

# Multi-Dimensional Consumer Value and Adoption of Mobile Health Service: A Study During COVID-19 Outbreak in Indonesia

Tri Lestari  
Departement of Management  
Indonesia Banking School  
Jakarta, Indonesia  
[Trilestari308@gmail.com](mailto:Trilestari308@gmail.com)

2<sup>nd</sup> Whony Rofianto  
Departement of Management  
Indonesia Banking School  
Jakarta, Indonesia  
[Rofianto@ibs.ac.id](mailto:Rofianto@ibs.ac.id)

**Abstract**— The COVID-19 pandemic has a major impact on many aspects of consumer life, including how to access health services. One approach that has emerged is mobile health services as an alternative access mechanism for health services in the midst of epidemics and health care crises. This study examines the role of perceived needs and external cues to action in encouraging multi-dimensional values (usefulness, convenience and monetary), and their impact on the intention to adopt mobile health services. Empirical data was collected through a cross-sectional online survey of 120 respondents in the JABODETABEK area. Hypothesis testing is done using the Structural Equation Modelling (SEM) approach. The results demonstrate that External cue to actions and perceived needs have a positive effect on usefulness, convenience, and monetary values. Meanwhile, multidimensional values also indicate a positive influence on intention to adopt mobile health services.

**Keywords**— *Mobile health applications, customer perceived value, perceived need, external cues, adoption intention.*

## I. INTRODUCTION

Throughout December 2019, there has been an outbreak of pneumonia of an unknown etiology that was first reported in Wuhan, Hubei Province, China. Following the outbreak, a novel coronavirus, SARS-CoV-2 (COVID 19), was identified as the causative virus for the pandemic in China and worldwide by the World Health Organization [1]. On April 4, 2020, Indonesia declared war with Coronavirus disease 2019 (COVID-19), during pandemic outbreak there were 2,092 people has been identified as the positive cases [2], after that Indonesia's president finally decided to implement large-scale social restriction in cities and provinces, the government also emphasize social distancing its aim is to keep people apart from each other by confining them to their homes in order to reduce contact rates [3].

The impacts of social distancing are allowed transformation in behavior consumptions during the crisis outbreak, especially the perceived needs of health service as a major requirement of health solutions [4]. Therefore, Indonesian government has provided alternative health services to fulfil the perceived needs with the utilization mobile health in collaboration with aliansi telemedik Indonesia (ATENSI) ready to work in synergy [5]. The WHO Global Observatory for mobile health has defined as "medical telemedicine and public health practice self-service supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants, and other wireless devices." [6].

Halodoc, is mobile health application in Indonesia that has become revolutionary to innovate telemedicine Check COVID-19 collaboration with the Indonesian government to strengthen the COVID-19 handling system [7], halodoc

provide services to end-users in seven steps: (1) Chat with a docter feature; (2) Hospital Appointment Feature for COVID-19 Test; (3) Buy medice future; (4) Go medice delivery service feature; (5) Hospital feature; (6) Get lab test feature; (7) Hospital appointment.

To understand the impact behavior intention to adopt mobile health during the outbreak, this study explores several factors based on consumer value and health behaviour research. The multi-dimensional value perspective is applied to explore expectations and perceptions of benefits consumers want to receive from mobile health such as usefulness value, convenience value, monetary value [8]. In addition the behavioural model of health service utilisation is applied such as perceived needs [9].

This research applied model of the determinants of mobile health adoption [10], To the best of authors' knowledge, there is still limited study on unexplored factors, we consideration additional one of factor external cues to action which act as triggers that stimulate people to take action [11]. This adoption model enhance the predicting capability of the proposed model and provide profound insights into mobile health adoption behaviour.

## II. MATERIALS AND METHODS

### *Literature Review*

#### *A. Multi-dimensional consumer value*

The value create customer experience by using product or service. And other words value influence their consumer behavior, including intention to adopt, willingness to buy, purchase, and purchase intention [12]. Value has been proven as a useful tool for companies to sustain competitive advantage and to achieve success and for researchers to understand value-driven consumers [13].

The multi-dimensional value perspective has applied for some research to health service utilisation found that the significant impact of functional and emotional values on customer satisfaction with preventative health services [14], in addition to mobile health research investigated that consumer value are significant predictors of intention to adopt mobile health [10]. However, this study also use functional value is depicted through three sub-dimensions: monetary, convenience and usefulness values to predict what users' intention to adopt during the outbreak.

#### *B. Health belief model*

This theory focus on two aspects of individual's: perceived disease threat (PDT) and behavioral evaluation. HBM is commonly used in studies on health behaviors,

particularly in explaining or predicting health-related behaviors [15]. As many previous theories and studies have indicated, the BI and the usage of technology share a strong and significant causal relationship, and can be used to predict the actual usage [16]. In outbreak COVID-19, perceived needs affect an individual's ability to search alternative acces to secure health services. This study conduct cues to action of individuals as triggers that stimulate people to take action while seach alternative access in adoption to mobile health.

### Hypotheses Development

Perceived needs for health services consist of perceived illness and illness experiences, such as number of disability days, a self-report of general health status or perceived symptoms [9], while during the outbreak people more concern with illness have a greater need of health services and are more likely to use them, because consumer needs cause changes in their behaviours.

In addition a major situation, when people experience life-changing events, such as onset of disease, they tend to re-evaluate their circumstances, These shifts lead to changes in consumption-related lifestyles, ultimately driving buying and consumption patterns [17], In the case of mobile health it seems that perceived needs changes in the value perceptions of mobile health. They may perceive that mobile health is usefulness, convenience and helpful in terms monetary value of saving health care costs. Thus, these following hyphotheses are developed:

**H1:** Perceived needs has a positive impact on the usefulness value.

**H2:** Perceived needs has a positive impact on the convenience value.

**H3:** Perceived needs has a positive impact on the monetary value.

In the early stages of the outbreak COVID-19, hospital as a healthcare service was overwhelmed [18]. Therefore, people search alternative acces to use healtcare service by internet, campaign and suggestion from the doctor. Based on theory HBM, external cues to actions act as triggers that stimulate people to intention to adopt mobile health. Thus,

these following hyphotheses are developed:

**H4:** External cues to actions has a positive impact on the intention to adopt mobile health services.

The usefulness value has been proven to be a strong and consistent predictor of technology adoption intentions [19]. The significant influence of the usefulness belief on mobile health adoption has been investigated [20]. When users believe mobile health maintains or enhances their health status and reduces health-related threats during the ourbreak, the users perceive the usefulness value for mobile health and have a stronger intention to adopt it. Thus, these following hyphotheses are developed:

**H5:** Usefulness value has a positive impact on the intention to adopt mobile health services.

Mobile health is a type of self-service taking care of health by using mobile technology. Self-service are expected to provide the ultimate level of convenience by being available continuously and everywhere, enabling consumers to save time and emotional effort [21]. Therefore during the outbreak COVID-19, people can utilise healthcare services at their convenience by using mobile technologies without physically moving to medical or healthcare centres. Thus, these following hyphotheses are developed:

**H6:** Convenience value has a positive impact on the intention to adopt mobile health services.

In general self-service technologies and mobile services are perceived to save money and are often priced lower than alternatives [22]. During the outbreak people faced inconstant economic situation [23]. Mobile health can provide more cost-effective delivery of healthcare services than traditional healthcare services by reducing in-person visits, trips to emergency centres and hospitalisations [24]. Thus, these following hyphotheses are developed:

**H7:** Monetary value has a positive impact on the intention to adopt mobile health services.

Therefore, shown in Fig.1 to illustrate the study's research model that was developed in prior paragraph. There are 7 hyphotheses proposed in this study.

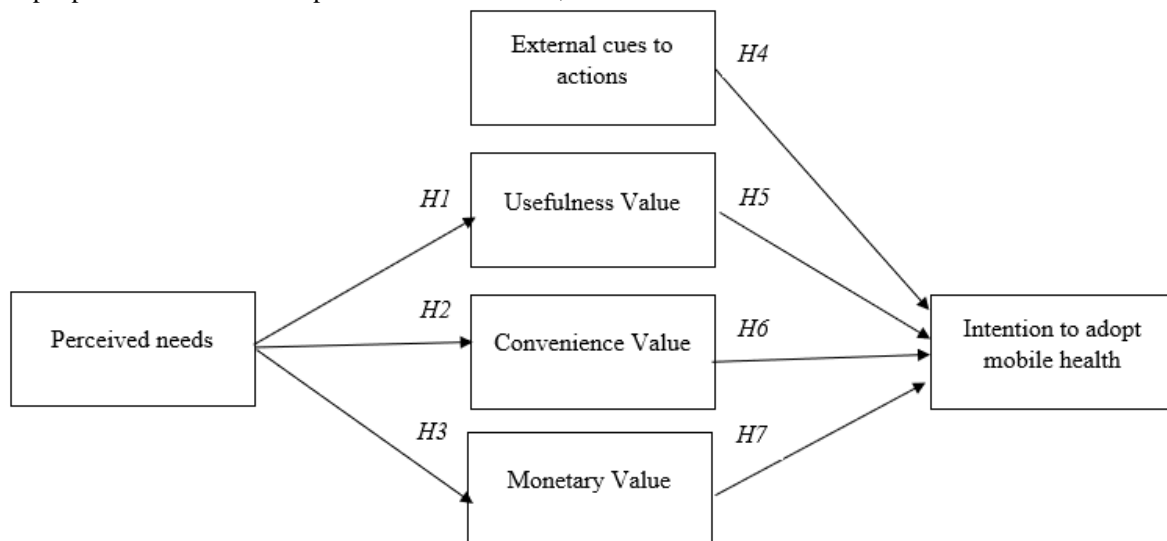


Fig.1. Research Model

## Methodology

A cross-sectional survey was employed, and a non-probability convenience sampling technique, data was collected and analysed using Statistical Package for Social Science (SPSS) software version 22 and the SEM with AMOS version. The study survey measurement was adopted from existing pre-validated instrument and by author as presented in Table 1. The first part of the questioner is filtering question to ensure that respondents meet the required criteria for a subsequent. The second section of the questionnaire focused on demographic characteristics of respondents. The measure of multi-dimensional consumer value and adoptin of mobile health service from the study by Lee and Han [12], External cues to action was measured using the items from the study by Huang [11]. The measure of perceived needs was measured using the items from the study Lee and Han [12].

All items included in the survey were measured on a 7-point Likert scale ranging from 1 to 7, with “1” representing strongly disagree and “7” representing strongly agree, except for perceived needs, were measured on a 7-point Difensial semantic scale ranging from 1 to 7, with “1” representing never “7” representing often Measurement items

TABLE 1. MEASURMENT ITEMS

Code	Operational Definitions	Resource
PN1	How often is COVID-19 service needed to improve your health care?	By authours
PN2	How often is general practitioners service needed to improve your health care?	
PN3	How often is psychologist service needed to improve your health care?	
PN4	How often is dermatologist service needed to improve your health care?	
PN5	How often is dentist service needed to improve your health care?	
PN6	How often is pediatrician service needed to improve your health care?	
ECUE1	I have always obtained health-related information from the Internet	(Deng,2014)
ECUE2	Medical care personnel encourage and support me to use mobile health service	
ECUE3	Friends encourage and support me to use mobile health service	
ECUE4	Relatives encourage and support me to use mobile health service	
UV1	It enhances the effectiveness of my daily healthcare	(Hung and Jen, 2012)
UV2	It is useful in managing my daily health	
UV3	It improves my capability to manage my health	
CV1	It is convenient because i can receive healthcare services anytime and any place	(Kim,2007)
CV2	I find that mobile health service is easy to learn.	(Sezgin,2018)
CV3	Overall, I find that mobile health service is convenient.	
MV1	Mobile health services are expensive to purchase.	(Yu, 2012)
MV2	I think mHealth service equipment cost was not expensive	(Oppong,2018)
MV3	I think service access cost was not expensive	

Code	Operational Definations	Resource
MV4	I think service transaction fee was not expensive.	(Hung and Jen, 2012)
ITA1	I expect to use mobile health in the future	
ITA3	I intend to use mobile health in the future	
ITA3	I will encourage friends and others to use this service	

## Data Collection

This study still ongoing research, therefore the data shown is pre-test. The sample of this study was halodoc users in Indonesia were collected via an official online survey questionnaire. A total of 76 respondents were approached, of the number of completed surveys, ten were considered excluded. Finally, 67 surveys were analyzed as presented in Table 2.

TABLE 2. DEMOGRAPHY RESPONDENS

Items	Categories	%
Gender	Male	70%
	Female	30%
Age	<20	5%
	21-30	81%
	31-40	10%
	<40	3%
Occupation	Student	21%
	Government employees	3%
	Private employees	67%
	Entrepreneur	7%
	Housewife	7%
Education	Equivalent	29%
	Diploma	13%
	S1	55%
	S2	3%
	S3	-
Income	< Rp 500,000	5%
	Rp 500.000 s.d Rp 1.000.000	4%
	Rp 1.000.000 s.d Rp 5.000.000	54%
	Rp 5.000.000 s.d Rp10.000.000	35%
	> Rp10.000.000	1%
Location	Jabodetabek	93%
	Pulau Jawa (Except Jabodetabek)	7%

## III. RESULTS

### Construct Validation

All the measurement scales were extracted directly from other researchers as indicated presented in Tabel 2 and hence, a confirmatory factor analysis (CFA) was done to test the construct. Six variables (PN, ECUE, UV, CV, MV, and ITA) was analyze by measuring Composite Reliability and Loading factors. Meanwhile, the validity of reflective indicators is measured using AVE [25]. The results of reliability and validity testing is depicted at Table 3.

The model fit indices in the measurement model exhibited good fit on all the six constructs (CMIN/DF = 3,235, CFI = .761, RMSEA = .173. These indices discrepancy with the acceptable criteria for the overall model fit of the sample group as recommended [26].

TABLE 3. REABILITY AND VALIDITY TESTING

Variable	Indicator	Loading Factor	CR	AVE
PN	PN1	0,858	0,944	0,773
	PN2	0,847		
	PN3	0,917		
	PN4	0,873		
	PN5	0,792		
	PN6	0,86		
ECUE	ECUE1	0,562	0,801	0,508
	ECUE2	0,776		
	ECUE3	0,617		
	ECUE4	0,857		
UV	UV1	0,945	0,948	0,859
	UV2	0,952		
	UV3	0,882		
CV	CV1	0,831	0,933	0,778
	CV2	0,846		
	CV3	0,91		
	CV4	0,937		
MV	MV1	0,853	0,946	0,815
	MV2	0,914		
	MV3	0,906		
	MV4	0,936		
ITA	ITA1	0,982	0,968	0,91
	ITA2	0,964		
	ITA3	0,915		

#### Structural analysis and testing of hypotheses

The Structural Equation Modelling (SEM) enables the control of the measurement of error, tests multiple relationships and also provides information on the degree of fit of the tested model [27]. The structural paths were estimated to test the hypotheses of the constructs. The results reveal that the model appears to have established an acceptable fit and thus, accomplished a satisfactory level of nomological validity as presented in Tabel 4

TABLE 4. STRUCTURAL MODEL ASSESSMENT RESULT.

Ho	Effects	$\beta$ Estimate	CR.	P	Remarks
H1	PN $\rightarrow$ UV	0,58	6,444	0	Supported
H2	PN $\rightarrow$ CV	0,397	4,741	0	Supported
H3	PN $\rightarrow$ MV	0,467	6,231	0	Supported
H4	ECUE $\rightarrow$ ITA	-0,168	-2,273	0	Supported
H5	UV $\rightarrow$ ITA	0,263	3,606	0	Supported
H6	CV $\rightarrow$ ITA	0,360	4,756	0	Supported
H7	MV $\rightarrow$ ITA	0,530	6,775	0,023	Rejected

#### IV. DISCUSSION

We found that usefulness, convenience and monetary values are significant predictors of intention to adopt mobile health. This finding is in line with research conducted by Lee and Han [10], which states that usefulness, convenience and monetary values has a significant relationship to intention to adopt mobile health. In particular the convenience values of mobile health are relative weaker than pre-existing medical and healthcare services. We expect that convenience value has greater significant because during the outbreak people have social distancing and search for alternative accsees can use anytime and anywhere.

Moreover, the importance of usefulness value has a greater significant than another it means during the outbreak people search health care for improve daily health and manage individual's health. In addition to the effects of values on mobile health adoption intention, we considered the circumstances in which values are perceived strongly

Inconsistent with the hypotheses, the result show that external cues to actions does not have a positive influence to intention adopt mobile health. This contrasts with the research of Huang which states that external cues to actions has significant intention di adopt mobile health [11]. These results can help in creating guidelines for strategy campaign halodoc and attract halodoc users, providers should emphasise mobile health advantages and benefits over pre-existing medical and healthcare services. Providers need to position in the users' mind the idea that halodoc enables them to manage their health effectively, to take care of health without temporal and spatial restrictions, and to save healthcare costs.

Despite the implications of the study, the limitations of the findings should be interpreted. First, although we identified additional variables for mobile health adoption that is external cues to actions, there are funding discrepancy od goodness of fit, Second, the demography of respondents did not represents all users characteristics of mobile health in Indonesia, third we limited our study to halodoc as investigated application. Moreover, future research must resification model to intention adopt mobile health. Further data collection needs to be conducted in order to improve the results of this study.

#### REFERENCES

- [1] Baskara, Bima. Rangkaian Peristiwa Pertama Covid-19 [Internet]. 2020. Available from: <https://bebas.kompas.id/baca/riset/2020/04/18/rangkaian-peristiwa-pertama-covid-19/>
- [2] Aziz I. Update Corona Indonesia 4 April, Sebaran 2.092 Kasus di 32 Provinsi [Internet]. 2020. Available from: <https://tirto.id/update-corona-indonesia-4-april-sebaran-2092-kasus-di-32-provinsi-eKTY>
- [3] Manafe D. Permenkes Nomor 9 Tahun 2020 untuk Atur PSBB [Internet]. 2020. Available from: <https://www.beritasatu.com/nasional/616835-permenkes-nomor-9-tahun-2020-untuk-atu-psbb>
- [4] Kapoor A, Guha S, Kanti Das M, Goswami KC, Yadav R. Digital healthcare: The only solution for better healthcare during COVID-19 pandemic? Indian Heart J. 2020;72:61–4.
- [5] Edon M. Kemenkes Luncurkan Pemanfaatan Layanan Telemedik Pencegahan dan Penanganan Covid-19 [Internet]. 2020. Available from: <https://indonews.id/artikel/28380/Kemenkes-Luncurkan-Pemanfaatan-Layanan-Telemedik-Pencegahan-dan-Penanganan-Covid-19/>
- [6] Park YT. Emerging new era of mobile health technologies. Health Inform Res. 2016;22(4):253–4.
- [7] Yurivito B. Gojek dan Halodoc Berkolaborasi Dukung Kemenkes Tangani Penyebaran Covid-19 [Internet]. 2020. Available from: <https://adv.kompas.id/baca/gojek-dan-halodoc-berkolaborasi-dukung-kemenkes-tangani-penyebaran-covid-19/>
- [8] Sheth JN, Newman BI, Gross BL. Why we buy what we buy: A theory of consumption values. J Bus Res. 1991;22(2):159–70.
- [9] Andersen R, Newman JF. Societal and individual determinants of medical care utilization in the United States. Milbank Q. 2005;83(4):1–28.
- [10] Lee E, Han S. Determinants of adoption of mobile health services. Online Inf Rev. 2015;39(4):556–73.
- [11] Huang JC. Remote health monitoring adoption model based on artificial neural networks. Expert Syst Appl [Internet].

- 2010;37(1):307–14. Available from: <http://dx.doi.org/10.1016/j.eswa.2009.05.063>
- [12] Kim HW, Chan HC, Gupta S. Value-based Adoption of Mobile Internet: An empirical investigation. *Decis Support Syst*. 2007;43(1):111–26.
- [13] Cronin JJ, Brady MK, Hult GTM. Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments. *J Retail*. 2000;76(2):193–218.
- [14] Zainuddin N, Previte J, Russell-Bennett R. A social marketing approach to value creation in a well-women's health service. *J Mark Manag*. 2011;27(3–4):361–85.
- [15] Rosenstock IM. The Health Belief Model and Personal Health Behavior. *Health Educ Monogr*. 1974;2(4):354–86.
- [16] Rosenstock IM. Why people use health services. *Milbank Q*. 2005;83(4):1–32.
- [17] Deng Z, Mo X, Liu S. Comparison of the middle-aged and older users' adoption of mobile health services in China. *Int J Med Inform [Internet]*. 2014;83(3):210–24. Available from: <http://dx.doi.org/10.1016/j.ijmedinf.2013.12.002>
- [18] Wibawa SW. Mengapa Rumah Sakit Kewalahan Hadapi Corona dan Apa Dampaknya? [Internet]. 2020. Available from: <https://www.kompas.com/sains/read/2020/05/08/130400523/mengapa-rumah-sakit-kewalahan-hadapi-corona-dan-apa-dampaknya-?page=all>
- [19] Zhao Y, Ni Q, Zhou R. What factors influence the mobile health service adoption? A meta-analysis and the moderating role of age. *Int J Inf Manage*. 2018;43(August 2017):342–50.
- [20] Schepers J, Wetzels M. A meta-analysis of the technology acceptance model: Investigating subjective norm and moderation effects. *Inf Manag*. 2007;44(1):90–103.
- [21] Farquhar JD, Rowley J. Convenience: A services perspective. *Mark Theory*. 2009;9(4):425–38.
- [22] Meuter ML, Ostrom AL, Roundtree RI, Bitner MJ. Self-service technologies: Understanding customer satisfaction with technology-based service encounters. *J Mark*. 2000;64(3):50–64.
- [23] Krisiandi. Survei SMRC: Dampak Covid-19, 59 Persen Responden Anggap Ekonomi Rumah Tangga Bakal Memburuk. 2020; Available from: <https://nasional.kompas.com/read/2020/05/12/15280211/survei-smrc-dampak-covid-19-59-persen-responden-anggap-ekonomi-rumah-tangga?page=all>
- [24] Oppong E, Hinson RE, Adeola O, Muritala O, Kosiba JP. The effect of mobile health service quality on user satisfaction and continual usage. *Total Qual Manag Bus Excell [Internet]*. 2018;0(0):1–22.
- [25] Jr JFH, Black WC, Babin BJ, Anderson RE, Black WC, Anderson RE. *Multivariate Data Analysis*. 2018. 95–120 p. Available from: <https://doi.org/10.1080/14783363.2018.1541734>
- [26] Kline, R. B. *Principles and practice of structural equation modeling* 2005. 2nd ed.
- [27] Byrne, B. M.. *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. 2013





# **BUSINESS INNOVATION & ENGINEERING CONFERENCE (BIEC) & 2<sup>nd</sup> International Conference on Risk Management as An Interdisciplinary Approach (ICRMIA)**

**Bogor, Indonesia - July 28, 2020**

## **Theme**

**The New Dynamics of Business Innovation & Engineering:  
Creating and Protecting Value in The Era of Industry 4.0 & Society 5.0**

# **Book of Abstracts**

# Table of Contents

Author Names	Page
Hery Suliantoro, Baby Monica I Simanjuntak, Kirana Rukmayuninda	1
Budi Ismoyo, Muhammad Idrus Alhamid , Nasruddin, Muswar Muslim, Arnas Lubis	2
Siti Jahroh, Janita S Meilala	3
Ahmad Shaharudin Abdul Latiff	4
Rozaina Ali, Ahmad Shaharudin Abdul Latiff, Sazali Abdul Wahab	5
Muhammad Faizurrohman, Lukman M Baga, Siti Jahroh	6
Danjuma Tali Nimfa, Ahmad Shaharudin Abdul Latiff, Sazali Abdul Wahab, Patrick Ethe Raj	7
Murodjon Urmonov, Ahmad Shaharudin Abdul Latiff	8
Nusrat Hafiz, Ahmad Shaharudin Abdul Latiff, Sazali Abdul Wahab	9
Kamna Anum, Sazali Abdul Wahab, Ahmad Shaharudin Abdul Latiff	10
Md Ahsanuzzaman Nishu, Ahmad Shaharudin Abdul Latiff, Huam Hon Tat	11
Luthpiyah Juliandara, Siti Jahroh, Budi Purwanto	12
Khairunnisa Mohd Azmi, Ahmad Shaharudin Abdul Latiff, Sazali Abdul Wahab	13
Mohamad Jatiardi, Dodik Siswantoro, Miranti Kartika Dewi, Evony Silvino Violita	14
Muhammad Isradi Zainal, Wahyu Ismail Kurnia, Kuswandi Arifin, Seherdi Siman	15
Wahyu Ismail Kurnia, Muhammad Isradi Zainal, Alex Kisanjani	16
Ferry Ardiansyah, Hermanto Siregar, Dedi Hakim, Mulya Siregar	17
Rifqi Jalu Pramudita, Niniet Indah Arvitrida	18
Dhaha Praviandi Kuantan, Hermanto Siregar, Anny Ratnawati, Solikin Juhro	19
Suhaila Abdul Hanan, Emy Ezura A. Jalil, Nizamuddin Zainuddin	20
Alfa Chasanah, Nindita Ayu Mutia Lestari, Siti Jahroh	21
Eka Sudarmaji, Noer Azam Achsani, Yandra Arkeman, Idqan Fahmi	22
Morgan Parlindungan, Muslim Efendi Harahap	23
Siti Jahroh, Intan Adhitya Rosmasari, Achmad Fadillah	24
Agus Masrianto, Hartoyo, Aida Vitayala S Hubeis, Nur Hasanah	25
Muhammad M. Maulana, Arif Imam Suroso, Yani Nurhadryani, Kudang Boro Seminar	26
Besty Hasyati, Taufik Djatna, Erliza Noor	27
Johannes Widjaja Wahono, Ujang Sumarwan, Bustanul Arifin, Herry Purnomo	28
Meuthia Rachmaniah, Arif Imam Suroso, Muhammad Syukur, Irman Hermadi	29
Afeez Kayode Ibikunle, Mohamad Farizal Rajemi, Fadhilah Mohd Zahari	30
Raden Isma Anggraini, Rifa Herdian	31
Ahmad Giffari, M Syamsul Maarif, Setiadi Djohar, Arif Imam Suroso	32
Heri Susanto, Noni Noerkaisar, Raden Isma Anggraini	33
Esaputra Mangarul Rajagukguk, Muslim Efendi Harahap	34
Asaduddin Abdullah, Dikky Indrawan	35
Nyayu Lathifah Tirdasari, Andina Oktariani, Dikky Indrawan, Nur Hasanah	36
Achmad Fadillah, Muhammad Asyam Dzaki Hasibuan, Anny Ratnawati	37
Achmad Fadillah, Andre Eka Hizkia Barus, Noer Azam Achsani, Lien Herlina, Febriantina Dewi, Fithriyyah Shalihati	38
Joko Rurianto, Ujang Sumarwan, Budi Suharjo, Nur Hasanah	39
Heny Herawati, Agus Soemantri, Elmi Kamsiati, Muchamad Bachtiar	40
Aini Ayu Zahara Tsulusi, Anton Mulyono Azis	41
Khairun Nisha Khirul Anuar, Nurul Amirah Faiqah Sallehuddin, Suhaila Abdul Hanan	42
Audy Joinaldy, Luki Abdullah, Yandra Arkeman, Siti Jahroh	43
Rakhmat Dicky Mohammad, Sisdjiatmo Kusumosuwidho Widhaningrat	44
Nur Khairiah Muhammad, Nor Hasni Osman, Nurul Azita Salleh	45
Heny Herawati, Agus Soemantri, Elmi Kamsiati, Muchamad Bachtiar	46
Masanori Fukui, Jo Hagikura, Yuji Sasaki, Jun Moriyama, Yusuke Hayashi, Tsukasa Hirashima	47
Belal Zidan Rimawi, Wan Fadzilah Wan Yusoff, Abu Sofian Yaacob	48



