

The Impact of Big Data Analytics Capability on Supply Chain Innovation and Competitive Advantage of Restaurant Industry in Thailand

Received: September 10, 2025

Revised: November 6, 2025

Accepted: November 12, 2025

Dr.Chanchai Meathawiroon

Siritida Songkhwan*

Lecturer of Department of Logistics Management,
Business School, University of the Thai Chamber of Commerce

(* Corresponding Author)

ABSTRACT

Through This study aims to analyze the contributions of big data analytics capability (BDAC) to the evolution of supply chain innovation (SCI) and the pursuit of competitive advantage (CA) within Thailand's restaurant sector. Utilizing the resource-based view (RBV) and Dynamic Capability (DC) frameworks, the study formulates and empirically evaluates a structural model that investigates both direct and mediating effects. Data were gathered from 184 restaurant enterprises via a questionnaire, and the hypothesized relationships were empirically examined employing partial least squares structural equation modeling (PLS-SEM).

The findings indicate that BDAC exerts a substantial impact on both SCI and CA, whereas SCI subsequently enhances competitive results by functioning as a mediating variable within the BDAC-CA relationship. The results of this study offer theoretical implications by broadening the resource-based view within the framework of digital supply chains and illustrating the pivotal function of innovation as a dynamic capability. In the context of managerial significance, the research accentuates the criticality of allocating resources towards data-informed decision-making processes and cultivating pioneering supply chain methodologies to ensure enduring competitive advantage. Control variables including firm size and firm age were additionally integrated, thereby enhancing the robustness of the findings.

Overall, the research elucidates the mechanisms by which BDAC empower organizations to transform technological assets into competitive advantages via innovations in supply chain management, providing valuable guidance for both scholars and industry professionals.

Keywords: Big Data Analytics Capability, Supply Chain Innovation, Competitive Advantage

ผลกระทบของความสามารถในการวิเคราะห์ข้อมูลขนาดใหญ่ ต่อนวัตกรรมห่วงโซ่อุปทาน และความได้เปรียบทางการแข่งขัน ของอุตสาหกรรมร้านอาหารในประเทศไทย

วันที่ได้รับต้นฉบับบทความ : 10 กันยายน 2568
วันที่แก้ไขปรับปรุงบทความ : 6 พฤศจิกายน 2568
วันที่ตอบรับตีพิมพ์บทความ : 12 พฤศจิกายน 2568

ดร.ชาญชัย เมธาวิรุฬห์

ลิริธิดา สงขวัญ*

อาจารย์ประจำสาขาวิชาการจัดการโลจิสติกส์ คณะบริหารธุรกิจ
มหาวิทยาลัยหอการค้าไทย
(* ผู้ประสานงานหลัก)

บทคัดย่อ

การศึกษานี้มีวัตถุประสงค์ เพื่อวิเคราะห์การสนับสนุนของความสามารถในการวิเคราะห์ข้อมูลขนาดใหญ่ต่อการพัฒนานวัตกรรมห่วงโซ่อุปทาน และการแสวงหาความได้เปรียบทางการแข่งขัน ในภาคธุรกิจร้านอาหารของประเทศไทย โดยใช้กรอบแนวคิดมุมมองฐานทรัพยากร และความสามารถเชิงพลวัต การศึกษานี้ได้พัฒนาและทดสอบเชิงประจักษ์ซึ่งแบบจำลองโครงสร้างที่ศึกษาทั้งอิทธิพลทางตรงและอิทธิพลการเป็นตัวแปรส่งผ่าน ข้อมูลถูกรวบรวมจากกิจการร้านอาหารจำนวน 184 แห่งผ่านแบบสอบถาม และความสัมพันธ์ตามสมมติฐานได้รับการทดสอบเชิงประจักษ์ด้วยการวิเคราะห์แบบจำลองสมการโครงสร้างด้วยวิธีกำลังสองน้อยที่สุดบางส่วน

ผลการศึกษาพบว่า ความสามารถในการวิเคราะห์ข้อมูลขนาดใหญ่ มีอิทธิพลอย่างมีนัยสำคัญต่อทั้งนวัตกรรมห่วงโซ่อุปทาน และความได้เปรียบทางการแข่งขัน ในขณะที่นวัตกรรมห่วงโซ่อุปทาน ส่งเสริมผลลัพธ์ทางการแข่งขันโดยทำหน้าที่เป็นตัวแปรส่งผ่านในความสัมพันธ์ระหว่างความสามารถในการวิเคราะห์ข้อมูลขนาดใหญ่ และความได้เปรียบทางการแข่งขัน ผลการศึกษานี้มีนัยสำคัญเชิงทฤษฎีโดยขยายมุมมองฐานทรัพยากรภายใต้บริบทของห่วงโซ่อุปทานดิจิทัล และแสดงให้เห็นบทบาทสำคัญของนวัตกรรมในฐานะความสามารถเชิงพลวัต ในด้านนัยสำคัญเชิงการจัดการ การวิจัยนี้เน้นย้ำถึงความสำคัญของการจัดสรรทรัพยากรเพื่อกระบวนการตัดสินใจที่อิงข้อมูล และการพัฒนาวิธีการห่วงโซ่อุปทานที่ล้ำสมัยเพื่อรับประกันความได้เปรียบทางการแข่งขันที่ยั่งยืน ตัวแปรควบคุมประกอบด้วยขนาดขององค์กรและอายุขององค์กร ได้ถูกนำมาพิจารณาพร้อมด้วย ซึ่งช่วยเพิ่มความน่าเชื่อถือของผลการศึกษา

โดยภาพรวมการวิจัยนี้ทำให้เกิดความชัดเจนในด้านความสามารถในการวิเคราะห์ข้อมูลขนาดใหญ่ ช่วยให้องค์กรสามารถแปลงทรัพยากรทางเทคโนโลยีให้เป็นความได้เปรียบทางการแข่งขันผ่านนวัตกรรมในการจัดการห่วงโซ่อุปทาน อันเป็นแนวทางที่มีคุณค่าสำหรับทั้งนักวิชาการและผู้ประกอบการในอุตสาหกรรม

คำสำคัญ : ความสามารถในการวิเคราะห์ข้อมูลขนาดใหญ่ นวัตกรรมห่วงโซ่อุปทาน ความได้เปรียบทางการแข่งขัน

INTRODUCTION

The service sector plays a pivotal role in economic systems worldwide (Zhong et al., 2016). In the context of Thailand, the Gross Domestic Product (GDP) exhibited an expansion of 3.3 percent in the year 2024, with the service sector functioning as a pivotal catalyst for the enhancement of the nation's economic framework. The service sector constitutes 57.2 percent of the overall GDP. This underscores the significant contribution of the service sector to Thailand's economic advancement. In the contemporary business landscape, characterized by technological evolution and shifting operational environments, Thailand has been actively promoting the development of a digital economy—a system propelled by technology and innovation. Currently, the volume of operational business data generated by the service sector is expanding at an unprecedented rate, prompting numerous businesses to become increasingly attentive to big data implications (Zhong et al., 2016). Many enterprises are facing considerable pressure to adapt, as business operations now necessitate data-driven approaches to inform decision-making processes and explore novel operational methodologies focused on creating customer value through supply chain management (Bahrami et al., 2022). Furthermore, digital factors have progressively influenced supply chain management in the service sector over recent years. This represents another critical factor driving the initiation of big data concept applications (Eichengreen & Gupta, 2013). Consequently, it becomes intriguing to investigate how the development of big data analytics capabilities within businesses can enhance value creation throughout the supply chain (Singh & Singh, 2019). The restaurant industry constitutes one of the service sector's most significant components. Moreover, the role of big data can potentially enable restaurant businesses to increase profitability and reduce operational costs through the integration of big data as a crucial element in strategic business decision-making processes.

Big data has become increasingly accessible to businesses across various sectors (Jha et al., 2020). The ability of enterprises to analyse their existing data repositories to uncover actionable insights represents a significant opportunity to enhance operational efficiency and maintain competitive advantage—effectively leveraging the potential of big data. However, to extract meaningful insights, organizations must develop robust big data analytics capabilities, which entail mobilizing essential resources across technological, human, and managerial domains to transform diverse data sources into actionable intelligence, ultimately aiming to generate business value (Gupta & George, 2016). Rialti et al. (2018) propose that big data analytics extends beyond merely discovering operational insights; it can catalyse business innovation. Within supply chain management contexts, big data analytics capabilities can function as crucial facilitators of supply chain innovation (Bahrami et al., 2022). Supply chain innovation constitutes a vital organizational component as it enhances both products and processes, ultimately leading to elevated customer satisfaction levels (Seo et al., 2014). Research on supply chain innovation by Wong and Ngai (2019) suggests that such innovation represents a valuable organizational resource characterized by its inimitability and irreplaceability. Consequently, businesses possessing superior supply chain innovation capabilities can establish sustainable competitive advantages that

distinguish them from market rivals. However, limited empirical evidence exists regarding how big data analytics capability translates into supply chain innovation and competitive advantage in service sectors, particularly within Thailand's restaurant industry. This study addresses this gap by developing an integrated framework linking BDAC, SCI, and CA under the resource-based view and dynamic capability perspectives.

Based on the aforementioned research significance and background, this study aims to investigate the causal relationships among big data analytics capabilities, supply chain innovation, and competitive advantage in the restaurant industry-a sector characterized by critical supply chain management practices. Additionally, this research examines the mediating role of supply chain innovation in the relationship between big data analytics capabilities and competitive advantage within Thailand's restaurant businesses. The scarcity of empirical studies exploring the interrelationships between big data analytics capabilities, supply chain innovation, and competitive advantage within the context of Thailand's restaurant industry represents a significant research gap. This investigation endeavours to address this gap by contributing to both academic discourse and practical applications beneficial to restaurant enterprises. The findings aim to foster operational efficiency within this industry, which serves as a vital component for strengthening the nation's economic advancement.

LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

Resource-Based View

The resource-based view explains how firms secure competitive advantage by leveraging resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991). Within supply chains, especially in the restaurant industry, such resources extend beyond physical assets to include data-driven competencies, technologies, and innovation processes. Penrose (1959) highlighted that organizational growth depends not only on available resources but also on their effective utilization. Building on this, RBV posits that resources such as big data analytics capability create value when strategically integrated into processes that competitors cannot easily replicate. Empirical studies emphasize BDAC as a dynamic resource that enhances decision-making and fuels supply chain innovation. Wamba et al. (2017) show that advanced analytics systems transform raw data into strategic intelligence, while Gupta and George (2016) stress that BDAC reflects not just technological investment but also culture, processes, and expertise aligned with VRIN criteria. In supply chain contexts, BDAC enables knowledge creation, process innovation, and interfirm collaboration (Chae et al., 2014). Open innovation further amplifies this by combining internal and external assets (Inauen & Schenker-Wicki, 2011). Thus, positioning BDAC and supply chain innovation within the RBV framework provides a robust foundation for examining how data-driven capabilities translate into sustainable competitive advantage.

Dynamic Capability

Dynamic capability theory builds on the resource-based view (Barney, 1991) by stressing that long-term competitiveness depends not only on possessing valuable, rare, inimitable, and non-substitutable resources, but also on the ability to reconfigure them in response to dynamic environments (Teece et al., 1997; Akpan et al., 2022). This perspective emphasizes that organizational survival derives from continuous adaptation and renewal, enabling firms to exploit new revenue streams and manage market volatility effectively (Chukwuemeka & Onuoha, 2018). Although influential, the theory's early conceptualizations were criticized for ambiguity and overlap between static and dynamic aspects (Wang & Ahmed, 2007; Kikuchi & Iwao, 2016). To address this, Teece (2007) refined the framework into three core microfoundations: sensing opportunities and threats, seizing them through strategic investments, and transforming organizational processes to maintain long-term competitiveness. This tripartite view links micro-level actions to macro-level outcomes, thereby clarifying how firms convert individual and collective behaviors into sustained advantage (Cristofaro & Lovallo, 2022). In recent years, big data analytics capabilities have been recognized as a manifestation of dynamic capability, as they enhance firms' adaptability, innovation, and responsiveness (Bahrami & Shokouhyar, 2021). Teece (2011) further emphasized that competitive advantage arises less from static resource endowments than from the continuous orchestration of capabilities. Evidence from emerging technology industries also indicates that the sequential execution of sensing, seizing, and transforming activities significantly improves innovation and performance, reinforcing the interdependent nature of these capability dimensions (Zabel & O'Brien, 2024).

Big Data Analytics Capability

The integration of digital technologies within supply chain management has emerged as a pivotal element facilitating service-oriented enterprises to augment their customer service competencies. These technologies empower organizations to customize their offerings in order to better satisfy the distinct requirements of individual customers, consequently enhancing operational efficiency and promoting heightened customer engagement (Sayasonti et al., 2025). Among these technological advancements, big data analytics constitutes one of the most significant and revolutionary instruments in the current digital epoch. Big data, characterized by its volume, variety, velocity, veracity, and value, enables organizations to manage and analyze vast datasets for improved decision-making and operational efficiency (Dubey et al., 2019; Wamba et al., 2015). Big data analytics involves systematic methods for integrating, processing, and interpreting large-scale data to generate actionable knowledge, enhance sustainability, and secure competitive advantage (Kabil, 2021; Mikalef et al., 2020). Research highlights that BDAC contributes significantly to innovation, competitiveness, and productivity (Ciampi et al., 2021). By leveraging consumer and supplier data, firms can optimize supply chain efficiency, improve responsiveness, and foster innovation (Lee & Mangalaraj, 2022; Al-Omoush et al., 2022). In manufacturing,

BDAC expands the scope of information available for decision-making (Park & Singh, 2022). In the restaurant industry, BDAC has transformed operations, customer engagement, and supply chain management. The integration of AI, IoT, and machine learning enables restaurants to boost efficiency, customer satisfaction, and service innovation (Tan et al., 2024; Valencia-Arias et al., 2024). Within supply chains, BDAC enhances resilience and innovation, often mediated by digital platforms and networks (Bahrami et al., 2022; Al-Khatib & Ramayah, 2023). BDAC signifies not only the acquisition of sophisticated technologies but also the organization's agile capacity to convert unrefined data into significant insights that inform both strategic and operational decision-making processes. Within the culinary sector, BDAC encompasses the amalgamation of sales, customer, and supply chain data to discern demand trends, regulate expenditures, and formulate ground-breaking menus or delivery methodologies. This is consistent with the capability-based framework that underscores the role of data analysis in fostering innovation and securing a competitive edge.

Supply Chain Innovation

Digital technologies have progressively revolutionized supply chain operations across various sectors, especially within the food industry. The integration of digital food supply chains augments operational efficiency, promotes sustainability, and increases transparency, thereby establishing a foundation for innovation in supply chain methodologies (Virmani et al., 2025). Supply chain innovation refers to the integration of technological and methodological advancements into supply chain operations to create transformative improvements in products, processes, and services. These innovations aim to achieve operational efficiency, adaptability, and superior customer satisfaction (Seo et al., 2014; Shamout, 2021). SCI not only fosters innovative product and process development but also strengthens firms' capacity to respond rapidly to dynamic market demands, thereby enhancing competitiveness (Bag et al., 2020). In the restaurant and food service industries, SCI has emerged as a critical factor for both scholarly and managerial attention. It contributes to operational efficiency, customer experience, and environmental sustainability, which are increasingly vital in today's competitive market. The progression of Industry 4.0 technologies-such as IoT, AI, and big data analytics-has significantly reshaped food supply chains since 2008, enabling smarter, data-driven operations (Sharma et al., 2024). Coupled with the rapid expansion of digital food delivery and the rising necessity for omnichannel services, these innovations underscore the importance of supply chain transformation for achieving service differentiation and customer loyalty (Mehra et al., 2024). Furthermore, empirical evidence suggests that SCI enhances customer experience by enabling faster delivery times, more personalized services, higher product quality, and improved safety assurance. Collectively, these outcomes reinforce SCI's role as a strategic driver of competitive advantage in modern service industries (Guo, 2024). In the present investigation, innovation is framed as supply chain innovation, which denotes the application of novel concepts, methodologies, or technologies that augment the performance and responsiveness of supply chains. In contrast to Open Innovation, which prioritizes external collaboration and the dissemination of

knowledge across organizational confines, SCI underscores the significance of internal and inter-organizational enhancements that directly bolster supply chain efficacy and competitive advantage (Seo et al., 2014; Kwak et al., 2018).

Competitive Advantage

Competitive advantage is a key determinant of a firm's market position, defined as the ability to deliver superior value compared to competitors (Porter, 1985; Barney & Hesterly, 2019). It derives from leveraging unique, hard-to-imitate resources and competencies to sustain long-term performance (M'kuma, 2015). Dimensions of advantage include cost leadership, quality, adaptability, efficiency, and timeliness (Ofori & Appiah-Nimo, 2021), which align with dynamic capability theory in driving superior outcomes (Gupta et al., 2018). In the restaurant and food service sectors, competitive advantage has become increasingly critical due to dynamic market conditions and high competition (Tang & Chin, 2024). The shift toward digital platforms-driven by consumer demand for convenience, personalization, and omnichannel interaction-has redefined service delivery (Stehnei et al., 2024). Emerging technologies such as AI, IoT, and automation have enhanced efficiency, innovation, and customer experiences, strengthening firms' market positioning (Guo, 2024). Ultimately, digital adoption not only improves service quality but also drives revenue growth and customer engagement, underscoring its strategic relevance for sustaining competitiveness in the global dining industry (Valencia-Arias et al., 2024; Anwar et al., 2024).

Hypothesis Development

Big data analytics capability signifies an organization's proficiency in obtaining, processing, and scrutinizing extensive and intricate datasets to facilitate both strategic and operational decision-making. Within the realm of supply chains, BDAC augments visibility, responsiveness, and agility-attributes essential for fostering innovation and sustaining long-term competitiveness (Gupta & George, 2016; Wamba et al., 2017). According to the resource-based view, enterprises can secure a competitive edge through distinctive, valuable, and challenging-to-replicate resources, including data and analytics capabilities (Barney, 1991). BDAC is recognized as a strategic asset that enhances supply chain innovation when integrated within systems, processes, and decision-making frameworks (Gunasekaran et al., 2017). Meanwhile, the Dynamic Capability Theory posits that organizations are required to incessantly adjust, assimilate, and reorganize both internal and external competencies to effectively respond to fluctuations in their environmental context (Teece, 2007). The concept of big data analytics capability enhances this dynamic capability by facilitating organizations to swiftly detect and react to supply chain disturbances and market transitions, thereby promoting innovation (Wamba et al., 2017). Empirical investigations have indicated that enterprises exhibiting robust big data analytics capabilities are more predisposed to engage in innovative practices throughout their supply chains. For instance, Wamba et al. (2017)

ascertained that BDAC exerts a favorable influence on supply chain efficacy by enabling improved forecasting, augmented collaboration with stakeholders, and decision-making predicated on data analysis. Within the context of the restaurant sector, BDAC facilitates superior demand forecasting, instantaneous inventory management, and adaptable sourcing strategies-all of which contribute to the advancement of supply chain innovation (Dubey et al., 2019). Therefore, based on theory and empirical evidence, we propose the following hypothesis:

H1: Big data analytics capability has a positive influence on supply chain innovation.

