Chapter 41

Customer Analytics Capabilities in the Big Data Spectrum:
A Systematic Approach to Achieve Sustainable Firm Performance

Md Afnan Hossain
University of Wollongong, Australia

Shahriar Akter
https://orcid.org/0000-0002-2050-9985
School of Management and Marketing, University of Wollongong, Australia

Venkata Yanamandram
University of Wollongong, Australia

ABSTRACT

Customer analytics plays a vital role in generating insights from big data to improve service innovation, product development, personalization, and managerial decision-making; yet, no academic study has investigated customer analytics capability through which it is possible to achieve sustainable business growth. To close this gap, this chapter explores the constructs of the customer analytics capability by drawing on a systematic review of the literature in the big data spectrum. The chapter's interpretive framework portrays a definitional aspect of customer analytics, the importance of customer analytics, and customer analytics capability constructs. The study proposes a customer analytics capability model, which consists of four principal constructs and some important sub-constructs. The chapter briefly discusses the challenges and future research direction for developing the customer analytics capability model in the data rich competitive business environment.

INTRODUCTION

"Big Data" continuously challenges firms, creating an exhilarating leading edge of prospect in the last couple of years. Contemporary firms are taking initiatives to adopt analytics for gaining a superior advantage in the rapidly changing data-rich business environment (Popovič et al., 2016; Nam et al., 2018). The worldwide market in business intelligence and analytics is estimated to be worth $200 billion by 2020 (IDC, 2016), with many industry experts predicting that the customer analytics capability of a firm would enhance the overall firm's performance in the big data environment (Germann et al., 2014). France and Ghose (2018) refer to customer analytics as to the advanced technology that able to solve the customer-centric challenges by analyzing the massive amount of marketing data. A large stream of research focuses on the benefit of customer analytics (e.g., Verhoef et al., 2010; Erevelles et al., 2015; Braun and Garriga, 2018), with relatively little or no attention been devoted to understanding the firm's capacity building of customer analytics in the data-rich environment. Therefore, this chapter seeks to answer the following question.

RQ: What are the dimensions of customer analytics capability to gain sustainable firm performance?

To answer this research question, firstly, we portray the definitional aspects of customer analytics, including discussing the difference between customer and marketing analytics. Secondly, we highlight the importance of customer analytics, and we articulate the findings of a systematic literature review and propose a set of customer analytics capability constructs.

In addressing the research question, this chapter makes two contributions to customer analytics research. Firstly, it offers a theoretical framework of capability dimensions of customer analytics. Secondly, managers can get a clear idea of the customer analytics capability that will lead to attaining sustainable firm performance in the competitive business environment. Following an extensive literature review, we propose a model of customer analytics capability that gives direction to achieve sustainable business growth. Finally, we present a brief discussion on the challenges and a path for future research in this particular area.

LITERATURE REVIEW

Customer Analytics in Big Data Environment

Customer analytics is a robust procedure to manage today's ever-changing customers in the data-rich environment (Sun et al., 2014). Magill (2015) argues that customer analytics is no longer just an exility; it is a necessity to create the superior customer experience, triggering firms to perform large-scale customer analytics to gain profound insights into customers and the entire market.

In defining customer analytics, one stream has reflected on value creation and strategy-centric analysis. For example, verhoef et al. (2010) enlightened that the application of customer analytics in the data-rich environment helps managers to implement a cross-selling strategy through analyzing individual customer's purchasing pattern over the various product categories. Indeed, an analytically mature organization is strategically ahead to gain a competitive advantage (Ransbotham & Kiron, 2018). In another study, Germann et al. (2013) mentioned a firm's actual performance, and management's decision-making shape well when managers strategically applied analytics.

Related Content

A Predictive Analytics Framework for Blood Donor Classification
Kavita Pabrejaand Akanksha Bhasin (2021). *International Journal of Big Data and Analytics in Healthcare (pp. 1-14).*
www.irma-international.org/article/a-predictive-analytics-framework-for-blood-donor-classification/277644

COVID-19 Deaths Previsions With Deep Learning Sequence Prediction: Bacille Calmette-Guérin (BCG) and Tuberculosis Track
Heni Bouhamed (2020). *International Journal of Big Data and Analytics in Healthcare (pp. 65-77).*
www.irma-international.org/article/covid-19-deaths-previsions-with-deep-learning-sequence-prediction/259989

On Estimating Population Means of Two-Sensitive Variables With Ranked Set Sampling Design
Shivacharan Rao Chitneni, Stephen A. Sedoryand Sarjinder Singh (2022). *Ranked Set Sampling Models and Methods (pp. 104-140).*
www.irma-international.org/chapter/on-estimating-population-means-of-two-sensitive-variables-with-ranked-set-sampling-design/291281

Prediction Length of Stay with Neural Network Trained by Particle Swarm Optimization
Azadeh Oliyaeiand Zahra Aghababaee (2017). *International Journal of Big Data and Analytics in Healthcare (pp. 21-38).*
www.irma-international.org/article/prediction-length-of-stay-with-neural-network-trained-by-particle-swarm-optimization/204446

Fuzzy Logic-Based Predictive Model for the Risk of Sexually Transmitted Diseases (STD) in Nigeria
Jeremiah A. Balogun, Florence Alaba Oladeji, Olajide Blessing Olajide, Adanze O. Asinobi, Olayinka Olufunmilayo Olusanyaand Peter Adebayo Idowu (2020). *International Journal of Big Data and Analytics in Healthcare (pp. 38-57).*
www.irma-international.org/article/fuzzy-logic-based-predictive-model-for-the-risk-of-sexually-transmitted-diseases-std-in-nigeria/259987