• **BOOK OF ABSTRACTS**

<b>Author Names</b>	<b>Page</b>
Fithriyyah Shalihati, Suhendi, Asaduddin Abdullah, Agustina Widi Palupiningrum	49
Fanar Shwedeh, Norsiah Hami, Siti Zakiah Abu Bakar	50
Setyo Ferry Wibowo, Mukhamad Najib, Ujang Sumarwan, Yudha Heryawan Asnawi	51
Anita Mustikasari, Agung Utama	52
Tri Lestari, Whony Rofianto	53
Ni Made Dwidhyana, Dadang Gunawan	54
Aklima Akter, Wan Fadzilah Wan Yusoff, Mohamad Ali Abdul-Hamid	55
Annuridya Rosyidta Pratiwi Octasyilva, Lilik Noor Yulianti, Hartoyo, Agus W Soehadi	56
Rina Uswatun Hasanah, M Syamsul Maarif, Nimmi Zulbainarni, M. Joko Affandi	57
Intan Shafira, Aditya Tri Nugroho, Imam Fathur Rahman, Ahmad Setiawan Nuraya	58
Nyayu Lathifah Tirdasari, Dikky Indrawan	59
Adhika Prajna Nandiwardhana, Muslim Efendi Harahap	60
Mokhamad Syaefudin Andrianto, Anis Daifatin Masruroh	61
Y. Dony Antarius, Rinaldy Dalimi	62
Muhammad Azman, Intan Delia Rustandi, Putri Gayatri	63
Rafdi D. Ramdhani, Lukman M Baga, Popong Nurhayati	64
Erwin Widodo, Dwi Handayani, Suparno	65
Idqan Fahmi, Fithriyyah Shalihati, Suhendi	66
Darlyn Jasmin Magno, Karl Benedict Ong	67
Mohd Rizal Razalli, Mobashar Sadik, Kamaruddin Radzuan	68
Samah Rozana, Zakirah Othman, Noor Hidayah Abu , Salleh Nurul Azita	69
Zakirah Othman, Mohd Zahari Fadhillah, Salleh Nurul Azita	70
Jay Omotoy	71
Shimol Philip, Rakendu R, Hanna Paul	72
Shafini Shafie	73
Rahimi Abidin, Nor Hasni Osman, Rushanim Hashim	74
Daniel Hofilena	75
Siti Zakiah Abu Bakar, Chun Hounng Choo	76
Noorulsadiqin Azbiya Yaacob, Risyawati Mohamed Ismail, Siti Norhasmaedayu Mohd Zamani	77
Noor Hidayah Abu , Nik Muhammad Aqil Ajman, Mohd Fitri Mansor	78
Aryo Pinandito, Tsukasa Hirashima, Yusuke Hayashi	79
Norlena Hasnan, Ng Weng Seng Benson, Shahimi Mohtar, Nor Hasni Osman, Rahimi Abidin	80
Balakrishnan Bavaani, Zakirah Othman, Shafie Shafini, Ahmad Zaidi Mohamad Faizal	81
Mawaddah Mohamad	82
Muhamad Syafiq Mat Kassim, Shafini Mohd Shafie, Zakirah Othman	83
Swathi J, Deepika Sasi, Vibesh V Panicker	84
Deepika Sasi, Swathi J, Vibesh V Panicker	85
Marlita D. Yulianti, Elok S. Pusparini	86
Tu Vy Thuy Nguyen, Yuwalee Unpaprom, Rameshprabu Ramaraj	87
Huyen Thu Thi Nong, Yuwalee Unpaprom, Rameshprabu Ramaraj	88
Retnaningsih, Achmad Fadillah, Rezky Bella Agata	89
Nur Hasanah, Asaduddin Abdullah, Arif Imam Suroso	90
Adhil Iqbal, Robin David, Anandu M. S, Sijo G. Joy, Sharukhan S	91
Aldi Febrian, Ma'mun Sarma, Saadiatul Ibrahim	92
Thomas Ubina, Raymart Villena	93
Intan Azizka, Lindawati Kartika	94
Intan Widya Pertiwi, Lindawati Kartika	95
Ricky Arnaz, Muslim Efendi Harahap	96
Salis Musta Ani, Amelia Oktrivina Siregar, Basis G. Andamari	97
Zaky Abdullatif, Ninuk Purnaningsih, Megawati Simanjuntak	98
Muhammad Fariz Tiowiradin, Nurmala	99
Didik Dwi Prasetya, Tsukasa Hirashima, Yusuke Hayashi	100
Ilham Buana, Ratih Dyah Kusumastuti	101
Dion Achmad, Ratih Dyah Kusumastuti	102



• **BOOK OF ABSTRACTS**

<b>Author Names</b>	<b>Page</b>
Marjea Jannat	103
Wan Farez Saini Muner, Zulkornain Yusop, Norashida Othman	104
Ade Candra, DS Priyarsono, Nimmi Zulbainarni, Roy Sembel	105
Siti Jahroh, Lokita Rizky Megawati, Robinsar Jogi Yoshua Manullang	106
Mohd Norullah Razak, Ahmad Shaharudin Abdul Latiff	107
Arif Imam Suroso, Hansen Tandra, Achmad Fadillah	108
I Made Harry Kurniawan	109
Rifa Herdian, Raden Isma Anggraini	110
Salsa Dilla, Linda Karlina Sari, Noer Azam Achsani	111
Asaduddin Abdullah, Suhendi, Fithriyyah Shalihati	112
Anita Primaswari Widhiyani, Retnaningsih	113
Linda Karlina Sari, Salsa Dilla, Noer Azam Achsani	114
Jemmy Rinaldi, Eko Nugroho Jati, I Ketut Mahaputra, Anella Retna Kumala Sari, Yusti Pujiawati	115
Ayotunde Adelaja, Rosna Awang Hashim	116
Sri Ambarwati, N Aryani	117
Binsar Naipospos	118
Adrin Rauf	119
Fithriyyah Shalihati, Qurroh Ayuniyyah	120
Oumaima Hafide, Yacoutt Zenjali, Younes Lafraxo	121
Gabriel Bucu, Alexis Joseph Baarde, Rosarie Joy Balneg, Lara Isabelle Cabral, Maria Jocelyn Cerezo	122
Gabriel Bucu, Carmella Altares, Danessa Eunice Candelaria, Rheena Amor Chavez, Cyrille Enan Rivera	123
Mohamad Firwan Aprizal, Bambang Juanda, Anny Ratnawati, Abdul Muin	124
Reni Lestari	125
Gabriel Bucu, Karl Benedict Ong	126
Gabriel Bucu, Polo Miguel Elefante, Julien Christiane Gicalao, Loreto Jaen , John Danyael Taguinod	127
Gabriel Bucu, Glenn Gerald Castañeda, Keziah Marella Cueto, Clara Franchesca Mendoza, Angeline Nicole Regalado	128
Franciskus Antonius Alijoyo, Ridwan Hendra, Kevin Bastian Sirait	129
Syaipul Malik Ibrahim, Dewi Hanggraeni	130
Sugeng Wahyudi, Wisnu Mawardi, Julia Safitri	131
Yasmine Ramadhana Harahap, Dewi Utami Saptaningrum, Dwi Athika Widyanti	132
Ana Kadarningsih, Irene Rini Demi Pangestuti, Sugeng Wahyudi, Julia Safitri	133
Jihar Mayangsari, Muhamad Asvial, Alvin Yudistriansyah	134
Mary Cliedy Angelie Bersola, Tomas Tiu	135
Harold Cao, Tomas Tiu	136
Santi Rimadiaz, Feza Rahman, Deasy Ariyani, Devita Rosaliana	137
Kezia Bella, Noer Azam Achsani, Suhendi	138
M. Lucky Akbar, Arif Imam Suroso, Anggraini Sukmawati, Bambang Juanda	139
Madania Agusta, Retnaningsih, Dicky Indrawan	140
Rhea Nisa Humaira, Idqan Fahmi, Dicky Indrawan	141
Rizal Ardianto, Lien Herlina, Raden Isma Anggraini	142
Irfan Manaf, Nimmi Zulbainarni, Dicky Indrawan	143
Mazlan Yasin	144
Rahmi Jamza, Noer Azam Achsani, Dicky Indrawan	145
Desviana A. Ramadhani, Henny K. Suwarsinah, Dicky Indrawan	146
Erin Diana Sari, Siti Jahroh, Agustina Widi Palupiningrum	147
Maria Patty, Popong Nurhayati, Fuad Muhibuddin	148
Aqira Pakuanzahra, Noer Azam Achsani, Asaduddin Abdullah	149
Ruchi Tantra, Alifiannisa Diar, Farisya Setiadi	150
Minhajuddin Kasman Ar, Farisya Setiadi	151
Eka Prasliyuda, Tri Lestari, Muhammad Bahari Putra, Whony Rofianto	152
Sherin Andiana Gatot, Whony Rofianto, Ajeng Dwi Utami, Anneria	153
Thanh Long Le, Tan Tien Nguyen	154

• **BOOK OF ABSTRACTS**

<b>Author Names</b>	<b>Page</b>
Stevia Septiani, Dikky Indrawan	155
Kesha Jonathan, Ani Nuraisyah, M Syamsul Maarif	156
Vibesh V Panicker, Deepika Sasi, Swathi J	157
Laras Insiya Pertiwi, Arif Imam Suroso, Achmad Fadillah	158
Andhyka Tyaz Nugraha, Nor Hasni Osman	159
Achmad Fadillah, Retnaningsih, Wisnu Murti Khaliffaturrahman	160
Achmad Fadillah, Dikky Indrawan, Nur Hasanah	161
Achmad Fadillah, Dikky Indrawan, Siti Jahroh	162
Achmad Fadillah, Arief Daryanto, Rafii Yoga Pramana	163
Achmad Fadillah, Andre Eka Hizkia Barus, Noer Azam Achsani, Lien Herlina, Febriantina Dewi, Fithriyyah Shalihati	164
Fariz Shidqi, Pramono D Fewidarto, Hamimah Hassan	165
Ilham Rizky Ghozali, Rindang Matoati, Abdul Rashid Abdullah	166
Dexan Seganoval Cahyadi, Pramono D Fewidarto, Noor Azlin Ismail	167
Aldy Rizaldy, Lindawati Kartika, Roni Jayawinangun	168
Nooraini Ismail, Nor Hasni Osman, Siti Norhasmaedayu Mohd Zamani	169
Yudha Heryawan Asnawi, Hanifah Rosyidah Sari	170
Anita Primaswari Widhiyani, Febriantina Dewi, Nada Widyanto Rizki	171
Arif Imam Suroso, Febriantina Dewi, Dita Yuniar	172
Andina Oktariani, Nyayu Lathifah Tirdasari, Nur Hasanah, Dikky Indrawan	173
Armaudiah Putri, Andina Oktariani, Arief Daryanto	174
Novsa Fakhira, Andina Oktariani, Nimmi Zulbainarni	175
Nastasya Larasati Lontoh, Andina Oktariani, Joyo Winoto	176
Linda Karlina Sari, Noer Azam Achsani, Bagus Sartono, Lukytawati Anggraeni	177
Suhendi, Noer Azam Achsani, Mukhamad Najib, Tanti Novianti	178
Henry Siahaan, DS Priyarsono, Bustanul Arifin, Amzul Rifin	179
Lokita Rizky Megawati, Siti Jahroh, Annisa Falimantik	180
Eka Sudarmaji, Noer Azam Achsani, Yandra Arkeman, Idqan Fahmi	181
M. Fauzi Aditra, Popong Nurhayati, Siti Jahroh	182
Dystiana Putri Abistha, Henny K. Suwarsinah, Annisa Ramadanti	183
Savelia Salsa Bila, Agustina Widi Palupiningrum, Hartoyo	184
Neldo Irawan, Salsa Dilla, Anny Ratnawati	185
Setyo Wibowo, Noer Azam Achsani, Arif Imam Suroso, Hendro Sasongko	186
Achmad Fadillah, Abdul Jabbar Hartanto, Noer Azam Achsani, Nur Hasanah	187
Achmad Fadillah, Adisti Permatasari Putri Hartoyo	188

## **The Effect of Purchase Skills on The Purchasing Strategies and Financial Performances**

**Hery Suliantoro, Baby Monica I Simanjuntak, Kirana Rukmayuninda**  
Diponegoro University

### **ABSTRACT**

Restaurant business is one of the fastest growing businesses and is increasing in number at the moment. Also noted that in 2018 food and beverage industry's development rate reached 8.67%. Where the number exceeds the value of Indonesia national economic development. With the increasing population of people in Indonesia, the effect of demand for food and beverages has also increased. Therefore restaurant is an important type of business at this time. However, many problems occurred in restaurants which related to the amount of procurement costs that occur in the budget plan. There is no research that explains the steps to improve financial performance through procurement. Therefore, this study was conducted to look at the relationship between the ability of employees in procurement to strategic purchasing and its impact on the financial performance of restaurants. After the research finished, it will give advice and recommendations to the restaurant to improve its performance. This research uses Structural Equation Modeling-Partial Least Square method with a sample of 60 restaurants in Semarang. After the research, it was found that the ability that would improve the implementation of strategic purchasing and improve the financial performance of the restaurant was technical knowledge. And also by implementing strategic purchasing the financial performance will also improve.

**Keywords:** Strategic Purchasing, Purchasing Skill, Restaurant Procurement, Semarang Restaurant, Structural Equation Modeling-Partial Least Square

### **Email Correspondence:**

[kirana.rukmayuninda.ririh@lipi.go.id](mailto:kirana.rukmayuninda.ririh@lipi.go.id)



## Working Fluid Selection for A Simple System of Low-Temperature Organic Rankine Cycle Plant

Budi Ismoyo, Muhammad Idrus Alhamid , Nasruddin, Muswar Muslim, Arnas Lubis  
University of Indonesia

### ABSTRACT

Heat sources such as geothermal brine, biomass, and other waste heat sources have the potential to be recovered. Organic Rankine Cycle (ORC) plants can use to convert low-temperature heat sources into electrical energy. Working fluid selection for a simple system of the Organic Rankine Cycle plant is essential because the system works in limited conditions. This research will analyze the performance of several fluids that can use as working fluids. Simulation using EES, the selected fluid must have excellent cycle efficiency, a high volumetric vapor flow rate, and a high expansion pressure difference. Working fluids compared at a constant pump flow rate of 4.5 lpm with a heat source temperature range of 70-180 oC to obtain thermal efficiency, volumetric vapor flow rate, and expansion pressure difference of the expander. The simulation results obtained 11 types of work fluids that meet these criteria. Considering environmental aspects, three types of working fluids are ideal for testing. N-Pentane as a working fluid with the highest volumetric vapor flow rate. R-123 as a working fluid with the highest cycle efficiency. R-1233zd as a working fluid with the highest expansion pressure difference.

Keywords: Organic Rankine Cycle, Working Fluid, Scroll Expander

### Email Correspondence:

budiismoyo@gmail.com



## Impacts of Business Aggregator on Farmers' Income

Siti Jahroh, Janita S Meilala

IPB University

### ABSTRACT

Agricultural produces pass a long journey from the farms up to the end consumers. With the advancement of information technology, aggregator businesses have emerged in order to shorten the long distribution chain. Therefore, farmers as producers can access information both on prices received by consumers and the characteristics of products demanded by consumers. This study aims to (1) explain the distribution chain mechanism through the aggregator business, and (2) analyze the impact on farmers who join the aggregator business distribution chain. There were 12 aggregator businesses and 36 farmers were interviewed as respondents in February to April 2019. The results showed that the distribution chain through the aggregator business was shorter compared to conventional whereas farmers had specific contracts or agreements with the aggregator business. The impact on farmers who join the aggregator business distribution chain is receiving higher prices, leading to increase farmers' income, transparency in prices where farmers know the selling prices at the consumer level, and farmers know consumer preferences for the products. It is expected that farmers will be able to produce better agricultural produces according to consumer preferences as well as to increase farmers' income.

Keywords: Price, Consumer Preferences, Distribution Chain, Transparency

### Email Correspondence:

janita@binus.ac.id





## **THE BUSINESS STRATEGY TRANSFORMATION OF DIGITAL MARKETING OF MICRO, SMALL, AND MEDIUM ENTREPRISES (A CASE STUDY OF CULTIVE APPAREL)**

**Muhammad Faizurrohman, Lukman M Baga, Siti Jahroh**  
IPB University

### **ABSTRACT**

The existence of MSMEs (Micro, Small, and Medium Enterprises) has proven to be a pillar of the economic improvement of a country. The industrial era 4.0 has caused intense of business competition that emphasizes in the internet-based interconnection. Therefore, a business formulation is needed that can be adopted by MSMEs in order to be able to maintain their existence and not be crushed by the intense of competition by the capital-intensive businesses. This research aims to formulate a business strategy that can be applied by MSMEs to enter and compete in the online business. The research will be conducted as a case study at MSME Cultive Apparel. The methods used will include Benchmarking, Internal and External Environmental Analysis, and IE Matrix. The alternative business strategy will be useful for the Cultive Apparel to survive and develop in the industrial era 4.0.

**Keywords:** Business formulation, Environmental analysis, Online business

### **Email Correspondence:**

faizurrohman62@apps.sb.ipb.ac.id



## **Effect of Organisational Culture on Sustainable Growth of Manufacturing SMEs: Mediating Role of Innovation Competitive Advantage**

**Danjuma Tali Nimfa, Ahmad Shaharudin Abdul Latiff, Sazali Abdul Wahab, Patrick Ethe Raj**  
Universiti Putra Malaysia

### **ABSTRACT**

In spite of incessant efforts to encourage sustainable growth of small and medium enterprises (SMEs), challenges in terms of organisational culture innovation have continued to hinder the progress of SMEs. This study investigates the effect of organisational culture on the sustainable growth of manufacturing SMEs and the mediating role of innovation competitive advantage. The electrical small and medium enterprises production is the realm of this study. The study used a sample size of 247 electrical SMEs. The partial least squares structural equation modelling (PLS-SEM) via SmartPLS was employed to test the hypotheses. The study reveals that there was a significant relationship between organisational culture and sustainable growth of electrical manufacturing SMEs. Also, there was a positive and significant relationship between innovation competitive advantage and sustainable growth of electrical manufacturing SMEs. Furthermore, the findings confirmed that innovation competitive advantage mediates the relationship between organisational culture and sustainable growth of electrical manufacturing SMEs in Nigeria. This study sets out purposeful measures to encourage owner-managers of the electrical manufacturing SMEs to maintain as well as installing innovative organisational culture that enhances innovation competitive advantage efficiently for sustainable growth of SMEs in Nigeria. This study is distinctive because it tries to fill the small and medium enterprises gaps through encouraging managers of the electrical manufacturing SMEs to always strategies for better sustainable growth in the rapidly changing business environment.

**Keywords:** Organisational culture, Sustainable growth, SMEs, Innovation competitive advantage, PLS-SEM (SmartPLS)

### **Email Correspondence:**

danjuma.phd\_mgt18@grad.putrabs.edu.my

## Blockchain technology for enhanced Halal food integrity

Murodjon Urmonov, Ahmad Shaharudin Abdul Latiff

Universiti Putra Malaysia

### ABSTRACT

Incidents around the Halal food products are diminishing the trust in the effectiveness of Halal Assurance Systems and integrity of halal products. Trust concerns include proper product and process verification techniques, reliable information sharing and record keeping systems. Hence, there is a need for a proof to show the products sold are really in compliance with religious requirements and guidelines. Blockchain Technology with other Industry 4.0 components can allow businesses to store and send information securely and transparently thanks to its unique features: distributed, decentralized, secure, permanent and tamper-proof. Despite of interest among researchers and practical benefits of Blockchain to solve traceability and transparency issues, there is still a need to study on the applications of Blockchain in the Halal Assurance Systems, thus representing a knowledge gap. Consequently, our understanding of inner-workings of Blockchain technology as well as its implications on ensuring halal integrity remains limited. Hence, principal aim of this study is to discover how Blockchain will likely be the solution to issues around Halal Assurance System and transform it to achieve true Halal integrity. The study has vital business implications in the form best practices for performance enhancement, and governments may use study findings to make modifications or create new policies and regulations as well as extending the knowledge about Blockchain and its applications in various areas.

Keywords: Blockchain, Halal supply chain, Food integrity, Halal Assurance System

#### Email Correspondence:

murodjon.phd\_mgt18@grad.putrabs.edu.my

## **Challenges faced by Urban Women Entrepreneurs on Small Firm Growth of Bangladesh**

**Nusrat Hafiz, Ahmad Shaharudin Abdul Latiff, Sazali Abdul Wahab**

Universiti Putra Malaysia

### **ABSTRACT**

Women entrepreneurs are crucial transformation agents of the economic growth in a developing country. In order to enhance their value-added participation in the Small and Medium Enterprises (SME) sector for a developing nation, Bangladesh, it is essential to accentuate the unexploited segment of women entrepreneurs, such as those who operate from urban settings. The present study aims to investigate the challenges and constraints that the urban women entrepreneurs are facing pertaining to their venture growth. The findings of the extensive review of the extant literature reveals that financial illiteracy, inadequate human capital, insufficient social capital and business environmental hiccups are the key challenges for them. While many women from urban cities are better equipped to utilize their human capital for venture growth, most of them are still quite susceptible towards economic and social-denials. If not treated prudently with immediate affects, the constraints may lead to the substandard venture growth and eventually to the closure of firms; and leave adverse effects on the economic status of the country. The paper also offers strategic recommendations in order to halt the probable catastrophe caused by the constraints and to reap maximum benefits from urban women entrepreneurship to prompt the development process of the country.

**Keywords:** Challenges, Small Firm Growth, Socio-economic development, Urban Women Entrepreneurs, Bangladesh

### **Email Correspondence:**

nusrat.phd\_mgt18@grad.putrabs.edu.my

## **Women-owned MSMEs – Startup to Survival**

**Kamna Anum, Sazali Abdul Wahab, Ahmad Shaharudin Abdul Latiff**  
Universiti Putra Malaysia

### **ABSTRACT**

Despite the significant contributions of women entrepreneurs in various socio-economic advancements of a country, only a few studies explain how women entrepreneurs manage to sustain their business performance for a longer run. Under the premise of Triple Bottom Line (TBL), this study intends to provide a detailed insight into the multidimensional perspectives of women entrepreneurs' sustainable performance. This conceptual paper contributes to the existing women entrepreneurship literature by highlighting the under-researched issues associated with women-owned micro, small and medium enterprises' long term survival, particularly in the context of Pakistan. In addition, the study serves as a basis for future research in the field of sustainable entrepreneurship by providing a direction to business academics in order to identify the factors associated with women entrepreneurs' sustainable performance.

**Keywords:** Women Entrepreneurs' Sustainable Performance (WESP), Women-owned MSMEs, Sustainable Development

#### **Email Correspondence:**

kamna.anam1@gmail.com



## **Entrepreneurial Marketing (EM): An Innovative Paradigm of Growth for the SMEs of Bangladesh**

**Md Ahsanuzzaman Nishu, Ahmad Shaharudin Abdul Latiff, Huam Hon Tat**

Universiti Putra Malaysia

### **ABSTRACT**

The small and medium enterprise (SME) sector is one of the thriving sectors of Bangladesh which has significant contributions in terms of GDP growth, reduction of unemployment and overall progress of the economy. SMEs in Bangladesh create an estimated manufacturing output of 40%, employment of 7.8 million individuals supporting 31.2 million people's livelihood and contribution of 25% to the GDP of Bangladesh as of 2017. However, the sector is suffering from major constraints such as limited access to finance, lack of information and communication technology (ICT) adoption, barriers to internationalization, absence of innovative, entrepreneurial and managerial skills. Out of the several challenges that the SMEs face, the development of marketing and sales channels had been less emphasized due to lack of capital. If we look into the current situation of the SME sector from the marketing perspective, the new paradigms of marketing such as entrepreneurial marketing (EM), which is most suitable for the SMEs due to its capabilities and feasibilities mentioned by previous researchers, can be a turning point for the SMEs. Indeed, EM has emerged as a marketing practice that helps SMEs to operate in a rapidly changing environment. Nevertheless, there are very few studies outlining the impacts of EM on performance outcomes of SMEs in different contexts creating a research gap. Thus, this conceptual paper recognizes how EM can assist to unravel the key constraints impeding the growth of SMEs using contemporary platforms of innovative marketing strategies and digital technologies.

**Keywords:** SMEs, Constraints, Growth, Entrepreneurial Marketing (EM), Bangladesh

### **Email Correspondence:**

ahsannishu18nov@gmail.com

## ANALYSIS OF MAPPING DISCLOSURES ON SUSTAINABILITY REPORTS IN INDONESIA

**Luthpiyah Juliandara, Siti Jahroh, Budi Purwanto**

IPB University

### ABSTRACT

In the modern industrial era, the role of companies that expresses their social responsibility in the form of sustainability reports is important. The Biodiversity Foundation (Sri-Kehati) plays an important role in publishing this report every year. The report contains social, economic and environmental disclosures that have been carried out by the company during one operating period. This study aims to analyze the mapping of Sustainability Report Disclosures conducted by companies in Indonesia. The data used are secondary data that are processed through descriptive and plot analyses. The results showed that the companies in the SRI-Kehati index group and the LQ45 index had similar characteristics to those on the company charts that tended to cluster. They had a fairly large positive correlation when viewed from the shape of the angle formed which is a sharp angle. For companies in the SRI-Kehati Index group, they had an advantage in market performance, especially in Unilever Indonesia companies, while for companies in the LQ45 index group, they had an advantage in market performance and its fundamental performance, especially in the Matahari Departement Store company.

Keywords: correlation, fundamental performance, market performance

#### **Email Correspondence:**

[luthpiyah\\_juliandara@apps.ipb.ac.id](mailto:luthpiyah_juliandara@apps.ipb.ac.id)

## ENTREPRENEURSHIP ECOSYSTEMS AND SUSTAINABLE ENTREPRENEURSHIP ECOSYSTEMS

**Khairunnisa Mohd Azmi, Ahmad Shaharudin Abdul Latiff, Sazali Abdul Wahab**

Universiti Putra Malaysia

### ABSTRACT

Entrepreneurship ecosystems concept has received growing attention over the past decade as policy makers, universities, private enterprises, and communities have started to recognize the potential of cohesive structures, policies, programs and processes that foster regional entrepreneurship activities and also can support innovation, productivity and employment growth. Scholars too have turned their attention to understanding entrepreneurship more holistically, as part of a larger ecosystem of institutions, firms and individuals that engage in innovative and entrepreneurial activity. However, the entrepreneurial ecosystem approach has to this point been constructed ad hoc by different authors, without any mutual definition. In addition, following the path of sustainable development, an increasing number of researchers have started paying attention to the connection between sustainable development and entrepreneurship and sustainable entrepreneurship has received substantial recognition from academics and practitioners in the last decade. Cohen (2006) pioneered in introducing the concept of a sustainable entrepreneurial ecosystem; an ecosystem that focuses on sustainable development. Nonetheless, the lack in Cohen answering several doubts such as how important the community culture is towards sustainability or which components of entrepreneurial ecosystems are more important than others in the emergence of sustainable entrepreneurship ecosystem has led other authors in search for more. Thus, this paper will discuss on the prior literatures on entrepreneurship ecosystem as well as the concept of sustainable entrepreneurship ecosystem.

**Keywords:** Entrepreneurship, Entrepreneurship ecosystem, Sustainable entrepreneurship ecosystem

**Email Correspondence:**  
nisazmi@gmail.com

## **For The Better Halal Industry Environment: Evaluation and Resolution of Halal Certification Audit in Indonesia**

**Mohamad Jatiardi, Dodik Siswantoro, Miranti Kartika Dewi, Evony Silvino Violita**

University of Indonesia

### **ABSTRACT**

Halal industry has become world phenomenon that cannot be ignored, especially in food & beverages industry. Due to the continuously growing demand of halal industry, the existence of halal certification is very crucial for the assurance of halal products. However, the problem occurred because of many inappropriate practices that can lead to unreliable information about halal products and can turn to consumers disbelief of halal product in the future. Therefore, the existence of halal certification audit is considered necessary. This paper seeks to explain and evaluate the practice of halal certification, especially in terms of halal audit practices in Indonesia, the biggest Muslim country in the world. We did a literature review from academic papers, international standards, and other resources. We also examine news, regulations, and other relevant information that can capture the existing halal audit practices in Indonesia. This paper finds that the implementation of halal certification audits in Indonesia is far from perfect, therefore exposes a lot of room for improvements. This paper emphasizes the importance of several elements such as openness and transparency regarding the audit procedures and outcomes, clear government regulations, and pressure from customers for the better halal audit environment in Indonesia.

**Keywords:** Halal industry, Audit, Assurance, Indonesia, Literature Review

#### **Email Correspondence:**

m.jatiardi@ui.ac.id



## **Analysis on the Impact of Total Quality Management (TQM) Practices Towards Business Performance; A Case Study**

**Muhammad Isradi Zainal, Wahyu Ismail Kurnia, Kuswandi Arifin, Seherdi Siman**

Universitas Balikpapan

### **ABSTRACT**

The improvement of company management quality to achieve competitive advantage must be appropriate in the term of applying the concept or strategy of improvement, because it can affect the company's success in competition with its competitors. Total Quality Management (TQM) is one of the concepts which is in regard with improving the quality of company management by considering almost all company aspects. It is proven through the claim of most academics and practitioners who say that TQM can improve company's business performance. This research aims to find out the implications of TQM practices on the business performance of PT. XYZ which is engaged in cement business. There are 10 TQM indicators and 3 company's business performance indicators used, as well as 250 respondents who involved in this research. The approach of Structural Equations Modeling (SEM) is used in data processing and analysis. The software used are SPSS version 22 and SPSS-AMOS version 21. The results show that the practices of TQM have a positive effect on company's business performance significantly. Moreover, each constructs of TQM variables and company's business performance show the adequate level of validity and is declared as capable in representing each variable.