In the contemporary and exceptionally competitive landscape, organizations are progressively utilizing data-centric methodologies to surpass their competitors. The capacity for BDAC, which is characterized as an organization's proficiency in efficiently acquiring, storing, analyzing, and applying extensive and intricate datasets, has surfaced as a pivotal factor for maintaining a competitive edge (Wamba et al., 2017). This capability empowers enterprises not only to make judicious decisions but also to swiftly detect and react to fluctuations in the market, alterations in consumer preferences, and operational inadequacies (Mikalef et al., 2020). In the realm of the restaurant sector, which is distinguished by fierce rivalry and swiftly evolving consumer preferences, big data analytics assumes a crucial position in amplifying strategic agility and responsiveness. Organizations that adeptly harness the capabilities of big data can customize individualized experiences, refine pricing strategies and inventory management, and derive profound insights into consumer behavior, thus attaining both differentiation and cost leadership concurrently (Wamba et al., 2015). Furthermore, BDAC facilitates predictive analytics and instantaneous insights, which are imperative for fostering innovation and adaptability-fundamental components of competitive superiority in fluctuating industries (Mikalef et al., 2020). According to Dubey et al. (2019), organizations exhibiting elevated levels of BDAC demonstrate enhanced competencies in strategic alignment, resource reconfiguration, and value generation. Consequently, BDAC serves as a catalyst for firm-specific advantages that are not only valuable and rare but also challenging to replicate, thereby aligning with the resource-based view of the firm. Based on the presented evidence, it is reasonable to assert that the capability for big data analytics exerts a positive impact on the competitive advantage within the restaurant industry, we propose the following hypothesis:

H2: Big data analytics capability has a positive influence on competitive advantage.

In the modern digital environment, supply chain innovation has come to be recognized as a crucial enabler of organizational competitiveness. Supply chain innovation involves the implementation of novel concepts, methodologies, technologies, or managerial frameworks within supply chain operations, aimed at improving performance, responsiveness, and integration. As organizations encounter escalating uncertainty and complexity, particularly in consumer-centric sectors such as the restaurant industry, advancements in supply chains empower firms to swiftly adapt to market fluctuations, fulfill customer demands, and mitigate inefficiencies (Fatorachian & Kazemi, 2020). Innovative methodologies within

supply chain management-encompassing real-time monitoring, anticipatory demand forecasting, and flexible logistical arrangements-enable organizations to distinguish themselves from their rivals. Such advancements not only augment internal operational efficiencies and responsiveness but also elevate customer service quality, thereby fostering a more robust competitive advantage (Ravichandran, 2018). Moreover, the innovation within supply chains facilitates strategic coherence and collaboration with suppliers and distributors, thereby fostering operations that are both flexible and agile. Such adaptability is crucial for attaining a sustainable competitive edge in rapidly evolving markets, as articulated by Dubey et al. (2019), who emphasize that organizations possessing innovative supply chains are more favorably situated to generate value that is both rare and challenging to replicate. Consequently, the innovation of supply chains represents a pivotal element that augments an organization's capacity to excel beyond its rivals and maintain dominance in the marketplace, especially when integrated as a dynamic capability. Therefore, based on theory and empirical evidence, we propose the following hypothesis:

H3: Supply chain innovation has a positive influence on competitive advantage.

The Mediating Role of Supply Chain Innovation

Grounded in the theoretical frameworks of the resource-based view and dynamic capabilities view, big data analytics capability can be interpreted as a superior, reconfigurative capability that empowers organizations to perceive, capitalize on, and reorganize supply chain processes. Through this mechanism, BDAC promotes SCI encompassing processes, technologies, and inter-organizational arrangements-which is subsequently transformed into CA. An increasing integration of the literature explicitly delineates SCI as the mediator that facilitates the translation of data-driven capabilities into competitive outcomes. Empirical investigations across multiple industries that predominantly utilize structural equation modeling and partial least squares structural equation modeling (PLS-SEM) consistently indicate that supply chain innovation exhibits a mediating role that ranges from partial to complete within the big data analytics capabilities to performance/advantage nexus, with findings encompassing manufacturing sectors, Micro, Small, and Medium Enterprises (MSMEs), food supply chains, as well as varied national contexts. Furthermore, these investigations highlight that the magnitude of the indirect effect is contingent upon contextual factors and the specific model configurations employed. For example, Bahrami et al. (2022) identify a partial mediating effect exerted by supply chain innovation (and, under specific circumstances, a complete mediation effect attributed to resilience), thereby suggesting complex multi-stage pathways linking big data analytic capabilities to competitive outcomes. Concurrently, Ramadan et al. (2020) document that the capability for innovation acts as a mediator in the relationship between big data analytic capabilities and sustainable competitive advantage. In analogous mechanisms. Therefore, based on theory and empirical evidence, we propose the following hypothesis:

H4: Supply chain innovation positively mediates the relationship between big data analytics capability and competitive advantage.

Control Variable

Firm age, measured by years of operation, reflects organizational maturity and experiential knowledge that influence decision-making, innovation capacity, and effectiveness (Coad et al., 2018). Older firms often benefit from established processes, resources, and networks, while younger firms exhibit flexibility and quicker responses to market shifts (Autio et al., 2000; Sorensen & Stuart, 2000). In supply chain management and big data analytics, firm age affects how technological capabilities are developed and translated into competitive advantage (Huergo & Jaumandreu, 2004). Controlling for firm age ensures that results are not confounded by differences in organizational maturity. Firm size is another critical control variable, as it significantly impacts resources, capabilities, and performance outcomes. Larger firms typically have stronger financial capacity, refined operations, economies of scale, and brand power, which enhance innovation and strategic execution (Becker-Blease et al., 2010). Conversely, smaller firms are more adaptable and faster in decision-making, though constrained by limited resources. Accounting for firm size prevents biased results by ensuring observed relationships are not driven by variations in organizational scale.

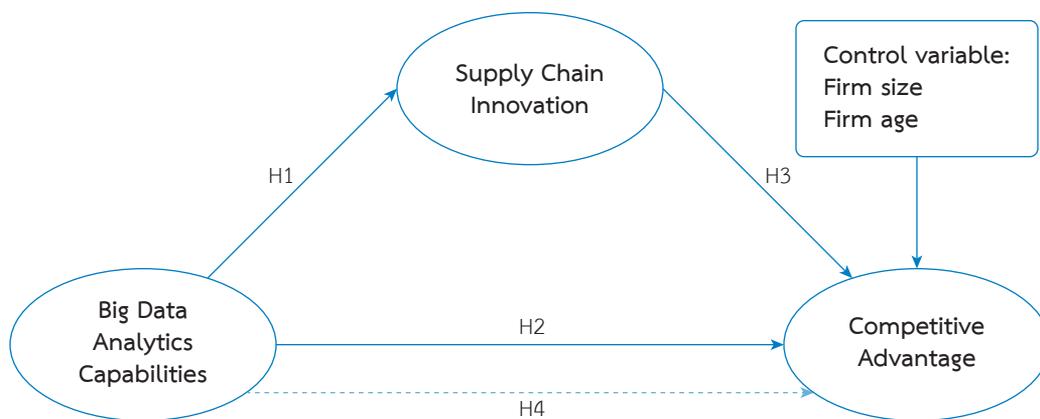


Figure 1: Research Framework

METHODOLOGY

Research Design, Sample, and Procedure

This investigation utilized a quantitative research methodology to analyze the causal interrelations among big data analytics capability, supply chain innovation, and competitive advantage within the framework of restaurant enterprises in Thailand. The study’s population consisted of proprietors and managers of restaurants operating throughout the nation. A purposive sampling strategy was implemented,

specifically targeting restaurant establishments that are formally registered with the Department of Business Development, Ministry of Commerce, Thailand. The research concentrated on the restaurant sector, which constitutes a significant element of Thailand's service industry. The selection of restaurants was predicated on their substantial dependence on data-oriented methodologies in domains including procurement, logistics, and customer relations, thereby rendering them appropriate for investigating the impact of big data analytics capability on supply chain innovation and competitive advantage. The primary informants for this study comprised proprietors, associates, and high-ranking executives who were directly accountable for both strategic and operational decision-making processes. In certain instances, personnel at the operational level were incorporated solely if their roles involved direct engagement in data utilization or activities related to the supply chain, including but not limited to inventory management, procurement facilitation, or digital ordering systems. This methodological approach ensured that all participants possessed adequate expertise to effectively assess each construct within the context of the research. The suitable sample size was ascertained in accordance with the recommendations posited by Hair et al. (2011), which advocate that the minimum sample size ought to fall within the range of 10 to 20 times the quantity of observed variables (measurement items). Considering that the current investigation utilized a total of 18 measurement items, the advised sample size spanned from 180 to 360 participants. The data collection process resulted in 184 valid responses, thereby satisfying the minimum threshold of the suggested sample size necessary for rigorous statistical analysis. The data for this study were collected through an online questionnaire survey.

Measurement and Instrument Development

A comprehensive survey was meticulously constructed in the English language and thereafter subjected to a back-translation process into Thai by two proficient linguistic specialists, during which various amendments and refinements were implemented (Klotz et al., 2023). The current investigation utilized a meticulously designed questionnaire as the principal tool for the acquisition of data. The questionnaire consisted of two distinct segments. Section 1 compiled demographic data and organizational-level contextual information from the primary informant. The survey included five closed-ended items aimed at identifying the respondent's role within the organization, the total number of employees, the firm's average annual revenue for the last three years, the duration of the respondent's employment within the organization, and the years that have passed since the firm's founding. Section 2 conducted an assessment of the fundamental constructs underpinning the study. The study evaluates big data analytics capability by examining a firm's proficiency in managing and utilizing extensive data for decision-making, rather than the technology scale of big data. In accordance with Lin and Kunnathur (2019) and Shamim et al. (2020), BDAC signifies the organization's ability to gather, process, and leverage data insights for both operational and strategic purposes. Participants were requested to express the degree to which their restaurant employs data-driven decision-making, analytical tools, and integrated information systems to enhance business performance. The assessment of supply chain innovation was

derived from the works of Seo et al. (2014) and Kwak et al. (2018), who articulated SCI as the amalgamation of technological, procedural, and organizational advancements that augment supply chain integration, risk mitigation, and competitive efficacy. The six components were meticulously refined to encapsulate innovation in logistics, procurement, and collaboration within the context of the restaurant industry. The assessment of competitive advantage was derived from the works of Al-Khatib (2023) and Tu et al. (2020), who conceptualize CA as the organization's capability to excel beyond its competitors through strategies of cost leadership, differentiation, and the creation of value. Consequently, our constructs embody perceptions relating to cost effectiveness, the distinctiveness of services or products, and enduring superiority over rival entities within the context of the restaurant industry. All items encompassed in this section were evaluated on a seven-point Likert scale, wherein a rating of 1 signified strong disagreement and a rating of 7 signified strong agreement.

