

A Review of Management Studies Published in Journal of Business Administration: Bibliometric and Co-word Analysis

Received: March 9, 2021

Revised: April 2, 2021

Accepted: April 9, 2021

Sukrit Vinayavekhin

Lecturer of Department of Operations Management,
Thammasat Business School, Thammasat University

Sasi Chanplakorn

Bachelor's Degree in Business Administration (International Program),
Thammasat Business School, Thammasat University

ABSTRACT

Journal of Business Administration (JBA) is a highly-regarded peer-reviewed business and management journal published quarterly by Thammasat Business School, Thammasat University. Since its first issue was printed in 1975, the journal has been delivering quality academic and research articles in several research areas including Accounting (AC), Finance (FN), Marketing (MK), Management Information Systems (MIS), Organization Entrepreneurship and Human Resource Management (MOEH), Operations Management (OM), International Business Logistics and Transport (IBLT), and Real Estate (RE), aligning with the school's specialization. In celebration of the 44th anniversary of the journal, we conducted a bibliometric literature review of a single journal, using a combination of statistical and content analysis, to study the evolution of the journal itself. We used descriptive statistical techniques to explore publication trends and scholarly productivity, and then used co-word network analysis, a graph-based data mining technique, to visually analyze the content from the articles' abstracts. The dataset used in the analysis comprises several English bibliographic information including author name, publication year, article title, research area categorization, and abstract of 210 articles published between 2008 and 2020. The results reveal the publication trends, productive authors, authorship patterns, prolific research areas of the Journal of Business Administration, and provide insights into three prominent research themes: Dealing with external environment, Managing an organisation, and Understanding consumers. This research has also proved that bibliometric study can be done in a single journal in Thailand and the methodology used in this research can be utilized as a guideline to analyse other Thai journals.

Keywords: Bibliometric analysis, Journal of Business Administration, Content analysis, Co-word analysis, Research trends, Bibliometric Review

การวิเคราะห์บรรณมิติของบทความวิชาการ และงานวิจัยที่ตีพิมพ์ในวารสารบริหารธุรกิจ มหาวิทยาลัยธรรมศาสตร์

วันที่ได้รับต้นฉบับบทความ : 9 มีนาคม 2564

วันที่แก้ไขปรับปรุงบทความ : 2 เมษายน 2564

วันที่ตอบรับตีพิมพ์บทความ : 9 เมษายน 2564

สุกฤษฎี วินยเวคิน

อาจารย์ประจำสาขาวิชาการบริหารการปฏิบัติการ
คณะพาณิชยศาสตร์และการบัญชี มหาวิทยาลัยธรรมศาสตร์

ศศิ ฉันทพลากร

นักศึกษาโครงการปริญญาตรีบริหารธุรกิจ หลักสูตรนานาชาติ
คณะพาณิชยศาสตร์และการบัญชี มหาวิทยาลัยธรรมศาสตร์

บทคัดย่อ

วารสารบริหารธุรกิจ เป็นวารสารวิชาการด้านการบริหารธุรกิจ ที่จัดทำโดยคณะพาณิชยศาสตร์และการบัญชี มหาวิทยาลัยธรรมศาสตร์ นับตั้งแต่ตีพิมพ์ฉบับแรกในปี พ.ศ. 2518 วารสารนี้ได้นำเสนอและเผยแพร่บทความทางวิชาการ และงานวิจัยที่มีคุณภาพครอบคลุมเนื้อหาทั้งในด้านการบัญชี (AC) การเงิน (FN) การตลาด (MK) ระบบสารสนเทศเพื่อการจัดการ (MIS) การบริหารองค์การ การประกอบการ และทรัพยากรมนุษย์ (MOEH) การบริหารการปฏิบัติการ (OM) การบริหารธุรกิจระหว่างประเทศ โลจิสติกส์ และการขนส่ง (IBLT) และธุรกิจอสังหาริมทรัพย์ (RE) ซึ่งสอดคล้องกับความเชี่ยวชาญของทางคณะ

ในการเฉลิมฉลองครบรอบ 44 ปีของวารสารบริหารธุรกิจ งานวิจัยนี้ได้ทำการวิเคราะห์บรรณมิติเพื่อศึกษาวิวัฒนาการของตัววารสาร ผู้เขียนได้ทบทวนวรรณกรรมและได้จำแนกการวิเคราะห์บรรณมิติ ออกเป็น 3 ประเภท กล่าวคือ การวิเคราะห์ทางสถิติ การวิเคราะห์การอ้างอิง และการวิเคราะห์เนื้อหา โดยในงานวิจัยนี้ได้ใช้วิธีการวิเคราะห์ทางสถิติ ร่วมกับการวิเคราะห์เนื้อหา วิธีการทางสถิติที่ใช้คือสถิติเชิงพรรณนา เพื่อใช้วิเคราะห์แนวโน้มของบทความด้วยข้อมูลเชิงตัวเลข ในขณะที่เดียวกันได้ใช้วิธีการวิเคราะห์เครือข่ายการใช้คำสำคัญร่วมกัน เพื่อวิเคราะห์เนื้อหาของบทความในรูปของบทความย่อยของบทความ ชุดข้อมูลที่ใช้ในการวิเคราะห์ เป็นข้อมูลทางบรรณานุกรมในภาษาอังกฤษของบทความที่ตีพิมพ์ในวารสารระหว่างปี พ.ศ. 2551 ถึง พ.ศ. 2563 จำนวนทั้งสิ้น 210 บทความ ซึ่งประกอบไปด้วย ชื่อผู้แต่ง ปีที่ตีพิมพ์ ชื่อบทความ สังกัดสาขาวิชา และบทความย่อยของบทความ

งานวิจัยนี้ได้แสดงถึงแนวโน้มของการตีพิมพ์ ผู้เขียน รูปแบบการประพันธ์ และสังกัดสาขาวิชาที่โดดเด่นของวารสารบริหารธุรกิจ หัวข้อวิจัยที่โดดเด่นในวารสารสามารถสรุปได้เป็น 3 หัวข้อหลักได้แก่ การรับมือกับสภาพแวดล้อมภายนอก การเพิ่มประสิทธิภาพขององค์กร และการเข้าใจผู้บริโภค

งานวิจัยนี้ยังพิสูจน์ให้เห็นว่า การวิเคราะห์บรรณมิติสามารถนำมาใช้ในการวิเคราะห์วารสารในประเทศไทยได้ ทั้งนี้ วิธีการรวมถึงขั้นตอนวิจัยของงานวิจัยชิ้นนี้ สามารถนำไปใช้เป็นแนวทางในการวิเคราะห์บรรณมิติสำหรับวารสารในประเทศไทย ฉบับอื่น ๆ ได้อีกด้วย