**Keywords:** business performance, structural equations modeling, total quality management

### **Email Correspondence:**

wahyu.ismail.kurnia@uniba-bpn.ac.id

## **Analysis on the Level of Physical Workload of Coal Handling Control Room and Ship Unloader Operators in Cilacap Steam Turbine Power Plant**

**Wahyu Ismail Kurnia, Muhammad Isradi Zainal, Alex Kisanjani**  
Universitas Balikpapan

### **ABSTRACT**

Unbalanced and unproportional workload distribution by company management can cause fatigue in operators, which can result in working accidents. Companies that put their profit as priority without appropriately distributing the workload by considering the propriety between the number of operators with the workload, it is certain that the operators will gradually experience inconvenience. It will have an impact on productivity and company performance, and increase the rates of working accident. A way to find out the effectiveness of operator's workload is by measuring and analyzing workload distribution. For that purpose, this study is aimed to measure the physical workload of Coal handling Control Room (CHCR) and Ship Unloader (SU) in coal handling system division of Cilacap Steam Turbine Power Plant. The total number of CHCR and SU operators are 16, consisting of 8 workers in each division whom divided into night, morning, and afternoon shifts. The parameters of physical workload level measurement are worker's pulse rate and body temperature. The results of this study regarding the workload of CHCR and SU operators in physical aspect which is analyzed through their pulse rate is considered as normal without fatigue symptoms. Their body temperature also considered as normal with the workload is categorized as light.

**Keywords:** body temperature, Cardiovascular Load, Physical workload, pulse rate

### **Email Correspondence:**

wahyu.ismail.kurnia@uniba-bpn.ac.id

## **DETERMINANT FACTORS AFFECTING EFFICIENCY INTERMEDIATION AND PRODUCTION APPROACH (CASE STUDY : BANK BUKU II GO PUBLIC IN INDONESIA)**

**Ferry Ardiansyah, Hermanto Siregar, Dedi Hakim, Mulya Siregar**  
IPB University

### **ABSTRACT**

There are several approaches that can be used to explain the relationship between input and output from financial institutions, namely the production approach and the intermediation approach. Technical efficiency reflects the ability of the company to produce output with a number of available inputs. Whereas allocative efficiency reflects the company's ability to optimize the use of its inputs, with its price structure and production technology. These two measures are then combined into economic efficiency (economic efficiency). This research was conducted at eighteen banks included in the BUKU II Go Public Bank group in Indonesia. The study was conducted using secondary data from January 2014 to December 2018. To analyze the factors that influence the efficiency of intermediation and production approach, it is processed using Panel Data Regression analysis. The results of the research that have been carried out show that a significant factor affecting efficiency based on the intermediation approach is the number of variations in electronic banking and the number of Automatic Teller Machine. The significant factors affecting efficiency based on the production approach are total assets, the score of good corporate governance, the number of Automatic Teller Machine and the number of management

**Keywords:** Banking Efficiency, Determinant Factors, Go Public, Panel Data Regression.

**Email Correspondence:**  
ferryard4@gmail.com

## **Retail Pricing Strategy Considering Sales Capacity Constraint : An Agent-Based Modeling Approach**

**Rifqi Jalu Pramudita, Niniet Indah Arvitrida**

ITS - Sepuluh Nopember Institute of Technology

### **ABSTRACT**

Pricing strategy is one of main methods that retailer applies to compete in the market. Retailer must consider several factors, such as customer preference, competitor, and retailer format to successfully implement their strategy. Supplier existence also need to be reviewed in analyzing the effectiveness of the strategy from supply chain perspective. As competition becomes fierce, retailers tend to lower their price through promotion to attract more customer and increase their sales. Retailer may also have limited capacity based on their format and need to choose an appropriate promotion to avoid lost sales and negative effect on supply chain performance. This paper aims to study the effect of promotion on retailer and supply chain performance considering different retailer's capacity constraint. Due to the complexity of the problem, an agent-based simulation model composed of a supplier, two retailers, and hundreds of customers is proposed in this paper. Each customer owns personal preference toward price and distance of retailer. Retailer's performance, such as demand, sales, and profit, as well as supplier revenue and supply chain fill-rate are analyzed to see how they behave under several scenarios. The result shows that both retailers gain more demand and sales but suffer lower profit as they use the same promotion scheme regardless of their format. Supplier revenue and supply chain fill rate increase when both retailers set as minimarket and have no significant difference when both retailers set as larger format. This paper provides a more comprehensive perspective compared to previous studies.

**Keywords:** Retail Pricing Strategy, Promotion, Retail Capacity, Agent-Based Simulation, Customer Preferences

### **Email Correspondence:**

rjpkuliahits@gmail.com



## Corporate Investment Behavior in Countries Based on Level of Participation in the Global Value Chain

**Dhaha Praviandi Kuantan, Hermanto Siregar, Anny Ratnawati, Solikin Juhro**

Bank Indonesia

### ABSTRACT

The level of global value chain participation of countries is categorized based on four factors, namely, commodities, limited manufacturing, advanced manufacturing, and innovative activities. The level of participation is considered to affect the investment behavior (capital expenditure) of the firms. Sales and cash flows of firms in commodity-based countries are likely to be affected by commodity price development, which consequently affects investment behavior. The commodity influences both the commodity exporter and other firms through the revenue channel, whereas firms incorporated in manufacturing seem to be more affected by exchange rates. In this case, the exchange rate is the competitiveness of manufactured goods. But countries with limited manufacturing are still likely to be affected by both commodity movements and the exchange rate. Countries with innovative activities should be more immune to macro variables. For micro variables, sales and cash flows, as sources of internal company funds, can affect corporations in all types of countries

**Keywords:** Global Value, Chain Corporate Investment, Capital Expenditure, manufacturing

### Email Correspondence:

dhaha@bi.go.id

## THE ROLE OF PHYSICAL INFRASTRUCTURE AND FACILITIES IN GREEN CAMPUS: A REVIEW

**Suhaila Abdul Hanan, Emy Ezura A. Jalil, Nizamuddin Zainuddin**

Universiti Utara Malaysia

### ABSTRACT

Transportation is one of the most critical and challenging issues that university's campuses face in the process of transitioning to environmental sustainability. Green transport or sustainable transport refers to the any transportation, which does not involve non-renewable energy and produces less harmful impact to the environment. Lack of facilities and infrastructure may discourage the use of green transport such as walking and cycling. This paper reviewed the role of physical infrastructure and facilities in reducing carbon footprint and encouraging campus communities to use green transport. The review indicated that while cycling is a dynamic, ecologically friendly method of travel, cycling infrastructure is a very important factor that can either encourage or discourage the likelihood of cycling. It should be designed according to five principles: safety, directness, comfort, attractiveness and cohesion. Walking is also beneficial for our health as well as to the environment. The important aspect of walking is the connectivity and accessibility facilities to which it will influence the people behavior when choosing walking as their travel mode choice. In conclusion, physical infrastructure and facilities availability may help to promote active transport such as cycling and walking. In relation to university campus, it is suggested that on-campus infrastructure and facilities improvements may focused on improving facilities, connectivity, accessibility and safety to campus destinations.

**Keywords:** Sustainability, Green campus, Mobility Facilities, InfrastructureTravel behaviour.

### **Email Correspondence:**

suhai@uum.edu.my

## Creating Value Propositions for ‘Glory Music Education’

Alfa Chasanah, Nindita Ayu Mutia Lestari, Siti Jahroh  
IPB University

### ABSTRACT

Non-formal education becomes a new trend in this modern society. Children go to non-formal educational courses after their formal schools. Some of them learn more on certain subjects taught at school, others learn music, dance, etc. ‘Glory Music Education’ (GME) is one of the non-formal educational institutions. As a newly established institution in 2018, it needs to create unique value propositions that fit its customer segments. Therefore, this study aims to (1) identify its customer segments, and (2) create unique value propositions that fit its customer segments. Questionnaire survey and in-depth interview were conducted from March to June 2019 to a total of 33 respondents. Value proposition canvas (VPC), empathy map, and company benchmarking were employed in this study. The results showed that the majority of GME’s customer segment is elementary school students whereas their parents play an important role for the decision making. Based on the suitability of the customer segments, ‘Glory Music Education’ needs to create the curriculum which fits for elementary school students to provide them with fun learning activities; design colorful rooms; conduct regular music performances; and also offer guitar, violin, and vocal courses as new company’s value propositions.

Keywords: Customer Segments, Empathy Map, Non-formal Education

#### Email Correspondence:

alf4Bgr@gmail.com

## **Determinant Factors and Forecasting Energy Intensity and Wide Economic Rebound Effect in ASEAN Countries: Based on Kaya Identity and LMDI Decomposition Approach**

**Eka Sudarmaji, Noer Azam Achsani, Yandra Arkeman, Idqan Fahmi**  
IPB University

### **ABSTRACT**

Increased energy efficiency leads to increased economic growth, with the energy used in the economy, and overall production goes up. Unfortunately, the rebound effect and carbon emissions are negative effects occurs on the final result of energy efficiency. These ASEAN countries have achieved extraordinary high growth rates in their history of economic development. All of them relied on new energy efficiency technologies to reduce their energy intensity and but at the same time avoiding the rebound effects. Academics debate told that the rebound effects happened due to the false policies. Hence the other strategy to stimulate increased energy efficiency in the economic sector is an essential part of government policy in overcoming resource constraints. This study is using the logarithmic-mean divisia index (LMDI) decomposition and KAYA index to recognize the determinant factors of carbon emissions and rebound effect changes in ASEAN countries. The forecasting carbon emissions, energy intensity, and rebound effect in Indonesia and ASEAN countries for the 1971-2017 period by utilizing time-series data and country panel data. This study is also analyzing the factors behind the change in carbon emissions in the ASEAN and identifying differences between member countries. The carbon emissions are decomposed into energy structure, population effects, GDP growth effect, and energy intensity effects.

**Keywords:** ASEAN, Rebound Effect. LMDI. KAYA

**Email Correspondence:**  
esudarmaji@gmail.com



## **Analysis of Lean Implementation on Spoiler Production Process with Monozukuri Innovation Activity Approach in PT. Inoac Polytechno Indonesia**

**Morgan Parlindungan, Muslim Efendi Harahap**  
University of Indonesia

### **ABSTRACT**

The importance of operations management in the manufacturing company has increased in the era of the globalization of the automotive industry, however many local manufacturing companies have not yet fully developed a systematical and integrated system to manage and monitor the efficiency of their performance capabilities in producing their products. This paper aims to provide insights into monozukuri innovation activity and analyze the lean implementation on the spoiler production process in PT. Inoac Polytechno Indonesia. In this research, after the primary and secondary data have been collected, then the data were processed using an approach called monozukuri innovation activity (MIA) which consists of 3 points of view, i.e. single format, variation, and supply chain. Monozukuri is a Japanese word consisting of "mono" which means "product" and "zukuri" which means "process of making products". The result of this research shows that MIA activity gave cost reduction of current production part cost around 3% and for future model part cost 20% compared to current part. It can be said that MIA is an approach that can be applied to bring systematic cost reduction activity to face global challenges in the automotive industry. The weakness of this research is that this research has only been conducted in one company. To prove that MIA can be generally accepted, the number of company samples needs to be increased.

**Keywords:** Monozukuri, Lean, Process Improvement, Productivity

#### **Email Correspondence:**

morganparlindungan1@gmail.com

## **Women's Group Participation on Local Economy and Business Performance (Case Study in Batang District, Central Java, Indonesia)**

**Siti Jahroh, Intan Adhitya Rosmasari, Achmad Fadillah**

IPB University

### **ABSTRACT**

Since the decentralization, local economy plays an important role whereas each region should focus on its potencies and comparative advantages in developing its region. In addition to on-farm activities in agricultural sector, agricultural processing industry had been paid attention. Batang District is one of the regions in Central Java Province, Indonesia in which emping melinjo (*Gnetum gnemon*) or melinjo chips processing industry has occupied the highest proportion in terms of numbers of agricultural processing business in the region. Majority of the business actors are women and some of them joined a women's group. This study aims to (1) clarify the uniqueness of business process and management of women's group, (2) analyze the business performance of melinjo chips processing run by women's group compared to the conventional one, and (3) compile the lessons learned of women's group management in order to strengthening local economy. The methods used in this study were regression analysis and cost return analysis. A questionnaire survey was conducted to 30 persons of women's group members and another 30 persons of non-women's group members in Batang District in May 2018. The result showed that local economy (melinjo chips business) run by women's group members significantly had greater performance than run by non-women's group members (conventional way). Based on regression result and cost and return analysis, women's group was able to gain higher profit compared to non-women's group.

**Keywords:** business process, melinjo chips, women's group management

### **Email Correspondence:**

sitijahroh@gmail.com

## **Firm digital marketing adoption model: A content, context, and process framework**

**Agus Masrianto, Hartoyo, Aida Vitayala S Hubeis, Nur Hasanah**  
IPB University

### **ABSTRACT**

Digital marketing (DM) is a digital approach to marketing that can maximize the conversion, engagement and interaction of businesses with online customers through the use of digital content, digital channels, and digital activities. The company's adoption of DM is one of the keys to increasing the capacity and capabilities of businesses facing extended rivalry. Research on technology adoption, such as Information, Communications, and Technology (ICT), has been seen in some literature, but research on the evaluation of the adoption of digital marketing by companies with a content, context and process framework (CCP framework) has not yet existed. Qualitative systematic literature review is used to describe the factors for evaluating firm digital marketing adoption under the CCP framework. The Publish or Perish application is used to select literature, and the Voyant-Tools application is used to search for links between texts within and between pieces of literature. Knowledge translation from the CCP framework reveals that, in order to achieve digital marketing capability, customer value and business performance, the organization must have adequate resources to gain competitive intensity through successful digital transformation, digital servitization and digital marketing training. The results of this study led us to propose the Firm Digital Marketing Adoption Evaluation Model (F-DMAEM).

**Keywords:** Business process perspective, CCP framework, Digital marketing adoption model, Interpretive approach,

**Email Correspondence:**  
agusdmb14@gmail.com

## Smart Governance Design for One-Stop Shop Services

Muhammad M. Maulana, Arif Imam Suroso, Yani Nurhadryani, Kudang Boro

Seminar

IPB University

### ABSTRACT

The concept of smart governance as a component of smart city needs to be further developed to produce a governance that can overcome the challenges of one-stop shop services in government such as integration of central and regional services, increase public participation, efficiency of policy and bureaucracy. The purpose of this study is to design a smart governance framework for one-stop shop services. Literature study related to smart governance, one-stop shop services, and several Information Technology governance frameworks that are commonly used namely Enterprise Architecture, COBIT, ITIL and Balanced Scorecard. It starts by selecting the appropriate target for each component of Smart Governance using a mapped COBIT based on the perspective of the balanced scorecard and the corresponding ITIL process. This study produces a framework with four smart governance domains which includes 4 Enterprise Architecture main processes, 11 COBIT 5 processes, 15 ITIL processes with 3 proposed KPI recommendations for each domain. As a conclusion, the resulting smart governance begins with the design of Enterprise Architecture then targets are set for each domain and the processes that support it. Further studies need to be carried out to implement the smart governance design to one-stop shop services such as business licensing services.

Keywords: Smart governance, one stop shop services, IT Governance, framework

### Email Correspondence:

m3mahreza@apps.ipb.ac.id



## **A Comparative Study of Supervised Learning Models for Churn Prediction: A Case Study in a Coffee Shop**

**Besty Hasyati, Taufik Djatna, Erliza Noor**  
IPB University

### **ABSTRACT**

In today's competitive world, moving toward customer-oriented markets with increased access to customer's transaction data, identifying a loyal customer, predicting customer attrition, and estimating their lifetime value makes crucial. Since knowledge of customer value provides targeted data for personalized markets, implementing customer relationship management strategy helps a company to identify, segment customers, and create long term relationships with them. As a result, they can maintain loyalty and minimize attrition. Business analysts and customer relationship management (CRM) analyzers need to know the reasons for churn customers from the existing churn customer's data. This paper proposes a churn prediction model that uses classification to analyze the factors behind the churning of customers in a coffee shop. Feature selection is performed by using information gain and correlation attribute ranking filter. The proposed churn prediction model is evaluated using metrics, such as accuracy, precision, recall, f-measure, and receiving operating characteristics (ROC) area. The final result of this churn prediction is the rules and patterns of customers based on their past transactions. The strategies designed to prevent the churn in the future that will be carried out by the person in charge.

**Keywords:** Loyalty Reward Prediction, CRM, RFM Method, CLV, Data Mining, Decision Tree Algorithm

### **Email Correspondence:**

besty\_afrah24@apps.ipb.ac.id

## RENEWABLE ENERGY DEVELOPMENT OF SUSTAINABLE BAMBOO FOREST BASED ON COMMUNITY EMPOWERMENT

Johannes Widjaja Wahono, Ujang Sumarwan, Bustanul Arifin, Herry Purnomo

Universitas Bina Nusantara

### ABSTRACT

This research has studied bamboo biomass renewable energy development cultivated in community forests in Indonesia especially in those frontier, outermost and least developed regions often referred to as 3T (terdepan, terluar, tertinggal) regions. Community empowerment refers to the process of enabling communities to increase control over their lives. The study was conducted in three villages of Matotonan, Madobag and Saliguma on Siberut Island, Mentawai Islands District, West Sumatra Province. The design of this study was descriptive by conducting a field survey to obtain primary data, using a systematic random sampling method with interview and questionnaire techniques to obtain data on electricity demand and demographic factors. Using the SAST method to analyze the FGD then key success indicators are generated. The development of biomass energy without community empowerment and without the presence of PLN at subsidized rates will not succeed. The renewable energy of bamboo forest biomass characterizes the need for community participation to be involved in operations. Without community empowerment results in the community not having the ability to pay electricity bills even if subsidized. No distribution of income will also result in not achieving the main objectives of the development of this project, which is sustainable development for rural communities in the 3T area.

Keywords: renewable energy, bamboo biomass, community empowerment, community forestry, sustainable development

#### Email Correspondence:

johannes.wahono@binus.ac.id

## Strategic Food Risks – Chili's Agrosystem Perspective

**Meuthia Rachmaniah, Arif Imam Suroso, Muhammad Syukur, Irman Hermadi**  
IPB University

### ABSTRACT

Strategic food prices are monitored in Indonesia's inflation following the foodstuffs group. These are rice, chili, chicken, beef, onions, eggs, granulated sugar, and cooking oil. This study was intended to explore chili agrosystems as an essential Indonesian daily cuisine that also influences the inflation rate due to its perishable nature and its long supply chain. The state-of-the-art approach from various research databases was used in conducting the study supplemented with secondary data gathered from the related enterprise. The study revealed that food strategic web-based information systems on commodities production, consumption, and price are under different enterprises/authorities. Each food strategic commodity operates a distinct supply chain. Concerning the chili case, even though there was a production surplus, however, monthly/quarterly price discrepancies increase the risk of lowering farmer's urge to plant. Besides, there are eight chili's supply chain main patterns denoted by the number of actors played their role in the chain. In conclusion, chili trade and freight margins favored supply chain actors but not the farmer itself. Farmer welfare characterized by proxy indicators is majority slightly greater than 100. This creates a new risk in a decrease in farmers' motivation in farming. Further study using agile chili enterprise systems is required to bring farmers closer to end consumers and hence improve their welfare.

**Keywords:** Strategic food, Agrosystem, Chili

**Email Correspondence:**  
meuthiara@apps.ipb.ac.id

## **The implementation of Hybrid Lean Six Sigma among Manufacturing SMEs Companies in an IR 4.0 Era: A Conceptual Literature Review**

**Afeezy Kayode Ibikunle, Mohamad Farizal Rajemi, Fadhilah Mohd Zahari**

Universiti Utara Malaysia

### **ABSTRACT**

Lean Manufacturing and Six Sigma share many common features, which highlights the benefits of combining both approaches. Therefore, these differences and similarities help address limitations of these individual processes when combined, further suggesting the benefits of studying and applying Lean and Six Sigma together. The main objective of this study is to explain the importance of Hybrid lean manufacturing and Six sigma implementation among SMEs companies in IR 4.0 perspective. The outcome of this research will help to map out lean manufacturing, six sigma and industry 4.0 components to the characteristics of manufacturing SMEs. These findings of this study will be beneficial to company managers and researchers to help improve their sustainable performance especially within companies in developing nations. The paper concludes with a summary and outlook for our future research.

**Keywords:** Hybrid, Lean Manufacturing, Six Sigma, SMEs, IR 4.0

### **Email Correspondence:**

ibikunleafeezkayode@gmail.com



## **Digital Amoeba : In-House Innovation Management Model to Support Telkom's Digital Transformation**

**Raden Isma Anggraini, Rifa Herdian**

IPB University

### **ABSTRACT**

Conditions in the VUCA era demanded innovation to achieve the right position in the intense business competition. Telkom is demanded to give birth to innovative breakthroughs to be able to improve digital capabilities and have an impact on company performance. Telkom formed the Digital Amoeba program, so that digital innovation can be faster than a start-up in the market. The objectives of this study are 1) to identify the management process of Digital Amoeba's in-house innovation, 2) to identify business models, and 3) to identify the effectiveness of program impacts in digital transformation. This research uses a descriptive method with a qualitative approach with the support of primary and secondary data. Data were analyzed using the operating model approach in key activities, the Business Model Canvas (BMC), and the parameters of the impact on culture and costs. The results showed that the management process of Digital Amoeba's innovation includes five key activities: selection, preparation, intrapreneurial, governance, and closing. BMC analysis consists of seven elements: key partners, key activities, key resources, value propositions, customer relationships, channels, and customer segments. Digital Amoeba's program is considered useful in supporting the process of digital transformation because it can create a digital culture and is cost-effective. In the future, a system that can facilitate the monitoring and evaluation of Digital Amoeba's progress is needed. It is also hoped that the spirit of innovation management can be spread to other SOEs to face business challenges.

**Keywords:** business model canvas, digital amoeba, digital transformation, innovation, start-up

### **Email Correspondence:**

isma.anggraini@apps.ipb.ac.id

## **Business Resilience Model of Regional Owned Enterprises of Jakarta Provincial Government**

**Ahmad Giffari, M Syamsul Maarif, Setiadi Djohar, Arif Imam Suroso**  
IPB University

### **ABSTRACT**

Disruption era that happened nowadays in the world requires the organizations to be more responsive, innovative and adaptive. Moreover, the Government-owned business organization must be able to overcome threats become opportunities that finally can improve their performance. Regional Owned Enterprises (ROE) of Jakarta is a business entity that have strategic and business function which will always be faced on the turbulence internally and externally. This study is to design a business resiliency model in ROE of Jakarta. Data and information obtained through the study of literature to the previous studies combined with the knowledge of authors who currently works as an advisory of ROE in Government of Jakarta and conducting depth interview with experts. Analysis is done qualitatively by mapping existing models then come up with a new model related to business resilience of ROE. The results showed that for the business resilience of ROE of Jakarta mapped into 4 quadrants with X axis is business function while the Y axis is a strategic function. The business model of business resiliency of ROE of Jakarta is developed. Through this business resiliency model the strategies of ROE can be used when facing turbulence that occurs.

**Keywords:** regional owned enterprises, business resiliency, transformation, turbulence

**Email Correspondence:**  
agifari1974@gmail.com

## **A Model of ICT Adoption: Acceptance and Use Online Learning for College Student in Indonesia During Social Distancing of Covid-19**

**Heri Susanto, Noni Noerkaisar, Raden Isma Anggraini**

IPB University

### **ABSTRACT**

Since the appearance of Covid-19, all learning and teaching activities at universities have had to be done through online media. One of the factors that influence the effectiveness of this method is the ability of students to adopt the technology used. On the other hand, after the pandemic ends, this method also can be more popular along the industry 4.0 development. Therefore, student behavior in the technology adoption used needs to be known in order to increase the effectiveness of online learning activities. This study aims to determine student behavior in adopting online learning technology based on the Unified Theory of Acceptance and Use of Technology (UTAUT) model. This research will be conducted by the survey method using questionnaire. The respondents that will be used is 300 people from the 10 Best State Universities in Indonesia based on the rank of Menristekdikti. The data obtained will be analyzed using the Structural Equation Modeling approach. The results of this study will indicate several factors that influence the effectiveness of student learning through online media. This research will recommend universities to create and provide the effective online learning media for their teaching and learning activities.

**Keywords:** covid-19, industri 4.0, online learning, technology adoption, UTAUT

### **Email Correspondence:**

heri.susanto14@gmail.com

## **Analysis of Waste of Cost Factors During Engineering Phase of EPC Project with Lean Thinking (Case Study: PT.XYZ)**

**Esaputra Mangarul Rajagukguk, Muslim Efendi Harahap**

University of Indonesia

### **ABSTRACT**

An engineering, procurement, and construction (EPC) company is challenged to compete in a cut-throat industry with many competitors and slim profit margin. Previous studies revealed that 70% of activities in a construction project are non-value adding which diminish productivity and profitability. As well as at PT. XYZ, the historical results showed that most of projects run by this company ended up in delay and cost overrun. Those previous studies had concluded that the most common factor that leads to project delay and cost overrun was poor design in engineering phase. This paper aims to identify the waste factors affecting cost during the engineering phase of EPC project at PT. XYZ. Lean information framework was utilized to identify and analyze the waste factors. Based on the extensive literature review, it was identified that there were 28 waste factors which can be classified into six groups of wastes. A questionnaire was designed and distributed to 48 participants to be filled out to investigate the dominant waste factors. The factor analysis, correlative test, descriptive and relative index analysis were then carried out. The results showed that the dominant waste factors are waiting for the needed documents, the long and far meetings, waiting for feedback information, waiting for the document approval, outdated information, and producing dummy document. The managerial implications are PT. XYZ should focus on efficient planning, streamlined information flow, pull-based planning activities, continuous improvement, and human resource development.

**Keywords:** EPC, engineering phase, waste, lean information

### **Email Correspondence:**

esaputra.mangarul@yahoo.com



## **Does Indonesia Banking Performance Sustainable? A Comparison between SOE's Bank and Non-SOEs Bank**

**Asaduddin Abdullah, Dikky Indrawan**

IPB University

### **ABSTRACT**

As the Indonesian State-Owned Enterprise (SOE) banks are obligated play intermediaries role to support the government economic policy, they are expected to have sustainable performance in banking sectors by efficient usage of its assets and maintain a healthy financial ratio. However, a competition between Indonesian State-Owned Enterprise (SOE) with Non-SOE Banking sector in term of its efficiency, growth, and solvency lead these SOE banks to have a non-sustainable performance. This study compared the financial performance of four SOE Indonesian Banks; BBRI, BMRI, BBNI, and BBTN with other Non-SOE Banks; BBKA, BTPN, BNGA, and BNLI. Quantitative analysis was performed to analyze various sets of bank financial ratios. The financial reports in 2019 was examined. The results showed that SOEs banks in 2019 were good and had healthy financial performance based on the Bank Indonesia provisions. However, the SOEs Banking less effective in management compare to non-SOE banks. This study recommended some possible strategies for SOEs Banking in improving their financial performance using effective management to compete with non-SOE banks. Business synergy of all units will strengthen its good-quality assets growth in improving sustainable banking performance in the future.

**Keywords:** Sustainable Performance, Banking, SOE (State-Owned Enterprise), Financial Ratios

### **Email Correspondence:**

asaduddin.abdullah@gmail.com

## Critical Factors in Developing Sustainable Food Packaging

Nyayu Lathifah Tirdasari, Andina Oktariani, Dikky Indrawan, Nur Hasanah  
IPB University

### ABSTRACT

Sustainability issue has pushed the food industry constantly looking for new materials to reduce and replace plastics in their packaging. However, the recent development of novel materials is still less satisfactory due to different involvement from different vital players such as government, society, and industry. This paper analyzed the critical success factors of new material development for food packaging based on different key players, involvements, and interests. A survey was conducted by the authors to gather information related to the development factors and the participation factors based on the three key players. This research employed cluster sampling and factor analysis methods. The results revealed that the critical success factors in Indonesia were different from the elements in the developed countries. The development factors classified into five clusters, namely technical substitution, technical drivers/barriers, application barriers, cost barriers, and raw material supply barriers. Differently from developed countries, the critical players' involvement, especially from the government, was essential in developing new material for food packages.

Keywords: new material, sustainable food package, key success factor

#### Email Correspondence:

nyayu.lathifah@apps.ipb.ac.id

## Digital Platform Development of Photography Business "Snapcash"

Achmad Fadillah, Muhammad Asyam Dzaki Hasibuan, Anny Ratnawati  
IPB University

### ABSTRACT

Photography is part of people's lifestyles nowadays. The photography business is closely related to the tourism business. But there is no digital platform that offers photography services in Indonesia. Photography business innovation was created as a digital platform solution that can be used by photographers to find work and consumers to look for photography services. The study was conducted to determine consumer problems, to identify appropriate solutions, and to formulate business model innovations that are appropriate for customers and markets. The method used is descriptive qualitative with a customer discovery approach, prototyping, and business model innovation canvas. The results of testing the problem show the difficulty of the photographer in getting customers and the difficulty of consumers in finding perfect photographers. The solution offered is the digital platform application and the features in it. Based on the customer test, the solution offered is accepted by the respondent so that it becomes a solution for the research respondents. The verified photography business model innovation is based on three aspects: product compatibility with the market, customer segments, and how to achieve it, and how companies make money.