Data Analysis

This research employed SmartPLS 4.0 to evaluate the model through the application of Partial Least Squares Structural Equation Modeling (PLS-SEM), selected for its capacity to clarify complex relationships while circumventing challenges associated with non-acceptable solutions and factor indeterminacy. A bifurcated approach was adopted: initially estimating the measurement model, followed by an examination of the structural model. Partial least squares structural equation modeling was employed to optimize the elucidated variance of endogenous constructs and to address mediation effects, thereby aligning with the explanatory objectives of the study. Moreover, PLS-SEM was employed in this investigation due to the primary aim of predicting and clarifying the variance within endogenous constructs, rather than the affirmation of an established theoretical framework. Considering the moderate sample size ($n = 184$) and the reflective nature of the constructs, PLS-SEM provides a more reliable estimation. Moreover, PLS-SEM is especially beneficial for the assessment of mediation effects and exploratory models in emerging contexts, such as the restaurant sector in Thailand. Furthermore, this research employs ρ_A as a substitute for composite reliability to substantiate the internal consistency of the model (Hair et al., 2019). A two-stage Partial Least Squares Structural Equation modeling (PLS-SEM) approach was utilized for data analysis with SmartPLS. This technique is appropriate for reflective constructs and moderate sample sizes, emphasizing predictive capabilities. The analysis comprised three principal phases. Initially, the measurement model was scrutinized for construct reliability and validity via composite reliability (CR), average variance extracted (AVE), and discriminant validity employing the Fornell-Larcker criterion and HTMT ratio. Subsequently, the structural model was evaluated by investigating such as coefficient of determination (R^2), and predictive relevance (Q^2). Lastly, the hypothesis investigating the causal link between big data analytics capability, supply chain innovation, and competitive advantage, along with the mediating role of supply chain innovation, was assessed through a bootstrapping method utilizing 5,000 subsamples to evaluate the significance of indirect effects.

Descriptive Profile of Respondents

A descriptive statistical analysis was conducted to characterize the properties of the study sample. The results demonstrated that a significant fraction of respondents categorized themselves as business owners (47.8%), indicating that the data primarily represent the insights of individuals with decision-making authority across multiple operational facets of the restaurants. A notable majority of the participating restaurants staffed between 30 and 100 personnel (73.4%), thereby positioning them within the medium-sized industry sector. Within the Thai context, the restaurant industry is perceived as a pivotal sector that contributes to national economic advancement through the facilitation of employment opportunities. In the context of firm's average annual revenue for the last three years, the majority of restaurants included in the sample indicated an average annual revenue ranging from 50 to 300 million Thai baht. This comparatively substantial revenue spectrum may be ascribed to the distinctive attributes and widespread allure of Thai cuisine, which enjoys considerable appreciation from both domestic and international patrons. Concerning the tenure of the respondents, over half (52.2%) reported having been employed at their respective restaurants for a duration of five to ten years, which corresponds with the observation that a significant majority of establishments (85.9%) have been operational for a period exceeding five years. This implies that the sample predominantly encapsulates mature enterprises characterized by seasoned management. The details are presented in Table 1.

Table 1: Descriptive Statistical Analysis and Detail of Respondents

Characteristics	Demographic Characteristics	Frequency (n = 184)	Percentage (%)
Respondent's role	Owner	88	47.8
	Business partner / shareholder	67	36.4
	Operational-level employee	29	15.8
Number of employees	Less than or equal to 30	37	20.1
	Between 30 and 100	135	73.4
	More than 100	12	6.5
Average annual revenue for the last three years (THB)	Less than 50 million	53	28.8
	Between 50 and 300 million	119	64.7
	More than 300 million	12	6.5
Duration of the respondent's employment	Less than or equal to 5 years	23	12.5
	Between 5 and 10 years	96	52.2
	More than 10 to 15 years	47	25.5
	More than 15 years	18	9.8

Table 1: Descriptive Statistical Analysis and Detail of Respondents (Cont.)

Characteristics	Demographic Characteristics	Frequency (n = 184)	Percentage (%)
Firm age	Less than 5 years	26	14.1
	5 years or more	158	85.9

RESULTS

This study examined an extensive collection of 184 valid cases. Prior to the execution of the structural equation modelling (SEM) analysis, the dataset was rigorously assessed to ascertain adherence to fundamental preliminary statistical assumptions. The evaluation of normality revealed that skewness values exhibited a range from -1.05 to 0.42, while kurtosis values were observed to fluctuate between -0.47 and 1.80, both of which remain within the permissible absolute value threshold of 2.0 as stipulated by Kline (2005). The phenomenon of multicollinearity was assessed through the application of the variance inflation factor (VIF), with all independent variables exhibiting values ranging from 1.29 to 1.73, significantly lower than the threshold value of 10, thus validating the nonexistence of multicollinearity complications (Hair et al., 2009). Furthermore, the assessment of variance homogeneity indicated p-values exceeding 0.05 for all examined variables, thereby implying the absence of statistically significant discrepancies in variance among the groups. The linearity assessment produced p-values that were less than 0.05, indicating the existence of statistically significant linear relationships between the independent and dependent variables. These findings validate that the dataset fulfilled the critical assumptions requisite for Structural Equation Modelling (SEM), thereby permitting the subsequent analysis to advance as planned. The specifics of these initial evaluations are delineated in Table 2.

Table 2: The Result of Statistical Assumptions

Construct	Multicollinearity VIF	Homogeneity of variance P-value	Linearity	
			BDAC	SCI
BDAC	1.29	0.36	-	-
SCI	1.73	0.53	0.00*	-
CA	-	0.43	0.00*	0.00*

* P-value < 0.05

Measurement Model

The appraisal of the measurement model in this study was executed in accordance with the methodology delineated by Hair et al. (2019), which posits that the evaluation of reflective measurement models encompasses four fundamental stages. The initial phase involves the evaluation of outer loadings, which are required to exceed the benchmark of 0.60 (Afthanorhan et al., 2020) to substantiate that latent constructs are sufficiently depicted by the observed variables. Within the scope of this study, the outer loadings fluctuated between 0.61 and 0.79. The second step is the evaluation of internal consistency reliability through the analysis of composite reliability coefficients. Elevated values of these indices signify an augmented reliability of the measurement model. In the current study, the composite reliability coefficients for each variable exhibited a range from 0.83 to 0.85. Hair et al. (2019) posited that composite reliability coefficients falling between 0.7 and 0.9 are indicative of substantial reliability of the measurement model. The third phase entails the evaluation of the measurement model via convergent validity, which refers to the degree to which the construct effectively accounts for the variance among its constituent items. This evaluation is conducted through the calculation of the average variance extracted (AVE) for each variable within the study. The current investigation revealed that the AVE values for each variable fluctuated between 0.63 and 0.74. Fornell and Larcker (1981) posited that an AVE threshold of 0.50 or above signifies that the construct elucidates at least 50 percent of the variance associated with its items. The final step involves the evaluation of discriminant validity, which pertains to the degree to which a construct is empirically differentiated from other constructs within the structural model. Fornell and Larcker (1981) assert that the square root of the average variance extracted for each construct must surpass the corresponding correlation coefficients among the constructs, thus indicating sufficient discriminant validity. Moreover, Henseler et al. (2015) introduced an alternative methodology for assessing discriminant validity, which involves the analysis of the Heterotrait-Monotrait ratio (HTMT). They indicated that when comparing HTMT ratios across variables, the resultant values should not exceed the threshold of 0.90. This investigation delineates the comprehensive findings of the measurement model evaluation for steps 1–3 in Table 3, alongside the outcomes of the discriminant validity assessment presented in Table 4.

Table 3: The Result of Measurement Model Test

Construct / Items	Outer loading	CR	rho_A	AVE
Big data analytic capability		0.83	0.77	0.63
BDAC1 Our restaurant collects big data to meet business needs.	0.61			
BDAC2 Our restaurant stores and processes big data effectively.	0.72			
BDAC3 Our restaurant uses latest technology for big data processing.	0.67			

Table 3: The Result of Measurement Model Test (Cont.)

