professor Jordaan some questions about the research that she chose for this publication. Here are her answers.

1. What was it about exploring the effects of big data analytics and the use of the more traditional marketing analytics techniques that interested you?

Big data analytics as a field is new and information addressing the use and effects of big data is still limited.

This study offers information about big data and how it is largely generated by consumers and external sources. It creates an indispensable raw material that ought to be used by organisations to create solutions that lead to better performance.

The use of big data analytics also raises the question of whether or not traditional marketing analytics still has a place in the realm of analytics. Especially when considering the volume, variety, velocity and veracity of insight that big data offers.

2. What do we mean by a "knowledge-fusion taxonomy of big data analytics and traditional marketing analytics"?

Knowledge-fusion largely explains the collaborative knowledge exploration between applied sciences and social sciences that can speed up innovative and unique ideas.

When it comes to big data analytics and traditional marketing analytics, the knowledge-fusion taxonomy refers to the varying degrees of complexity when combining the two types of analyses, and the knowledge generated throughout the process to help inform sophisticated performance decisions.

In this instance the aim of the knowledge-fusion taxonomy is to ensure the success of new products.

It also helps to classify organisations by outlining four possible strategies that result from combining both big data analytics and traditional marketing analytics domains of research.

Ultimately, however, it serves to guide organisations, helping them to determine whether they are currently implementing a perfectionist (high traditional marketing analytics, low big data analytics), explorer (low traditional marketing analytics, high big data analytics), bystander (low traditional marketing analytics, low big data analytics) or pioneer (high traditional marketing analytics, high big data analytics) strategy.

3. Harnessing big data can be both a daunting and expensive prospect for marketing managers. What would your advice be to those embarking on big data analytics for the first time?

The rate of change in technology fast-tracks the inevitable - that sooner or later every manager will face the big data challenge.

Big data does cost money, but if implemented correctly, big data analytics can enhance profit margins.

A few tips include:

1. Don't get caught up in the novelty of big data. Whilst it complements traditional marketing data, the differentiator is the sophistication of the analytics and insights it can provide.

2. Take a customer-centric approach as big data analytics can deliver insights into better serving customer needs.

3. Identify and store information about your organisation, customers and competitors from all sources such as web resources, social media, smartphone apps and open source data.

4. Finally, embrace the transition from cost centres to profit centres once processes have been optimised.

4. What potential challenges does the fusion of big data analytics and traditional marketing analytics pose for marketing managers? And how can they overcome them?

The challenge occurs in the need to combine data that differs in structure, composition and source.

For organisations that focus solely on either traditional marketing analytics or big data analytics, it is challenging because a knowledge-shift needs to take place in order to combine the two.

Another challenge is the lack of skills to analyse big data. To address this, there needs to be a drive internally to provide education and training opportunities for marketing analysts, so that the skills gap can be closed, and the organisation can stay up to date with the changes in marketing analytics.

This is also important in the context of the security and privacy of customer data, whilst still maintaining the predictive and analytical power of data.

Finally there is the challenge of cost minimisation.

When it comes to big data analytics, many marketing managers fail to consider the costs of training, getting production-ready, and forming big data specific teams. Marketing managers must be aware of these costs, especially if big data analytics is to become a new strategy for an organisation.

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Contact us

We hope that you enjoy reading this edition. If you have any questions about the issues raised in this paper, please don't hesitate to contact us.

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