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以企業跟顧客的觀點來探討大數據分析對電子商務的衝擊

Applying Big Data Analytics in E-commerce: Aspects of
Business and Customer

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論文摘要內容：

大數據分析應用已經在許多已開發國家中被各產業領域應用著。這種新的分析工具提高了專家和研究人員對商業價值和企業挑戰的使用動機。然而，目前研究在這部分較為缺乏以商業視角下評估大數據分析應用的研究。本研究主旨在（1）應用大數據分析時，對公司的意義、企業特色、企業價值和企業挑戰進行文獻回顧；（2）探索並確定應用大數據分析在電子商務上對消費者反應的利弊影響；（3）評估知覺價值維度和知覺風險的中介效應；（4）確定信任傾向的調節效果。通過使用社會科學統計軟體和線性結構分析軟體進行數據分析，樣本回收越南 349 名受訪者之有效樣本。本研究從企業和客戶兩個角度進行分析。本研究結果如下：

（1）該研究綜合了多種大數據分析概念，為大數據分析在電子商務公司的應用提供更深入的見解。值得強調的是近年來與電子商務相關的大數據分析興趣增加。大數據分析在電子商務中的應用可以分為創建透明度、發現需求和提高績效、細分市場、更好的決策、新產品或商業模式創新等五個方面。這些應用程序帶來了許多商業價值，但也會對其他想要應用大數據分析的電子商務業者帶來一些挑戰。

(2) 研究結果發現訊息搜索、推薦系統、動態定價和客戶服務對消費者反應有不同顯著的影響，整體而言，訊息搜索對消費者意向及改變消費者行為的影響最大，而動態定價、推薦系統和客戶服務也對消費者意向有顯著的影響，但消費者行為卻會降低。而另一方面，隱私、安全、購物成癮和群眾效應對消費者反應有不同顯著的負面影響。具體而言，購物成癮與群眾效應、隱私及安全相比，購物成癮對消費者意向及行為都有具大的影響。因此不可否認的是，消費者正同時接收正面及負面的影響。

(3) 研究結果證實，功能和情感價值是大數據分析的積極性與消費者反應之間關係的重要中介變數。但功能價值的中介效果與情感價值並無顯著差異。這是一個重大的發現，現在的消費者不僅可以找到自己喜歡的產品或服務，還可以享受在網上購物的趣味性。因此，如何有效地運用大數據分析來促發消費者的功能價值和情感價值，這是給電子商務業者的一個方向。

(4) 研究發現，知覺風險不會調節大數據分析的負面因素與消費者反應之間的關係。此外，客戶的信任傾向可以緩解大數據分析的負面因素與客戶反應之間的關係及消費者感知到的風險。高信任傾向的消費者比低信任傾向的反應更強烈。由於消費者對大數據分析應用的信任，因此，當負面因素和知覺風險上升時，很容易對消費者行為有負面影響。

本研究有助於在以企業角度和消費者角度下增進對大數據分析應用的理解，這提供給電商業者發展永續的消費者市場之重要作用。電子商務可以依靠大數據分析來提升消費者行為，但過度使用可能會有一些負面的影響。除此之外，本研究對未來的後續研究建議，理論和實踐方面的挑戰進行了更廣泛的討論。

關鍵字：電子商務、大數據分析、消費者行為、知覺價值、知覺風險、信任傾向

ABSTRACT

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The Contents of Abstract in This Dissertation:

The era of Big Data analytics (BDA) has begun in most industries within developing and developed countries. This new analytics tool has raised motivation for experts and researchers to study its impacts to business values and challenges. However, there is shortage of studies which evaluate the applications of BDA under business view and help to understand customers' views towards the applications of Big Data analytic. This research aims to (1) draw on a systematic review of the literature about definition, distinctive characteristics, business values and challenges of a company when applying Big Data analytics, (2) explore and determine the pros and cons of applying Big Data analytics that affects customers' responses in an e-commerce environment, (3) evaluate the mediation effect of perceived value's dimensions and perceived risk, (4) determine the moderation effect of trust propensity. Data analyses were conducted by using the statistical package for social sciences and analysis of moment structures software in useful sample of 349 respondents in Vietnam. Two aspects as business and customer views are reviewed, explored, discussed in this study.

