THE IMPACT OF BIG DATA ANALYTICS O CAPABILITIES N INNOVATION WITH THE MEDIATING ROLE OF VALUE CREATION MECHANISMS IN SELECTED TELECOMMUNICATION SERVICE PROVIDERS FROM TWELVE DISTRICTS OF SRI LANKA

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Abstract

In Sri Lanka, telecommunication service providers (TSPs) are looking for new definitions and guidelines for innovation direction due to the changing nature of technology, user behaviour, competition, and market trends. Data sources, types and analysis methods have changed dramatically in the last few years, and there are pieces of evidence that these are influencing the level of innovation in a firm. Big data analytics (BDA) is recognized as one of the most important future technology. Most literature on BDA focuses on how it can be used to enhance tactical organizational capabilities, but there are limited studies have adopted the conceptual model of this study regarding the mediating role of VCMs between BDA capabilities and innovation. To address this gap, the study extends existing research by examines the indirect impact of BDA capabilities on innovation with mediating role of value creation mechanisms (VCMs). Further, this study try to determine level of intention to adopt BDA and to identify the interrelationships among BDA capabilities, innovation, and VCMs in selected TSPs from twelve districts of Sri Lanka. To test the proposed research model, data collection was accomplished through self-administered questionnaire and online questionnaire from 91 executive level employees by using exponential non-discriminative snowball sampling technique. Additionally, data analysis was accomplished through descriptive analysis, univariate analysis, bivariate analysis, and multivariate analysis.

Based on the objectives of this study, four hypotheses were developed and tested. Based on the obtained results, the study found that BDA capabilities have a strong impact on innovation and this effect is partially mediated by VCMs. The study also discloses that there are strong positive significant interrelationships among BDA capabilities, innovation, and VCMs. The results of this study also show that there is high level of BDA adoption intention among selected TSPs in from twelve districts of Sri Lanka. Further, the study concludes that BDA capabilities enable TSPs to generate the insight that can trigger or strengthen their VCMs, which, in turn, positively associate with improved innovation. Finally, this study fulfilled the empirical and population gaps and serve as a reference for the TSPs those who have intention to adopt BDA to improve the innovation.

Keywords: *Intention to Adopt Big Data Analytics, Big Data Analytics Capabilities, Value Creation Mechanisms, Innovation, and telecommunication service providers.*

Abbreviations

BDA – Big Data analytics

VCMs – Value Creation Mechanisms

TSPs – Telecommunication Service Providers

POS – Point of Sales

OLAP – Online Analytical Process

DAaaS – Data Analysis as a Services

IT – Information Technology

HTMT - Heterotrait-Monotrait Ratio

RFID - Radio Frequency Identification

GPS - Global Positioning System

CCTV - Closed-Circuit Television

SNA - Social Network Analysis

OTT - Over the Top

OSS - Operating Support System

RAN - Radio Access Network

AHT - Average Handling Time

CRM – Customer Relationship Management

SPSS - Statistical Package for Social Sciences

VAF - Variance Accounted For

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