Construct / Items	Outer loading	CR	rho_A	AVE
BDAC4 We use big data to develop new menu items/services.	0.61			
BDAC5 Our restaurant uses big data to enhance innovation.	0.79			
BDAC6 Our restaurant trains staff on big data analytics tools.	0.64			
Supply chain innovation		0.84	0.79	0.67
SCI1 We develop modern systems to integrate supply chain data.	0.71			
SCI2 We develop technology for real-time supply chain tracking.	0.68			
SCI3 We innovate in vehicles, packaging, or physical assets.	0.74			
SCI4 We continuously innovate in core supply chain processes.	0.69			
SCI5 We develop agile supply chain processes.	0.65			
SCI6 We develop creative supply chain management methods.	0.75			
Competitive Advantage		0.85	0.77	0.74
CA1 We can compete effectively with market competitors.	0.71			
CA2 We have flexible marketing channels to respond to market changes.	0.66			
CA3 We have a reputable brand and recognized market image.	0.75			
CA4 We can offer the lowest prices to customers.	0.65			
CA5 We can offer innovative and high-quality products to customers.	0.67			
CA6 We can deliver orders to customers on time.	0.66			

Table 4: Result of Discriminant Validity

	Fornell-Larcker Criterion			Heterotrait Monotrait (HTMT)	
	BDAC	SCI	CA	BDAC	SCI
BDAC	0.79*	–	–	–	–
SCI	0.73	0.82*	–	0.84	–
CA	0.63	0.75	0.86*	0.82	0.85

* diagonal values: square root of the AVE for each construct

Structural Model

The methodology employed for assessing the structural model in the current study was executed in accordance with the guidelines established by Hair et al. (2019), which encompasses the coefficient of determination (R^2), a statistical measure that encapsulates the variance attributable to each of the endogenous constructs and serves as an indicator of the model's explanatory efficacy. Elevated R^2 values signify that the independent variables possess a heightened capacity to elucidate the dependent variables. In this research, the R^2 values corresponding to supply chain innovation and competitive advantage were determined to be 0.55 and 0.58, respectively. Hair et al. (2011) articulated that R^2 values exceeding 0.50 but falling short of 0.75 suggest that independent variables are capable of providing a moderate level of explanation for the dependent variables. The subsequent phase in the evaluation of the structural model involves the examination of f^2 values, which serve to assess effect size and exhibit a degree of redundancy with respect to the magnitude of the path coefficients. This investigation revealed that the capability for big data analytics yielded f^2 values of 0.03 and 1.20 concerning supply chain innovation and competitive advantage, respectively; furthermore, supply chain innovation demonstrated an f^2 value of 0.40 in relation to competitive advantage. Cohen (1988) elucidated the importance of f^2 values by delineating their significance thresholds, asserting that f^2 values exceeding 0.02, 0.15, and 0.35 are classified as indicative of small, medium, and large effect sizes, correspondingly. The subsequent phase involves the evaluation of the structural model through the utilization of Q^2 values, which serve as a metric for gauging the predictive accuracy of the PLS path model. The present investigation determined that the Q^2 values corresponding to supply chain innovation and competitive advantage were recorded at 0.53 and 0.38, respectively. Hair et al. (2019) articulated that Q^2 values exceeding 0, 0.25, and 0.50 signify small, medium, and large degrees of predictive relevance within the context of the PLS path model. The findings derived from the structural model evaluation are systematically delineated in Table 5.

Hypothesis Testing

This investigation incorporates both the testing of direct effect hypotheses, elucidating the distinct impact of each variable within the proposed research conceptual framework through three specific hypotheses, as well as the evaluation of mediation hypotheses to analyse the mediating role of supply chain innovation in the relationship between big data analytic capability and competitive advantage. Furthermore, two control variables were evaluated: firm size, which within the Thai context can be classified into three tiers based on the number of employees -namely, fewer than 30 employees, between 30 and 100 employees, and exceeding 100 employees-aligned with small, medium, and large-scale dining establishments, respectively. The second control variable pertains to firm age, as the dependent variable in this investigation is competitive advantage, which within the context of the restaurant industry may necessitate significant temporal investment for maturation. Consequently,

restaurant age was categorized into two classifications: enterprises established less than 5 years prior and those established for 5 years or more, denoting short and long establishment durations, respectively. The hypothesis testing results can be explained through three sequential steps. (1) direct effect hypothesis testing: The analytical examination uncovered substantial affirmative correlations across all direct effect hypotheses. The big data analytics capability demonstrates a strong positive influence on supply chain innovation (H1: $\beta = 0.739$, $t = 7.274$, $p < 0.05$, $f^2 = 0.03$). In a similar vein, big data analytics capability exhibits a positive influence on competitive advantage (H2: $\beta = 0.165$, $t = 1.851$, $p < 0.001$, $f^2 = 1.20$). Additionally, supply chain innovation shows a positive influence on competitive advantage (H3: $\beta = 0.615$, $t = 6.122$, $p < 0.001$, $f^2 = 0.40$). (2) mediation effect testing: The mediation analysis was executed utilizing bootstrapping with 5,000 subsamples, a non-parametric resampling methodology frequently employed in partial least squares structural equation modelling to assess the statistical significance of path coefficients and to ascertain the robustness of estimates. The findings substantiate that supply chain innovation serves as a positive mediator in the association between big data analytics capability and competitive advantage (H4: $\beta = 0.455$, $t = 5.088$, $p < 0.001$). and (3) control variable testing: The analysis of control variables indicated that neither the size of the firm ($\beta = 0.054$, $t = 0.848$, $p = 0.198$) nor the age of the firm ($\beta = -0.010$, $t = 0.155$, $p = 0.438$) exerted a statistically significant impact on the relational outcomes of the model. The inclusion of these control variables facilitates a more precise evaluation of the causal interrelations between the independent and dependent variables (Joo et al., 2018). The result of the hypothesis testing is presented in table 5 and figure 2.

Table 5: Result of Structural Model and Hypothesis Testing

Relationship	Std. Beta	t-value	p-value	f ²	Result
BDAC → SCI	0.739	7.274	0.000	0.030	Supported
BDAC → CA	0.165	1.851	0.030	1.200	Supported
SCI → CA	0.615	6.122	0.000	0.400	Supported
BDAC → SCI → CA	0.455	5.088	0.000		Supported

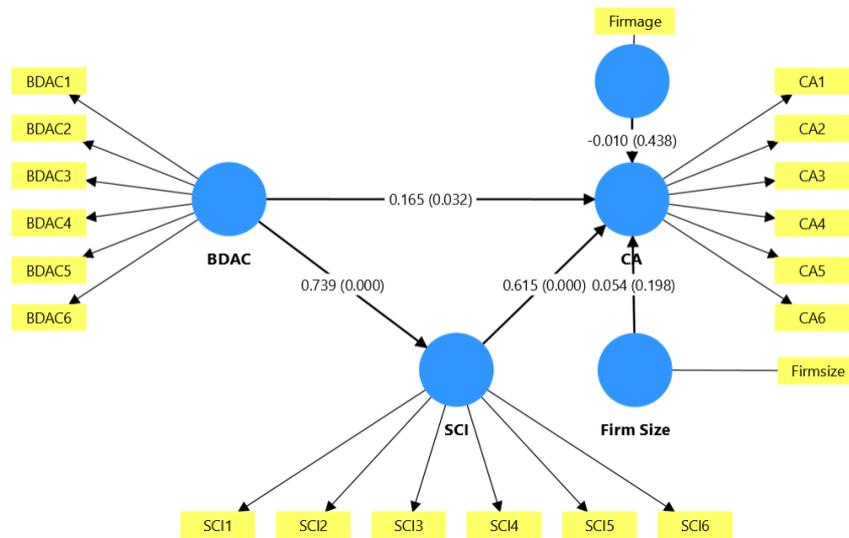


Figure 2: The structural model tested in this study

DISCUSSION

The empirical results provide strong support for hypothesis 1, indicating that big data analytics capability significantly enhances supply chain innovation within the restaurant industry in Thailand. This outcome underscores that organizations endowed with sophisticated data analytics competencies possess the ability to convert unprocessed data into pragmatic insights, thereby promoting innovation throughout supply chain operations. Specifically, the capacity to acquire, scrutinize, and elucidate substantial quantities of consumer and operational data empowers restaurants to reconfigure procurement frameworks, enhance inventory trajectories, and establish more agile distribution networks. Such advancements are imperative in the Thai restaurant industry, where competitive dynamics are fierce and consumer preferences evolve swiftly. From a theoretical standpoint, the results substantiate and broaden the dynamic capabilities view (Teece, Pisano, & Shuen, 1997) by illustrating that big data analytics capability functions as a superior capability that enables organizations to detect, capitalize on, and reorganize resources for innovation within supply chains. In particular, BDAC facilitates the conversion of unprocessed data into strategic insights, thereby equipping organizations to discern emerging opportunities, devise innovative solutions, and realign supply chain processes in accordance with fluctuating market conditions. Moreover, the current research outcomes are congruent with preceding investigations. For instance, Wamba et al. (2017) established that big data analytics capabilities empower organizations to augment their innovation proficiencies by utilizing predictive insights derived from consumer and market data. Likewise, Gupta and George (2016) underscored that big data analytics capabilities constitutes the bedrock for organizational innovation through its amalgamation of technology, human capital, and data-driven methodologies. Within the framework of supply chains, Dubey et al. (2019) validated that analytical capabilities promote innovative practices in supply chains by enhancing

transparency, traceability, and responsiveness. Collectively, these scholarly contributions resonate with the present findings, corroborating that BDAC functions as a catalyst for innovation within supply chains.

The outcomes of the current study provide empirical support for hypothesis 2, indicating that the capability of big data analytics significantly enhances competitive advantage within the Thai restaurant industry. This finding is consistent with the resource-based view, which posits that organizations can achieve a sustainable competitive advantage when they possess resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). The capacity for big data analytics, by enabling the derivation of actionable insights from vast and complex datasets, represents a strategic asset that enhances decision-making processes, operational efficiency, and innovation centered on customer needs, thereby leading to an improved competitive advantage. This outcome is consistent with existing literature. For example, Wamba et al. (2017) illustrated that organizations that utilize big data analytics capabilities achieve enhanced performance metrics due to the capacity of analytics to facilitate improved alignment between available resources and prevailing market opportunities. In a similar vein, Mikalef et al. (2020) posited that big data analytic capability operates as a dynamic capability, empowering organizations to identify and exploit emergent opportunities while simultaneously reconfiguring their existing resources to sustain competitive advantages. These revelations resonate with the current findings, wherein restaurants that implement BDAC can effectively predict customer preferences, optimize supply chain processes, and develop innovative service offerings, thus enabling differentiation from their competitors.