Keywords: business models, customer discovery, digital platforms, photography, tourism

### Email Correspondence:

achmadfadillah@apps.ipb.ac.id

## **Digital Marketing to Build Customer Experience of Hakko Kombucha: Marketing Mix 4C Research Approach**

**Achmad Fadillah, Andre Eka Hizkia Barus, Noer Azam Achsani, Lien Herlina,  
Febriantina Dewi, Fithriyyah Shalihati**  
IPB University

### **ABSTRACT**

The rising awareness of a healthy lifestyle encourages consumers to shift functional food and beverage. Digital marketing has the power to increase the penetration of Hakko Kombucha and its benefits to consumers. Therefore, Hakko Kombucha will be able to grab advantages within the digital economy ecosystem and kombucha trend in Indonesia. This study aims to (1) analyze the digital marketing that Hakko Kombucha has done to build customer experience, (2) map customer path and experience to find areas for improvement, and (3) measure customer effort score (CES) of Hakko Kombucha. The methods used in this study are customer path 5A and CES (Customer Effort Score) metrics methods. The results of this study are insights into Hakko Kombucha's current digital marketing on social media and marketplace, areas of improvement in nearly the whole of the customer path. In the pre-purchase stage, 60% of respondents admit that digital marketing Hakko makes them aware of the existence of Hakko Kombucha, either passively or actively looking for organic products and 76% of respondents agree that Hakko Kombucha complements the needs and goals of a healthy lifestyle. Digital marketing in the form of visual content on social media must be interesting to encourage consumers to find out about Hakko Kombucha.

**Keywords:** digital marketing, customer experience, 5A customer path, 4C marketing mix

**Email Correspondence:**  
andrebarusid@gmail.com



## **The Modelling of Mobile Advertising on the Formation of Value Co-Creation in Cellular Telecommunication Industry of Indonesia**

**Joko Rurianto, Ujang Sumarwan, Budi Suharjo, Nur Hasanah**  
IPB University

### **ABSTRACT**

The growth of Mobile Internet services has changed the paradigm of telecommunication consumers from information oriented toward social and communication oriented. This change makes customer as part of the digital society especially in Mobile Advertising services. Along with this change and the requirement for the company to win the competition, telecommunication providers must develop a business model of Mobile Advertising as a 'stage' that is easily accessible to all interested customers to this facility. In the concept of Service Dominant Logic, the company has no longer as a full control of value creation, but it must involve the customer in the process of value co-creation. The purpose of this research is to build a model of Mobile Advertising services in telecommunication industry, analyzing that the Mobile Advertising will influence on the value co-creation the brand and corporate image and analyzing the successful determinants of Mobile Advertising that is held and managed by companies. The research develops a model from the model of attributes and benefits of online community, model Consumer Engagement, model Attitude Toward Online Ads and model of Click Through Rate (CTR).

**Keywords:** Mobile Advertising, Value Co-Creation, Attitude Toward Online Ads, Click Through Rate

**Email Correspondence:**  
jokorurianto21@gmail.com

## ANDROID-BASED FEASIBILITY STUDY TRANSFORMATION ANALYSIS CASE STUDY OF THE RASI (RICE FROM CASSAVA) DEVELOPMENT IN CIRENDEU-KAMPUNG CIMAHI CITY

**Heny Herawati, Agus Soemantri, Elmi Kamsiati, Muchamad Bachtiar**  
Balai Besar Penelitian dan Pengembangan Pasca Panen

### ABSTRACT

Development of "rasi" or rice made from cassava flour was developed in Cirendeue Village-Cimahi City. The activity requires a feasibility study analysis in mobility and reckless response when implement in the field. Information technology become crucial to enhance decision support systems through mobile application based. Current analysis of economic-based feasibility studies has been widely developed in the field under virtual laptops. The purpose of this research activity is to conduct a trial-based Android-based feasibility study for the development of constellations in those respective area. The method include consist of several stages, ie. optimizing and developing constellation technology, analyzing the laptop-based feasibility study, transforming the results of an Android-based feasibility study and testing the performance. The study result the software is feasible to identify an optimum capacity of the production base on the several parameters input data to the system. This study effectively help user to replicate in other other area.

**Keywords:** Transformation, Feasibility study, Android based, Rasi, Cassava

### Email Correspondence:

herawati\_heny@yahoo.com

## **Entrepreneurship and Innovation Level to Maintain Business Continuity of Traditional Food Products in West Java**

**Aini Ayu Zahara Tsulusi, Anton Mulyono Azis**  
STIE Ekuitas

### **ABSTRACT**

The number reduction of SMEs' traditional food entrepreneurs in West Java as a result of the presence of various modern foods required appropriate strategies to overcome. This study aims to identify entrepreneurship and innovation levels in maintaining business continuity especially in small and medium enterprises in the traditional food sector in West Java. The research utilised descriptive-analytic with quantitative and qualitative approaches, in determining the entrepreneurship and the level of innovation of traditional food-product within various regions in West Java. The research conducted through surveys and interviews with traditional food makers, home industry owners, traditional food customers, and other related parties. The unit of analysis of this study is SME traditional food in West Java, with a total of 300 SME respondents selected purposively. Data analysis was completed using a triangulation validity test and member check for its validity. The results show 73% of traditional foods SMEs are followers, with the highest number group level of innovation at level 2 of 58%, thus this has an impact on the low competitiveness. Therefore business continuity should be pursued by increasing competitive advantage in at least four ways, namely business focus, increasing the ability to take risks, increasing the level of innovation to knowledge collaboration, and emphasising knowledge management resources.

**Keywords:** Entrepreneurship, Innovation Level, Business Continuity, Traditional Food, West Java

### **Email Correspondence:**

anton.mulyono@ekuitas.ac.id

## KNOWLEDGE ON HALAL PROCESS AND HALAL CERTIFICATION: A PILOT STUDY OF RESTAURANT OWNER IN JOHOR, MALAYSIA

**Khairun Nisha Khirul Anuar, Nurul Amirah Faiqah Sallehuddin, Suhaila Abdul Hanan**

Universiti Utara Malaysia

### ABSTRACT

Nowadays, due to rise of lifestyle changes, eating out is becoming a trend among Malaysians. Many food stalls and restaurants are available. People can choose from all-day hawker centres, food courts and coffee shops to full-service dining restaurants. However, there were a growing concern about the quality and safety of outside food. The purpose of this paper is to investigate the knowledge of Halal Process and Halal Certification among restaurant owners. This study conducted interview sessions with restaurant owners who serving range type of foods and services. The data received were analysed using thematic analysis. The findings indicated that the owners agreed Halal process in the restaurant business is important to make sure the food and drinks served are Halal and can be consumed by the customers. However, not all owners were fully aware how to implement the Halal process properly in the business's operation. They also indicated that Halal certification is important. However, not all owners have the desire to obtain the certification because of the cost and complex procedure. The result also able to provide factual evidence of what the restaurant owners are expecting after having the certification. It should be noted that the samples in this study are only focusing in Johor, Malaysia, to which the results cannot be generalized for the whole Malaysia and the industry. Future research could study bigger population with quantitative approach.

**Keywords:** Halal, Halal food, Halal process, Halal certification, Halal logistics, Halal restaurant

### Email Correspondence:

suhai@uum.edu.my



## The Importance of Logistics 4.0 for DOC (Day-Old Chick) Business

Audy Joinaldy, Luki Abdullah, Yandra Arkeman, Siti Jahroh  
Perkasa Group

### ABSTRACT

Chicken meat consumption in 2020 is predicted to reach 12.79 kg per capita per year to occupy the first place in the consumption pattern of animal protein in Indonesia. The poultry industry is always related to the business of day-old chicken (DOC). However, DOC distribution or logistics still received less attention and is considered only as a subsidiary business of a logistics company. The advancement of information technology in this era of industry 4.0 encourages us to pay attention to the possibility of developing a logistics 4.0 for DOC businesses. This paper aims to analyze the importance of logistics 4.0 for DOC business in Indonesia, specifically aims to (1) explain the actual conditions of DOC distribution or logistics implementation in Indonesia, (2) benchmark the distribution or logistics implementation in several developed countries, and (3) create a design concept of a logistics 4.0 for the DOC business in Indonesia. This research will be conducted through literature studies, benchmarking, and interviews with several experts and business practitioners in DOC distribution. The results of this study emphasize the importance of logistics 4.0 for the DOC business seeing that the adoption of IoT (Internet of Things) can improve the effectiveness of the DOC distribution process which impacts the performance of chicken farms, the producer of the animal protein most consumed by Indonesian.

Keywords: benchmarking, DOC, IoT (Internet of Things), logistics

#### Email Correspondence:

audyjoinaldy@yahoo.com

## **Strategy of Instagram Marketing and Implementation of Competitive Design Packaging at SMEs Guriyana Bakery through Business Coaching**

**Rakhmat Dicky Mohammad, Sisdjiatmo Kusumosuwidho Widhaningrat**

University of Indonesia

### **ABSTRACT**

Breads are one of the most delicious foods in Indonesia, especially in Jakarta. There are so many bread companies in Jakarta. To compete in this industry, SMEs should give much effort to survive. Guriyana Bakery is one of the SMEs that survive in this industry. They have a signature product, wide distribution network, and very good production system. One of the ways to develop these SMEs is by excellence promotion on the internet. The objectives of this research are to develop the digital market in order to maintain sales. This study is conducted using a qualitative method, and the data is obtained by observation, surveys, and in depth interviews. The writer utilized social media Instagram as a tool for promotion on the internet. The method writers use is based on instagram marketing strategies by combining several different outcomes. Starting from choosing the right profile photo, and creating visually compelling content. Also, based on evaluation from the questionnaire, writers conclude their packaging isn't competitive enough to evolve their leads. So basically, they have to redesign the packaging to be more competitive. The seven analytical tools to achieve the targeted results, namely Business Model Canvas (BMC), Porter's Five Forces, PESTEL Analysis, Service Marketing Mix, SWOT Analysis, TOWS Analysis, and GAP Analysis. These analyses are used as a base to generate the result of this study, as example applying website and social media sites for customers to order products.

**Keywords:** Small Micro Enterprise, Bakery Industry, Digital Marketing, Instagram Marketing, Design Packaging

### **Email Correspondence:**

akunkelas@gmail.com

## **A Conceptual Framework for Big Data Analytics adoption towards the success of industry 4.0**

**Nur Khairiah Muhammad, Nor Hasni Osman, Nurul Azita Salleh**  
Universiti Utara Malaysia

### **ABSTRACT**

The rise of big data has inspired business organizations to venture into Big Data analytics. However, academic research and empirical evidence about the business value remains scarce. This phenomenon attracts organizations. This paper attempts to evaluate the readiness of Malaysia companies to take advantage of big data adoption. Initial insights highlighted the definition and challenges surrounding Big Data. The research finds great interest in Big Data Analytics (BDA) solutions that fuel with sound decision making and influence organizations into a growth mindset. Big Data provides various advantages to organizations that would seriously consider all its perspectives alongside its lifecycle in the pre-adoption or implementation phases. The research attempts to outline the different aspects of Big Data as a management practice to leverage the values of big data adoption techniques as part of Industry 4.0 vision in future organizations. This is of great interest to researchers, professionals, and policymakers.

**Keywords:** Big Data Adoption, Industry 4.0, TOE Framework, Data Quality Management

**Email Correspondence:**  
nkmmur@gmail.com

## **Internet of Things (IoT) implementation in effective staple food supply chain management in Indonesia**

**Heny Herawati, Agus Soemantri, Elmi Kamsiati, Muchamad Bachtiar**

Balai Besar Penelitian dan Pengembangan Pasca Panen

### **ABSTRACT**

Indonesian common obstacles in developing staple food are economic scale of industry, sporadic and extensive chain of distribution. Enormous staple food resources have been pursued with several concepts, namely the formatting and developing a group of farmer (farmer association) and the core-plasma concept to achieve optimum production capacity and to give a product value added. The effort is not that effective until implementing information technology to the system through Internet of Things (IoT). The research will provide how IoT brings solution in 3 (three) aspect which are shortening the trade chain of distribution, effectively reach out the availability of raw materials and improve business sustainability. To achieve the goal, it is require massive technical assistance within cooperation from all actors including the farmer association, agriculture instructor and industrial business owner for successful IoT implementation

**Keywords:** Supply Chain management, Internet of Things, Staple food, business sustainability

### **Email Correspondence:**

Muchamadbachtiar@apps.ipb.ac.id



## Development of a Visual Programming Environment that Enables Simultaneous Editing to Promote Collaborative Learning

Masanori Fukui, Jo Hagikura, Yuji Sasaki, Jun Moriyama, Yusuke Hayashi, Tsukasa Hirashima

Hiroshima University

### ABSTRACT

In this study, we report on the development of a visual programming environment that enables simultaneous editing to promote collaborative learning. It is pointed out the importance of personal learning, learning in the classroom, and collaborative learning. Besides, pair programming and mob programming are methods of collaborative learning in programming, and it is essential to use them. However, these are supposed to be done face-to-face, which is difficult to do remotely. By making it possible to do it remotely, collaborative learning can be done without meeting in person. Also, it is thought to need to be able to do the activities in visual programming so that even beginners can do collaborative learning. To realize this, we developed a visual programming environment using Blockly, Google Firebase, and Google Realtime Database. Furthermore, we implemented a function that enables the simultaneous editing of the system. Moreover, the function to switch between editable and non-editable is also implemented. Using this system, visual programming can be done remotely and collaboratively, which is expected to promote collaborative learning at a distance.

**Keywords:** Block-type Programming, Collaborative Learning, Pair Programming, Programming Education, Visual Programming

### Email Correspondence:

fukui@lel.hiroshima-u.ac.jp

## **The Moderating Role of Political Connections in the relationship between Board Characteristics and Intellectual Capital Disclosure**

**Belal Zidan Rimawi, Wan Fadzilah Wan Yusoff, Abu Sofian Yaacob**

Universiti Putra Malaysia

### **ABSTRACT**

In light of the modern knowledge-based economy, companies have become more and more dependent on intellectual capital. So the companies increased their dependence on intangible assets and changed their traditional assets structure. On the other hand, the traditional accounting standards and financial statements failed to provide non-financial data to the users for example stakeholders, investors and creditors. This has encouraged the researchers in developed countries to focus on intellectual capital disclosure because the traditional financial statements and the accounting standards do not address the intellectual capital. Previous studies have adopted the descriptive approach in order to study the intellectual capital disclosure. Few studies have investigated the impact of board characteristics on intellectual capital disclosure. In addition, this few studies found mix and different results about the relationship between board characteristics and the intellectual capital disclosure.

**Keywords:** corporate governance, board characteristics, political connections, intellectual capital disclosure

### **Email Correspondence:**

belalzidan.phd\_acc18@grad.putrabs.edu.my

## **Covid-19: Responding with Resilience and Readiness (A Case Study of Coffee Shops in Indonesia)**

**Fithriyyah Shalihati, Suhendi, Asaduddin Abdullah, Agustina Widi Palupiningrum**  
IPB University

### **ABSTRACT**

Entrepreneurs have to deal with the turbulence, uncertainty, novelty and ambiguity (TUNA) posed by COVID-19 outbreak. The business world is significantly affected due to rapid market changes. The business strategies used this week may not necessarily relevant in the following weeks. This paper focuses on the coffee shop business in Indonesia and its agility to survive during this pandemic period. The data collection is based on the interview and brainstorming with several coffee shop owners. This paper employs rich picture and CATWOE methods to examine the business environment and to formulate a resilience strategy in dealing with the current situation. The two methods provide valuable tools to measure the strategy of coffee chop business during this pandemic. The strategy focuses on the approach based on the revenue size of business namely micro, small, and medium clusters. In addition, the methods also provide insights of coffee shops in Indonesia in improving its resilience during this pandemic. The results of this paper show that local government support in the form of regulations, collaboration between coffee shop owners, shifting sales methods from offline to online. i.e. the used of digital marketing, and packaging innovation are required to maintain business stability and resilience in this pandemic.

**Keywords:** Rich Picture, CATWOE, Resilience, Coffee Shop, Business Strategy

### **Email Correspondence:**

oktyshalihati@apps.ipb.ac.id

## Technology and Human Happiness: Conceptual insights from Dubai's Smart City Project

Fanar Shwede, Norsiah Hami, Siti Zakiah Abu Bakar  
DWA

### ABSTRACT

Ever since a few decades ago, the concept of smart city has resuscitated back to the academic field, making scholars examine the factors, timeline, policy, and human behavioral change. Deviating a little from that available literature, this study conceptually examines the influence of technology on human happiness concerning their natural habitat. To achieve this, the authors engage the use of the available public documents, academic journals, and government portals to examine the perceptions of Dubai residence concerning the perceived happiness level (psychology artifact) on the smart city project aimed at making the residence in Dubai the happiest people on earth. The conceptual findings reveal that although Dubai's residence was known to be happy people, the prestige of the country using some of the sophisticated technologies had enhanced and sustained the level of happiness. Although, at some points, some residence felt the urge to feel the natural green environment, yet, that does not bother them too much. This paper thus reveals that no matter how happy we made people using technology, the urge to feel the natural habitat, that is, connecting to nature cannot be displaced or replaced. Therefore, to make smart city a perfect place for humans, the element of natural habitat should be placed in the smart city project.

Keywords: Smart city, Human relation, Happiness Technology

**Email Correspondence:**  
fanarshwede@gmail.com



## Green purchase: A systematic review and future research agenda

Setyo Ferry Wibowo, Mukhamad Najib, Ujang Sumarwan, Yudha Heryawan Asnawi  
Universitas Negeri Jakarta

### ABSTRACT

Green purchase behavior needs different approaches than non-green consumption. Therefore, a study of the green purchase intention and behavior becomes unavoidable. The purpose of this paper is to provide a holistic understanding of the contexts and theories applied in green purchase behavior studies. This research used a systematic review method to analyze and summarize the theoretical frameworks and products that have been investigated across countries. This study reviewed 100 empirical articles on green purchase intention and behavior from 2014 to 2019. This research is one of the first studies to cross-examine context and theories applied in green purchase studies. For each theory, we present a brief description, application the theories in green purchase context, and recommendation for future agenda of research. Despite the breadth of previous studies results, this review indicates that most studies investigated green products in general. Furthermore, the theory of planned behavior, the theory of perceived value, and the theory of personal value emerged as the three main theoretical frameworks of consumer green purchase behavior study across products and countries. The paper will help policymakers and managers in formulating and implementing strategies to encourage green purchasing and give insight into the future direction of green purchase study.

Keywords: green purchase intention, green purchase behavior, green products, theoretical framework, systematic review

**Email Correspondence:**  
setyoferry@gmail.com

## **The Impact of Perceived Ease of Use and Enjoyment on E-Commerce User Satisfaction: The Mediating Effect of Website Design Quality**

**Anita Mustikasari, Agung Utama**  
Yogyakarta State University

### **ABSTRACT**

Internet development has given a big contribution to business activity. The satisfaction of internet technology usage in purchasing products or services such as e-commerce is becoming a significant factor to consumers. But, without realizing much e-commerce that is less friendly to users so the users are often constrained in using the system. Perceived enjoyment is one of the important factors that influence repeat purchases and also the website design quality is considered to have a positive influence on e-commerce user satisfaction. Perceived ease of use is a degree where someone believes that technology is easy to use so that it will affect customer satisfaction. The data collected online were analyzed using regression analysis. Through these variables, this study indicates that perceived enjoyment, perceived ease of use had a statistically significant effect on E-commerce User Satisfaction and also Website Design Quality prove that can mediate partially.

**Keywords:** E-commerce User Satisfaction, Website Design Quality, Perceived Ease of Use, Perceived Enjoyment

### **Email Correspondence:**

anita.mustikasari@uny.ac.id

## Multi-Dimensional Consumer Value and Adoption of Mobile Health Service: A Study During COVID-19 Outbreak in Indonesia

Tri Lestari, Whony Rofianto  
STIE Indonesia Banking School

### ABSTRACT

The COVID-19 pandemic has a major impact on many aspects of consumer life, including how to access health services. One approach that has emerged is mobile health services as an alternative access mechanism for health services in the midst of epidemics and health care crises. This study aims to examine the role of perceived needs and external cues to action in encouraging multi-dimensional values (usefulness, convenience and monetary), and their impact on the intention to adopt mobile health services. Methodology – Empirical data was collected through a cross-sectional online survey of 67 respondents in Indonesia. Hypothesis testing is done using the Structural Equation Modelling (SEM) approach. Findings - The results demonstrate external cues to actions does not have a positive influence to intention adopt mobile health, moreover perceived needs have a positive effect on usefulness, convenience, and monetary values. Meanwhile, multidimensional values also indicate a positive influence on intention to adopt mobile health services. This research is an expansion of the previous multidimensional value model by adding constructs and testing in different countries. furthermore, this study provides a test result in a specific context, namely adoption in the midst of a shift in behaviour as a result of the Covid-19 outbreak, which is thought to provide a significant shift in consumer response.

Keywords: Mobile health applications, Customer perceived value, Perceived need, External cues, Adoption intention

**Email Correspondence:**  
trilestari308@gmail.com

## Potential Alternatives For Future Adoption LTE WiFi Interworking for Telco SOE Services in Indonesia

Ni Made Dwidhyana, Dadang Gunawan

University of Indonesia

### ABSTRACT

The dependence on mobile internet access has increased over the past few years. It has proven by the growth of mobile subscribers and mobile data consumption globally, included Indonesia. This phenomenon drives Telco operators to provide a better infrastructure capable of supporting the necessity to access the internet more flexibly and efficiently due to the needs of availability, capacity, and reliability. Therefore, make the best utilization of resources is an expectation for Telco operators. Nowadays, PT. Telekomunikasi Indonesia, Tbk (Telkom) as the largest Telco State-owned Enterprise (SOE) in Indonesia, has provided an excellent network infrastructure, both mobile and fixed network. Telkom SOE and subsidiaries have tried interworking schemes for their network but only contributed 14.79% of their revenue in 2015 and seemed to decline over the years to 2018 through traffic offloading. This paper is aimed to propose the idea of identifying consumer behavior towards the potential alternatives of unlicensed spectrum utilization for existing technology LTE through LTE WiFi Aggregation (LWA) or Licensed Assisted Access (LAA) as WiFi coexistence in 5 GHz band. By using these consumer behaviors for the upcoming alternatives such as performance expectancy, effort expectancy, social influence, facilitating condition, price value, hedonic motivation, Telkom SOE is expected to increase the revenue contribution.

Keywords: interworking, LTE unlicensed, LWA, LAA, WiFi, consumer behavior

### Email Correspondence:

ni.made813@ui.ac.id



## Earnings management: a review on family ownership

Aklima Akter, Wan Fadzilah Wan Yusoff, Mohamad Ali Abdul-Hamid  
Universiti Putra Malaysia

### ABSTRACT

In recent years, there is a growing interest in the accounting choices of family firms, especially earnings management, because of several corporate failures around the globe. By considering the importance of earnings management, the study attempts to review the existing literature regarding earnings management practices in family firms. The methodology of this study is mainly based on the theoretical frameworks and findings from the prior studies about earnings management practices in family firms. The results of this study have found that the prior empirical research identified the theoretical framework mainly based on agency theory. This study also finds that the existing literature uses two types of research study, namely, how different types of family firms manage earnings and the comparative scenario of earnings management between family and non-family firms. This paper adds values to the current literature by identifying the gaps in the existing literature and suggesting avenues for future research. The study has significant implications as it helps to develop the theoretical framework to understand the distinguishing characteristics of family firms and their engagement in earnings management practices.

Keywords: Earnings Management, Family Ownership, Agency Theory

#### Email Correspondence:

aklima3rd@yahoo.com

## **A Conceptual Framework to understand Growth Intention Small Medium Enterprise using Social Capital Theory and The Reasoned Action Approach Theory**

**Annuridya Rosyidta Pratiwi Octasyilva, Lilik Noor Yuliati, Hartoyo, Agus W Soehadi**  
IPB University

### **ABSTRACT**

Entrepreneurship plays an important role in the economy. Research on entrepreneurship has been an interesting topic of research in recent years this year. It is important with its role in reducing the unemployment rate and increasing the economy of a country. There are several approaches used to predict entrepreneurial interests such as the EEM (Entrepreneur Event Event) and TPB (Theory of Planned Behavior). The paper is expected to provide literature on the application of the use of RAA theory in predicting entrepreneurial intentions with independent variable such as Attitude, Injunctive Norm, Descriptive Norm, and Perceived Behavior Control.

**Keywords:** The Reasoned Action Approach, Social Capital Theory, Small Medium enterprise

**Email Correspondence:**  
annuridya@yahoo.com

## Strengthening of Entrepreneur Innovation Model

Rina Uswatun Hasanah, M Syamsul Maarif, Nimmi Zulbainarni, M. Joko Affandi  
IPB University

### ABSTRACT

Strengthening innovation for entrepreneurs becomes very important because nowadays consumers are smarter and they demand to fulfill their needs in terms of quality, renewals and price. Therefore the innovative skills are needed to meet the consumer's needs for business sustainability. Many entrepreneurs want to create an innovation in their business organizations, but it cannot appear by itself, since it is not something that can be bought and used. To improve innovative ability, the role of actors and factors become important to support the improvement of the ability in business innovations. Apparently, factors such as competence, motivation, and the use of information technology are assumed to support the improvement of business innovation capabilities. In addition, the environment and culture also support innovation, including supports from parties such as the government, educational and training institutions, academics and the community. The elements of actors, factors, enthusiasm and interrelated processes will form an entrepreneurial ecosystems capable of encouraging entrepreneurial innovation. This study uses the Soft System Methodology (SSM) to analyze the problem situation experienced by business actors, so that an overview of the model of strengthening entrepreneurial innovation can be obtained.

Keywords: Entrepreneurial Ecosystems, Entrepreneur, Innovation, SSM

**Email Correspondence:**  
uswah1983@yahoo.co.id

## **TOXIC NETIZEN IMPACT ON CELEBRITY ENDORSEMENT IN COSMETIC BRAND MARKETING IN SOCIAL MEDIA (INSTAGRAM) INDONESIA**

**Intan Shafira, Aditya Tri Nugroho, Imam Fathur Rahman, Ahmad Setiawan Nuraya**  
STIE Indonesia Banking School

### **ABSTRACT**

In this study aims to determine how much influence the toxic netizens have on celebrity endorsement in the effort to introduce new brands that will lead to consumer decisions in a buying process. This paper follows the case study approach in describing the problems faced by Endorser in dealing with netizens that have a negative influence on advertising by a character on social media (Instagram). The factor of negative comments by netizens in influencing the image of an endorser in advertising on social media, so an endorser must create a good image in an effort to avoid negative threats from bad netizens' comments (toxic netizens). This research illustrates the importance of the role of an endorser in promoting new products on social media so that they must know the risk of netizens' attacks on integrity that can affect the marketing of a product. There for the selection of characters in a marketing activity requires a figure who has credibility and a good image in the eyes of the community. This paper is basically a study in an effort to recommend endorser figures in an effort to promote a product on social media that has a positive influence on society so as to avoid netizens' attacks.

**Keywords:** Celebrity Endorsement, Toxic Netizen, Netizen, Advertising, Marketing

**Email Correspondence:**  
intan.shafira@ibs.ac.id



## CHALLENGE AND STRATEGY: LESSON LEARNED FROM FAMILY BUSINESS IN MARITIME SECTOR

Nyayu Lathifah Tirdasari, Dikky Indrawan

IPB University

### ABSTRACT

Family business is the most business practice in the maritime sector in Indonesia. However, there are demand to develop this business in order to encourage the national economic growth. This paper aims to deliver business strategies that support the competitiveness and continuance of the family business. Reviewed literatures occupied to find both the internal and external factors that can bridge this business to become competitive and sustain. The findings highlighted the importance of strengthening family business in maritime industry based on each strength to overcome their weaknesses and the threats to take the opportunity from it. This paper may bring strategies for supporting the family business in maritime area. It also contributes to the limited source of references literature regarding family business in maritime in Indonesia.

Keywords: business continuance, business strategy, family business, maritime industry, literature review

#### Email Correspondence:

nyayu.lathifah@apps.ipb.ac.id

## **Routine Aircraft Airframe Spare Parts Inventory Analysis Used on Planned Maintenance at PT XYZ**

**Adhika Prajna Nandiwardhana, Muslim Efendi Harahap**

University of Indonesia

### **ABSTRACT**

Managing aircraft spare parts has been troublesome since there is demand uncertainty. Maintenance cost has been a concern nowadays especially spare parts cost. The objective of this research is to study costs generated by spare parts procurement using new inventory model compared with existing inventory model. To present this inventory analysis, a case study based on a maintenance, repair and overhaul (MRO) company in Indonesia is discussed. In this research, two methods are used, i.e. Syntetos-Boylan Approximation (SBA) and Single Exponential Smoothing (SES) to predict the planned maintenance forecasting. Furthermore, after forecasting has been done, inventory analysis is needed to determine inventory model to be implemented. According to inventory model, fixed order quantity is used to account for costs generated in procurement activity. Since the forecasting methods are new in PT XYZ, this gave different result compared to existing method. Suitable forecasting method is used on each SKU as the demand characteristics are different. The result of this research shows that the new inventory model using SBA and SES method are more accurate, and gave cost reduction 4% of total annual procurement cost compared to existing inventory model. It can be said that the method can be applied to improve inventory cost reduction to face challenges in aviation industry. The weakness of this research is only conducted in several spare part SKUs with specific demand characteristics. To prove that the method can be generally accepted, number of SKU samples needs to be increased.