The major findings include:

(1) The study synthesized diverse BDA concepts that provide deeper insight about application of BDA for e-commerce firms. It is highlight that the increase in interest related to BDA in e-commerce in recent years. BDA applications in e-commerce can be divided into five aspects like as creating transparency, discovering needs and improving performance, segmenting market, better decision making, new product or business model innovation. These applications bring many business values but also raise some challenges when e-firms want to apply BDA.

(2) The findings found that information search, recommendation system, dynamic pricing, and customer services had different significant positive effects on customers' responses. Specifically, information search had a highest significant influence on customers' intention and improved customers' behavior. Following by dynamic pricing, recommendation system and customers' service also had significant impact on customers' intention but decreased customers' behavior. On another hand, privacy and security, shopping addiction, and group influences were found to have different significant negative effects on customers' responses. Specifically, shopping addiction had a drastic change from intention to behavior compared to group influences and privacy and security. It cannot be denied that customers receive positive and negative factors at the same time.

(3) The results confirmed that functional and emotional values play mediating roles between positive of applying BDA and consumers' responses. However, there weren't significant different between mediator effect of functional value and emotional value. This finding highlights the notification that customers nowadays not only find their products or services but also seek enjoyment when online shopping under Big Data era. Therefore, e-firms should increase perceived value based on creasing equally functional and emotional values.

(4) The study found out that perceived risk don't act mediate the relationship between negative of applying BDA and consumers' responses. Besides, customers' trust propensity was found to moderate the relation of negative factor of applying BDA to customers' responses and perceived risk to customers' responses. High trust propensity participants reported stronger responses than those with low trust propensity. It due to customers' trust on new applications of BDA, hence, it is easy to influence on customers as their negative response when negative factor and perceived risk are rising.

This study contributes to improve understanding of applications of Big Data Analytics under business view and customer view. This could play an important role to develop sustainable consumers market. E-vendors can rely on Big Data analytics but over usage may have some negative applications. Besides that, the research also broader discussion regarding future research opportunities, challenges in theory and practice.

Keywords: E-commerce, Big Data Analytics, Customers' Responses, Perceived Value, Perceived Risk, Trust Propensity

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TABLE OF CONTENTS

摘要.....	I
ABSTRACT	III
ACKNOWLEDGEMENTS	VI
TABLE OF CONTENTS	VIII
LIST OF TABLES	XII
LIST OF FIGURES	XIV
CHAPTER I. INTRODUCTION	1
1.1. Background of the Study.....	1
1.2. Statement of the Problem	2
1.3. Objectives of the Study	3
1.4. Contribution of the Study.....	4
1.5. Definition of the Operation Terms.....	5
1.6. Research Flowchart	6
1.7. Research Systematic Discussion	8
CHAPTER II. LITERATURE REVIEW	11
2.1. Concept of Big Data in E-commerce Environment	11
2.1.1. Big Data Analytics in the E-Commerce Environment	11
2.1.2. Big Data’s Distinctive Characteristics.....	13
2.1.3. Types of Big Data Used in E-commerce	18
2.2. Big data analytics in E-commerce: Aspect of business	22
2.2.1. Literature Review Research Approach.....	23

2.2.2. Business Values of Applying Big Data Analytics for E-commerce Firms	27
2.2.3. Challenges of Applying Big Data Analytics in E-commerce	30
2.3. Big data analytics in E-commerce: Aspect of Customer	34
2.3.1. Positive Factor of Applying BDA on Customers' Responses	35
2.3.2. Negative effects of applying Big Data analytics on customers' responses	40
2.3.3. The Mediating Role of Perceived Value and Perceived Risk	42
2.3.4. The Moderating Effect of Individual Trust Propensity	46
2.3.5. Behavior Consumer Responses Hierarchy Models	47
CHAPTER III. RESEARCH METHODOLOGY	49
3.1. Research Model and Research Hypotheses	49
3.1.1. Mechanism of Applying Big data Analysis and Customers' Responses ...	49
3.1.2. Perceived Value as the mediator for Positive Factor of Applying BDA and Customers' Responses	50
3.1.3. The Mediating Role of Perceived Risk and Moderating of Trust Propensity	52
3.2. The Operational Definition and Measurement Design	55
3.3. Research Type	60
3.4. Pilot Test	61
3.5. Sample Size	62
3.6. Data Type and Data Collection Method	63
3.6.1. Data Type	63
3.6.2. Data Collection Method	63
3.6.3. Data Collection Procedure	64
3.7. Data Analysis Techniques	65