คำสำคัญ: การวิเคราะห์บรรณมิติ วารสารบริหารธุรกิจ การวิเคราะห์เนื้อหา การวิเคราะห์การอ้างอิง การทบทวนวรรณกรรม

1. INTRODUCTION

Journal of Business Administration (Thai: วารสารบริหารธุรกิจ) is a highly-regarded peer-reviewed business and management journal published quarterly (March, June, September, and December) by Thammasat Business School, Thammasat University. Its slogan is “Enhancing knowledge, developing ideas, and stepping into the business world with confidence” (Thai: “เพิ่มพูนความรู้ พัฒนาความคิด ก้าวสู่โลกธุรกิจ อย่างมั่นใจ”). Since its first issue was printed in 1975 with two years worth of discontinuation periods, the journal has been delivering quality academic and research articles for over 40 years. It has served as a medium facilitating exchange of views and experiences among academic scholars, managers, practitioners, students, and public audiences. The areas covered include but not limited to Accounting (AC), Finance (FN), Marketing (MK), Management Information Systems (MIS), Organization Entrepreneurship and Human Resource Management (MOEH), Operations Management (OM), International Business Logistics and Transport (IBLT), and Real Estate (RE), aligning with the school’s specialization. It is indexed in both Thai-Journal Citation Index (TCI) Tier 1 and ASEAN Citation Index (ACI) databases. In celebration of the 44th anniversary of Journal of Business Administration, we conducted the first attempt in its history of this journal to conduct a bibliometric review to study the evolution of the journal itself. Despite limitedly available data, we were able to analyze the publication trends, productive authors, authorship patterns, prolific research areas, and prominent research themes.

2. Literature Review

Bibliometric review, firstly introduced in 1969, is the application of quantitative methods to study the bibliographic data of academic articles, including but not limited to author names, titles publication years, abstracts, keywords, and references (Pritchard, 1969). Up to now, many types of bibliometric review have been conducted in different disciplines by various researchers across the world. Building on previous research, we have identified three types of bibliometric review based on the objectives, techniques, and data used, as shown in Table 1: Statistical analysis, Citation analysis, and Content analysis (Ball & Tunger, 2006; Ellegaard & Wallin, 2015; van Eck & Waltman, 2014). Firstly, a statistical analysis normally uses descriptive statistical techniques such as sum, min, max, and mean, to explore publication trends and scholarly productivity. Secondly, a citation analysis constructs, clusters, and visualizes a citation network based on references and citation information in order to explore influential articles and scholarly communities. Lastly, a content analysis utilises textual data such as abstracts and keywords to build, cluster, and visualize a co-word network. The categorization of these three bibliometric reviews could be used to align the data used with proper techniques to achieve the intended objectives.

Table 1: Three types of bibliometric reviews

	Objective	Technique	Data Used
Statistical Analysis	To explore publication trends and scholarly productivity.	Descriptive statistical techniques such as sum, min, max, and mean.	Simple information such as author name, title, and publication year.
Citation Analysis	To explore influential articles and scholarly communities.	Citation network & Clustering & Network visualisation	Simple information & References
Content Analysis	To explore prominent research themes.	Text mining & Co-word network & Clustering & Network visualisation	Simple information & Abstract / Keyword

The bibliometric review is flexible in terms of the unit of analysis. It can vary from research groups, to universities, and to countries (Ellegaard, 2018). It is also uncommon to conduct a bibliometric review on a single journal. In the past, this type of bibliometric review was popular among American researchers (Tiew, 1997). However, the previous research has shown the evidence of emerging trends in other continents, including Asian countries such as India and Malaysia (Kevin et al., 2009). In fact, it has been widely conducted in journals in a wide range of fields including Arts, Humanities and Social Sciences; Medical and Health Sciences; Sciences and Technology; and Library and Information Sciences, with the number of articles analysed ranging from hundreds to thousands (Kevin et al., 2009). Recent research on single journals in business and management include Global Finance Journal (Baker et al., 2021), Journal of Business & Industrial Marketing (Valenzuela et al., 2017), and European Journal of Marketing (Martínez-López et al., 2018).

In Thailand, there are only a few bibliometric review papers. Most of them study the scholarly productivity of Thai scholars at country level (Choemprayong, 2011; Chun, 2009; Hassan et al., 2012; Yuthavong, 1986). Some focus at the faculty and university levels in particular fields such as energy and fuel (Sombatsompop et al., 2011) and nursing (Srisawad, 2019). However, there is little knowledge on analyzing a Thai journal. Thus, in this research, we explore this research gap by conducting a bibliometric study on a single journal, the Journal of Business Administration, aiming to answer the following research question: What are the publication trends, productive authors, authorship patterns, prolific research areas, and prominent research themes of the journal?

3. Methodology

We asked the journal editor for the English bibliographic information of all articles published by the journal, and we were given the dataset, including author name, publication year, article title, research area categorization, and abstract, of 210 articles published between 2008 and 2020. The data before 2008 were excluded in this research due to the availability and consistency of their information. In order to ensure quality control, the data were manually cleaned by detecting, correcting, and removing irrelevant records. We, then, constructed a final dataset with all information contained in the same format.

According to three types of bibliometric review identified in Table 1 in the previous section, the citation analysis cannot be conducted without the references and citation information for each article. Thus, we followed the two-step approach adapted from a previous research (Chinotaiikul & Vinayavekhin, 2020), combining statistical and content analysis techniques to conduct the analysis.

The first step is to conduct the statistical analysis. We used simple descriptive statistical techniques such as sum, minimum, maximum, and mean. The data used in this step were the author name, publication year, article title, and research area categorization of 210 articles. The aim of this bibliometric analysis was to analyze the trends of publication, authors, and authorship patterns in this journal.

The second step is to perform the content analysis. The co-word network analysis was conducted to analyze the abstracts of the articles. It is known as a popular data mining technique to visualise sets of terms shared by articles through graph theory, when terms are represented in nodes, and their co-occurrences in the same article represented in links (Cobo et al., 2011). We used VOSviewer and algorithms provided by the Apache OpenNLP library to detect the sentences, perform part-of-speech tagging, identify noun phrases, and unify the noun phrases by transforming them into lower-case singular ones (van Eck & Waltman, 2010). The threshold of at least 3 occurrences and 60% highest relevance scores was set to increase visibility and remove generic terms (Leydesdorff & Nerghe, 2017). The extracted terms together with their co-occurrence relationships were translated into a co-word network and then grouped into clusters by VOS layout and clustering techniques (Waltman et al., 2010). Each cluster represented each research field discussed by the journal (Cobo et al., 2011). With the network and overlay visualization techniques, we were able to capture the prominent research themes discussed and also detect the emerging research trends.