**Keywords:** inventory analysis, forecasting, planned maintenance

### **Email Correspondence:**

adhikaprajna@gmail.com

## **Factors affected Local tourist to visit Baluran National Park, East Java, Indonesia**

**Mokhamad Syaefudin Andrianto, Anis Daifatin Masruroh**  
IPB University

### **ABSTRACT**

Baluran National Park (BNP) located in eastern Java is one of national tourist destinations. This research aims to examine the factors that determine visitors come to BNP and some visitor's habits. Data gathered from 128 respondents that have come to BNP at least two years ago via a google form questionnaire. Data analyses used factor analysis. The results showed there are five factors determine tourist come to BNP with Total variance cumulative explained for five factors reach 75%. The factors based on group variables were named Nature landscape and fauna, Supporting facilities, Acces, Advertising, and Direct Marketing. Baluran Nature landscape is very unique, compare to other tourist destination in East Java, contains savanna, mountains, beach view, and wild animal. It is supported by adequate information, security also marketing activities to attract visitors. Local visitors average come to BNP four times annually and spend five hours in location.

**Keywords:** Africa in Indonesia, biodiversity, business opportunity, ecotourism, wild animal

**Email Correspondence:**  
syaefudin1@apps.ipb.ac.id

## LPG for Power Generation in Indonesia: Techno-economic and Distribution Analysis

Y. Dony Antarius, Rinaldy Dalimi

University of Indonesia

### ABSTRACT

Application of LPG for power generation in Indonesia can be replacing the usage of fuel-oil at the existing power plant. It turns out that LPG is also a flexible and low-emission alternative to other fuel types within power generation that equal with other natural gas such as LNG or CNG. The main LPG advantages are the distribution which very well developed in Indonesia, handling LPG is also cheaper and saver since it does not have to be transported in cryogenic temperatures like in the case of LNG, neither high pressurized tank in the case of CNG terminal. Therefore, LPG might be a good solution for gasification program for the fuel-oil-driven power plants, which currently facing obstacles in the high cost of LNG regasification infrastructure, whereas this is a major concern in a long term investment in the power industry. This paper presents a techno-economy and distribution analysis start with the analysis matrix of how feasible a power plant to be converted to LPG until the calculation of capital expenditure, operation expenditure includes the distribution cost and distribution clustering scheme for the LPG supply chain. The existing power plants were divided into 13 clusters, where the study found 5 clusters are very competitive with the energy price less than 4 USD/MMBTU, 4 clusters are average competitive with the energy price between 4 to 6 USD/MMBTU, and 4 other clusters are not competitive with the energy price more than 6 USD/MMBTU.

Keywords: LPG power generation, Energy system saving, LPG/LNG Price

### Email Correspondence:

d\_antarius@yahoo.com



## NAVIGATING BUSINESS TRANSFORMATION WITH FUTURE-READY MINDSET

**Muhammad Azman, Intan Delia Rustandi, Putri Gayatri**  
IPB University

### ABSTRACT

VUCA Era drives the current business ecosystem significantly to be more complex and experience strong turbulence. This ecosystem also brings the business process based on the customer transformation needs (vibrant, unreal, crazy, and astounding). This condition requires a new way of working to face future challenges. However, most business practitioners still use conventional approaches (fixed mindset) rather than agile mindset. The paper aims to navigate business entities to compound with business ecosystem in era 4.0. The methods used to construct the paper are meta-analysis and integrating simplification theory (IST). To navigate its transformation path, the future ready mindsets – curiosity, explorer, empathy, transformative, experimental, and open mindset - will play a crucial part. Sub-concepts for each of the future-ready mindset have already been mapped and matched up with each VUCA characteristic.

Keywords: Business Ecosystem, Business Transformation ,Future Ready Mindset, VUCA

### Email Correspondence:

muhammadazman.bogor@gmail.com

## **Read The Future Needs of Gas Station Consumers in DKI Jakarta & Banten**

**Rafdi D. Ramdhani, Lukman M Baga, Popong Nurhayati**  
IPB University

### **ABSTRACT**

The Business of Gas Stations in DKI Jakarta & Banten have become an attractive business for investors because of the demand for fuel and the growth in the number of vehicles that continues to increase every year. With so many choices of gas stations in DKI Jakarta & Banten: PERTAMINA, SHELL, TOTAL, VIVO, BP-AKR. Now consumers have higher bargaining power and growing needs for gas stations. This study aims to analyze the reasons for the selection of gas stations and future consumer needs of gas stations in DKI Jakarta & Banten using descriptive analysis. Data collection techniques used in descriptive analysis are direct observation and gas stations consumer surveys. Based on descriptive analysis, it is found that access and location that is easy and affordable are the main reasons consumers choose gas stations with 24%, followed by the accuracy of the fuel dose with 22% and the good quality of services with 17%. Whereas for future consumers needs at gas stations are Food & Beverages Vending Machine with 30%, Quick Cleaning with 23%, and fuels delivery service with 13%.

**Keywords:** Gas Stations, Bargaining power, Future Consumer Needs

**Email Correspondence:**  
rafdidr@gmail.com

## **Tariff Decision Of D-Parking with Capacity Constraint Based on Reservation Systems Considering By Changes Modes Of Transportation**

**Erwin Widodo, Dwi Handayani, Suparno**

ITS - Sepuluh Nopember Institute of Technology

### **ABSTRACT**

The development of technology provides many advantages for the community especially for the economy. One of them is a cashless transactions. This is used by the Sidoarjo government to replace subscription parking to the digital one due to criticisms from society. Most people agree that the old parking mode is poor quality and unclear. However, the income earned annually from parking is far from its potential which should be 102.146.595.652, but the money reported only is 21.551.793.500. Therefore, for transparency, the parking should be automated for increasing the regional income.

However, the implementation of digital parking should be organized well to maximize income through parking rates. The shifting transportation mode to the online has to be limited in the cars and motorcycles usage to understand the public's preference.

Therefore, parking tariffs will be determined in two ways including online (d-parking) and offline (traditional parking). Both of them apply game theory, a mathematical approach to formulate a strategy involving decision-makers. This strategy is Stackelberg dan Vertical Nash. Then, the results obtained will be utilized for determining the best scenario providing much profit.

**Keywords:** Dual-Channel, Parking, Profits

### **Email Correspondence:**

[dwih787@gmail.com](mailto:dwih787@gmail.com)

## HOW EFFECTIVE IS EMPOWERING MSMEs THROUGH BUSINESS TRAININGS? A LESSON FROM DAYA PROGRAM OF BANK BTPN

Idqan Fahmi, Fithriyyah Shalihati, Suhendi  
IPB University

### ABSTRACT

Bank BTPN has a unique program called DAYA aiming to grow the business of its MSME customers by giving free regular and systematic business trainings. The question is how effective is DAYA program in improving the business of its MSME customers. The effectiveness is shown by comparing business performances of participating MSMEs customers with non-participating ones. Study undertaken in 12 BTPN working areas by surveying 540 number of participants and 108 number of non-participants. The results showed that Daya program had positive direct impact on MSMEs' business variables such as turnover, operational cost and customers' business growth index (CBGI), especially at the micro-enterprises category. Indirectly, the trainings also had a good impact on MSME's family and environment reflected by changes in household's expenditure (family) and number of employees (environment). Finally, Daya program improved the quality of business practices of participating MSMEs in the aspect of managing finance, marketing, sales, human resources, operations and soft-skills.

Keywords: empowering MSMEs, Business Trainings, Business Variables, Customers' Business Growth Index, Micro-Enterprises, DAYA BTPN

#### Email Correspondence:

oktyshalihati@apps.ipb.ac.id



## **A Delphi-SERVQUAL Methodology in Analyzing Public Service Quality in the Philippines**

**Darlyn Jasmin Magno, Karl Benedict Ong**

De La Salle University

### **ABSTRACT**

Services are delivered by private businesses, non-profit organizations, and public agencies. These sectors can provide variety of services, but each are driven by different purposes. The private sector manages the needs and interest of a subset of the population while the public sector deals with the greater population. Differences between the delivery of services by the two sectors imply that quality of service may be measured differently. Coupled with the ever-changing attitude of consumers, variety of stakeholders and criticality of bureaucracy issues, there is a need to evaluate the alignment, sufficiency, effectiveness and efficiency of the provided services by the public sector. In this study conducted in the Philippines, the service quality (SERVQUAL) model was performed to establish significant service dimensions and modified sub-dimensions to profoundly assess the expectation and perception of government services in the country. Through the integration of Delphi method and SERVQUAL tool, key factors were extracted to provide recommendations and opportunities for government agencies to lead its resources to appropriate resolutions and policies in line with the needs of its citizen. It was found that reliability or the ability to perform promised service dependably and accurately gathered the highest weighted score of all the dimensions. Findings of this research can be referenced by public offices in developing their service evaluation forms and improving their service delivery.

**Keywords:** public service, service quality in the Philippines, SPSS, Delphi method, SERVQUAL

**Email Correspondence:**

darlyn\_magno@dlsu.edu.ph

## Mobile Government Service: A Disruption to the Governance Mechanism

Mohd Rizal Razalli, Mobashar Sadik, Kamaruddin Radzuan

Universiti Utara Malaysia

### ABSTRACT

Governments all over the world have long been adopted technology to deliver their services to their citizen, however, the process has been accelerated with the recent advent of COVID-19. The ubiquitous nature of mobile technology is making it a preferred source of delivering governmental service. These services are named as “m-government” services and traditionally been placed as a type of e-government service. Because of the impact which these services are having upon general public, it is important to fully understand the definition of m-government services. The current paper tries to argue upon the features and nature of m-government services. It challenges the idea that m-government is a subset of e-government services. After a thorough literature review, examination of various definitions provided by researchers, evaluating its features and comparison of these with e-government services, it was concluded that m-government service is a superset of e-government service. The features of m-government services were also evaluated using theory of disruptive technologies. This lead to establishing the fact that m-government service is a disruptive technology. And a new definition of m-government services was also proposed to reflect recent development in m-government.

Keywords: m-government, disruption, governance, e-government, disruptive technology, innovation

### Email Correspondence:

rizal@uum.edu.my

## **Exploring the Demand on Local Organic Rice in Malaysia**

**Samah Rozana, Zakirah Othman, Noor Hidayah Abu , Salleh Nurul Azita**  
Universiti Utara Malaysia

### **ABSTRACT**

In recent years, the global organic rice market is in growing trend and was valued at 1.5 billion US dollars. In Malaysia, the demand for organic rice also on the rise. This is due to the growth of the Malaysian's per capita income that has empowered consumers to have more purchasing power, health consciousness, and demand for more nutritional value food. Besides, factors such as food safety concerns, health benefits, and environmental concern are the main factors that affect consumers' demand for organic food products in this era. Organic rice can be defined as rice produced from practice management without the use of chemicals especially in fertilization and pest control. Thus, this paper determined the demand for local organic rice in Malaysia and the factors that influence it. By doing the market demand research, it will describe the demand for a given product and factors that influence it. As market demand increases, so does the price. Thus, this will promote and motivate the farmers towards sustainable or ecologically friendly agriculture. Primary data were collected by using a questionnaire through a survey in northern Malaysia. The data obtained were analyzed using the basic statistical method, which is descriptive statistics. Descriptive analysis was done in the Statistical Package for Social Science (SPSS) application. The results have shown that organic rice demand is positive, but still low in term of quantity. Socio-demographic factors such as educational level, taste, and health purpose have been the factors influencing consumer's demand on local organic rice.

**Keywords:** market demand, organic rice, sustainability

#### **Email Correspondence:**

zakirah@uum.edu.my

## Review of Sustainable Paddy Farmer Perception in Malaysia

Zakirah Othman, Mohd Zahari Fadhilah, Salleh Nurul Azita  
Universiti Utara Malaysia

### ABSTRACT

Rice production in Malaysia faces many problems and is considered to be in critical condition due to the issue of inadequate supply, increasing cost of rice production and serious disease threats. Despite of this exceptional situation, there are some farmers who adopted sustainable management practices in rice cultivation. Therefore, this study intends to explore the driven factors for farmers in sustainable paddy farming in Malaysia. The study is an exploratory in nature, using interview and observation approaches. The sustainability scope of this study is framed with respect to the economic, social and environmental and agrobiodiversity dimensions. The findings from five respondents of farmers who have more than six years' experience in sustainable agriculture show that the factor in changing the attitude towards sustainable agriculture and maintain the practices, are due to the early exposure and awareness, education, and experience in sustainable agriculture. The results of this study are expected to motivate the rice farmers' community as an alternative to sustainable rice cultivation particularly in developing the abandoned land.

Keywords: sustainability, paddy, farmer perception

#### Email Correspondence:

zakirah@uum.edu.my



## Informal Economy: Its Contribution to the Gross Income of Gonzaga

**Jay Omotoy**  
Cagayan State University

### ABSTRACT

The study generally intends to determine the factors that give rise to the existence of the informal economies in Gonzaga, Cagayan and its contribution to the municipality gross income.

The study employed non-probability purposive sampling where specific criteria were used to identify respondents. For the tool, open-ended and structured interview format and documentary analysis were used. In particular, the profiling of the respondents along with gender, civil status, number of years in the informal economy, nature of informal economy and reasons for engaging in the informal economy.

The study showed that most of those who engaged in the informal economy are female and married. Informal economy was stayed in business for almost ten years. Reasons for joining in the informal economy were due to the absence of or limited job opportunities that will qualify the respondents. Also, the idea that engaging in the informal economy is way far more accessible than the stable or formal economy since government regulations are not observed by the former.

Factors that give rise to the existence of these low-scale and unregistered enterprises are because of the ease of having these type of economy and because there are no job opportunities available in the municipality. However, despite being “unregistered,” informal economies are still contributory to the gross income of the city because they are paying “arkabala” as a “fee” or “tax” paid to the local government.

**Keywords:** Contribution, Gross Income, Informal Economy

**Email Correspondence:**  
jay\_cool275@yahoo.com

## **Comparative Analysis of the Properties of Building Insulation Materials from Natural and Recycled Resources**

**Shimol Philip, Rakendu R, Hanna Paul**  
Saintgits College of Engineering, Kottayam

### **ABSTRACT**

Thermal insulation plays a major role in reducing energy loss from the buildings. Currently, materials derived from petrochemicals or natural resources extracted with high energy consumption are widely used for building insulation. Many pernicious effects are caused to the environment due to these materials starting from its production stage, i.e. the use of non- renewable resources and fossil fuel consumption, to the disposal stage, i.e. issues with recycling or reusing the products at the end of their lives. Hence, the development of new thermal insulation materials from natural and recycled resources for replacing synthetic and hazardous materials is the current need of the hour. The current research focused on exploiting local materials and industrial by-products and the primary objective of this paper is to report a state of the art of thermal insulation materials made of natural or recycled materials that are not or scarcely commercialized. This paper investigates the performance of thermal insulation materials by analyzing its physical, mechanical, and thermal characteristics. Comparative analyses were performed between thermal insulation materials made from natural and recycled resources in terms of density, water performance, flexural strength, and thermal conductivity. A comparative analysis of the properties of thermal insulation materials made from natural or recycled material resources with conventional thermal insulation materials is also included in this paper. The use of these natural or recycled materials will minimize the utilization of both oil-based and non-renewable sources in the construction industry and would contribute to a cleaner environment.

**Keywords:** Thermal insulation, invasive weeds, water hyacinth, water performance, flexural strength, thermal conductivity

**Email Correspondence:**  
shimolphilip16@gmail.com

## **Solid Oxide Fuel Cells fueled with biogas in Malaysia: A review of potential**

**Shafini Shafie**

Universiti Utara Malaysia

### **ABSTRACT**

The limitations of conventional types of energy resources, makes world searching for variety source in electricity generation. Fuel cell based electricity generation create the huge potential in energy industries. This paper aim to study a potential of biogas in Malaysia to fed to direct biogas solid oxide fuel cell (DB-SOFC) system. The data from Malaysia Palm Oil Board (MPOB), Energy commission (ST) and the Malaysia statistic department were used in this study. The analysis show that in 2019 Malaysia potentially to generate biogas about 877.53 million m<sup>3</sup>/year. The characterizations of DB-SOFC system with capacity 200kW from Bloom Energy were applied in this study. The result shows that Malaysia potential to generate about 2006.9 MW of electricity from biogas solid oxide fuel cell is about 6% of total Malaysia electricity installed capacity. By comparing with conventional biogas CHP, the DB- SOFC give 76.95% more performance in electricity generation. Hence, this provides a positive impact on the biomass industry in Malaysia. Extensive RND are needed in order to penetrate this fuel cell system to Malaysia energy industry landscape.

Keywords: Solid Oxide Fuel Cell, Biogas, Renewable Energy, Malaysia

### **Email Correspondence:**

shafini@uum.edu.my





## **A New Frontier: Challenges of Protecting Innovation in Cyberspace.**

**Daniel Hofilena**  
De La Salle University

### **ABSTRACT**

The advent of the digital era brought new challenges in the realm of intellectual property rights, particularly the protection of patented inventions and copyrighted works. The rise of artificial intelligence and open-source software interposed questions in the ownership of works. The widespread use of the internet contributed to the astronomical rise of piracy and counterfeiting. Besides the lack of a uniform legal system, one of the major challenges in combating this is that intellectual property rights are territorial in nature—making cross border enforcement difficult. The study will use the principles contained in the Agreement on Trade-Related Aspects of Intellectual Property Rights ("TRIPS") and the Berne Convention as a baseline standard for legal analysis. Nevertheless, the study will discuss model laws in various jurisdictions. For its recommendation, the study will recommend for uniform adoption of policies and solutions to address: 1) ownership digital creations; and 2) cross-border enforcement of intellectual property rights through the conclusion of a treaty providing for extradition or the extraterritoriality of offenses.

Keywords: technology management, intellectual property rights, patent, innovation, digital era, cyberspace

**Email Correspondence:**  
danielhofilena@gmail.com

## **Factors influencing service quality in restaurant business: A case of SME Bank Cafeteria**

**Siti Zakiah Abu Bakar, Chun Hong Choo**

Universiti Utara Malaysia

### **ABSTRACT**

Many restaurant businesses have faced demise due to stiff competition. Competition are more aggressive due to the emerging of on-line food services and the changing food preferences among consumers. Due to the increasing competition, 'survival of the fittest' will be those who could understand the factors that may influence customers' satisfaction. Therefore, this study explores what is deemed important by customers in restaurant service. Restaurant service quality are food quality, price and physical environment. To conduct the research, a survey in the form of online questionnaire was distributed to the resident in hostel SME Bank. A total of 100 respondents which from both genders and from different races participated in this study. The key dimensions of food quality, price, physical environment and customer satisfaction were identified through literature. From the result of the data, it shows that the food quality is the most important factor which impacts on customer's satisfactions. However, the physical environment is not significant variable of customers satisfaction. Cafeteria owner of SME Bank Cafeteria should pay more attention on food quality and price adjustment to improve the customer satisfaction. Findings of this research provide a useful suggestion in the area of customer satisfaction with the specific interest in catering in the future.

**Keywords:** Service Quality, Customer satisfaction, food quality, price, physical environment

### **Email Correspondence:**

ctzakiah@uum.edu.my

## **Factors Influencing the Adoption of ICT : A Case Study of Malaysian Halal Small Medium Enterprise**

**Noorulsadiqin Azbiya Yaacob, Risyawati Mohamed Ismail, Siti Norhasmaedayu Mohd Zamani**  
Universiti Utara Malaysia

### **ABSTRACT**

In the rapidly changing business environment of the twenty-first century, it is extremely important for Small Medium Enterprises (SMEs) to adopt Information and Communications Technology (ICT) in order to maintain their competitive edge, develop a global network of product exchange and establish wider international network. While ICT adoption studies among SMEs has become increasingly popular, the literature still suggests the need for advancing understanding of the key factors experienced mainly those involving different contexts, technologies and user populations. Thus, the present study bridged this gap by employs a case study approach to investigate how the selected halal Small Medium Enterprise (SME) is constantly engaging in ICT adoption. The findings suggest that using Innovation Implementation model to examine the influencing factors of ICT adoption would provide a picture and analysis of the range factors in Malaysian Halal SME in adopting ICT in their halal business.

**Keywords:** ICT adoption, Case study, Halal Small Medium Enterprise, Innovation Implementation model

**Email Correspondence:**  
sadiqin@uum.edu.my

## **Waste Management among Resident of Taman Desa Sinaran Dengkel Selangor Malaysia**

**Noor Hidayah Abu , Nik Muhammad Aqil Ajman, Mohd Fitri Mansor**  
Universiti Utara Malaysia

### **ABSTRACT**

Solid waste management has been identified as a major problem at all over the world. Disposal of household wastes is a major issue of concern due to population explosion, poverty and high urbanization rates. Household waste can be categorized into several types such as organic waste, toxic waste but the most contribution to the household waste is food waste. The failure of managing household waste may lead to increased operation cost and effected the environment entirely. There is a tremendous amount of loss in terms of environmental degradation, health hazards and economic descend due to direct disposal of waste. This study will concentrate on solid waste management among household at Taman Desa Sinaran Dengkel Selangor Malaysia. In this study, a quantitative method based on survey questionnaire was implemented. The data collected, calculated and analyzed using SmartPLS. The results of the study revealed that knowledge is the domain factor in the relationship between waste management behaviour among resident of Desa Sinar Harapan. It is very important that this independent variable is handled professionally and maturely. Relations between knowledge and waste recycled behaviour can be enhanced by having a broader knowledge to create a better perception towards waste management. Green programs such as organic and food waste recovery, multi-family recycling and 'How to recycle' communication can widen household knowledge and encourage them to recycle. This paper able to enrich understanding of household regarding the factors that most contribute to waste management.

**Keywords:** Waste Management, PLS, House hold waste, Malaysia, Knowledge

### **Email Correspondence:**

dayah@uum.edu.my



## **Preliminary Review Towards Practical Use of Online Collaborative Kit-Build Concept Map Tool**

**Aryo Pinandito, Tsukasa Hirashima, Yusuke Hayashi**  
Hiroshima University

### **ABSTRACT**

Kit-Build concept map framework is one of the learning frameworks that involves and uses concept maps in its learning activities. The learning process that uses the Kit-Build concept map framework is called the Kit-Build method. Previously, the use of the Kit-Build concept map framework in learning is known to be useful in promoting students' understanding. Several extensions to the Kit-Build concept map framework have been developed to fulfill various use of the framework in different learning subjects, including the use of the concept map framework in a collaborative learning environment. Recently, the need to shift the learning activities towards distant or online learning emerged. Thus, the need for innovations and supports to accommodate online learning become highly demanding. An online collaborative concept mapping tool has been developed to support the students' collaborative learning activities that use the Kit-Build method in the online learning context. The tool allows the students to collaboratively work together to create and construct concept maps, as well as having text-based discussions among group members during the collaborative work of concept mapping. This research presents a preliminary evaluation of how the online collaborative tool supports the students' collaborative work of concept mapping and supports their discussion during collaboration. A comparison of students' learning outcomes between the use of the Kit-Build method and a traditional concept mapping activity in online collaborative work of concept mapping is also presented.

**Keywords:** collaboration, concept map, Kit-Build, online, tool

### **Email Correspondence:**

aryo@ub.ac.id

## ORGANIZATIONAL CHARACTERISTICS, ENVIRONMENT UNCERTAINTY & CONSTRUCTION INNOVATION: EVIDENCE FROM MALAYSIAN CONSTRUCTION INDUSTRY

Norlena Hasnan, Ng Weng Seng Benson, Shahimi Mohtar, Nor Hasni Osman, Rahimi  
Abidin

Universiti Utara Malaysia

### ABSTRACT

Constructions industry has increasingly becoming more dynamic, demanding the adoption of innovative methods, and greater technological advancement. The complexity of the industry, generally has been described as multi-faceted and highly fragmented with significant problems such as communication breakdown, conflicts, and disputes. The uniqueness of projects, the organization itself and the management role in coping the changing demands can apparently influence the effort in adopting the new technologies and innovation in the construction sector. In addition, the construction environment which is known as dynamic and full with uncertainties posed difficulty for the management to understand their organization's ability to function in the future. Hence, this paper interested to identify the effects of organizational characteristics and the perceived level of environmental uncertainties towards the implementation of construction innovation. In order to fulfill the research objectives, online survey has been conducted among the construction companies in Malaysia. The on-line questionnaires have been send to randomly selected contraction companies that operating in Malaysia and registered as G7 contractor with CIDB. The number of returned questionnaires were totaled to be 383, yielding an effective response rate of 54.4%. The result showed all the variables proposed have been found to be positively correlated with construction innovation. Apart from suggesting the direction of future construction industry study, this paper is valuable in providing insights for the contractors in implementing innovative construction technologies that can be used to devise strategic marketing plans and ultimately for enjoyment of competitive advantages.

**Keywords:** organizational characteristics, innovation, construction, perceived uncertainty, Malaysia

**Email Correspondence:**  
norlena@uum.edu.my

## **Review of IR4.0 Readiness and IR4.0 Adoption in Malaysian Manufacturing Sector**

**Balakrishnan Bavaani, Zakirah Othman, Shafie Shafini, Ahmad Zaidi Mohamad Faizal**

Universiti Utara Malaysia

### **ABSTRACT**

Technology has become an integral part in the manufacturing sector. Businesses have been change dramatically over a short period of time and exposed to uncertainty, complexity and risks that influenced by technological innovation. Additionally, the fourth industrial revolution (IR4.0) which is rapidly approaching has created massive unprecedented change and barriers across the manufacturing sector. Employment disruptions, high implementation cost, organizational and process changes, security and privacy issues, regulatory compliance issues and lack of data management are few barriers that are required to cope up with the upcoming emerging technologies. The growing global competition especially adopting IR4.0 into the manufacturing sector has mounting challenges to the business world. Such a challenging environment should drive manufacturing sector particularly Electrical and Electronics (E&E) Small and Medium-sized Enterprises (SMEs) in Malaysia to adopt IR4.0 to ensure survival. However, the enthusiasm for the IR4.0 adoption among E&E SMEs appears to be low. With respect to Malaysia insufficient research on the winning formulae to overcome the IR4.0 adoption, this study reviews the IR4.0 readiness and IR4.0 adoption in Malaysian manufacturing sector.

**Keywords:** Fourth industrial revolution, IR4.0 adoption, Manufacturing

#### **Email Correspondence:**

s901755@student.uum.edu.my

## Examining the Trend of Research on Marketing Mix: A Bibliometric Review

Mawaddah Mohamad  
Universiti Utara Malaysia

### ABSTRACT

Most businesses are striving to achieve its production and marketing objectives to prove its significant role in the economic development. To stay competitive in the market, businesses must seek to create a competitive advantage in attempt to attract customers through innovation and creativity, to cope with new needs of the customers, and respond to the changes in consumption patterns among the society. Marketing mix is considered to be one of the most important aspects in creating value and satisfaction for the customer. Owing to the growing numbers of research on this domain, this paper analyses and reports various types of published works related to marketing mix from 1980 to 2020. This study adopted a bibliometric analysis based on the data obtained from Scopus online database as of May 2020. Based on the search results, the study finalised, 469 valid documents for further analysis. Microsoft Excel was employed for data analysis, while VOS Viewer was used for data visualization purpose. The growth of publications, research productivity and citation analysis were presented using standard bibliometric analysis. The growth rate of literature in marketing mix increased year by year and most of the articles were published in journal and conference proceedings. Most research reported mainly in the area of Business, Management and Accounting; and Economics and Finance. This study presents the evolution of the scientific literature in marketing mix and identifies areas of current research interest and potential directions for future research.

Keywords: Marketing mix, Bibliometric analysis, Systematic review, 4Ps

**Email Correspondence:**  
mawaddah11@gmail.com



## New Type of Energy Resource in Malaysia – Fuel Cell: A Review

**Muhamad Syafiq Mat Kassim, Shafini Mohd Shafie, Zakirah Othman**  
Universiti Utara Malaysia

## ABSTRACT

Malaysia faces the challenge of finding the right fuel mix to ensure a sustainable and secure energy supply. Malaysia is looking for other alternatives to produce energy to substitute with the fossil fuel which is used primarily in Malaysia. An average of 86% of electricity generation in Malaysia is generated from fossil fuel. Therefore, there is a need to explore a variety of alternative energy resources that can generate electricity by decreasing the nation's dependence on conventional ways. Recently, fuel cell has been addressed as a solution. Currently, an increasing number of studies are focusing on fuel cell as a source to generate electricity. As a tropical country, Malaysia is rich in biomass resources that can be feeding into fuel cell for electricity generation, hence give good impacts to the countries. Biogas in Malaysia is not fully utilized due to economic and infrastructure limitations, lack of local expertise, public perception, and industry support. The study also collected by secondary information based on other's country research. Since it is involved in multiple sources of data collection, the findings of this study will be more convincing and accurate. Moving toward 2050, the fuel cell energy system is targeting to be one of potential sustainable energy in Malaysia.

