

PROJECT SUMMARY

CAREER: Examining Big Data and Business Analytics Operationalization Challenges

Big data and business analytics practices bring the value of data in decision making to the mainstream. Industry white papers reports -- Gartner (2014)ⁱ and IBM (2012)ⁱⁱ -- reported that while adoption rates of big data technologies are on the rise, most corporations are still immature in their business analytics processes and strategies. From operating in silos, lack of appropriate measurements, appropriate skills, to privacy issues, corporations are still operating on the basis of departmental and functional boundaries to implement business analytics. Such boundaries are questionable when seeking the full value out of big data analytics.

While there has been considerable effort undertaken with regards to the development of the various technical approaches towards big data analytics, the human aspect of big data and business analytics have received minor attention. To fill this gap in our knowledge, this study aims to (1) identify key challenges faced by stakeholders as they operationalize business analytics, (2) deepen the theoretical understandings by developing a theoretical framework of operationalization challenges in business analytics at the organizational level, and (3) propose organizational strategy best practices to support integrated business analytics.

The intellectual merits of this project include the following:

- **Interdisciplinary understanding of business analytics:** This study is designed to gain an in-depth understanding of business analytics operationalization challenges at the organizational level by converging the research streams of information systems, organizational behavior, and domain knowledge based on the industries interviewed (e.g. healthcare, banking, government, retail, manufacturing)
- **Granular assessment of key challenges:** This study will use multiple methods for triangulation and generalizability; however the study will capitalize on grounded theory investigation. The researcher's choice to embrace a qualitative study stems from the nature of the research problem and the degree of uncertainty. Indeed, understanding of big data and analytics is still surrounded by a high degree of uncertainty. Therefore, a grounded theory approach with an interpretive epistemology is appropriate and well suited for this study. This systematic approach of gathering and analyzing data allows the research to derive constructs and build theories.

The broader impacts of this work are as follows:

- **Scholarly contributions:** The research results will make scholarly contributions through the development of new theoretical frameworks that explain operationalization challenges of business analytics.
- **Strategic and practical guidelines for industry, government and other entities:** As a result of this investigation, there will be guidelines emerging from organizational business analytics challenges which likely will lead to guidelines relevant to industry, government, and other entities.
- **Educational impact:** The results will make practical contributions through the development of interventions such as educational opportunities and curricular resources. This research will be

integrated into a business analytics programs at both the graduate and undergraduate levels. Moreover, as an active member of the PhD Project for the last 8 years, training or panel discussions will be offered during the annual conference.

Keywords: Business analytics, big data, Business intelligence, Operationalization challenges.

ⁱ <https://www.gartner.com/doc/2844218/big-data-best-practices-insurance>

ⁱⁱ <http://public.dhe.ibm.com/common/ssi/ecm/gb/en/gbe03521usen/GBE03521USEN.PDF>