4. Results and Discussion

In total, 210 articles were published in the Journal of Business Administration during the period of 2008 and 2020. The results from both statistical and content analysis of these articles are presented in the following sections.

4.1 Statistical Analysis

Publication Trend

We start the bibliographic analysis by looking at the growth trajectory of the Journal of business administration from 2008 to 2020. From Figure 1, there are no significant changes in the number of published articles per year. On average, there are around 16 articles published per year. The lowest number of articles published are in the year 2009 and 2015 where there were 14 articles published. The highest amount of published articles per year is 21 publications in 2019.

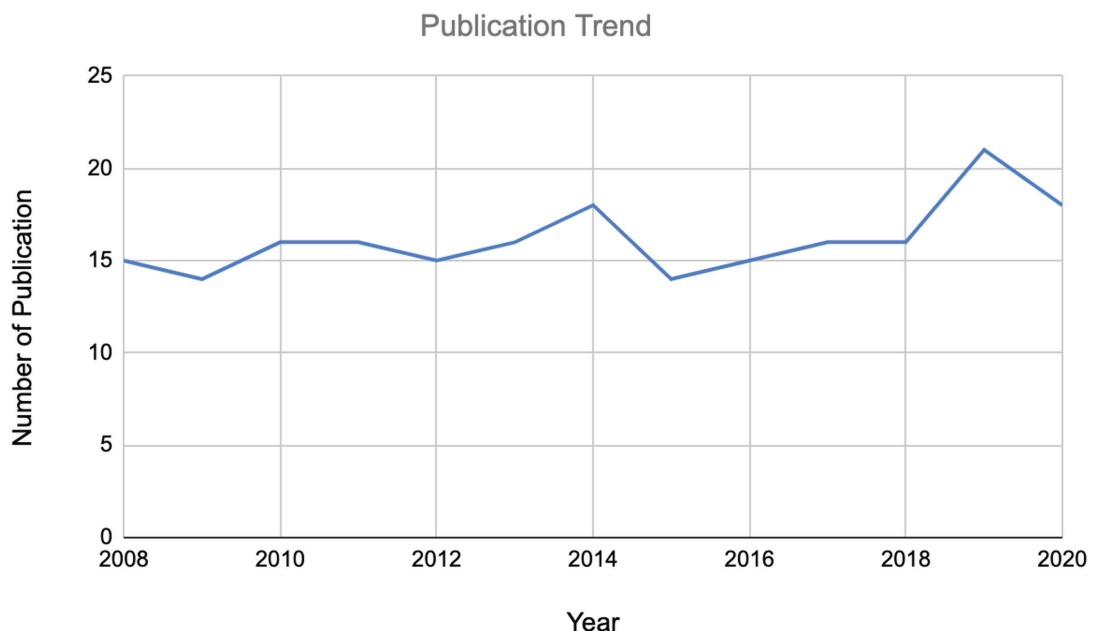


Figure 1: Annual number of articles published in Journal

Author Influence

There are in total 260 authors who published articles in the Journal of Business Administration from 2008 to 2020. There are only 16 authors who published 3 articles or more in the following years. Their names together with their information including affiliation as written in the latest articles, earliest publication year, and latest publication year, are shown in Table 2. All of them have not co-authored with each other, except for Theeranuphattana, A. and Boonjom, W., who co-published three articles in

total. Top three most prominent authors are Leemakdej, A., Khanthavit, A., and Rotchanakitumnuai, S., with the number of 8, 7, and 6 published articles, respectively. All of them have been affiliated with Thammasat Business school.

Despite most of the authors being affiliated with Thammasat Business school, we were able to identify some productive authors from other organizations as written in their articles, including Suttipun, M. from Faculty of Management Sciences, Prince of Songkla University; Theeranuphattana, A. from Faculty of Business Administration, Chiang Mai University; Popaitoon, S. from Mahasarakham Business School, Mahasarakham University; Boonjom, W. from Faculty of Business Administration, Chiang Mai University; and Wonglimpiyarat, J. from College of Innovation, Thammasat University.

Analysing from the publication years, there are some authors, such as Opaitoon, S., Juntongjin, P, and Boonjom, W., who just recently started to publish articles in the Journal of Business Administration. On the other hand, observing from the latest publication year, some authors such as Supattarakul, S., and Wonglimpiyarat, J., published articles in Journal of Business administration for quite some time and stopped publishing articles in the recent years.

Table 2: Authors who published 3 articles or more in Journal of Business Administration in 2008–2020

Author	Affiliation	No. of Articles	Earliest Publication Year	Latest Publication Year
Leemakdej, A.	Thammasat Business School, Thammasat University	8	2008	2019
Khanthavit, A.	Thammasat Business School, Thammasat University	7	2008	2019
Rotchanakitumnuai, S.	Thammasat Business School, Thammasat University	6	2012	2020
Suttipun, M.	Faculty of Management Sciences, Prince of Songkla University	5	2013	2018
Theeranuphattana, A.	Faculty of Business Administration, Chiang Mai University	5	2009	2018
Popaitoon, S.	Mahasarakham Business School, Mahasarakham University.	4	2014	2020
Intojunyong, S.	Thammasat Business School, Thammasat University	4	2010	2018

Table 2: Authors who published 3 articles or more in Journal of Business Administration in 2008–2020 (cont.)

Author	Affiliation	No. of Articles	Earliest Publication Year	Latest Publication Year
Rungruangphon, W.	Thammasat Business School, Thammasat University	4	2009	2017
Opasanon, S.	Thammasat Business School, Thammasat University	3	2011	2019
Rompheo, N.	Thammasat Business School, Thammasat University	3	2010	2018
Juntongjin, P.	Thammasat Business School, Thammasat University	3	2014	2017
Ngarmyarn, A.	Thammasat Business School, Thammasat University	3	2011	2017
Supattarakul, S.	Thammasat Business School, Thammasat University	3	2010	2014
Boonjom, W.	Faculty of Business Administration, Chiang Mai University	3	2016	2018
Napathorn, C.	Thammasat Business School, Thammasat University	3	2010	2017
Wonglimpiyarat, J.	College of Innovation, Thammasat University	3	2010	2015

Authorship Pattern

In terms of authorship pattern, most of the publications in the Journal of business administration are written by one author. From Figure 2, 125 out of 210 articles (59.52%) are single author articles. Another 61 articles (29.05%) are written by 2 authors. The number of articles written by 3 and 4 authors are 16 (7.6%) and 6 (2.9%) articles. There are only 2 articles published by more than 5 authors.