**Keywords:** Fuel cell, Biomass, Biogas, Electricity generation, Malaysia

### Email Correspondence:

muhamad\_syafiq5@oyagsb.uum.edu.my

## Analysis and Visualization of CO<sub>2</sub> Emissions using Bigdata Techniques

Swathi J, Deepika Sasi, Vibesh V Panicker

TKM College of Engineering

### ABSTRACT

World is impacted by the outcomes of environmental changes, for example, by the effects of global warming, flooding, tropical storms and extreme conditions. The atmospheric CO<sub>2</sub> levels are over 400 ppm, which is the maximum point in about 800,000 years. The largest gas blamed for climate change is carbon dioxide, which is one of the natural greenhouse gases. It is one of the world's most significant sources of pollution. There are other explanations for the publicity it receives beyond the measurable importance of the pollution and it's ability to harm humans. Within this paper we use bigdata to examine and imagine carbon dioxide worldwide. We added the data measurements of the 3v(volume, velocity, variety) for various databases that were analyzed. For measuring big data trends, the sending density and the receiving density were created. In India, the CO<sub>2</sub> emission guideline has focused on automobile and industrial areas where the carbon emission charge is paid on engine vehicles dependent on ignition efficiency. While becoming the biggest source of CO<sub>2</sub>, the production process has not had any methods planned to combat emissions. In this work we present the processing of visualization of CO<sub>2</sub> emissions in India using Python and R with Hadoop Ecosystem. This paper also highlights the fundamental industries contributing to CO<sub>2</sub> emission, the plans rendered for globally and in India to monitor CO<sub>2</sub> emission rates, offers a forecast for CO<sub>2</sub> outflow rate by 2021 and proposes potential work headings based on the findings.

Keywords: Carbondioxide Emission, Bigdata, Python, Greenhouse Gases

### Email Correspondence:

swathiacer@gmail.com

## **An Intelligent Real Time Crowd Management and Driver Alert System for Public Transportation**

**Deepika Sasi, Swathi J, Vibesh V Panicker**

TKM College of Engineering

### **ABSTRACT**

Public Transportation Sector plays a vital role in every country's mode of transport. Since public transportation reduces traffic congestion, air pollution and is a comparatively cheaper means of transport, it's mostly preferred by common people. With the growing population, crowding in public transports, especially in buses are a common scenario in most cities. Many people are forced to travel in footboards of buses due to overcrowding, which can even be a cause of death. Another issue faced is the accident caused mainly during night time as the driver may fall asleep, or due to sudden cardiac arrest of the driver. All these problems are sort in this paper, where we introduce an intelligent information and driver monitoring system that could be built in buses. The passenger security is enabled by means of IR sensors that counts the number of passengers entering and exiting the vehicle and thereby the real time status of seating is available through mobile application. Passengers waiting for bus can access this information through Global Positioning System (GPS). In case passengers travel on the footboard, it is alerted by the sensor to the driver. In addition to this, a driver monitoring system is also established which consists of an eyeblink sensor and heart beat sensor. Both the sensors are used to alert the driver in case an emergency situation arises. Ultimately, some features of conventional bus can be modified to provide better safety to the passengers and make the public transportation system more efficient and safer.

**Keywords:** IR Sensor, Global Positioning System (GPS), eyeblink sensor, heart beat sensor

### **Email Correspondence:**

deeps.deepika89@gmail.com

# THE EFFECT OF PERCEIVED USEFULNESS AND PERCEIVED EASE OF USE ON AFFECTIVE COMMITMENT AND ACTUAL USAGE OF THE FLEXIBLE BENEFIT SYSTEM: THE MEDIATING ROLE OF INDIVIDUAL ABSORPTIVE CAPACITY

**Marlita D. Yulianti, Elok S. Pusparini**

University of Indonesia

## ABSTRACT

The purpose of this study is to understand the role of individual absorptive capacity after implementation of flexible benefit system by its users. We assume the effect of benefit that satisfy employees will increase their affective commitment with the firm. Technology Acceptance Model (TAM) were used to determine the factors that influence the actual usage of flexible benefit system. This is a quantitative study of 162 employees in a single banking industrial firm. Using questionnaires data and structural equation modelling (SEM), this research investigates how perceived usefulness and perceived ease of use affect the actual usage of flexible benefit system by introducing individual absorptive capacity as a mediator. The main finding is that individual absorptive capacity mediates between affective commitment and actual usage of flexible benefit system. Also, this study finds that flexible benefit program influence employees' affective commitment with the firm. This study using flexible benefit program which implemented by a system. To our best knowledge, this is the first study to examine actual usage of flexible benefit system. Practically, firms are increasing their efforts to offer benefits that satisfy their employees. So, they can earn their engagement by retain through benefit which contain extrinsic motivation. The findings can help human resource to understand what influences employees' intention to adopt a new system and decide which strategy will be chosen.

**Keywords:** Technology Acceptance Model (TAM), Flexible Benefit, Affective Commitment, Individual, Absorptive Capacity, Actual Usage

### Email Correspondence:

yulianti.marlita@gmail.com



## **Enhanced fermentable sugar production from low grade and damaged longan fruits using cellulase with algal enzymes for bioethanol production**

**Tu Vy Thuy Nguyen, Yuwalee Unpaprom, Rameshprabu Ramaraj**  
Maejo University

### **ABSTRACT**

Longan fruits' economic values have been increasing in recent years, for example, nutrients, medicine, cosmetic, and pharmaceutical products, etc. Especially, Southeast Asia countries are the largest longan fruits producer. The huge amount of low grade and damaged longan fruits are one of the interesting resources for producing bioethanol. In this study, hydrothermal pretreatment and hydrolysis through added cellulase and algal enzymes were conducted with dried low grade and damaged longan fruits. The total and reducing sugar were achieved  $230.70 \pm 2.01$  g/L and  $91.11 \pm 1.11$  g/L, after the pretreatment process finished, respectively. Subsequently, a rise in the total and reducing sugar in the hydrolysis case was  $368.42 \pm 13.16$  g/L and  $297.78 \pm 2.94$  g/L, respectively. Consequently, longan fruits are valuable edible products and leftover or low grade/damaged longans are promising bioresources for bioethanol production.

**Keywords:** Fermentable sugar production, Low grade and, damaged longan fruits, Cellulase, Algal enzymes

**Email Correspondence:**  
nguyenthuyvytu@gmail.com

## **Biogas production from fresh ludwigia hyssopifolia: Effect of pretreatment using different sodium hydroxide conditions**

**Huyen Thu Thi Nong, Yuwalee Unpaprom, Rameshprabu Ramaraj**  
Maejo University

### **ABSTRACT**

Plants that use its roots to absorb and accumulate the heavy metals such as: water primrose (ludwigia hyssopifolia) is growing and spreading rapidly in agricultural land area. The potential energy of water primrose can be utilized for biofuel applications directly and those potentials are not yet to be fully exploited for energy generation. In the current study, a laboratory scale biogas production was designed as anaerobic mono-digestion testing to investigate the ability of biogas production using with/without chemical pretreatment on water primrose. In order to identify characters of raw material, some relevant parameters were measured such as: pH, total solids (TS), volatile solids (VS), chemical oxygen demand (COD), volatile fatty acids (VFAs) and alkalinity. Besides this, physicochemical methods were applied to the substrate before fermentation for enhancing biogas yield. The chemical pre-treatment was considered several different concentrations of 0%, 1%, 2%, 3% and 4% NaOH and resulted in a varying degree. In batch digestion for 45 days, the maximum biogas volume amounting to 8,247.5 mL was produced by treatment of 3% (w/v). The results revealed that all pretreatment processes produced gas and improved its quantity as well as quality of production compared to untreated samples.

**Keywords:** Pre-treatment, Mono-digestion, Water primrose, Biogas production

#### **Email Correspondence:**

thithuhuyen1995@gmail.com

## Marketing Innovation of Kabayaki Eel Products in The Digital Economy Era

Retnaningsih, Achmad Fadillah, Rezky Bella Agata

IPB University

### ABSTRACT

The world market demand for eel products is still high. European markets (German, Belgian, Dutch) and East Asian markets (Japan, China, South Korea, Taiwan) are the countries with high consumption of eel. However, national eel companies have not been able to optimally absorb international eel market share. PT. Laju Banyu Semesta as one of the national eel companies can utilize the digital market to expand sales of kabayaki products in international markets. The objectives of this paper are: to identify the initial marketing mix of PT. Laju Banyu Semesta, to analyze the company's performance on the consumer satisfaction of PT. Laju Banyu Semesta, to formulate marketing innovation strategies that can be used by PT. Laju Banyu Semesta to increase the number of sales. The methods used in this paper are descriptive analysis and Importance Performance Analysis (IPA). The results show that the marketing mix of PT. Laju Banyu Semesta can be formulated into the 4C concept. Based on IPA consumer satisfaction, the attributes in quadrant A are the focus of the problem that is made into a marketing strategy. The results of the design of the strategy are to improve cooking techniques and renew seasoning formulations (co-creation), starting a collaboration with frozen food and supermarkets (communal activation), increasing engagement with potential customers and end consumers (conversation), and increasing the popularity of the official online store (communal activation).

Keywords: marketing innovation, kabayaki, Importance Performance Analysis (IPA), digital economy, consumer satisfaction

### Email Correspondence:

bella.agata.ba@gmail.com

## **Evaluation of Information System Acceptance among Jakarta's Regional State-Owned Food Enterprise**

**Nur Hasanah, Asaduddin Abdullah, Arif Imam Suroso**

IPB University

### **ABSTRACT**

The main threats in the pursuit of achieving national food security are price instability and food stock management. Through a well-integrated information system, the collected information is a key of making significant contribution to improving food security. Presently, Jakarta has developed several food security information systems by the state-owned food enterprises, including the Jakarta Food Info (IPJ), which monitors price developments of important commodities in various Jakarta markets, as well as PT Food Station Tjipinang Jaya, which monitors the price and stock of rice. This study aims to evaluate the success of the existing information system towards the development of an integrated food security monitoring system. The evaluation was carried out using the information system success model by Delone and McLean which reflected the monitoring of six parameters, namely system quality, information quality, service quality, use, user satisfaction, and net benefits. Furthermore, the level of success were analyzed from the technical, semantic, service level, and system effectiveness. The main data was collected through a purposive sampling survey of the information system users with five-scale Likert and analyzed descriptively to provide initial benchmarking. The results show that the strategic commodities price and stock information monitoring systems were considered to have a relatively high overall success rate (4.17 and 3.93 from a scale of 5). Further analysis provided recommendations of features which need to be maintained and which need to be improved in the development of an integrated food security information system.

**Keywords:** food security, information system, success model

### **Email Correspondence:**

nur.hasanah@apps.ipb.ac.id



## **Development and Performance Evaluation of Environment-Friendly Thermal Insulation Material from Floating Weed *Salvinia Molesta* and Rice Straw**

**Adhil Iqbal, Robin David, Anandu M. S, Sijo G. Joy, Sharukhan S**  
VIDYA ACADEMY OF SCIENCE AND TECHNOLOGY TECHNICAL CAMPUS

### **ABSTRACT**

Polyurethane foam and polystyrene are the general polymer-based insulation materials used in the building sector at present. These materials exhibit high thermal insulation performance, but at the cost of environmental hazards because their production process creates severe environmental impacts. All these factors pave the way for the need for suitable alternatives that could minimize the energy losses by preserving energy. In this research, thermal insulation material based on *salvinia molesta* (SM) and rice straw (RS) were developed. The panel boards were made with SM particles that pass through 2.36 mm sieve and RS with length less than 1mm. In the present work, thermal insulation materials were made from SM in combination with RS in a ratio of 25, 50, 75, and 100% by weight using cement as a binder. Experimental investigations of physical, mechanical, and thermal characteristics of the developed panel board were carried out to determine: the bulk density, water absorption, flexural strength, and thermal conductivity. In this paper, a comparative study between the thermal insulation materials made from SM and RS with other agro-waste based panel boards and conventional thermal insulation materials are also included. The thermal conductivity test of the panel board showed a significant thermal insulation capability linked to low values of thermal conductivity, and these low values can be explained by the high porosity of SM. Besides, flexural stress results were good compared to those of bio based materials. This study indicates that *salvinia molesta* is a very good candidate for developing thermal insulation materials.

**Keywords:** Vidya Academy of Science and Technology Technical Campus, Kilimanoor, Trivadrur, Kerala, India

**Email Correspondence:**  
sijogeorgejoy@gmail.com

## **Determinants and Outcomes of LinkedIn Usage Intention: Users in Jakarta and Kuala Lumpur**

**Aldi Febrian, Ma'mun Sarma, Saadiatul Ibrahim**  
IPB University

### **ABSTRACT**

The Southeast Asia has become an emerging market for social media, including professional social media. Professional social media offer a prospective opportunity for some parties to maximize their performances in certain segments and gain more profits. LinkedIn is the only professional social media that succeed to reach the biggest number of active users alongside with the other social media. Therefore, this research aims to identify the characteristics of LinkedIn users, as well as analyze the effect of certain determinants on LinkedIn usage intention, and its impact on word-of-mouth and willingness to pay to the users in Jakarta and Kuala Lumpur. The determinants which employed are based on Technology Acceptance Model, which representing technological determinants, and Uses and Gratifications, which representing psychological determinants. The data are collected through questionnaire and are analyzed by using Partial Least Square Structural Equation Modeling analysis. The results show that perceived ease of use and career advancement affect usage intention in Jakarta. Perceived usefulness, perceived ease of use, and information affect usage intention in Kuala Lumpur. Furthermore, usage intention drives word-of-mouth and willingness to pay in both cities.

**Keywords:** Determinants, Linked In, outcomes, Partial Least Square Structural Equation Modeling analysis

**Email Correspondence:**  
aldi1831@gmail.com

## Design, Installation and Evaluation of a Smart Solar dc Home

Thomas Ubina, Raymart Villena  
Mariano Marcos State University

### ABSTRACT

Solar home systems are now very popular in the Philippines. Most setups, however, still utilize the ac power system and not dc. Solar dc power system is simple, efficient and cost-effective compared to an ac system. Also, in the Philippines, only few know and implement smart home and IoT in their houses. Combining the advantages of IoT and solar dc system and making it available in the locality is the purpose of this study as well as demonstrating a sustainable and efficient scheme in renewable energy utilization. Hence, the study designed a Smart Solar dc Home (SSdcH) and installed it in an existing ac solar powered home. Results showed that it is effective and functional in controlling connected lamps wirelessly and remotely using IoT through the MMSU i4.0 platform. Also, scheduled turning ON/OFF of connected lamps was achieved. Monitoring of the status of connected loads anywhere for as long as there is an internet signal was easy. It was found out that the SSdcH's installation cost of PhP 48,060.00 is about 33.71% cheaper than the traditional ac Solar Home System of the same capacity. The expected payback period of the 400Wp SSdcH installation is approximately 7 years and 3 months in an average consumption of 1.82kWh per day.

Keywords: ac, dc, IoT, solar home system, smart home, MMSU i4.0 platform

#### Email Correspondence:

tndconcepts@yahoo.com, raymart.o.villena@gmail.com

## ANALYSIS OF STRATEGIC ENTREPRENEURSHIP RETAIL BUSINESS SECTOR IN BOGOR CITY

**Intan Azizka, Lindawati Kartika**

IPB University

### ABSTRACT

Retail growth, as one of the most important distribution chains in the product distribution cycle, becomes a big opportunity for retail businesses. It causes an increase business competition therefore it is necessary to design strategic planning. One method that can be used is Strategic Entrepreneurship (SE) which combines two theories, specifically strategic management and entrepreneurship, to maximize opportunities by creating competitiveness in business processes. This research aims to examine the influence of Input-Process-Output segmentation by using descriptive analysis method and Partial Least Square -Structural Equation Modeling (PLS-SEM). The primary data of this research are in the form of direct interviews and questionnaires while the secondary data involve the literature studies and previous research. The results of this research indicate that there are two variables in input segment that significantly influence the variables in the process segment, namely the environmental factors and organizational resource variables. The individual resource variable has no significant effect. In the process segment, there is variable orchestration resource. Furthermore, the output segment consists of customer value and competitive advantages that have a significant effect to create wealth and other benefits.

**Keywords:** Input-Process-Output, Retail, Strategic Entrepreneurship

#### **Email Correspondence:**

intan\_azizka@apps.ipb.ac.id



## **Analysis of Strategic Entrepreneurship Model in Bogor City Culinary SMEs**

**Intan Widya Pertiwi, Lindawati Kartika**

IPB University

### **ABSTRACT**

Indonesia is a country that has the business capability and highest perceived opportunities in Southeast Asia, as evidenced by the growth in the number of Small Medium Enterprises (SME) from year to year. Bogor is one of the cities with the largest SME growth in West Java. For this reason, it is necessary to adopt a strategic entrepreneurial model by integrating opportunity-seeking and at the same time looking for a competitive advantage. This study aims to know the performance of strategic entrepreneurship and the interaction between the input, process, and output of the strategic entrepreneurship model in Bogor City SME culinary. The sampling method used purposive sampling with a sample of 96 respondents through questionnaires and interviews. The data analysis method uses Structural Equation Modeling (SEM) using Partial Least Square. the results of this study, there is a positive effect of resource inputs (environment, organizations, and individuals) with the process of orchestration resources and the process of resource orchestration strategic entrepreneurship has a positive effect on the creation of competitive advantage, wealth creation and other benefits for individuals, organizations, and society as output of strategic entrepreneurship.

**Keywords:** Competitive Advantage, Small Medium Enterprises(SMEs), Strategic Entrepreneurship

### **Email Correspondence:**

iinwidyapertiwi@gmail.com

## **Analysis of Implementation of Robotic Process Automation : A Case Study in PT X**

**Ricky Arnaz, Muslim Efendi Harahap**

University of Indonesia

### **ABSTRACT**

PT X as one of the largest manufacturing companies in Indonesia, has a large workforce and assets, complex business processes and has an important portion in the market share in the industry. PT X has decided to implement Robotic Process Automation (RPA) initiative which is expected to make operational processes more lean and efficient. But after it was implemented, was it true that RPA had a positive effect on PT X? This paper discusses the implementation of RPA at PT X, the effects and cost-benefit analysis of RPA implementation in the company. The analysis was conducted by focusing on the implementation of the RPA in the vendor payment process at PT X by using cost-benefit analysis based on qualitative and quantitative approaches. A qualitative approach was carried out using the interview method with key stakeholders from the implementation of the RPA coming from internal and external PT X. The quantitative approach is carried out using business process analysis and financial accounting methods. This study produces conclusions on the positive effects of the implementation of the RPA that can be seen from decrease of lead time vendor payment process up to 97.8% and decrease of Employee cost up to 55%.

**Keywords:** Robotic Process Automation, Cost-Benefit Analysis, Qualitative and Quantitative Approaches.

**Email Correspondence:**  
rickyarnaz7@gmail.com

## **Sustainability Disclosure in an Internal and External Pressure Perspective**

**Salis Musta Ani, Amelia Oktrivina Siregar, Basis G. Andamari**  
Universitas Pancasila

### **ABSTRACT**

This study aims to examine the driving forces (internal pressure and external pressure) in disclosing the sustainability of companies in Indonesia. Through multiple regression analysis testing with banks as research sample, the research results show that internal pressure with proxy for internal governance (board size and proportion of independent commissioners) and external pressure with proxy for Sustainable and Responsible Investment in Health (SRI Kehati) and government ownership was proven to be a driver for increasing sustainability disclosure in Indonesia. The results of this study also provide support to the IDX and the Kehati Foundation, so that the SRI Kehati index needs to be maintained because it can be a driver of sustainability disclosure. Likewise, these results support OJK (Otoritas Jasa Keuangan/Financial Services Authority) in spurring banks to improve sustainability performance expressed through sustainability disclosure. This is related to the sustainable finance program that makes banks the driving force for other sector companies to care for their social and environment.

**Keywords:** sustainability disclosure, sustainable and responsible investment, government ownership

**Email Correspondence:**  
salisaeffendy@gmail.com

## **The effect of Trust on MSME and Intermediaries toward Willingness to Lend in Peer to Peer Lending : Evidence in Indonesia**

**Zaky Abdullatif, Ninuk Purnaningsih, Megawati Simanjuntak**  
IPB University

### **ABSTRACT**

Peer-to-Peer Lending (P2P) applications were developed as an alternative funding solution for micro, small and medium enterprises (MSME) and individuals. The funding portion of P2P is still relatively small, especially when compared to bank funding for the MSME segment due to a significant gap between the number of lenders and borrowers. Analysis of trust determinants that affect the willingness to invest in P2P is required to formulate strategies to increase funding volumes. This study aims to analyze the effects of trust determinants which divided into trust on the borrowers and trust on the intermediaries on willingness to lend in P2P lending platforms in Indonesia. A total of 109 respondents sent their responses through an online questionnaire with the criteria of Indonesian citizens who have invested in P2P. The results showed that trust on borrowers had a significant impact on the willingness to lend. Trust on intermediaries does not significantly affect the willingness to lend, but has a significant effect on trust on borrowers. The most important attribute to increase willingness to lend is the borrowers' trustworthiness, protection system/policy adopted in P2P, sense of security when making transactions in P2P, attractive investment returns and quality assurance for prospective borrowers. The most important factor that needs to be considered in increasing the willingness to lend is trust to the borrower. However, no direct interaction between lenders and borrowers requires P2P operators to pay attention to factors of trust from lenders to P2P operators themselves.

**Keywords:** financial technology, peer-to-peer lending, trust, willingness to lend

#### **Email Correspondence:**

mega\_juntak@apps.ipb.ac.id



## ANALYTICAL HIERARCHY PROCESS MODEL FOR VENDOR SELECTION

**Muhammad Fariz Tiowiradin, Nurmala**

University of Indonesia

### ABSTRACT

The selection of vendors in Supply Chain Management is crucial in every company because it will help companies in dealing with global problems where the selection of the right vendor will have a significant impact on company efficiency. The purpose of this study is to determine the priority order of the criteria that influence the selection of vendors for operational vehicles and to analyze these criteria so that alternative vendors should be chosen by the company, by taking a case study at an oil drilling company in Indonesia. This study implements the Analytical Hierarchy Process (AHP) method by using 5 (five) criteria identified through the Systematic Literature Review (SLR) method, namely Quality, Delivery, Cost, Service, and Information Technology. The use of criteria in this study is combined with 4 (four) alternative vendors who have become partners with an oil drilling company in Indonesia. The results showed that the most significant criterion in the selection process was the Service criterion, and PMS was chosen as the vendor of operational vehicle suppliers at oil drilling company in Indonesia based on the priority value of the supplier is the largest. This research will contribute to the company in selecting vendors based on decision making by considering various criteria.

**Keywords:** Analytical hierarchy process, Supply chain management, Decision making, Selection criteria

**Email Correspondence:**

muhammad.fariz82@ui.ac.id

## Investigate the Distribution of Knowledge Structure using Extended Concept Mapping

Didik Dwi Prasetya, Tsukasa Hirashima, Yusuke Hayashi  
Hiroshima University

### ABSTRACT

Extended concept mapping is a technique to connect prior existing concept maps with a new knowledge structure. Some researchers argue that the extended concept mapping approach is efficient in building a knowledge base and facilitating improved meaningful learning. However, no information has been presented regarding the distribution of knowledge structure. This study aimed to compare two extended concept mapping approaches and investigate the distribution of quality of students' knowledge structures. A total of 55 students participated and divided into two groups, control and experimental. The students in the control group used the Extended Scratch-Build (ESB) technique, and those in the experimental group used the Extended Kit-Build (EKB) map. The results suggested that the students in the experimental group not only outperformed the control group in terms of quality of knowledge structure scores but also had an equitable distribution of achievement in material subtopics. Students who used the EKB were able to maintain performances consistently from the beginning to the end of material subtopics.

Keywords: Risk Technology and Knowledge Engineering

### Email Correspondence:

didikdwi@um.ac.id

## **Relationship Between Knowledge Management, Dynamics Capabilities and Innovation Performance to Firm Performance in Financial Technology Companies in Indonesia**

**Ilham Buana, Ratih Dyah Kusumastuti**  
University of Indonesia

### **ABSTRACT**

Research about firm performance has been conducted by many researchers before, the same goes with knowledge management, innovation performance, and dynamics capabilities. However, it will be interesting to study those variables in the context of financial technology industry in Indonesia (where the industry is still new and rapidly growing). Currently, there are 161 financial technology companies in Indonesia, and collectively, they distribute about IDR 25.92 trillion of loans across Indonesia. Hence, the objective of this paper is to develop a conceptual model which explains the relationships among knowledge management, dynamics capabilities, innovation performance, and company performance with the context of financial technology's industry in Indonesia. This paper is expected to provide insights on what factors that influence the performance of financial technology companies in Indonesia.

**Keywords:** Knowledge Management, Dynamics Capabilities, Innovation Performance, Firm Performance, Financial Technology

**Email Correspondence:**  
ilhambuana.m@gmail.com

## Configuring Market Orientation and Organizational Adaptive Capability toward Market Position in Nascent Industries

Dion Achmad, Ratih Dyah Kusumastuti

University of Indonesia

### ABSTRACT

This study analyzes the effect of environmental turbulence on strategic orientation and dynamic capabilities and their impact on market position superiority on research objects in the Indonesian eSports industry. Indonesia's eSports industry is considered a nascent industry, an industry characterized by ambiguous competitive landscapes, a lack of product standards, and uncertain customer demand so that to gain excellence in the market requires strategic skills and adaptability. Therefore, it needs to be examined in the face of environmental turbulence how its influence on strategic orientation especially market orientation and organizational adaptability affects its performance and position in the market in new industries.

Research data was collected by means of surveys and questionnaires distributed to 50 organizations in the eSports industry. Data were analyzed using SmartPLS 2.0 with Partial Least Square Structural Equation Model (PLS-SEM). The results of research show that environmental turbulence encourages organizations to have a market orientation and improve their organizational adaptability. Market orientation positively influences organizational adaptation. Furthermore, market orientation and organizational adaptability have a positive influence on performance and the superiority of its position in the market.

**Keywords:** Nascent industry, Market Orientation, Adaptive Capability, Market Position, eSports

**Email Correspondence:**  
dionachmad@yahoo.com



## **Are Institutional Pressures influencing on sustainability performance in RMG industries of Bangladesh?**

**Marjea Jannat**

Universiti Putra Malaysia

### **ABSTRACT**

With intensifying the global climate change phenomena throughout of the world as well as escalating of surroundings demands firm's operational performance is being evaluated in the context of holistic approach inclusion of economic, environmental and social proportions currently. From the prior 20th century, eye catching change has been observed in business strategy towards sustainable perceptions-the materialization of sustainability has become intrinsic part of the companies. However, after investigating the prior literature it has come to the contemplation that readymade garment (RMG) industries are also one of the major responsible sector for the environmental deterioration. Considering these affairs as burning issues, this study will expand the level of understanding about the influence of institutional pressures on sustainability performance in the context of RMG sector of Bangladesh in the shed of institutional theory. This paper will also contend to bring a novelty about sustainability phenomena that how to face a dilemma situation between massive industrialization and go green concept by handling the pressures consistent with sustainable development goal (SDG). Most importantly during the pandemic of COVID 19, it is been observed that the organizations having high ESG ratings lower the cost of debt and equity where sustainability actions can assist to revamp economic performance while advancing public cooperation for economic growth.

**Keywords:** Sustainability, External Pressures, RMG

### **Email Correspondence:**

PBS19104100@grad.putrabs.edu.my

## **Innovation and Competitiveness for Palm Oil Industry: A review paper**

**Wan Farez Saini Muner, Zulkornain Yusop, Norashida Othman**  
Universiti Putra Malaysia

### **ABSTRACT**

Numerous studies have been done on palm oil in Malaysia, however their studies largely focus on the performance and competitive on upstream level especially in term of palm oil prices using various techniques. Studies done by Hassanpour & Ismail (2010) examines the competitiveness of the Malaysian industrial plantation commodities in selected markets such as Indonesia, Philippines, Singapore and Thailand and China by using the Revealed Comparative Advantage (RCA). The results indicate that Malaysia ranked first in three commodities (cocoa paste, cocoa butter and cocoa powder), Indonesia ranked first in three other commodities (tea, pepper and palm oil) while Philippine ranked first in coconut (copra) based on the result of RCA rankings. Arip et. al (2013) used the same method to examines the comparative advantage of palm oil related products in Malaysia and Indonesia. Their findings based on 20 related palm oil products show Malaysia is more competitive than Indonesia in most of the palm oil downstream products. However, the products was limit to palm oil upstream and midstream level where only for specific product such like biodiesel. Thus this research attempts to study the competitiveness and potential in palm oil downstream industries in terms of their trade competitiveness level as compared to major oils and fats exporting countries and investigates the role of innovation in enhancing the Malaysia's competitiveness in palm oil downstream industry.

**Keywords:** Palm Oil, Competitiveness, Innovation, Trade

**Email Correspondence:**  
kuratormasa@gmail.com

## Comprehensive Due Diligence For Risks Mapping In Mining Industry's Merger and Acquisition Events

Ade Candra, DS Priyarsono, Nimmi Zulbainarni, Roy Sembel  
IPB University

### ABSTRACT

Due diligence (DD) in mining industry are the most important activity before signing the share purchase agreement. All risks shall be reviewed, measured and mitigated in this DD through the analysis of historical, current and future data. DD result also significantly influence to the determination of the company's enterprise value. Sometimes, company may not aware significant aspects in DD proses and lead to uncomprehensive DD thus buyer will bring the risks exposure after transaction completion. This latent risk will bring the company to either higher remedy cost, dispute or unfeasible of the asset afterward.