The empirical findings derived from this research elucidate that innovation within supply chains substantially augments competitive advantage within the restaurant sector in Thailand, thereby supporting hypothesis 3. This outcome accentuates the essential function of innovation in reinforcing organizations' capacity to distinguish themselves and adapt proficiently to fluctuations in the market. From the vantage point of the resource-based view, the innovation of supply chains may be construed as a strategic asset that is not only valuable but also scarce and challenging to replicate, consequently nurturing enduring competitive advantage (Barney, 1991). Through the innovation of operational processes, technological advancements, and collaborative frameworks, organizations can exploit distinctive competencies to surpass their rivals in an exceptionally dynamic marketplace. These empirical results are congruent with antecedent scholarly investigations. For instance, Afraz et al. (2021) underscore the paramount significance of supply chain innovation in cultivating a competitive advantage. Their research illustrates that supply chain innovation augments organizational flexibility, responsiveness, and adaptability, thereby empowering firms to proficiently maneuver through fluctuating market landscapes. In a similar vein, Kwak et al. (2018), in their investigation of enterprises within the manufacturing and logistics sectors in South Korea, determined that supply chain innovation has a pronounced positive impact on the competitive advantage of firms. In the realm of Thailand's gastronomic sector, where consumer preferences are undergoing rapid transformation and the level of competition is markedly intense, the significance of supply chain innovation is accentuated. Transformations such as the

The Impact of Big Data Analytics Capability on Supply Chain Innovation and Competitive Advantage of Restaurant Industry in Thailand

incorporation of digital platforms for procurement processes, the utilization of big data analytics for the purpose of demand forecasting, and the establishment of agile supplier networks empower restaurants to respond effectively to consumer expectations while simultaneously preserving cost efficiency. This localized context further substantiates the assertion that supply chain innovation is not merely of universal importance but is also contextually vital for sectors characterized by volatility and complexity.

The results of this investigation furnish empirical evidence supporting the mediating function of supply chain innovation in the nexus between big data analytics capability and competitive advantage. In particular, the findings elucidate that BDAC enhances competitive advantage not solely through its direct effects but also indirectly by facilitating the development of innovative practices within the supply chain. This underscores the significance of conceptualizing BDAC as a fundamental resource that, when adeptly utilized, promotes innovation in the supply chain, thereby ultimately converting data-driven insights into enduring sources of competitive edge. This mediating effect aligns with previous findings articulated by Kumar and Raj (2024), who underscored that innovation in supply chains driven by big data constitutes a vital avenue through which organizations attain a sustainable competitive advantage. The current investigation broadens this comprehension to encompass the restaurant sector in Thailand, wherein the capacity to transform analytical capabilities into pragmatic innovations—such as dynamic demand forecasting, adaptive sourcing, and digital collaboration with partners—functions as the mechanism by which BDAC translates into enhanced market positioning.

The findings underscore the pivotal function of BDAC in promoting supply chain innovation within the restaurant sector. By adeptly managing and analyzing operational data, establishments can enhance coordination among supply chain activities, such as procurement, inventory management, and supplier collaboration. This conclusion is consistent with the supply chain paradigm, highlighting that information dissemination and data analytics capabilities are fundamental facilitators of innovation and performance enhancement across the supply chain network. Although the structural interrelations among BDAC, SCI, and CA were corroborated, one must interpret these associations with due diligence. Considering the cross-sectional design employed, the study predominantly delineates statistical correlations rather than unequivocal causal trajectories.

Theoretical Implications

This study offers several theoretical contributions to big data analytics and supply chain management. First, it reinforces the resource-based view by showing that BDAC is a rare and valuable resource enhancing supply chain innovation and competitive advantage (Barney, 1991). It also supports the dynamic capabilities view, demonstrating how BDAC enables firms to sense, seize, and reconfigure resources in dynamic environments (Teece et al., 1997). Second, the study highlights the mediating role of supply chain innovation, clarifying how digital capabilities transform into competitive outcomes (Helfat & Peteraf, 2003). Third, by situating the research in Thailand's restaurant sector, it extends open

innovation theory (Chesbrough, 2003), showing how BDAC fosters collaboration, agility, and transparency in service-oriented contexts. Lastly, controlling for firm size underlines contingency perspectives, suggesting that organizational scale influences the extent to which BDAC and innovation generate competitive benefits. Overall, the findings refine RBV, dynamic capabilities, and open innovation theories, while contextualizing their relevance to service industries and developing economies. This research enhances theoretical understanding by broadening the resource-based view and dynamic capability frameworks to encompass the service industry setting, elucidating the role of BDAC as a dynamic capability that promotes innovation and competitive advantage.

Managerial Implications

The results derived from this research present multiple pragmatic implications for administrators and policymakers within the restaurant sector. Firstly, the investment in big data analytics capabilities has transitioned from being a discretionary choice to an imperative strategic requirement. It is imperative for managers to focus on the development of data-centric infrastructures, which encompass customer analytics, supplier data integration, and real-time demand forecasting methodologies. The implementation of these capabilities facilitates organizations in augmenting operational efficiency, minimizing waste, and improving the personalization of services, thus fortifying their long-term competitive advantage. Second, it is imperative for managers to acknowledge supply chain innovation as the pivotal mechanism that converts data capabilities into substantive value. Instead of concentrating exclusively on the acquisition of technology, organizations must reengineer their processes, embrace collaborative platforms, and devise avant-garde logistics solutions (for instance, digital ordering systems, traceability mechanisms, and AI-enhanced procurement strategies). Such innovations guarantee that data insights are proficiently transformed into customer value and competitive differentiation in the marketplace. Third, the research posits that competitive advantage within the restaurant industry is derived not solely from cost efficiency but also from agility, transparency, and responsiveness. It is recommended that managers cultivate an innovation-oriented culture that incorporates external stakeholders-such as suppliers, logistics providers, and technology vendors-into the strategic decision-making framework. This collaborative paradigm embodies the tenets of open innovation and enables restaurants to swiftly adapt to the fluctuating conditions of the market. Finally, the findings emphasize the significance of organizational scale. Smaller enterprises can utilize BDAC via collaborations and external analytics despite resource limitations. For larger organizations, scalability and sophisticated predictive modelling are essential for maintaining competitive edge. In both scenarios, aligning BDAC efforts with defined strategic goals will enhance investment returns. The empirical results provide strategic guidance for restaurateurs in the conversion of data assets into progressive supply chain methodologies, thereby fostering enduring competitive advantage. Moreover, from a managerial perspective, the findings indicate that restaurant managers can utilize BDAC to enhance supply chain efficiency and promote innovation. For example, data-driven insights facilitate procurement optimization, supplier performance monitoring, and customer demand

forecasting. By incorporating analytics into operations, managers can attain cost efficiency, improve service quality, and bolster competitive advantage in the restaurant sector.

CONCLUSION

This research investigated the influence of big data analytics capability on supply chain innovation and competitive advantage in the context of Thailand's restaurant sector, while also considering essential control variables including firm size and firm age. The findings substantiate that big data analytics capabilities directly augment both supply chain innovation and competitive advantage, with supply chain innovation functioning as a mediating mechanism that converts data-driven competencies into enduring business value. Significantly, the effects persisted robustly even after accounting for firm characteristics, indicating that the advantages of big data analytics capabilities are not confined to larger or more established enterprises but rather extend across a variety of organizational contexts. Through the synthesis of the resource-based view and the dynamic capability perspective, this study offers a theoretical contribution by elucidating the mechanisms through which analytics capabilities develop into innovation-centric processes that foster enhanced competitive advantage. From a managerial perspective, the results underscore the imperative for restaurateurs to allocate resources not solely towards technological frameworks but also towards enhancing organizational responsiveness, fostering interdisciplinary cooperation, and adopting supply chain methodologies that prioritize innovation. This dual emphasis equips enterprises to adeptly navigate market fluctuations, evolving consumer tastes, and the increasing digital transformation within the food service industry. The Thai context demonstrates how analytics-driven innovation allows enterprises in developing economies to develop unique competitive advantages, even in the face of resource limitations. Collectively, these contributions underscore the significance of BDAC as a catalyst for open innovation within supply chains, while the incorporation of control variables enhances the robustness and generalizability of the findings. Although this research does not engage in a direct examination of extensive datasets, it significantly enhances the comprehension of big data analytics capability as a strategic and dynamic asset, rather than merely a technological function. The results amalgamate the ways in which BDAC empowers organizations to amalgamate, interpret, and leverage a variety of data sources for fostering innovation and making informed decisions within the supply chain. This underscores the "analytical and interpretative dimension" of BDAC, which enables firms—such as the restaurants analyzed in this research—to convert disparate operational data into actionable insights that bolster supply chain innovation and confer a competitive advantage. This synthesis elucidates that the intrinsic worth of big data does not reside in its sheer volume or rapidity, but rather in an organization's proficiency to derive significance, cultivate knowledge, and adeptly implement insights throughout its business processes. Consequently, the research enhances theoretical comprehension by conceptualizing BDAC as a construct driven by capabilities, thereby underscoring its significance in fostering data-informed innovation and enduring competitiveness within the restaurant industry. The findings of this research also reaffirm that supply chain innovation acts as

a critical bridge linking big data analytics capability with competitive advantage. Through improved data-driven coordination with suppliers, inventory optimization, and service innovation, restaurants can achieve better operational integration and responsiveness. This underlines SCI as a form of innovation specific to supply chain processes rather than open or external innovation.