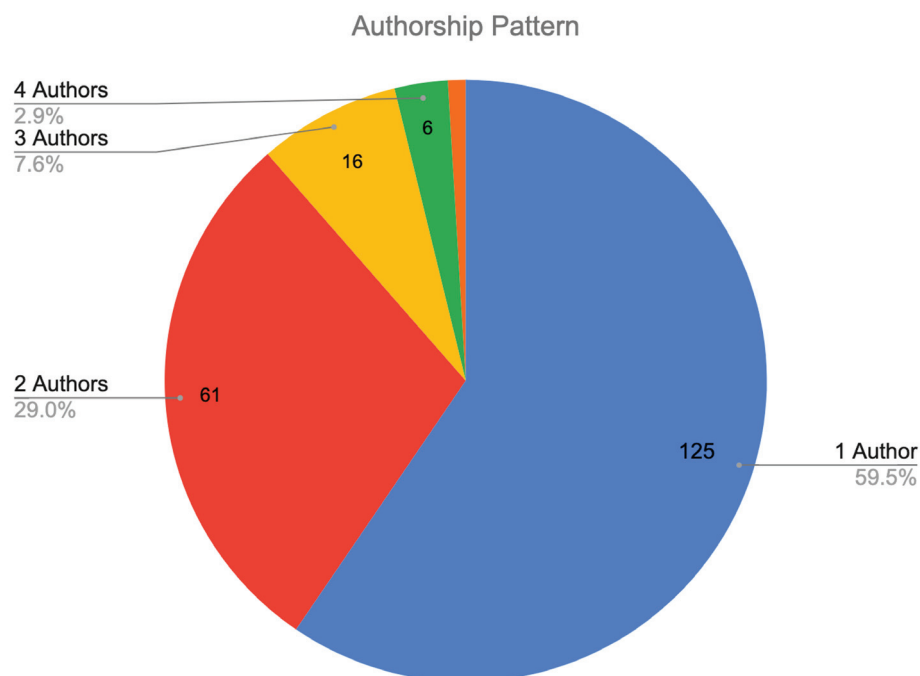


Figure 2: Numbers of Author in a publication

However, the trends of authorship patterns are observed when considering the percentages of articles written by a single author and multiple authors published overtime (Figure 3). Between 2008 and 2014, single author articles are the majority, consistent with the pattern of Figure 2, despite a sudden abnormal increase of the multiple authors articles published in 2012. Since 2015, the number of articles written by multiple authors has increased consistently, becoming a major trend in recent years, 2018-2020.

The rising trend of multi-authorship is aligned with the global trends. Several papers have previously found the increasing average number of authors per article, not only in business-related fields, but also in the social sciences as a whole (Henriksen, 2016; Rath & Wohlrabe, 2016).

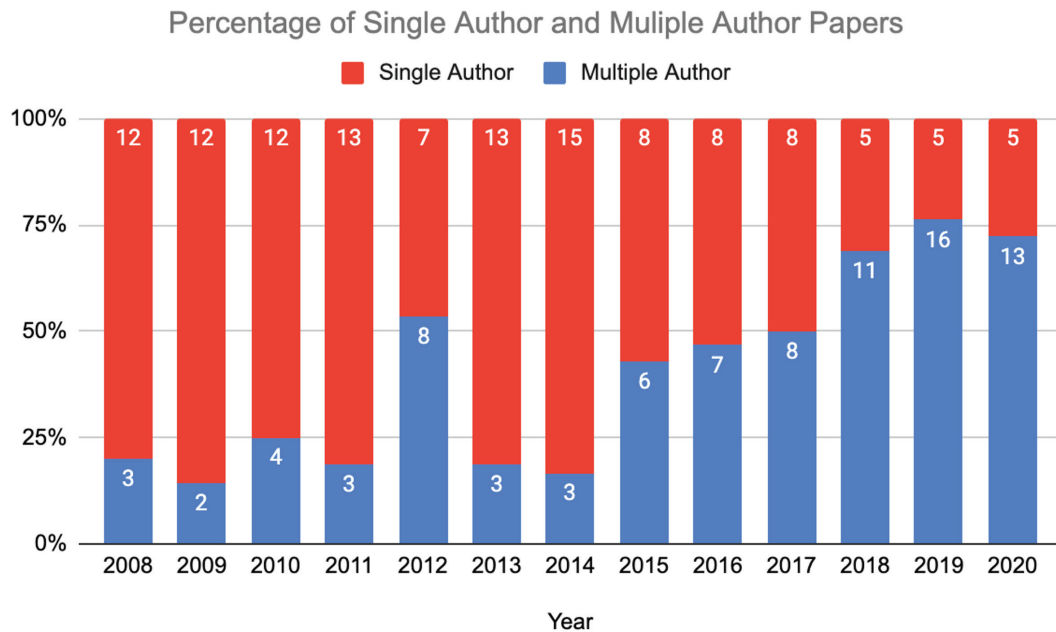


Figure 3: The percentage of articles written by single author and multiple authors published overtime

Research Area

Out of 210 articles published in the Journal of Business administration, 66 articles (32%) are in Marketing (MK), 40 articles (19%) are in Operations Management (OM), and 28 articles (13%) are in Finance (FN). There are less number of articles published in International Business Logistic and Transportation (IBLT) and Real Estate (RE) research areas.

To examine the trends of the research area of the articles published in the Journal of Business administration, we calculate the number of articles published in each area of research overtime. From Table 3, it is noted that articles related to Marketing (MK) and Operations Management (OM) have been consistently published every year. Articles in Accounting (AC) research area have been increased and consistently published since 2014. At the same time, there were no articles related to Real Estate (RE) published in recent years between 2018 and 2020.

Table 3: Number of articles in different research areas overtime

Year	Research Areas								
	AC	FN	MOEH	IBLT	MK	MIS	OM	RE	N/A
2008		4	2		3	2	3		1
2009		2	3	1	6		2		
2010	1	2	4	1	5	1	2		
2011	1	1		1	5		8		
2012		3	1	1	1	2	5	1	1
2013	1	4	2		6	2	1		
2014	1	3	5		5		3	1	
2015	2		3	1	3	3	1	1	
2016	3	1	1	1	4	1	3		1
2017	2		1		9		2	2	
2018	3			1	8	1	3		
2019	2	6	1	1	7	2	2		
2020	2	2	3	1	4	1	5		
Total	18	28	26	9	66	15	40	5	3
%	9%	13%	12%	4%	31%	7%	19%	2%	1%

Note: AC = Accounting, FN = Finance, MOEH = Organization Entrepreneurship and Human Resource Management, IBLT = International Business Logistics and Transport, MK = Marketing, MIS = Management Information Systems, OM = Operations Management, RE = Real Estate, N/A = Not Applicable

4.2 Content Analysis

Figure 4 shows the results of co-word network analysis attracted from the abstracts of the articles. Eight different clusters are identified in different colours: red, green, yellow, blue, purple, cyan, orange, and brown. Apparently, some clusters are located close to each other and share some similarities. After synthesizing each word appeared in each cluster with the content of each article, we have finalised three prominent research themes discussed in the Journal of Business Administration: dealing with external environments, managing an organisation, and understanding customers.