This study aims to conduct the literature review on previous journals and make comprehensive due diligence model which may applied by the mining company in merger and acquisition process. This model will be a guidance for buyer that involve internal team of the company as well as consultant, law firm, accountant and other investigators for data validation, value and sinergy potency at the agreed DD timeline among the parties.

There are some aspects that need to be reviewed in DD proses as follow; technical aspect (geology, mining and geotechnical), commercial aspect (commodity price, share portion), financial and tax (cost, debt, royalty and tax), legal (licence and dispute), environment, community, and social. There are some key risks in technical aspect that need to be concerned about; coal quality, reserve tonnage, stripping ratio, mine plan and infrastructure.

**Keywords:** Due Diligence, Risk, Literature Review.

### Email Correspondence:

boedaxbangka.candra@gmail.com

## **Risk Management of Bird Watching Saporkren Raja Ampat, Papua Barat**

**Siti Jahroh, Lokita Rizky Megawati, Robinsar Jogi Yoshua Manullang**  
IPB University

### **ABSTRACT**

Raja Ampat is one of the famous tourism objects in Indonesia. It is famous for diving and snorkeling with hundreds beautiful spots. However, there is a tourism spot at Saporkren in Raja Ampat which is specialized for bird watching. Proportion of tourists coming to Saporkren is relatively low compared to other tourism destinations in Raja Ampat. Yet, there are several issues regarding chaos and recently the corona virus, leading to the decreasing number of tourists. This paper aims to analyze risk management of Saporkren in coping with current issues, specifically, (1) to identify the main current problem with its consequences and causes and (2) to provide possible solutions for the main current problem with several strategies. This study will employ problem tree and objective tree analyses. Several respondents will be interviewed such as forest group leader who manages the bird watching area in Saporkren, staff of Natural Resources Conservation where it has the authority to the location of the Saporkren, guide tour leader, tourist, and staff of local government for instant the department of tourism and creative economy. This study will find out the main problems and provide the possible solution strategies.

Keywords: objective tree analysis, main problem, problem tree analysis, solution

#### **Email Correspondence:**

lokita.rizky@apps.ipb.ac.id



## **Information Asymmetry between Lenders and Borrowers: A Systematic Literature Review of P2PL and MSME borrowers**

**Mohd Norullah Razak, Ahmad Shaharudin Abdul Latiff**

University Pendidikan Sultan Idris

### **ABSTRACT**

Micro, Small and Medium Enterprise (MSMEs) both in developed and developing economies encounter challenges in gaining access to financing from the traditional financial institution. Financial Tech (FinTech) startups in a form of Peer-to-Peer Lending (P2PL) have created a new alternative financing option for SMEs, disintermediating bank lending and empower the crowd to finance capital distribution. Information asymmetry between borrowers and lenders has become a classical issue in social lending and affects the efficiency of the lending platform. The purpose of the conceptual paper is to investigate the impact of information asymmetry in P2PL among MSME borrowers. The characteristic of MSME may contribute to more acute Information Asymmetry issues. The conceptual paper will adopt Kitchenham (2004) Systematic Literature Review as the basis of the literature review methodology to investigate the issue. A systematic literature review is a means of identifying, evaluating and interpreting all available research relevant to a particular phenomenon of interest. In-depth understanding of how information asymmetry may influence P2PL efficiency due to a shortage of information source from MSME.

**Keywords:** Information Asymmetry, P2P Lending, MSME

### **Email Correspondence:**

[norullah@fpe.upsi.edu.my](mailto:norullah@fpe.upsi.edu.my)

## **Managing Investment Risk through Stocks Selection to Achieve Valuable and Sustainable Palm Oil Industry**

**Arif Imam Suroso, Hansen Tandra, Achmad Fadillah**

IPB University

### **ABSTRACT**

The palm oil industry has a strategic role in economic development in Indonesia, especially in alleviating poverty and creating other businesses that can support the industry. Operational activities in the palm oil industry are closely related to environmental issues (deforestation, land use change, and air pollution) and social conflict. The certification program is an effort for the palm oil industry to implement sustainable development. The certified palm oil industry will increase industrial profitability in the long run, so that it can increase investor interest in the future. The decision to choose palm oil industry stocks that carry out sustainable practices and generate maximum returns is an interesting issue, but how investors can choose the right stocks and the minimum level of risk. This study aims to apply the decision-making model to choose the optimal stock in the palm oil industry based on the minimum and potential levels of risk. The method used in this study was the Preference Ranking Organization Method for Enrichment Evaluation (PROMETHEE) based on the Indonesia Stock Exchange (IDX) data. Determinants of stock selection decisions from previous research are considered criteria for decision making. Through the PROMETHEE method, a list of the rankings of the oil palm industry shares can be generated and can be used as reference for relevant stakeholders such as investor. Further studies need to be developed by adding several other criteria such as macroeconomic factors and non-financial aspects in firm.

**Keywords:** Palm Oil, PROMETHEE, Risk Investment, Stocks, Sustainable Certification

### **Email Correspondence:**

[hansentandra@apps.ipb.ac.id](mailto:hansentandra@apps.ipb.ac.id)

## **The Impact of Local Influencer Endorsements on Consumer Purchasing Intentions: a Replication Study for the Indonesian SMEs Market Perspective**

**I Made Harry Kurniawan**  
University of Indonesia

### **ABSTRACT**

SMEs have always had to face the disadvantages of being in competition with major corporations' products and brands in the modern market, mainly due to their lack of resources for capital, expertise, technology and networks. Several studies have acknowledged that better access for financial support as one of the SMEs' major challenges, however only few of them are suggesting alternative feasible strategies to assist SMEs to gain market share against major firms. A considerable approach by SMEs is to promote their products and brands match with SMEs capacities through local influencer endorsement to stimulate consumer purchase intentions. Indonesian culture suggests Islamic religious moral leaders as one of the significant type of influencers in Indonesian local social communities. The influencer terminology used in this study refers to traditional leadership influencer concept in social groups' behavior. This study is designed to identify the impact of local influencer endorsements on consumer purchase intentions and the moderating effect of negative publicity on the SME market perspective in Indonesia; which provides a theoretical foundation whereby SMEs practitioners can use the suggested approach. A structured questionnaire was created to acquire primary data from 273 respondents using a quantitative research design. The findings from this study indicate that attractiveness, trustworthiness and familiarity are factors supporting the image of local influencer endorsements, which positively influence consumers' perceptions of quality, purchase intentions and brand loyalty. Furthermore, this study also shows that negative publicity on local influencer endorsements does not have a moderating effect on consumer purchase intentions.

**Keywords:** SMEs, Influencers Endorsers, Purchase Intentions, Perception of Quality, Brand Loyalty, Negative Publicity

#### **Email Correspondence:**

hkurniawan2012@gmail.com

## **Project Risk Assessment to Anticipate Potential Business Risk: A Case Study at PT Telkom Indonesia**

**Rifa Herdian, Raden Isma Anggraini**  
PT Telkom Indonesia

### **ABSTRACT**

In project management, project risk assessment has a significant role in anticipating business risks. PT Telkom as one of the State-Owned Enterprises in Indonesia has implemented many projects aimed at providing the best service for customers in the field of telecommunications services. For this reason, PT Telkom needs to carry out a risk assessment project to mitigate the risk of loss, facilitate the implementation of work and facilitate control and supervision within the framework of Enterprise Risk Management(ERM). This study aims to identify project risks and identify the stages of project risk assessment as a guide in anticipating business risks. This study uses document testing methods or document review to identify project risks and interview with an internal expert. The results of the study indicate that significant project risk is the risk associated with the collectibility of account receivables. Stages in the project risk assessment include customer assessment, project assessment, and mitigation plans. The next step that can be taken is to develop IT systems to support integration between systems and conduct periodic evaluations to ensure compliance with these guidelines.

Keywords: ERM, business, risk mitigation, project risk assessment, telecommunications

**Email Correspondence:**  
rifaherdian1@gmail.com



## EVENT STUDY ON THE REACTION OF STOCK RETURNS TO SARS, MERS, AND COVID-19: EVIDENCE FROM INDONESIA

Salsa Dilla, Linda Karlina Sari, Noer Azam Achsani

IPB University

### ABSTRACT

This research used event study methodology to evaluate exchange rates returns performance of Rupiah over the top three most traded currencies in the world. Comparing three historical outbreak events (SARS, MERS, and COVID-19), the sample of the study consisted of daily historical data from January 2001 to March 2020. The market model is applied in order to predict expected exchange rates returns and the use of simple regression to get the parameters of the regression equation. A t-test used to examine whether the outbreak events (SARS, MERS and COVID-19) does appear to be related significantly to the abnormal returns. The finding showed that the respond of exchange rate movement to the outbreak events were in a mixed result. Overall, COVID-19 brings the greatest reaction to the volatility of Rupiah compared to SARS and MERS.

Keywords: abnormal return, event study, stock return, virus outbreak, Indonesia

### Email Correspondence:

salsadilla@apps.ipb.ac.id

## **Protecting Investment from COVID-19 Outbreak: The effect, the response and the shield for potential investment**

**Asaduddin Abdullah, Suhendi, Fithriyyah Shalihati**

IPB University

### **ABSTRACT**

The COVID-19 has been officially recognized as a global pandemic by the World Health Organization (WHO) on March 11, 2020. The main pandemic countermeasure was physical and social distancing which halted various markets and disturbed of the world economy. Until the paper published no one fully knows what the long-term effect on the markets will be. In this paper, we analyze the potential effects of COVID-19 pandemic on the market and commodity sectors. We compared similar past outbreaks, such as SARS. Then we proposed possible strategy for an individual or institutional investor to manage a profit from fallen market. We concluded that, in the short run, the markets will be responded destructively to the disease outbreaks. Hence, in the long run, the markets' mechanism will correct themselves and surpass the previous high yield. Shorting investment in industries or sectors that will be immediately affected by the virus will provide profit. Specifically, in the travel industry, healthcare sectors, fast moving consumer's goods industry, and gold as potential areas where great profit can be made.

**Keywords:** Investing strategy, Pandemic Outbreak, Event study, Covid-19

### **Email Correspondence:**

asaduddin.abdullah@gmail.com

## Risk Management of University of Academic Administrative Support

Anita Primaswari Widhiani, Retnaningsih  
IPB University

### ABSTRACT

In the time of the pandemic, universities are changing their way of doing business. The aim of this research is to study how the academic support unit of a university adjusting to the condition and manage the risks that comes with the adjustment. The jobs with the biggest risks are providing diploma and final transcript and conducting graduation ceremony. Providing diploma and final transcript inherently carry legal and reputation risks and providing the paper version of those documents increase the probability of those risks. The first scenario is to mitigate every risk that may come by doing the job with pandemic protocols. The second scenario is to develop e-diploma system that mitigate the risks associated with producing and producing paper diploma. Conducting physical graduation ceremony during the pandemic requires arduous health and safety measures. The alternative is having digital graduation ceremony on virtual reality platform to mitigate the risks of conducting physical graduation ceremony while still maintaining a sense of engagement.

Keywords: risk management, university management, academic administrative support

**Email Correspondence:**  
anitawi@apps.ipb.ac.id

## **The volatility transmission of global stock returns to Indonesian sectoral index**

**Linda Karlina Sari, Salsa Dilla, Noer Azam Achsani**

IPB University

### **ABSTRACT**

Over recent decades, international financial markets become increasingly integrated. It makes shocks in one market transmitted to other markets so that the interrelated markets will face financial instability. The study aims to examine the characteristics and impacts of the transmission of volatility in Indonesian sectoral indices. Firstly, this research will analyze the existence of volatility returns on the composite indices of several global stock markets such as the US, UK, Hong Kong, Japan, and Singapore indices, as well as on Indonesian sectoral indices. Secondly, this study will observe the volatility transmission of foreign market indices against the Indonesian sectoral index. The data employed in this study are daily closing stock market indices over the period 2010-2019. Modeling of stock return volatility uses symmetric and asymmetric GARCH, while analysis of stock return volatility transmission utilizes Vector Autoregressive Model. The expected result is the model can reveal the existence of asymmetric effects on those several global stock markets and Indonesian sectoral indices. Another finding is the volatility of the main global stock's return plays dominant roles in influencing the volatility return of Indonesia sectoral indices.

**Keywords:** GARCH asymmetric, modeling, sectoral index, stock market, volatility

### **Email Correspondence:**

[lindakarlinas@apps.ipb.ac.id](mailto:lindakarlinas@apps.ipb.ac.id)



## **DETERMINANT FACTOR THE EFFICIENCY AND INEFFICIENCY OF PRODUCTION FROM CHILLI (*Capsicum frutescens* L.) FARMING SYSTEM IN KLUNGKUNG REGENCY BALI PROVINCE**

**Jemmy Rinaldi, Eko Nugroho Jati, I Ketut Mahaputra, Anella Retna Kumala Sari, Yusti Pujiawati**

Bali Assessment Institute of Agricultural Technology-Ministry of Agriculture

### **ABSTRACT**

Klungkung Regency is one of chili center producers in Bali which was declared as a horticulture commodities development, particularly chili. Most farmers are still applied traditional technologies on chili production; hence farmers have limited knowledge about efficiency of chili production. This research is aimed to: (1) find out affecting factors of chili production efficiency in Klungkung Regency, and (2) find out affecting factors of chili production inefficiency in Klungkung Regency. Data were collected using questionnaires on survey techniques. Number of respondents were 40 farmers, consists of 22 farmers from Getakan Village, Banjarangkan District, and 18 farmers from Gelgel Village, Klungkung District. Collected data were then analyzed by stochastic frontier approach with front 4.1 analysis tools. Results of this research showed that input factors have positive effect to improve chili production are land area, potassium (K) and manure fertilizer applications. Whereas input factor have negative effect to chili production are phosphate (P) fertilizer and ZA application. Meanwhile, social factors have negative effect to inefficiency chili production is education level of farmers.

**Keywords:** Chili, efficiency, inefficiency, Bali

**Email Correspondence:**  
anellaretna@yahoo.com

## Technology and Education: A Deterministic and Instrumentalist Philosophical Approach

Ayotunde Adelaja, Rosna Awang Hashim

Universiti Utara Malaysia

### ABSTRACT

Over the past few decades, enormous studies examining the significant contribution of technology adoption and usage in the education industry have emerged. Albeit, miniatures of this literature tend to focus on the outcome of massive (total) dependence of these technologies. To achieve the study objective, instrumentalism, and determinism philosophical approaches are employed to investigate the result of the full dependence of education technology in the pedagogical process in the education industry. Exhuming works of literature on technology adoption and usage in the education industry, and how the two philosophical approaches are being used in the field of philosophy, the conceptual findings reveal that using the instrumentalism approach to identify the potential outcome of educational technologies for the pedagogical process, there are bigger chances of producing a high level of effective and efficient students over traditional education. However, complete technology usage can be a complete disaster for the education industry if education is commercialized to the extent that education is viewed by students as a determining substance with lesser value.

Keywords: Education Technology, Determinism, Instrumentalism, Philosophy, Education Industry

### Email Correspondence:

ayoadelaja@live.com

# THE EFFECT OF UTILIZATION OF A COMPUTER-BASED ACCOUNTING INFORMATION SYSTEM, HUMAN RESOURCE COMPETENCIES, TRANSPARENCY OF FINANCIAL STATEMENTS TO THE QUALITY OF FINANCIAL REPORTS IN THE DEPOK CITY GOVERNMENT

Sri Ambarwati, N Aryani  
Universitas Pancasila

## ABSTRACT

This study aimed to examine the effect of utilization of a Computer-Based Accounting Information System, Human Resource Competencies, Transparency of Financial Statements to the Quality of Financial Reports in the Depok City Government. Research method used was Quantitative Research. The data sources in this study uses primary data obtained from the results of questionnaires. The population in this study were 13 Regional Apparatus Organizations (OPD), 1 Regional Secretariat, and 2 Government Bodies in Depok City with number of samples was 68 people. Research on this data was analyzed using multiple linear regression with SPSS Statistical Programs. The results of this study indicated that Transparency has a positive effect on the Quality of Financial Statements as hypothesized. Nevertheless the Utilization of computer-based Accounting Information Systems (AIS) and Competence were not related to the Quality of Financial Statements. The study addresses an important area in Accounting Systems Research that directly relates to implementation and usefulness of Accounting Information Systems and the mediating role of transparency to support the control system.

Keywords: AIS, Human Resource Competencies, Financial Statements Transparency, Financial Reports Quality

### Email Correspondence:

sriambarwati@univpancasila.ac.id

## **Competitive Dialogue to find the best price among PT AAT with BPPD Banten Province for Clean Water Project in Tangerang District**

**Binsar Naipospos**

ITB - Bandung Institute of Technology

### **ABSTRACT**

Competitive dialogue is an alternative communication approach to adjust the conventional restricted procedure for all client and bidder which considered may think flexible procedure for negotiation in infrastructure planning. Why the communication happened because of some complex ingredient required while the bidders cannot define all technical means capable to satisfy client's need. For the clean water project in Tangerang one of the complicated point complicated to decide was how to set the best competitive selling price. BPPD is a government institution of provincial revenue management board responsible to consult about taxes, retribution or public utilities price and other revenues. The presence of upper provincial government level of BPPD belongs to bridge the inter-government negotiation of how to find the best solution among two local government institutions or between Kabupaten and Kotamadya Tangerang and with PT AAT or PT Aetra Air Tangerang. Competitive dialogue is used as an alternative approach to advance infrastructure development within clean water project. Theoretical debate about communication in planning has been conducted by many planning theorists. Consensus-building where all the stakeholders being participated in authentic dialogue, including learning, changing, and sharing are play a significant role to produce an agreement (Innes and Booher, 2010). This article aimed to explore an effective communicative planning approach in infrastructure development through competitive dialogue between local government of Tangerang District and the winning clean water project company (PT AAT).

**Keywords:** Competitive Dialogue, Communicative Planning, Infrastructure Development, Pricing System

**Email Correspondence:**  
binsarn3@yahoo.com



## **COVID-19 pandemic impact on logistics mobility and raw materials supply vulnerability in pharmaceuticals industry: A case study of export-oriented multinational pharmaceutical company based in Indonesia.**

**Adrin Rauf**  
Kamika Consulting

### **ABSTRACT**

Healthcare sector plays critical role in protecting citizens against health risks arising from epidemics. Citizens expect government to provide response systems to handle emergencies adequately, thus a robust and resilient pharmaceutical supply chain that is free of disruption is of paramount importance. The COVID-19 pandemic has escalated into the largest health crisis of the 21st Century. According to the COVID-19 situation dashboard of the World Health Organization, the virus has infected more than 3,767,000 people worldwide to date, with fatality cases already reach more than 250,000. Many countries have thus imposed pandemic suppression measures such as lock-downs and community quarantines in an effort to stem the progress of the pandemic. In a globalized market, pharmaceuticals production in one country has involved a complex supply chain network of raw materials suppliers from many countries. Global logistics mobility has become a pivotal factor to enable the cross-border raw materials supply to arrive at the production base. COVID-19 pandemic has severely limited the logistics mobility due to lock-downs, and community quarantines. With COVID-19 pandemic expected to result in increasingly stringent logistics mobility in the future, it is critical that logisticians understand the impact that this pandemic event could have on supply chain disruption to facilitate the design of supply systems that are robust and resilient. A case study is conducted in export-oriented multinational pharmaceutical company with production base in Indonesia to investigate the main causal and intermediate events that led to disruption of the pharmaceutical supply chain following COVID-19 pandemic.

**Keywords:** COVID-19, Pandemic, Pharmaceutical Supply Chain, Logistics Mobility, Indonesia, Supply, Chain Disruption, Supply Risk

**Email Correspondence:**  
adrinrauf@gmail.com

## **Risk Management for Cash Waqf in Indonesia**

**Fithriyyah Shalihati, Qurroh Ayuniyyah**

IPB University

### **ABSTRACT**

As one of Islamic institution, cash waqf has a great potential especially in Indonesia as this country is one of the largest Muslim populous countries in the world. From the socio-economic point of view, number of studies show that waqf and cash waqf play significant roles in realizing welfare of the society as well as financing public facility for the low-income group of the society including health and education. The potential collection of cash waqf has been also great. Unfortunately, the realization of cash waqf is still far from its expectation. This shows that management of waqf's institution in Indonesia has not been able to optimize the cash waqf collection. This paper aims to evaluate cash waqf management in Indonesia in general. The paper also identifies the issues of risk management for cash waqf in Indonesia by using SWOT (strengths, weaknesses, opportunities, and threats) analysis. This study suggests the use of digital system to mitigate the risk of cash waqf management in Indonesia.

**Keywords:** Risk Management, Cash Waqf, Digitalization, SWOT Analysis

#### **Email Correspondence:**

oktyshalihati@apps.ipb.ac.id

## A CONCEPTUAL STUDY OF FACTORS THAT LEAD TO BLOCKCHAIN TECHNOLOGY ADOPTION IN A DEVELOPING COUNTRY CONTEXT (MOROCCO)

Oumaima Hafide, Yacoutt Zenzali, Younes Lafraxo  
Faculty of Law, Economics and Social Sciences Marrakech

### ABSTRACT

The Blockchain is a relatively new concept that finds its source in the first cryptographic currency known as Bitcoin. The BC is essentially known as a decentralized ledger that records every transaction made in a network called a "block", the body of which contains the encrypted data of the entire transaction history. It has a wider range of applications than the simple digital cryptographic platform. The Blockchain technology adoption depends on different factors. Several research papers and reports have focused on this technology over the past decade.

In Morocco, many companies do not consider the importance of their information system strategic alignment, which makes the blockchain technology difficult to implement and manage.

This paper provides a systematic literature review of the factors that lead to blockchain applications in multiple domains and captures the complex relationships between trust, risk, security and Blockchain technology adoption in the Moroccan context.

Thus, this paper will also highlight the link between BC implementation and its strategic alignment.

**Keywords:** Blockchain technology, Applications, Adoption, Trust, Risk, Security, Moroccan context

### Email Correspondence:

zyacoutt@gmail.com, oumaima.hafide@gmail.com

## **An Optimal Model on the Total Implementation Cost in Preventing the Occurrence of Dengue Outbreak in the Barangays of Lipa City, Batangas using Integer Linear Programming**

**Gabriel Bucu, Alexis Joseph Baarde, Rosarie Joy Balneg, Lara Isabelle Cabral, Maria Jocelyn Cerezo**  
De La Salle University

### **ABSTRACT**

Dengue is the fastest spreading vector-borne disease in the world endemic in 100 countries. The virus imposes a substantial burden on communities and health systems in most tropical and subtropical countries. It is also one of the major public health problems in the Philippines supported with the disease being endemic in the 17 regions, 81 provinces, 1,634 municipalities/cities, and 40,086 barangays of the country. A statistical report from the Department of Health states that there have been a total number of 322,693 dengue cases and 1,272 deaths in the country covering the period of January 1, 2019, to September 21, 2019, which is 115% higher compared to the period last year (149,849 dengue cases). With the continuous surge of dengue cases, the Department of Health declared the Philippines to be under the National Dengue Alert last July 15, 2019. Following the announcement, all DOH regional offices were urged to step up their Dengue Preparedness and Outbreak Response. The research aims to minimize overall implementation cost and to prevent the occurrence of dengue outbreak through the use of Integer Linear Programming. ILP is an optimization tool used in Operations Research which uses discrete variables to either maximize or minimize an objective. Various studies have utilized this method in different cases of health sectors. The researchers also conducted a Multiple Linear Regression equation to determine the coefficients needed to predict the change in the number of dengue cases after implementing the present preventive measures used by a community.

**Keywords:** Integer Linear Programming, Operations Research, Health Sector, Dengue Outbreak, Multiple Linear Regression

### **Email Correspondence:**

laraisabelle.cabral.eng@ust.edu.ph



## **Systematic Human Resource Allocation for a Medical Mission Program through Integrated Application of Integer Linear Programming and Monte Carlo Simulation in Sapang Palay, San Jose Del Monte: A Case Study Approach**

**Gabriel Bucu, Carmella Altares, Danessa Eunice Candelaria, Rheena Amor Chavez, Cyrille Enan Rivera**  
De La Salle University

### **ABSTRACT**

One major problem that has not been addressed in a medical mission program is the inefficient system of the partaking institution. This gap has brought about problems such as conflicting numbers of expected patients and an unutilized number of volunteers. This research aims to be of help to a volunteer institution in addressing the manpower utilization in their annual Medical Mission in Sapang Palay, Bulacan. This research aims to provide a solution to address the research gap by creating mathematical models using Operations Research tools specifically through the Integer Linear Programming and Monte Carlo Simulation model that will result in quality healthcare programs and services to the people in need. The researchers decided to conduct a sensitivity analysis that results in 3 additional cases excluding Case 1. The ILP results showed that significant change in the number of patients would affect the number of required volunteers in the program and the budget needed. Also, adding an inflation rate of 1.3% will affect the budget while the number of volunteers is still the same. In addition, the researchers applied Monte Carlo Simulation by using Random Digit Assignment which is generated from the software to determine whether it is probable to accommodate the patients with the corresponding optimal number of volunteers acquired from ILP. The models tested were both optimal and feasible to lessen unutilized medical personnel.

**Keywords:** Integer Linear Programming, Healthcare, Medical Mission, Monte Carlo Simulation, Operations Research

### **Email Correspondence:**

carmella.altares.eng@ust.edu.ph

## **Challenges in Indonesian Fiscal and Monetary Policy in Oil & Gas Sector: Empirical Evidence from Indonesia**

**Mohamad Firwan Aprizal, Bambang Juanda, Anny Ratnawati, Abdul Muin**  
IPB University

### **ABSTRACT**

Indonesia has been becoming one of the oil exporting countries since 1965. The historical Indonesian crude oil production mimic the natural cycle of oil production which follow 3 phases of production cycle. The early cycle is called the building up cycle, the 2nd cycle is called the plateau period and the last cycle is called the declining period. Indonesia is now under the declining period, however the increase of consumption causes trade deficit which become larger with time. Continuous production decline reflects limited discovery as a result of declining investment. The focus of the study is to evaluate variables affecting investment in oil and gas sector. The current production is depleting the current proved reserves therefore increasing production will only give impact for short term because of insufficient additional reserves to replace the decreasing proved reserves. Initial hypothesis suggested combination of macroeconomic factors, fiscal regime and the campaign for nationalization affect investment. The first model is VAR Panel to provide empirical evidence of causal relationship between 3 types of investment with lifting and total oil reserve. The second VAR panel model is for causal relationship between total investment with macroeconomic factors such as inflation, exchange and interest rate. The third VAR panel model is for empirical evidence between cost recovery with production, investment and government income. The results of the three models will be treated as input parameter for formulating attractive fiscal regime and appropriate monetary policies.

**Keywords:** Proved reserves, Trade deficit, Fiscal regime, Cost recovery

**Email Correspondence:**  
firwanaprizal@gmail.com

## Conservation Risk Assessment for Managing Plant Collection of a Botanic Gardens: Indonesian Experience

**Reni Lestari**

Indonesian Institute of Sciences

### ABSTRACT

Botanic Gardens as one of Ex Situ Plant Conservation Institution manage documented collection for conservation, research, education, tourism and ecosystem services purposes. There are many processes for plants to become garden's collection, from collecting the plants from their habitat until displaying at the garden. At the moment, the detail information required to get accurate data of many risks in term of collections is lacking. Nevertheless, simply attempting from the experiences and information from botanic gardens in Indonesia has produced valuable results.

This paper will explain furthermore the identifying risks of plant collections management in the botanic gardens, with accordance to the processes of the collections, as well as the effort to reduce the risks for preventive conservation. The overall information will beneficial for the management, institution and decision maker in relation to handling the collection in a botanic garden.

**Keywords:** Risk assessment, Botanic Gardens, Plant collection, Preventive conservation

### Email Correspondence:

reni\_naa@yahoo.com

## **Preliminary Assessment of Service Delivery in Establishing an Emergency Response Framework for Emergency Response on COVID-19 Pandemic**

**Gabriel Bucu, Karl Benedict Ong**  
De La Salle University

### **ABSTRACT**

The global pandemic of SARS-COV-2 (COVID-19) affected the delivery of healthcare worldwide. Due to the increasing number of COVID-19 cases in the Philippines starting March 2020, various efforts were made by the local government units to combat the problem. Moreover, the National Capital Region (NCR), the center of business and technology in the country, faced the challenges of having the highest reported confirmed cases and persons under monitoring and investigation. The challenge for the government was on providing effective and efficient service delivery of their emergency response actions considering the given risk of transmission leading to fatality. This study adopted the service quality (SERVQUAL) tool in understanding the customer satisfaction of middle-income Filipino households and the results were run through multiple linear regression. The main problem during the pandemic and enhanced community quarantine were analyzed by identifying its root causes through Pareto Chart, Ishikawa Diagram and 5 Why Analysis. Results were used as inputs in creating an emergency response framework with the goal of higher satisfaction of service delivery by adopting the PDCA (Plan-Do-Check-Act) approach. It was found that individuals seek tangible and faster actions while considering their varying individual needs. Findings from the survey showed that the unavailability of food and other necessities is the main problem majority of the respondents encountered during the pandemic. This study can be used by key decision-makers in prioritizing efforts in ensuring the health and safety of the citizens in times of pandemic, especially when the city or nation-wide quarantines are implemented.