LIMITATION AND DIRECTION FOR THE FUTURE RESEARCH

Although this investigation offers significant perspectives regarding the influence of big data analytics capability on fostering supply chain innovation and enhancing competitive advantage within the restaurant sector of Thailand, it is imperative to recognize several limitations. Initially, the study utilized a cross-sectional methodology, which limits the capacity to deduce causal relationships among the variables examined. Subsequent research endeavours could employ longitudinal methodologies to effectively capture the evolving characteristics of big data analytics capability, supply chain innovation, and competitive advantage throughout time. Second, the research predominantly concentrated on the restaurant industry within Thailand, which may constrain the applicability of the conclusions to alternative sectors or cultural milieus. Subsequent inquiries might broaden the framework to encompass varied industries and juxtapose findings across distinct nations to augment external validity. Third, although the variables of firm size and firm age were accounted for in this research, additional contextual elements such as ownership structure, digital maturity, or organizational culture may significantly influence the relationship between BDAC and innovation outcomes. Investigating these variables could yield a more comprehensive insight into the boundary conditions. Finally, the investigation was contingent upon self-reported survey data, which may potentially be influenced by common method bias notwithstanding the implementation of procedural safeguards. Subsequent research endeavours could integrate survey responses with objective performance indicators, case studies, or qualitative analyses to enhance the robustness of validity. Another constraint pertains to the conceptual breadth of the constructs in question. While the investigation delineates supply chain innovation and competitive advantage drawing upon extant literature, both constructs may still encapsulate a variety of dimensions spanning operations, technology, and strategic frameworks. This expansiveness may engender partial overlap or measurement biases, thereby resulting in potential spurious correlations among the constructs. Subsequent research endeavors could further refine these constructs concentrating, for instance, on process innovation or service performance to validate and enhance the causal interpretation of the proposed relational frameworks.

REFERENCES

- Afraz, M. F., Bhatti, S. H., Ferraris, A., & Couturier, J. (2021). The impact of supply chain innovation on competitive advantage in the construction industry: Evidence from a moderated multi-mediation model. *Technological Forecasting and Social Change*, 162, 120370. <https://doi.org/10.1016/j.techfore.2020.120370>
- Afthanorhan, A., Awang, Z., & Aimran, N. (2020). An extensive comparison of CB-SEM and PLS-SEM for reliability and validity. *International Journal of Data and Network Science*, 357–364. <https://doi.org/10.5267/j.ijdns.2020.9.003>
- Akpan, E. E., Johnny, E., & Sylva, W. (2022). Dynamic capabilities and organizational resilience of manufacturing firms in Nigeria. *Vision the Journal of Business Perspective*, 26(1), 48–64. <https://doi.org/10.1177/0972262920984545>
- Al-Khatib, A. W. (2023). The determinants of export performance in the digital transformation era: empirical evidence from manufacturing firms. *International Journal of Emerging Markets*, <https://doi.org/10.1108/ijoem-08-2022-1223>
- Al-Khatib, A. W., & Ramayah, T. (2023). Big data analytics capabilities and supply chain performance: testing a moderated mediation model using partial least squares approach. *Business Process Management Journal*, 29(2), 393–412. <https://doi.org/10.1108/bpmj-04-2022-0179>
- Al-Omoush, K. S., Palacios-Marqués, D., & Ulrich, K. (2022). The impact of intellectual capital on supply chain agility and collaborative knowledge creation in responding to unprecedented pandemic crises. *Technological Forecasting and Social Change*, 178, 121603. <https://doi.org/10.1016/j.techfore.2022.121603>
- Anwar, F. A., Deliana, D., & Suyamto, S. (2024). Digital transformation in the hospitality industry: Improving efficiency and guest experience. *International Journal of Management Science and Information Technology*, 4(2), 428–437. <https://doi.org/10.35870/ijmsit.v4i2.3201>
- Autio, E., Sapienza, H. J., & Almeida, J. G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43(5), 909–924. <https://doi.org/10.2307/1556419>
- Bag, S., Yadav, G., Wood, L. C., Dhamija, P., & Joshi, S. (2020). Industry 4.0 and the circular economy: Resource melioration in logistics. *Resources Policy*, 68, 101776. <https://doi.org/10.1016/j.resourpol.2020.101776>
- Bahrami, M., & Shokouhyar, S. (2021). The role of big data analytics capabilities in bolstering supply chain resilience and firm performance: a dynamic capability view. *Information Technology and People*, 35(5), 1621–1651. <https://doi.org/10.1108/itp-01-2021-0048>

- Bahrami, M., Shokouhyar, S., & Seifian, A. (2022). Big data analytics capability and supply chain performance: the mediating roles of supply chain resilience and innovation. *Modern Supply Chain Research and Applications*, 4(1), 62–84. <https://doi.org/10.1108/mscra-11-2021-0021>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Barney, J. B., & Hesterly, W. S. (2019). *Strategic management and competitive advantage: Concepts Global Edition*.
- Becker-Blease, J. R., Kaen, F. R., Etebari, A., & Baumann, H. (2010). Employees, firm size and profitability in U.S. manufacturing industries. *DOAJ (DOAJ: Directory of Open Access Journals)*. <https://doaj.org/article/51fb762ef1894b25af8193c421033968>
- Chae, B., Olson, D., & Sheu, C. (2014). The impact of supply chain analytics on operational performance: A resource-based view. *International Journal of Production Research*, 52(16), 4695–4710. <https://doi.org/10.1080/00207543.2013.861616>
- Chesbrough, H. W. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business School Press.
- Chukwuemeka, O. W., & Onuoha, B. C. (2018). Dynamic capabilities and competitive advantage of fast foods restaurants. *The International Journal of Management Science and Business Administration*, 4(3), 7–14. <https://doi.org/10.18775/ijmsba.1849-5664-5419.2014.43.1001>
- Ciampi, F., Demi, S., Magrini, A., Marzi, G., & Papa, A. (2021). Exploring the impact of big data analytics capabilities on business model innovation: The mediating role of entrepreneurial orientation. *Journal of Business Research*, 123, 1–13. <https://doi.org/10.1016/j.jbusres.2020.09.023>
- Coad, A., Holm, J. R., Krafft, J., & Quatraro, F. (2018). Firm age and performance. *Journal of Evolutionary Economics*, 28(1), 1–11. <https://doi.org/10.1007/s00191-017-0532-6>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences (2nd eds.)*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Cristofaro, M., & Lovallo, D. (2022). From framework to theory: an evolutionary view of dynamic capabilities and their microfoundations. *Journal of Management & Organization*, 28(3), 429–450. <https://doi.org/10.1017/jmo.2022.46>
- Dubey, R., Gunasekaran, A., & Childe, S. J. (2019). Big data analytics capability in supply chain agility. *Management Decision*, 57(8), 2092–2112. <https://doi.org/10.1108/md-01-2018-0119>
- Eichengreen, B., & Gupta, P. (2013). The two waves of service-sector growth. *Oxford Economic Papers*, 65(1), 96–123. <https://doi.org/10.1093/oep/gpr059>

The Impact of Big Data Analytics Capability on Supply Chain Innovation and Competitive Advantage of Restaurant Industry in Thailand

- Fatorachian, H., & Kazemi, H. (2020). Impact of Industry 4.0 on supply chain performance. *Production Planning & Control*, 32(1), 63–81. <https://doi.org/10.1080/09537287.2020.1712487>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39. <https://doi.org/10.2307/3151312>
- Gunasekaran, A., Papadopoulos, T., Dubey, R., Wamba, S. F., Childe, S. J., Hazen, B., & Akter, S. (2017). Big data and predictive analytics for supply chain and organizational performance. *Journal of Business Research*, 70, 308–317. <https://doi.org/10.1016/j.jbusres.2016.08.004>
- Guo, Y. (2024). *Successful stories on the usage of technologies in service industries*. In *Advances in business strategy and competitive advantage book series* (pp. 197–230). <https://doi.org/10.4018/979-8-3693-7683-6.ch010>
- Gupta, M., & George, J. F. (2016). Toward the development of a big data analytics capability. *Information & Management*, 53(8), 1049–1064. <https://doi.org/10.1016/j.im.2016.07.004>
- Gupta, G., Tan, K. T. L., Ee, Y. S., & Phang, C. S. C. (2018). Resource-Based View of Information Systems: Sustainable and Transient Competitive Advantage Perspectives. *AJIS. Australasian Journal of Information Systems/AJIS. Australian Journal of Information Systems/Australian Journal of Information Systems*, 22. <https://doi.org/10.3127/ajis.v22i0.1657>
- Hair, J., Black, W. C., Babin, B. J., & Anderson, R. (2009). *Multivariate Data Analysis*. Prentice Hall, Upper Saddle River, NJ.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *The Journal of Marketing Theory and Practice*, 19(2), 139–152. <https://doi.org/10.2753/mtp1069-6679190202>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/ebr-11-2018-0203>
- Helfat, C. E., & Peteraf, M. A. (2003). The dynamic resource-based view: capability lifecycles. *Strategic Management Journal*, 24(10), 997–1010. <https://doi.org/10.1002/smj.332>
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Huergo, E., & Jaumandreu, J. (2004). How Does Probability of Innovation Change with Firm Age? *Small Business Economics*, 22(3/4), 193–207. <https://doi.org/10.1023/b:sbej.0000022220.07366.b5>
- Inauen, M., & Schenker-Wicki, A. (2011). The impact of outside-in open innovation on innovation performance. *European Journal of Innovation Management*, 14(4), 496–520. <https://doi.org/10.1108/14601061111174934>