Figure 4 : Co-word map of Journal of Business administration

Dealing with external environments

The first theme is related to dealing with external environments; the clusters that belong to the first theme include red and green clusters. These themes are strongly interrelated as the content of the articles cover different aspects of the external environment in doing business.

The red cluster is related to the macro business environment, including articles that are focused towards studying the external environment that would influence the company's strategies and competitiveness at macro level. The sub-set keywords of this cluster include government, export, world, external factor, policy, and international market. The content of the literature in this cluster includes the contextual study of how the government can influence the private sectors. Such study includes an article by Laosirihingthong (2008) whereby the government can drive country-level innovation through university-industrial links (UIL); and the study done by Wonglimpiyarat (2010) where taxation policy from government can be used as risk sharing policy with the venture capital (VC) to create an effective financing system, thus assist the creation of new innovative businesses. Other external factors include the Great Flood of 2011 in Thailand (Rungruangphon & Ratanaprechavech, 2012), the cluster-based industrial

development strategy (Tippakoon, 2017), and the China-Thailand railway development project (Poonbua & Jansuwan, 2018).

The green cluster contains many articles that are related to the business environment at macro level, especially the job market, universities, and education, viewing universities as a source of labour supply for enterprise and business school education. The sub-set keywords of this cluster includes words such as enterprise, university, business environment, and student. Some key articles for this cluster include but not limited to Jantori (2012), addressing the problem of imbalance between demand and supply in the labour market and suggesting the cooperation between different stakeholders to solve the problem. In addition, Sitmonchai & Rompho (2011) studied the usefulness of MBA programs in order to improve MBA programs in the future. Tantiprapa & Srinil (2010) explored the business ethics teaching with a focus on student and professor perspectives. Some articles use universities as a unit of analysis, such as Pimthong (2014) studying employee retention of universities around Thailand, and Jhantasena (2015) studying organizational citizenship behaviour of Rajabhat University Employee.

Managing an organisation

The second theme is about managing an organisation, consisting of yellow, blue, and purple clusters. The interrelatedness of between three clusters are weaker than the relationships found in red and green clusters as the topic and content of the articles are more specific in scope. However, the linkage is still notable.

The yellow cluster focuses on measuring performance and increasing efficiency and productivity. The key terms in this cluster are efficiency, measurement, saving, and efficiency score. Wongpinunwatana (2008), measures the benefit of the use of information technology, efficiency of using computers, and information technology of small- and medium-sized enterprises (SMEs) in Thailand. Theeranuphattana (2009), proposed an innovative performance measurement method integrated with the supply chain operations reference (SCOR) model. Boonjom & Theeranuphattana (2016), developed a model to access bank branch efficiency using balanced Scorecard (BSC) framework and Data Envelopment Analysis (DEA) and developed DEA further by using CAMEL framework to determine input and output variables. Damnoenniran et al. (2019) measures the efficiency of the public transportation systems in Mueang district in Chiang Mai province using Data Envelopment Analysis and Analytical Hierarchy Process (DEA-AHP) in analysis. Tapjarern et al. (2020) study the relationship of the characteristics to promote the commercial success and firm performance in the medical device industry. Thoraneenitiyan (2020) demonstrates the usage of slacks-Based Measure of Efficiency model to measure the efficiencies and total productivity changes of savings and credits, and credit union cooperatives in Thailand during the 2013 to 2017.

The blue cluster focuses on how to manage the human resources effectively and its importance by curating human resource development through creating a learning organisation. The significant keywords in this cluster includes words such as learning, participant, condition, self, and organizational citizenship behavior. Phatomsirikul (2011) surveyed 412 samples of hospital management teams and found that human resource development is one of the most important factors that create positive performance in private hospitals. Bunsin (2012) reviewed the concept of learning organization and analyzed how the Thai Airway International Public Company Limited created a learning organization. Thongwan (2010) investigates the factors that create the learning organisation and the relationship of learning organisation and innovation in company. In addition, Yuprot (2013) and Popaitoon & Popaitoon (2020) studied the changing in work work value among different generations, its relation to organizational citizenship and implication to human resource policies.

The purple cluster focuses on corporate governance, mostly studying companies listed in the Stock Exchange of Thailand (SET) through surveys, case studies, and publicly available data. The key words that have significant occurrence include stock exchange, committee, investor, stock price, and annual report. The topic of articles in this cluster is broad with connection to Accounting (AC) and Finance (FN) research areas. For example, Thomya (2015) studied the establishment of a separate risk management committee. Rokprai & Arunruangsirilert (2019) examined the effect of internal information quality on tax avoidance. Tongkachok (2013) explored factors that influence corporate social responsibility. Chamnankij & Suttipun (2016) investigated the level of Triple Bottom Line disclosures of listed firms. Nuanpradit (2018) studied information asymmetries and real earnings management (REM). Suttipun (2018) studied the level of intellectual capital disclosure.

Understanding customers

The last theme is about understanding customers, consisting of pre-purchase behaviour (cyan), post-purchase behaviour (orange), and marketing research methodology (brown) clusters.

The cyan cluster is about pre-purchase behaviour, using both qualitative and quantitative approaches to understand the behaviour of Thai customers from various aspects such as consumer perception on traditional grocery stores (Charoenpoom, 2011), and Thai customers' behavior of buying cosmetic products (Tungpradit & Anurit, 2017). The key terms are information technology, choice, internet, marketer, and brand. Some articles discuss the online behaviour. For example, Sangwanna (2009), studied the decision making process of Thai people from word of mouth communication on online platforms.

The orange cluster is closely located next to the cyan cluster, focusing on post-purchase behaviour of Thai customers. The words with most occurrences in this cluster are satisfaction, structural equation model, and service quality. The articles belong to this cluster study mostly focus on customer satisfaction in various perspectives such as customer satisfaction measurement (Phonghanyudh, 2011), customer satisfaction on the quality of e-services (Jhantasana & Poonrak, 2017), and the relationship between

service quality, service marketing mix, and customer satisfaction (Chensiripon & Wailerdsak, 2015). Some articles looked at customer loyalty after purchase in different contexts such as Thai Halal restaurants (Prasertsomboon & Saijam, 2015) and online automobile communities (Limpasirisuwan & Donkwa; 2017). Recent articles in this cluster are Dechtongkam & Agmapisarn (2019), which studied the service quality, corporate image, and satisfaction of Thai outbound tourists when using travel agent service, and Meathawiroon & Wannarat (2020), which explained the impact of logistics service quality on satisfaction, engagement, and loyalty of customers.

The brown cluster is about the research methodology in consumer research. The main focus is on Structural Equation Modeling (SEM) as the most occurrence words are sem, structural equation modeling, and frequency. It is a multivariate method used to test hypotheses regarding the influences among multiple interacting variables (Maruyama, 1997), popularly used by quantitative researchers in marketing and consumer behavior (Shah & Goldstein, 2006). Most of articles using Structural Equation Modeling for analysis belong to Marketing (MK) research area, ranging from the cases of branding (Khamwon & Kumgliang, 2018), social network loyalty (Narakorn & Seesupan, 2019); and effect of internet on consumer behaviour (Rungruangphon, 2009). The recent article published in this cluster is Wangsirivech & Metharom (2019), using Structural equation modelling to study attitudes of customers on restaurant social network advertising.

5. Conclusion, Limitation, Future Research and Contribution

To conclude, we summarize key findings on publication trends, productive authors, authorship patterns, prolific research areas, and prominent research themes from both statistical and content analysis as below.

1) Publication trend: The Journal of Business Administration has published in average 16 articles per year. There is no significant change in publication trends in terms of the number of articles yearly published, ranging from 14–21 articles per year.

2) Productive author: There are only 16 of 260 authors who published at least three articles from 2008 to 2020. Top three most prominent authors are Leemakdej, A., Khanthavit, A., and Rotchanakitumnuai, S., all of them affiliated with Thammasat Business school.

3) Authorship pattern: Most articles (59.52%) are written by one author. However, the number of multiple author articles has increased consistently, becoming a major trend in recent years, 2018–2020.

4) Research area: The main research areas are Marketing (MK), Operations Management (OM), and Finance (FN). Less number of articles have been published in International Business Logistic and Transportation (IBLT) and Real Estate (RE) research areas.

5) Research theme: The content analysis of article abstracts has identified eight clusters, which can be summarised into three prominent research themes: Dealing with external environments, Improving organisational performance, and Understanding customers, as shown in Table 4.

Table 4: Summary of eight clusters summarised into three research themes

Research Theme	Cluster Colour	Cluster Content	Related Topic (Example)
Dealing with external environments	Red	Macro business environment	Government, Policy, International project
	Green	Micro business environment	Job market, University, Business education
Managing an organisation	Yellow	Performance management	Performance measurement, Efficiency, Productivity
	Blue	Human resource management	Human resource development, Learning organisation
	Purple	Corporate governance	Corporate social responsibility, Information disclosure
Understanding customers	Cyan	Pre-purchase behaviour	Decision making, Perception, Online behaviour
	Orange	Post-purchase behaviour	Customer satisfaction, Service quality, Customer loyalty
	Brown	Marketing research methodology	Structural Equation Modeling (SEM)

In this research, some limitations need to be mentioned. Due to the availability and consistency of the English bibliographic information, the period of the analysis covered 210 articles published between 2008 and 2020, meaning that we were analysing only 13 recent years out of 44 years of the journal's history. Besides, the bibliographic information provided in the dataset included author name, publication year, article title, research area categorization, and abstract, with a lack of references and citation information. Thus, this research focused only on statistical and content. This left several research areas for future research to explore. For example, the future research should conduct citation analysis based on references and citation information in order to gain insights on influential articles and scholarly communities. Moreover, a comparative analysis of two or more Thai journals can be done to explore the commonalities and differences among Thai journals. Also, the research methodologies of each article could be analysed in order to gain deeper insights as some journals may favour specific methodological approaches.

This research paper has theoretically and practically contributed to the existing literature and knowledge. On one hand, for theoretical contribution, this research has clearly identified three types of bibliometric reviews, namely statistical, citation, and content analysis, based on the objectives, techniques, and data used, as systematically explained in Table 1. As the availability and consistency of the data are the key challenges, the categorization of these three bibliometric reviews could be used to align the data used with proper techniques to achieve the intended objectives. This research also proved that bibliometric study can be done in a single Thai journal, similarly to other research being conducted in international journals, but with some limitations earlier stated. Additionally, the methodology used in this research can be utilized as a guideline to analyse other Thai journals.

On the other hand, this research has practical contributions for several stakeholders. Firstly, the people who are currently academic scholars, practitioners, researchers, and readers of this journal will have a better overview of publication trends, productive authors, authorship patterns, prolific research areas, and prominent research themes of the journal. Secondly, the potential academic scholars, practitioners, and researchers can use this research as a guideline when considering publishing in this journal. Lastly, we hope that this research can assist the stakeholders of this journal, including but not limited to the journal editor and the editorial board, in making decisions related to the journal's strategic direction.

Acknowledgement

We would like to acknowledge Professor Dr.Sakun Boon-itt for his kind advice and encouragement to conduct this research. Furthermore, we would like to express our gratitude to the editor and the assistant editor for their support and for providing us with the dataset.