- Jha, A. K., Agi, M. A., & Ngai, E. W. (2020). A note on big data analytics capability development in supply chain. *Decision Support Systems, 138*, 113382. <https://doi.org/10.1016/j.dss.2020.113382>
- Joo, H., Seo, Y., & Min, H. (2018). Examining the effects of government intervention on the firm's environmental and technological innovation capabilities and export performance. *International Journal of Production Research, 56*(18), 6090–6111. <https://doi.org/10.1080/00207543.2018.1430902>
- Kabil, A. M. (2021). *Integrating big data technology into organizational decision support systems*. In IGI Global eBooks (pp. 639–657). <https://doi.org/10.4018/978-1-7998-9023-2.ch031>
- Kikuchi, H., & Iwao, S. (2016). Pure dynamic capabilities to accomplish economies of growth. *Annals of Business Administrative Science, 15*(3), 139–148. <https://doi.org/10.7880/abas.0160213a>
- Kline, R. B. (2005). *Methodology in the Social Sciences: Principles and Practice of Structural Equation Modeling*. Guilford Press, New York, NY.
- Klotz, A. C., Swider, B. W., & Kwon, S. H. (2023). Back-translation practices in organizational research: Avoiding loss in translation. *Journal of Applied Psychology, 108*(5), 699–727. <https://doi.org/10.1037/apl0001050>
- Kwak, D., Seo, Y., & Mason, R. (2018). Investigating the relationship between supply chain innovation, risk management capabilities and competitive advantage in global supply chains. *International Journal of Operations & Production Management, 38*(1), 2–21. <https://doi.org/10.1108/ijopm-06-2015-0390>
- Kumar, R. R., & Raj, A. (2024). Big data adoption and performance: mediating mechanisms of innovation, supply chain integration and resilience. *Supply Chain Management an International Journal*. <https://doi.org/10.1108/scm-03-2024-0186>
- Lee, I., & Mangalaraj, G. (2022). Big Data Analytics in Supply Chain Management: A Systematic Literature Review and Research Directions. *Big Data and Cognitive Computing, 6*(1), 17. <https://doi.org/10.3390/bdcc6010017>
- Lin, C., & Kunnathur, A. (2019). Strategic orientations, developmental culture, and big data capability. *Journal of Business Research, 105*, 49–60. <https://doi.org/10.1016/j.jbusres.2019.07.016>
- Mehra, A., Saha, S., Raychoudhury, V., & Mathur, A. (2024). DeliverAI: Reinforcement Learning based Distributed Path-Sharing Network for food deliveries. *2022 International Joint Conference on Neural Networks (IJCNN), 17*, 1–9. <https://doi.org/10.1109/ijcnn60899.2024.10651403>
- Mikalef, P., Krogstie, J., Pappas, I. O., & Pavlou, P. (2020). Exploring the relationship between big data analytics capability and competitive performance: The mediating roles of dynamic and operational capabilities. *Information & Management, 57*(2), 103169. <https://doi.org/10.1016/j.im.2019.05.004>

The Impact of Big Data Analytics Capability on Supply Chain Innovation and Competitive Advantage of Restaurant Industry in Thailand

- M’kuma, E. K. (2015). Strategic positioning and competitive advantage in banking industry in Kenya: A Descriptive Statistics of Private sector banks. *European Journal of Business and Management*, 7(32), 101–109. <https://www.iiste.org/Journals/index.php/EJBM/article/download/27027/27710>
- Ofori, D., & Appiah-Nimo, C. (2021). Relationship Management, Competitive Advantage and Performance of Hotels: A Resource-Based View. *Journal of African Business*, 23(3), 712–730. <https://doi.org/10.1080/15228916.2021.1924573>
- Park, M., & Singh, N. P. (2022). Predicting supply chain risks through big data analytics: role of risk alert tool in mitigating business disruption. *Benchmarking an International Journal*, 30(5), 1457–1484. <https://doi.org/10.1108/bij-03-2022-0169>
- Penrose, E. T. (1959). *The theory of the growth of the firm*. Oxford: Basil Blackwell.
- Porter, M. E. (1985). *Competitive advantage: creating and sustaining superior performance*. <http://ci.nii.ac.jp/ncid/BA00852365>
- Ramadan, M., Shuqqo, H., Qtaishat, L., Asmar, H., & Salah, B. (2020). Sustainable competitive advantage driven by big data analytics and innovation. *Applied Sciences*, 10(19), 6784. <https://doi.org/10.3390/app10196784>
- Ravichandran, T. (2018). Exploring the relationships between IT competence, innovation capacity and organizational agility. *The Journal of Strategic Information Systems*, 27(1), 22–42. <https://doi.org/10.1016/j.jsis.2017.07.002>
- Rialti, R., Marzi, G., Silic, M., & Ciappei, C. (2018). Ambidextrous organization and agility in big data era. *Business Process Management Journal*, 24(5), 1091–1109. <https://doi.org/10.1108/bpmj-07-2017-0210>
- Sayasonti, S., Devahastin, D. D., Aung, C. M., Aung, Z. P., & Wongwaiyut, P. (2025). Digital transformation of supply chain management for tourism industry in Thailand. *Journal of Supply Chain Management: Research and Practice*, 18(2), 28–39.
- Seo, Y., Dinwoodie, J., & Kwak, D. (2014). The impact of innovativeness on supply chain performance: is supply chain integration a missing link? *Supply Chain Management an International Journal*, 19(5/6), 733–746. <https://doi.org/10.1108/scm-02-2014-0058>
- Sharma, A. K., Srivastava, M. K., & Sharma, R. (2024). Exposition of techno-functional components of intelligent food supply chain: a review and future research agenda. *Journal of Business and Industrial Marketing*, 39(9), 1928–1949. <https://doi.org/10.1108/jbim-10-2023-0582>
- Shamim, S., Zeng, J., Khan, Z., & Zia, N. U. (2020). Big data analytics capability and decision-making performance in emerging market firms: The role of contractual and relational governance mechanisms. *Technological Forecasting and Social Change*, 161, 120315. <https://doi.org/10.1016/j.techfore.2020.120315>

- Shamout, M. D. (2021). The nexus between supply chain analytic, innovation and robustness capability. *VINE Journal of Information and Knowledge Management Systems*, 51(1), 163–176. <https://doi.org/10.1108/vjikms-03-2019-0045>
- Singh, N. P., & Singh, S. (2019). Building supply chain risk resilience. *Benchmarking an International Journal*, 26(7), 2318–2342. <https://doi.org/10.1108/bij-10-2018-0346>
- Sorensen, J. B., & Stuart, T. E. (2000). Aging, obsolescence, and organizational innovation. *Administrative Science Quarterly*, 45(1), 81–112. <https://doi.org/10.2307/2666980>
- Stehnei, M., Nod, O., Berghauer, S., & Kampov, N. (2024). Transformation of hotel and restaurant services in the context of digitalization. *Ukrainian Journal of Applied Economics and Technology*, 2024(3), 26–29. <https://doi.org/10.36887/2415-8453-2024-3-4>
- Tan, Y., Gu, L., Xu, S., & Li, M. (2024). Supply Chain Inventory Management from the Perspective of “Cloud Supply Chain” -A Data Driven Approach. *Mathematics*, 12(4), 573. <https://doi.org/10.3390/math12040573>
- Tang, Y., & Chin, T. A. (2024). Review of Competitive Advantage within Restaurants. *International Journal of Academic Research in Business and Social Sciences*, 14(1). <https://doi.org/10.6007/ijarbss/v14-i1/20579>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(sici\)1097-0266\(199708\)18:7](https://doi.org/10.1002/(sici)1097-0266(199708)18:7)
- Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J. (2011). Dynamic Capabilities and Strategic Management: Organizing for innovation and growth. *OUP Catalogue*. <https://ideas.repec.org/b/oxp/obooks/9780199691906.html>
- Tu, Y., & Wu, W. (2020). How does green innovation improve enterprises’ competitive advantage? The role of organizational learning. *Sustainable Production and Consumption*, 26, 504–516. <https://doi.org/10.1016/j.spc.2020.12.031>
- Valencia-Arias, A., Uribe-Bedoya, H., González-Ruiz, J. D., Santos, G. S., Ramírez, E. C., & Rojas, E. M. (2024). Artificial Intelligence and Recommender Systems in e-commerce. Trends and Research Agenda. *Intelligent Systems With Applications*, 24, 200435. <https://doi.org/10.1016/j.iswa.2024.200435>
- Virmani, N., Sharma, D., Tripathi, P. M., Raut, R. D., & Kumar, M. (2025). What drives the adoption of digital food supply chains? assessing the intentions to adopt digital food supply chain: stimulus-organism-response framework. *International Journal of Logistics Research and Applications*, 1–27. <https://doi.org/10.1080/13675567.2025.2514039>

The Impact of Big Data Analytics Capability on Supply Chain Innovation and Competitive Advantage of Restaurant Industry in Thailand

- Wamba, S. F., Akter, S., Edwards, A., Chopin, G., & Gnanzou, D. (2015). How 'big data' can make big impact: Findings from a systematic review and a longitudinal case study. *International Journal of Production Economics*, 165, 234–246. <https://doi.org/10.1016/j.ijpe.2014.12.031>
- Wamba, S. F., Gunasekaran, A., Akter, S., Ren, S. J. F., Dubey, R., & Childe, S. J. (2017). Big data analytics and firm performance: Effects of dynamic capabilities. *Journal of Business Research*, 70, 356–365. <https://doi.org/10.1016/j.jbusres.2016.08.009>
- Wang, C. L., & Ahmed, P. K. (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*, 9(1), 31–51. <https://doi.org/10.1111/j.1468-2370.2007.00201.x>
- Wong, D. T., & Ngai, E. W. (2019). Critical review of supply chain innovation research (1999–2016). *Industrial Marketing Management*, 82, 158–187. <https://doi.org/10.1016/j.indmarman.2019.01.017>
- Zabel, C., & O'Brien, D. (2024). Understanding dynamic capabilities in emerging technology markets: antecedents, sequential nature, and impact on innovation performance in the extended reality industry. *European Journal of Innovation Management*, 27(9), 305–336. <https://doi.org/10.1108/ejim-07-2023-0574>
- Zhong, R. Y., Newman, S. T., Huang, G. Q., & Lan, S. (2016). Big Data for supply chain management in the service and manufacturing sectors: Challenges, opportunities, and future perspectives. *Computers & Industrial Engineering*, 101, 572–591. <https://doi.org/10.1016/j.cie.2016.07.013>