REFERENCES

- Amornwatana, J. (2010). Study on comparison of factors that affect effectiveness in managing human resources from strategic point of view: Case study on companies under low-tech and high-tech industry. *Journal of Business Administration*, 125, 46–78.
- Baker, H. K., Kent Baker, H., Kumar, S., & Pandey, N. (2021). Thirty years of the Global Finance Journal: A bibliometric analysis, *Global Finance Journal*, 47, 1–18
- Ball, R., & Tunger, D. (2006). Bibliometric analysis - A new business area for information professionals in libraries. *Scientometrics*, 66(3), 561–577.
- Boonjom, W. & Theeranuphattana. (2016). Development of Model for Assessing Bank Branch Efficiency through Balanced Scorecard Framework and Data Envelopment Analysis. *Journal of Business Administration*, 151, 24–47.
- Bunsin, S. (2012). Creating Learning Organization of Service Business A Case Study of The Thai Airways International Public Company Limited. *Journal of Business Administration*, 133, 41–66.
- Chamnankij, O. & Suttipun, M. (2016). The Relationship between Corporate Governance and Triple Bottom Line Disclosures on Websites: A Case Study of Listed Companies in the Stock Exchange of Thailand. *Journal of Business Administration*, 149, 23–43.
- Charoenpoom, S. (2011). Factors Influencing Future Purchase Intention of Original Retail Stores in Thonburi District Bangkok. *Journal of Business Administration*, 130, 36–46.
- Chensiripon, A. & Wailerssak, N. (2015). Service Marketing Mixes and Customer Satisfaction with the North-Eastern Line Bus Services: Case Studies of Nakhonchai Air and Other Companies. *Journal of Business Administration*, 148, 20–38.
- Chinotaikul, P., & Vinayavekhin, S. (2020). Digital Transformation in Business and Management Research: Bibliometric and Co-word Network Analysis. *2020 1st International Conference on Big Data Analytics and Practices (IBDAP)*, 1–5.
- Choemprayong, S. (2011). An overview of Scholarly Productivity in ASEAN: A Preliminary Bibliometric Analysis. *RSU Library Journal*, 17(2), 5–16.
- Chun, Y. Y. (2009). BIBLIOMETRIC ANALYSIS OF JOURNAL ARTICLES PUBLISHED BY SOUTHEAST ASIAN CHEMICAL ENGINEERING RESEARCHERS. *Malaysian Journal of Library & Information Science*, 14(3), 1–13.
- Cobo, M. J., López-Herrera, A. G., Herrera-Viedma, E., & Herrera, F. (2011). An approach for detecting, quantifying, and visualizing the evolution of a research field: A practical application to the fuzzy sets theory field. *Journal of Informetrics*, 5(1), 146–166.
- Damnoenniran, B., Kitthamkesorn, S., & Opananon, S. (2019). Ranking Efficiency of Public Transportation Systems in Chiang Mai Using DEA-AHP Method. *Journal of Business Administration*, 161, 1–18.

A Review of Management Studies Published in Journal of Business Administration:

Bibliometric and Co-word Analysis

- Dechtongkam, K. & Agmapisarn, C. (2018). Behavioral Intention in Choosing Travel Agent by Thai Outbound Tourists. Case Study: Bangkok. *Journal of Business Administration*, 164, 1–27.
- Ellegaard, O. (2018). The application of bibliometric analysis: disciplinary and user aspects. *Scientometrics*, 116(1), 181–202.
- Ellegaard, O., & Wallin, J. A. (2015). The bibliometric analysis of scholarly production: How great is the impact? *Scientometrics*, 105(3), 1809–1831.
- Hassan, S.-U., Haddawy, P., Kuinkel, P., Degelsegger, A., & Blasy, C. (2012). A bibliometric study of research activity in ASEAN related to the EU in FP7 priority areas. *Scientometrics*, 91(3), 1035–1051.
- Henriksen, D (2016), “The rise in co-authorship in the social sciences (1980-2013)”, *Scientometrics*, 107(2), 455–476.
- Jantori, P. (2012). Dual System Study – The Solution of Thai Labor Crisis. *Journal of Business Administration*, 135, 29–39.
- Jhantasana, C., Poonrak, A. & Prasertsang, S. (2017). The Study of Satisfaction on E-Services Quality. *Journal of Business Administration*, 153, 45–63.
- Jhantasena, Z. (2015). Path Analysis of Organizational Citizenship Behavior: Case Study of Rajabhat University Employee. *Journal of Business Administration*, 147, 1–19.
- Kevin, W. U. A., Zainab, A. N., & Anuar, N. B. (2009). Bibliometric studies on single journals: A review. *Malaysian Journal of Library & Information Science*, 14(1), 17–55.
- Khamwon, A. & Kumgliang, O. (2018). Brand Experience, Brand Tribalism, and Brand Loyalty: A Case of Amway Business Owners in Thailand. *Journal of Business Administration*, 157, 21–38.
- Laosirihingthong, T. (2008) Cooperation between university and industry sector in improving innovation. *Journal of Business Administration* 119, 32–47.
- Leydesdorff, L., & Nerghes, A. (2017). Co-word maps and topic modeling: A comparison using small and medium-sized corpora ($N < 1,000$). *Journal of the Association for Information Science and Technology*, 68(4), 1024–1035.
- Limpasirisuwan, N. & Donkwa, K. (2017). A Study for Enhancing Loyalty of Online Brand Community: A Case Study of Comparison between Luxury Car and Typical Car Online Communities. *Journal of Business Administration*, 155, 49–72.
- Mathuramaypha, C. (2014). Human Resource Readiness, Market Orientation, and Organizational Capability: Building the SMEs Internationalization in Thailand - A Resource Based Approach. *Journal of Business Administration*, 144, 53–66.
- Martínez-López, F. J., Merigó, J. M., Valenzuela-Fernández, L., & Nicolás, C. (2018). Fifty years of the European Journal of Marketing: a bibliometric analysis. *European Journal of Marketing*, 52(1/2), 439–468.

- Maruyama, G. M. (1997). *Basics of Structural Equation Modeling*. SAGE Publications.
- Meathawiroon, C. & Wannarat, S. (2020). Creating Consumer Loyalty Toward Transportation Industry Through; Logistics Service Quality, Satisfaction and Engagement: A Structural Equation Modeling. *Journal of Business Administration*, 167, 16–37.
- Narakorn, P. & Seesupan, T. (2019). Influence of Social Network Site Identity, User Engagement and Trust in Members to Social Network Loyalty. *Journal of Business Administration*, 159, 24–44.
- Napathorn, C. (2016). How Do Organizations Recruit and Select Human Resources (HR) When they Internationalize Business Operations Via Cross-Border Mergers and Acquisitions (M&As) Strategy?: A Case Study of TCC Group. *Journal of Business Administration*, 150, 1–21.
- Nuanpradit, S. (2018). The Relationship between Information Asymmetry and Real Earnings Management: The Role of Ceo Duality in Thailand. *Journal of Business Administration*, 158, 48–69.
- Paprattakoon, T. & Wuthtimethee, Y. (2011). Organization management model for competitive advantage In the electrical and electronic industry. *Journal of Business Administration*, 129, 24–40.
- Phonghanyudh, S. (2011). Customer Satisfaction Measurement: A Study of Efficiency Assessment of State Enterprise Banks in Thailand. *Journal of Business Administration*, 132, 67–77.
- Pimthong, S. (2014). Antecedents of Employee Retention of the University Academic Staffs in Thailand. *Journal of Business Administration*, 142, 16–32.
- Poonbua, W. & Jansuwan, S. (2018). Developing Mode Choice Model for Durian Export between Thailand and China using Stated Preference Experiments. *Journal of Business Administration*, 159, 1–23.
- Prasertsomboon, S. & Saijam, R. (2015). Service Marketing Strategy Model of Thai Halal Restaurant for Preparation to AEC. *Journal of Business Administration*, 145, 65–81.
- Pritchard, A. (1969). Statistical bibliography or bibliometrics. *Journal of Documentation*, 25(4), 348–349.
- Rath, K. & Wohlrabe, K. (2016), “Recent trends in co-authorship in economics: evidence from RePEc”, *Applied Economics Letters*, 23(12), 897–902.
- Rokprai, U. & Arunruangsirilert, T. (2019). The Relationship between Internal Information Quality and Tax Avoidance in The Stock Exchange of Thailand. *Journal of Business Administration*, 164, 28–43.
- Rungruangphon, W. (2009). Internet news reception behavior in making decision to buy real estate. *Journal of Business Administration*, 124, 8–28.
- Rungruangphon, W. Ratanaprechavech, N. (2012) Shifting in Greater Bangkok Citizen’s Attitudes toward Dwelling Buying Decision Making after 2011 Flood Crisis. *Journal of Business Administration*, 136, 9–24.
- Sangwanna, N. (2009). A purchase decision process model from electronic viral marketing in Thailand. *Journal of Business Administration*, 121, 53–67.

- Shah, R., & Goldstein, S. M. (2006). Use of structural equation modeling in operations management research: Looking back and forward. *Journal of Operations Management*, 24(2), 148–169.
- Sombatsompop, N., Markpin, T., Ratchatahirun, P., Yochai, W., Ittiritmeechai, S., Premkamolnetr, N., & Wongkaew, C. (2011). Research productivity and impact of ASEAN countries and universities in the field of energy and fuel. *Malaysian Journal of Library & Information Science*, 16, 35–46.
- Srisawad, S. (2019). The Association of Research Collaboration and Bibliometrics Data with Citation Impact among Articles based on Scopus Q1 from Nursing Institutions in Thailand. *Princess of Naradhiwas University Journal of Humanities and Social Sciences*, 6(1), 154–170.
- Sroyetch, S. (2017) Backpacker Tourism within Southeast Asia: Thailand's Competitors from the Australian Perspective. *Journal of Business Administration*, 156, 87–115.
- Sungkhano, K. & Bangchokdee, S. (2020). Determinants of Foreign Currency Derivatives Usage of Companies Listed in the Stock Exchange of Thailand. *Journal of Business Administration*, 167, 38–57.
- Supattarakul, S. & Jongjaroenkamol, P. (2010). Factors determining the Market to Book value ratio (P/B Ratio) and Price to Earnings ratio (P/E Ratio) according to Residual income Model. *Journal of Business Administration*, 125, 7–31.
- Supmonchai, S. & Rompho, N. (2011). Evaluation of the Success of the Master of Business Administration: Case Study of the Faculty of Commerce and Accountancy Thammasat University. *Journal of Business Administration*, 131, 34–45.
- Suttipun, M. (2018). Association between Board Composition and Intellectual Capital Disclosure: An Evidence from Thailand. *Journal of Business Administration*, 160, 74–97.
- Tantiprapa, P. & Srinil, B. (2010). Teaching Ethics in Business Classes: Student and Teacher Perspectives. *Journal of Business Administration*, 127, 9–34.
- Tapjarern, C., Popaitoon, S., & Sujchaphong, P. (2020). The Influence of Knowledge Absorptive Capacity, Proactiveness and Competitive Aggressiveness to Firm Performance of Medical Device Industry in Thailand: International Medical Hub. *Journal of Business Administration*, 165, 17–43.
- Theeranuphattana, A. (2009). Development of model assessing competency of supply change using methodology of Chan and Qi (Fussy set theory) and SCOR framework. *Journal of Business Administration*, 121, 11–33.
- Thomya, W. (2015). The Factors Related to the Establishment of Risk Management Committee: Evidence from Firms Listed on the Stock Exchange of Thailand. *Journal of Business Administration*, 147, 20–38.
- Thongwan, K. (2010). Relationship of factors that promote learning organization to the level of being a learning organization and the level of innovation organization: a case study of the National Science and Technology Development Agency. *Journal of Business Administration*, 128, 34–48.

- Thoraneenitiyan, N. (2020). Measuring Technical Efficiency of Thai Saving and Credits, and Credit Union Cooperatives. *Journal of Business Administration*, 168, 38–57.
- Tiew, W. S. (1997). Single journal bibliometric studies: a review. *Malaysian Journal of Library & Information Science*, 2(2), 93–114.
- Tippakoon, P. (2017) Industrial Clustering, Knowledge Interaction, and Product Innovation in the Thai Food Processing Industry. *Journal of Business Administration*, 153, 64–93.
- Tongkachok, T. (2013). Using Structural Equation Model to Study Factors Influencing Corporate Social Responsibility of Listed Companies in the Stock Exchange of Thailand. *Journal of Business Administration*, 140, 71–97.
- Tungpradit, W. & Anurit, P. (2017). Brand Equity Model affecting Buying Behavior of Cosmetic Products in Thailand. *Journal of Business Administration*, 153, 24–44.
- Valenzuela, L. M., Merigó, J. M., Johnston, W. J., Nicolas, C., & Jaramillo, J. F. (2017). Thirty years of the Journal of Business & Industrial Marketing: a bibliometric analysis. *Journal of Business & Industrial Marketing*, 32(1), 1–17.
- van Eck, N. J., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.
- van Eck, N. J., & Waltman, L. (2014). Visualizing Bibliometric Networks. In *Measuring Scholarly Impact*, 285–320.
- Waltman, L., van Eck, N. J., & Noyons, E. C. M. (2010). A unified approach to mapping and clustering of bibliometric networks. *Journal of Informetrics*, 4(4), 629–635.
- Wangsirivech, V. & Metharom, P. (2019). Consumer Attitudes toward Social Network Advertising: A Case Study of Sushi Hiro Japanese Restaurant. *Journal of Business Administration*, 162, 27–50.
- Wonglimpiyarat, J. (2010) Policy of Taxation for improvement in investment. *Journal of Business Administration*, 126, 42–56.
- Wongpinunwatana, N. (2008). Measurement of benefit from using information technology in SMEs. *Journal of Business Administration*, 119, 9–31.
- Pasunon, P. (2008). Measurement of efficiency in organization using Data Envelopment Analysis. *Journal of Business Administration*, 118, 27–37.
- Yuprot, T. (2013). Effect of Work Values on Organizational Citizenship Behavior among the Generations. *Journal of Business Administration*, 138, 40–62.
- Yuthavong, Y. (1986). Bibliometric indicators of scientific activity in Thailand. *Scientometrics*, 9(3), 139–143.