**Keywords:** COVID-19, Service Delivery, Service Quality, Emergency Response, Multiple linear regression

**Email Correspondence:**  
gcbucu@ust.edu.ph



## **An Integrated Application of Integer Linear Programming and Ergonomic Principles in Re-designing Disaster Go-Bags for Adult Filipinos**

**Gabriel Bucu, Polo Miguel Elefante, Julien Christiane Gicalao, Loreto Jaen , John Danyael Taguinod**  
De La Salle University

### **ABSTRACT**

Disasters have been rampant in the history of the Philippines. There are already existing methods of disaster preparedness; one of the most common is the disaster go-bag. Countries such as Canada, England, Japan, and Scotland have guidelines on the creation of emergency disaster go-bags. This research aims to solve this problem by re-designing disaster go-bags using an integer linear programming model through optimum content allocation and anthropometry to tailor-fit to adult Filipinos. Constraints such as the volume and the allowable weight of the bag were also considered. Sensitivity analysis was also used to determine the flexibility and feasibility of the study by using two cases - male and female. For the first case or base model, it is found that in terms of food, the bag contains 8 cans of tuna and 6 high energy bars. For water requirements, it contains 1 (1L) of bottled water and 28 water tablets. For the tools that are in the bag, there is a whistle, flashlight, radio, lighter, and powerband. Finally, in terms of hygiene 1 (250ml) disinfectant alcohol 1 bandage 1 gauze and room for special needs. For the second case, the only constraints changed was the allowable weight of the bag. This caused the second case results to differ in terms of a radio in the contents of the bag. Researchers have concluded that using ILP, the models tested are both optimal and feasible in creating an optimized disaster go-bag.

**Keywords:** Operations Research, Ergonomics, Anthropometry, Integer Linear Programming, Disaster Preparedness, Disaster Go-Bags

**Email Correspondence:**  
gcbucu@ust.edu.ph

## **Establishing a Procurement Model in Philippine Barangay Health Centers Using an Integer Linear Programming Model**

**Gabriel Bucu, Glenn Gerald Castañeda, Keziah Marella Cueto, Clara Franchesca Mendoza, Angeline Nicole Regalado**  
University of Santo Tomas, Manila

### **ABSTRACT**

The Philippines is one of the populous nations in the world suffers from the scarcity of healthcare resources. The research aims to increase the percentage of population accommodated by healthcare resources in barangay health centers annually using Integer Linear Programming (ILP). ILP is an optimization tool used in Operations Research which is composed of different variables and constants to either maximize or minimize the objective. It will be used to address the problem of the insufficiency of healthcare resources in the Philippines which can also be used on different local barangay health centers in the Philippines. The study will be comprised of two models – the Human Resource Model and Basic Medical Equipment Model. The researchers also conducted three different cases for each model to test the feasibility and optimality of the model. For the first case, the base model, it is found that there is an infeasible solution with the data used from 2018 for the Human Resource Model. For the second case, decreasing the budget of 17% given to the Department of Health for 2019. This case decreased the budget allocated for the Human Resource of healthcare resources which makes the model more infeasible for the Model. For the third case, the surplus in the budget constraint of the Basic Medical Equipment Model will be used as an incremental for the budget constraint in the Human Resource Model to point out the lack of budget as a source of infeasibility for the first two models of Human Resource.

**Keywords:** Integer Linear Programming, Operations Research, Healthcare Resources, Barangay Health Center, Optimization

#### **Email Correspondence:**

clarafranchesca.mendoza.eng@ust.edu.ph

## **A literature Review on Existing Risk Management Maturity Models - Searching for The Most Practical Use to Indonesian State-Owned Enterprise (SOE)**

**Franciskus Antonius Alijoyo, Ridwan Hendra, Kevin Bastian Sirait**  
Parahyangan Catholic University

### **ABSTRACT**

The risk management maturity model (RMMM) has the purpose of helping the firms in assessing their risk management practices and effectiveness in managing risks for various sectors, and yet there is a lack of studies in tracking the progress and status of RMMM at the enterprise level. Following this issue, the purpose of this research is to list and synthesize the RMMM and map their similarities and differences to determine and identify the state-of-the-art of the existing enterprise RMMM. The synthesizing process of the enterprise RMMM uses the approach of literature review on the existing RMMM established after the introduction of the ISO 31000 standard in 2009. Moreover, the enterprise RMMM of interest are the models that emphasize practicality instead of theoretically. The findings show that enterprise RMMM has its level of complexity and characteristics, indicating that not all maturity models are suitable for every firm, and the aspect of technology has an increase of importance within the current state-of-the-art of enterprise RMMM. Therefore, firms are recommended to select a RMMM that matches their risk management capabilities and effectiveness and capitalize on the advancement of technology to enhance their risk management maturity.

**Keywords:** Risk Management Maturity, State Owned Enterprises. ISO 31000

**Email Correspondence:**  
sirait.kb@gmail.com

## **Disperse of Ownership, Liquidity, and Firm Value: Evidence from Indonesia**

**Syaipul Malik Ibrahim, Dewi Hanggraeni**

University of Indonesia

### **ABSTRACT**

This study aims to investigate the relationship between disperse of ownership, liquidity, and firm value using a sample of 225 Companies on Indonesia Stock Exchange (IDX) market conditions since 2014 until 2019. We examine disperse of ownership as measured by free float, liquidity as measured by Amihud illiquidity, firm value as measured by Tobin's Q, and total assets, operating income to price ratio, financial leverage ratio, operating income on assets, relative bid-ask spread, turnover of stock, depth of stock, stock return, and return on assets as control variables. We uses panel data, which is combination of cross section and time series data from Thompson Reuters data stream. We find that this study indicated that free float is negatively associated with liquidity of stock and both free float and liquidity of stock is negatively associated with firm value. Our findings are consistent with some of prior research in relation to blockholder dispersion have a negative correlation with Tobin's Q and disperse of ownership positively impact liquidity of stock.

**Keywords:** Disperse of Ownership, Free Float, Amihud Illiquidity, Firm Value, Tobin's Q

### **Email Correspondence:**

syaipulmalikibrahim@gmail.com



## **Influence of Credit Risk and Interest Rate Risk as a Moderating Liquidity on Bank Performance in Indonesia.**

**Sugeng Wahyudi, Wisnu Mawardi, Julia Safitri**

Diponegoro University

### **ABSTRACT**

This study aims to find out that credit risk and interest rate risk can mediate liquidity and minimum reserves on bank performance. Using data on banking companies listed on the IDX in 2010-2018. The analysis tool used is SEM-PLS with the WarpPLS 5.0 application. the results of this study indicate that credit risk which is proxied by Raroc is influential but not significant. Credit risk negatively affects bank performance. This shows that the greater the credit risk, the smaller the bank's performance. This proves that credit risk can mediate liquidity on bank performance, where liquidity has a negative effect on credit risk. Furthermore, interest rate risk has a negative effect on bank performance, this is proven by a significant 3 percent, that the lower the interest rate risk, the lower the bank's performance.

Keywords: interest rate risk, return adjusted risk on capital, return on assets

### **Email Correspondence:**

phypit.js@gmail.com

## **INITIATING THE IMPLEMENTATION OF INTEGRATED GRC THROUGH INTEGRATED MONITORING OF THE MONITORING PROCESS AND CONTROL IN THE GRC SYSTEM AND RISK MANAGEMENT USING THE RISK MANAGEMENT APPLICATION (MARKO APPLICATION)**

**Yasmine Ramadhana Harahap, Dewi Utami Saptaningrum, Dwi Athika Widyanti**  
BPJS Kesehatan

### **ABSTRACT**

Writing aims to ensure the achievement of the application of GRC towards principled performance through integrated monitoring by functions involved in the application of GRC to the process of monitoring and controlling appropriate and adequate GRC systems and risk management using risk management applications (MARKO application).

background, based on observations and experience of the risk management unit to obstacles in the field when managing GRC in monitoring the effectiveness of GRC management in accordance with the provisions and measuring the achievement of the implementation of integrated GRC implementation.

The research method used is a qualitative case study on the application of GRC using interview techniques, observation, as well as documentary studies which are then analyzed on the background, circumstances, and interactions that occur.

At the implementation level, the opportunity for improvement in GRC implementation is that there is no alignment between risk management and performance management (including business processes) and there are only a few sources and experiences of organizations that apply GRC, especially the tangible results of achieving effective GRC implementation.

The process of monitoring and controlling the GRC system and risk management using the MARKO application has a high chance of successful GRC implementation as well as quality risk management. The goal to achieve principled performance can be successful during the process of achieving this goal can be monitored through the GRC Dashboard on the Marko application by utilizing data derived from performance monitoring applications, budget monitoring applications, financial applications and other applications.

**Keywords:** Financial Distress, Bankruptcy, Altman Z-Score, Springate, Grover

### **Email Correspondence:**

dewi.utami@bpjs-kesehatan.go.id

## ACCURACY OF THE GROVER MODEL IN PREDICTING COMPANY'S FINANCIAL BANKRUPTCY - CASE IN CONSUMER GOODS MANUFACTURING COMPANY

Ana Kadarningsih, Irene Rini Demi Pangestuti, Sugeng Wahyudi, Julia Safitri  
Diponegoro University

### ABSTRACT

The purpose of this study aims to determine the highest level of accuracy of the three bankruptcy prediction models, namely the Grover model, the Altman Z-Score model, and the Springate model. The research data consisted of 525 financial data taken from 35 manufacturing companies in the consumer goods industry sector which were listed on the Indonesia Stock Exchange during 2016-2018. Data processing methods using quantitative methods with the prediction formulation of financial distress and hypothesis testing. Data analysis techniques in this study used a predictive model formulation bankruptcy and Paired Sample t-Test through the SPSS application for hypothesis testing. The results found that the Grover model had the highest accuracy rate in predicting financial distress by 94% with an error type of 6%. While the Springate model shows the lowest accuracy rate of 77% in the prediction of financial distress with an error type of 28%. While testing the hypotheses of the three financial bankruptcy prediction models results in a significant difference between the Grover model, the Altman Z-Score model and the Springate model in predicting the company's financial bankruptcy.

Keywords: Financial Distress, Bankruptcy, Altman Z-Score, Springate, Grover

#### Email Correspondence:

ana.kadarningsih@dsn.dinus.ac.id

## **Risk Assessment of Security Management for IoT Services Using Failure Modes and Effects Analysis: Case Study in XYZ Agency**

**Jihar Mayangsari, Muhamad Asvial, Alvin Yudistriansyah**  
Universitas Indonesia

### **ABSTRACT**

Telecommunications companies are developing a new business model, which is the Internet of Things (IoT). The connection of IoT devices to the Internet can be a threat to users and service providers due to security challenges. XYZ agency is developing IoT as a new business model. However, XYZ agency has not yet implemented a security framework for their IoT service. This study aims to identify the risks associated with IoT service security management at XYZ agency. This research uses Failure Modes and Effects Analysis (FMEA) as a tool for new services in the field of IoT to identify potential security risks. Using FMEA as a risk assessment should determine rating of the severity, occurrence, and detection of threats. Data were collected by interview, observation, and questionnaire-based survey with total 9 experts' judgement. In this study, IoT services are divided into seven domains: IoT Devices and Sensors, IoT Networks, Platforms and Applications, People, Operations, Asset Management, and Suppliers. The major contribution of this study is to contribute the improvement of security controls risk management in IoT services. The results of this study indicate that Inoperable computers and system networks operations (N01) is the highest risk, besides that asset management, and people at XYZ Agency are important components in managing the security of IoT services due to all risk IDs in those domains are in the high-level risk category. By following the research result, this new approach was proved to be able to be applied for IoT security risk assessment.

**Keywords:** Internet of Things, Risk Analysis, Security Management

### **Email Correspondence:**

jihar.mayangsari81@ui.ac.id



## **Estimation of Foreign Exchange Market Risk Exposure**

**Mary Cliedy Angelie Bersola, Tomas Tiu**  
De La Salle University

### **ABSTRACT**

The study looks at the unexpected volatility in the foreign exchange market to determine the market risk exposure of the Philippine peso to the US dollar focusing on expected shortfall (ES). Estimates between historical and extreme value approach are compared. Peak-over-threshold (PoT) and block maxima (BM) techniques are employed to obtain the extreme observations with results showing that the former method is more reliable on risk estimation. Backtesting the model using the Traffic Light Approach, results show that the expected shortfall falls under the Green zone with no values exceeds the risk estimate throughout the year. This study is beneficial for traders in oversold position to manage their possible losses.

**Keywords:** value at risk, volatility, expected shortfall, extreme value theory, peak-over-threshold, block maxima

#### **Email Correspondence:**

tommytiu@gmail.com

## **Valuation of Repo Haircuts Using Value-at-Risk with GARCH vis-à-vis Value-at-Risk with EWMA or Extreme Value Theory**

**Harold Cao, Tomas Tiu**

De La Salle University

### **ABSTRACT**

The study looks at the Philippine domestic repurchase agreement (repo) market and developed a new haircut valuation model based on the Value-at-Risk (VaR) measure by combining Exponentially Weighted Moving Average (EWMA), Extreme Value Theory (EVT) and the Generalized Autoregressive Conditional Heteroskedasticity (GARCH) model instead of the present standard haircut rate of ten percent (10%) for all repo transactions. The F-test methodology was conducted to examine the variability of the haircut rates generated by the two models. Results showed that both of the two models can either be used in the valuation of domestic repo haircut rates. The new model emerged to be a more effective model during stressed scenarios because of the use of the EVT as well as based on some certain specific scenarios.

**Keywords:** Repurchase Agreement, Repo Market, Repo Haircuts, Repo Trade, Value-at-Risk, GARCH, EWMA, Extreme Value Theory

**Email Correspondence:**

tommytiu@gmail.com



## **Customer Discovery Approach as The First Essential Step for Successful Business Development (E-Commerce Case Study: Bibikost)**

**Kezia Bella, Noer Azam Achsani, Suhendi**

IPB University

### **ABSTRACT**

The new challenges caused by globalization and technological advancements cause companies and entrepreneurs to think of new ways to compile a business marketing strategy or steps to build products. With the openness of the information, customers have formed their expectations over quality, service, and flexibility of supply. This causes businesses to no longer only offer products to solve customer problems but switches to offering products that understand consumers' real desires and needs as a starting point then in the end adjusted to the company's values and strategies. Although there have been several studies about Customer Development, this study is one of the few that focus only on Customer Discovery. As the first step of Customer Development, Customer Discovery focuses on understanding the customer problems, getting their feedback, and revising the business ideas to create customer-needed products. We propose a framework that outlines the steps of customer discovery in developing new products that can be followed by company. Based on a case study of e-commerce in Bogor, Bibikost, this paper illustrates the framework, challenges, and benefits of implementing Customer Discovery in building business success strategies.

**Keywords:** Customer discovery, e-commerce, framework

### **Email Correspondence:**

bellakezia0@gmail.com



## Optimization of the Maturity Level of Government Procurement Organizations in Indonesia

M. Lucky Akbar, Arif Imam Suroso, Anggraini Sukmawati, Bambang Juanda  
Ministry of Finance

### ABSTRACT

Formation of Working Unit for Goods/Services Procurement (UKPBJ) changes procurement agency in Indonesia is part of an improvement program for Goods/Services Procurement as efficient and corruption-free Government PBJ systems indicator. The change that is expected to be implemented is in the form of the permanent and structural Organization based on the theory of the Capability Maturity Model (CMM). This paper aims to map out more about the model, the main driver, and an action plan to achieve targeted UKPBJ Maturity Level using literature review based on secondary data about CMM, and combining with exploratory research to explain it process. The maturity level achieved by UKPBJ can make UKPBJ as PBJ Center of Excellence and the added value creation in Indonesia.

Keywords: public sector change, center of excellent, institutional transformation

**Email Correspondence:**  
alddanaldo@gmail.com

## **HYPEPRENEUR: DIGITAL PLATFORM TO ACCELERATE BUSINESS OPPORTUNITIES FOR MILLENNIALS**

**Madania Agusta, Retnaningsih, Dikky Indrawan**  
IPB University

### **ABSTRACT**

The shift of shopping behavior from offline into online platform grows new startups and SMEs in Indonesia. The increase number of new business put Indonesia in number one ranking among Asia Pacific countries with an entrepreneurial spirit. However, due to lack of experience, startups businesses face many challenges that lead to business failures. This research aimed to identify a digital platform solution in supporting new startups businesses to grow. The digital platform was designed by applying House of Quality methods to select the best features. The method transformed user demands into digital platform design for different types of user such as business seekers, businessmen, consultants, investors, and job seekers. The results developed 43 demanded features based on consumer expectations. Each type of potential consumer chose 5 priority features. These priority features were implemented in the digital platform prototype.

Keywords: digital platform, business opportunities, millennials, House of Quality

**Email Correspondence:**  
madaniata@hotmail.com

## PUAN: POP-UP MARKET FOR WOMEN-OWNED SMALL BUSINESS

Rhea Nisa Humaira, Idqan Fahmi, Dikky Indrawan  
IPB University

### ABSTRACT

Women entrepreneurs in Indonesia face various obstacles when starting and running their business on a daily basis. Inability to expand business networks is a major obstacle to the development of women's businesses. This limits their ability to increase their customer base. Therefore, businesses owned by women tend to be small scale. This study aimed to analyze the opportunities and the right solutions to hold a Pop-up Market in Bogor. We proposed a Puan Market Pop-up as a concept of marketplace for small-scale women entrepreneurs to support each other, strengthen the women's community, and strengthen the pop-up market brand that presented in the market. The study explored the appropriate business model, feature, and product prototype designs to address women entrepreneurship challenges. The study used descriptive qualitative approach based on a customer discovery method, then followed by a simulation. The results found women entrepreneurs as a tenant in the pop-up market faced difficulties in developing social and business networks and rely on personal relationships that related to their family. Hence, limited retail choices that offer shopping experience that combined with products were available. The Puan Pop-up Market as a marketplace concept was able to attract customers and women entrepreneurs. Furthermore, Puan Market Pop-up was verified as a business model with women between 20-39 years old as the main customers segment.

Keywords: customer discovery, pop-up market, women-owned business, women entrepreneurs

### Email Correspondence:

rheanisa.humaira22@gmail.com

## TRANSFORMING THE LIBRARY CULTURE INTO LEARNING LAB PERSPECTIVE TO STRENGTHEN ITS ENGAGEMENT

**Rizal Ardianto, Lien Herlina, Raden Isma Anggraini**

IPB University

### ABSTRACT

A library is a place where learning and sharing takes place. Currently with the technology advancement, library began to be less attractive place to visit. Based on this thought, aims of this study were formulated: 1) mapping community behaviour shifts and changes towards the use of libraries in the VUCA Era; 2) to identify factors and characteristics of the main values of learning lab to improve community engagement; 3) designing a library learning model based on learning lab perspective ; 4) to analyse supervisially the impacts of 'Learning Lab' Library over the learning process. This study was conducted in some libraries in Bogor City where diverse population and characteristics distribution exist, it is expected to be able to represent Indonesia. This study uses two major methods, namely, design thinking that is used to identify community learning problems and Delphi method used to verify the results of the library lab-based learning business ideas. In this study, questionnaires were distributed to experts and their inputs used to verify and to improve its concepts, strategies, and impacts. The result showed the introduction of the idea of a learning lab that offers the value of learning activities that can accommodate the learning styles of people who are always changing. The learning lab is expected to be able to support and increase community curiosity and interest in learning and increase their engagement as respons to the new library culture.

**Keywords:** design thinking, engagement, learning lab, library culture, transforming, VUCA

**Email Correspondence:**

rizalaliahsani@gmail.com



## **Type of Coffee Businesses in Bogor City: A Competitiveness Analysis**

**Irfan Manaf, Nimmi Zulbainarni, Dikky Indrawan**

IPB University

### **ABSTRACT**

Increase number of coffee consumption in Indonesia stimulates new coffee shops across Indonesia. In Bogor City, different types of coffee business can be found. The study objectives were, 1) to describe Coffee Industry in Bogor City. 2) to identify Business Model Canvas (BMC) of coffee business in Bogor City. 3) to identify the uniqueness and value of each coffee business in Bogor City. 4) to examine the possible strategy for these coffee businesses. The study conducted in three different coffee shops a Café type (Othello Coffee), Coffee-to-Go type (Kopi Yor Sempur), and Minimarket (Indomaret Point). The findings showed that Kopi Yor Sempur as a Coffee-to-Go type had more competitiveness compare to other coffee business types, because the coffee shop have better standard operating procedures set up by the head office. Moreover, their marketing efforts were supported by active social media activity to connect with their customer. While, Othello Coffee as a Café type was found urgently need to develop strategy in attracting customer via a routine promotion and having active social media.

**Keywords:** Coffee Shops, BMC, uniqueness and value, strategy

### **Email Correspondence:**

irfansmanaf@gmail.com

## **Internal Conflict in Ship Repair Works: The Difference in Educational Level and PFD**

**Mazlan Yasin**

Universiti Utara Malaysia

### **ABSTRACT**

Intergroup conflicts have turned out to be a common problem that occurs in shipyards of the ship repair works industry. This study aimed at examining the causes that contribute toward these conflicts occurring and practical solutions to manage the conflicts. Therefore, in order to resolve these conflicts well, what is required is the development of a relevant work process/system that can be implemented within the organisation. This research also is to identify the recommended appropriate solutions. A qualitative research methodology was used to identify practical solutions to address these conflicts. Data were gathered from document reviews, observations, and also interviews. Semi-structured interviews were conducted, which involved staff from the Engineering Department and Production Department. The findings indicated that conflicts are the result of the age and educational level, which leads to poor communication and poor cooperation among the staff. Meanwhile, poor time management causes poor performance among the staff. The relationship between the Engineering Department and Production Department has been improved by introducing the Production-Friendly Drawing (PFD). The Production Department needs to utilise the PFD in order to ensure that ship repair works are performed in accordance with the “best engineering practice”, while the designers in the Engineering Department must ensure that the end-product production drawing is user-friendly and accurate. When PFD is introduced for ship repair works, it is capable of reducing the age and education level gap between the Engineering Department and Production Department.

**Keywords:** conflict, ship repair works, intergroup conflict, production-friendly drawing

### **Email Correspondence:**

maza1078@gmail.com

## **Analysis of Online Business Operation Strategy (Glory Online Store Case Study)**

**Rahmi Jamza, Noer Azam Achsani, Dikky Indrawan**

IPB University

### **ABSTRACT**

The rapid development in the fashion industry due to an increasing use of technology shifts conventional methods of selling to online methods. Glory Online Store is one of the online stores that took the opportunity by selling fashion products for women via Instagram. In order to compete and gain more customers, Glory changed their operation strategy from dropshipper and reseller systems into independent production. Hence, Glory requires the right operating strategy to maximize its business performance. This study aimed to: (1) identify the business processes on Glory's Business internal environment, (2) identify the organizational structure on Glory's Business internal environment, (3) formulate the glory business operation strategy based on the results of the SWOT analysis evaluation and (4) redesign business processes on Glory's Business internal environment. The research employed BPMN and SWOT analysis. In-depth interviews were used to collect the data. This study analyzed the operations and seek for improvements to its business processes through BPMN. The mapping of internal and external factors was completed to find operational strategy. Furthermore, also business processes redesign was performed based on the strategies that have been formulated.

**Keywords:** Online, Fashion, Operating Strategy, BPMN, SWOT

#### **Email Correspondence:**

Rahmijamza11@gmail.com

## **CUSTOMER-BASED BRAND EQUITY (CBBE) MODEL IN STRATEGIC FORMULATION OF UNCHAL'S BRAND EQUITY STRENGTH**

**Desviana A. Ramadhani, Henny K. Suwarsinah, Dikky Indrawan**  
IPB University

### **ABSTRACT**

Unchal is a T-shirts brand for souvenir that designed with the positioning as the identity of Bogor City. In the 10 years, Unchal built the brand as a unique souvenir with a strong differentiation compare to other souvenirs. However, this effort meet limited success, because Unchal as a brand is still not convincing tourists who came to Bogor City in buying the T-shirt as souvenirs. The study objectives were: (1) to analyze the potential of the T-shirt market as a Bogor City souvenir, (2) to determine the strength of Unchal's brand equity, and (3) to formulate strategies for strengthening Unchal brand equity. The study employed a mixed research method that gave guidance in collecting data via questionnaires, interviews, observations, and literature studies. The study consisted of identifying the demographics and behavior of respondents using descriptive analysis, calculating the estimated total market potential, measuring brand equity, and formulating strategies using the CBBE Model. The results found some elements of Unchal's brand equity were rather less strong. Therefore, a strategy formulation was needed to strengthen these elements.

**Keywords:** CBBE, brand equity, tourist, souvenir, strategy

### **Email Correspondence:**

desviana.aglia@gmail.com



## THE CHANGE OF FRUIT SUPPLY CHAIN IN RESPONSE TO COVID-19 PANDEMIC IN WEST JAVA, INDONESIA (CASE STUDY OF ANTO WIJAYA FRUIT)

Erin Diana Sari, Siti Jahroh, Agustina Widi Palupiningrum  
IPB University

### ABSTRACT

Indonesia is the heaven of tropical fruits. However, as tropical fruits are perishable, the specific supply chain is needed to ensure the fruits are able to reach the customers in good condition. West Java Province is one of fruits producing centers in Indonesia. Anto Wijaya Fruit is a prominent company of fruits supply, especially for mango, in West Java. This study aims to (1) identify fruit supply chain management before the pandemic, (2) analyze the emerging challenges due to the outbreak, and (3) propose a scheme of fruits supply chain in response to the Covid-19 pandemic in the case of Anto Wijaya Fruit. This study was conducted from January to May 2020. Several key persons were interviewed along the chain from the producers up to the end customers. Qualitative analysis was employed in the framework of Food Supply Chain Networking (FSCN). The results showed that. Anto Wijaya Fruit mango supply chain has not been implemented optimally. This is seen from the supply chain business process flow that has not been integrated as a whole, in supply chain management contractual agreements have not yet been made between farmers and company, then the supply chain resources in cultivation activities until distribution is still done simply. Companies need to optimize the use of technology for supply chain effectiveness. There were several challenges such as movement restrictions and shorter operating time of the markets that affected the company. Lastly, in response to these challenges, a scheme using internet and communication technology (ICT) is proposed.

Keywords: Food Supply Chain Networking (FSCN), Internet and Communication Technology (ICT), mango tropical fruits

**Email Correspondence:**  
erindianas@gmail.com

## **BUSINESS STRATEGY DEVELOPMENT THROUGH VALUE CREATION ANALYSIS IN AUTOMOTIVE E-COMMERCE PLATFORM (CASE STUDY : XYZ PLATFORM)**

**Maria Patty, Popong Nurhayati, Fuad Muhibuddin**  
IPB University

### **ABSTRACT**

The Positive growth of automotive industry presents XYZ as an integrated digital automotive platform, which serve e-commerce for new and second hand vehicles. Since XYZ Platform launched, it has not contributed to company sales growth as well. In spite of macro and micro economic factors, we argue lack of value proposition provided by company. This paper aims to analyze XYZ platform value proposition in relation to map value creation of company. The study was qualitative and quantitative research, and conducted multi stage random sampling. Value proposition canvas, brand consideration matrix, four-step framework were conducted as tools analysis. Result shown VPC 0 of XYZ Platform as all in one platform for e-commerce new and second hand vehicle user with full features. The Brand Consideration matrix found elements divided into 2 types as functional value and emotional values. The Four-Step Framework maps 13 values that should be improved and 7 potential new values for XYZ Platform. These values are contained in a new formulation of new value propositions in VPC 1.

**Keywords:** Automotive E-Commerce Platform, Value Creation, Business Strategy

### **Email Correspondence:**

fuadwahdan@apps.ipb.ac.id, jacklynputri.18@gmail.com

## **Proposed a New Sustainable CSR Model Canvas for Effectiveness and Evaluation of Current CSR Programs (Case Study: PD PAL Jaya)**

**Aqira Pakuanzahra, Noer Azam Achsani, Asaduddin Abdullah**  
IPB University

### **ABSTRACT**

When managed effectively, a Corporate Social Responsibility (CSR) program can produce significant benefits in terms of reputation and returns as well. Therefore, CSR should be evaluated regularly. However, based on a survey conducted by Public Interest Research & Advocacy Public (PIRAC), only 30 percent of 226 companies in Indonesia evaluate their CSR programs. This research was conducted to analyze the effectiveness of PD PAL Jaya's lavatory CSR project, Petamburan District, Central Jakarta. PD PAL Jaya is Jakarta's Regional State-Owned Enterprise that operates in the waste management. This research has been conducted by using descriptive analysis on CSR project, Importance Performance Analysis (IPA), and concluded with purposed a new canvas model to mapping various indicators to the Sustainable CSR Model Canvas. Based on the results by using IPA analysis, PD PAL Jaya's CSR with the lavatory project is under the wishes of the community. However, several things need to be improved, especially in construction and socialization. The final results of the research are Sustainable CSR Model Canvas and recommendations to PD PAL Jaya in order to improve the quality of the next CSR programs.

**Keywords:** Corporate Social Responsibility, Regional Owned Enterprise, Sustainable CSR Model, Importance Performance Analysis

**Email Correspondence:**  
aqirapakuanzhr@gmail.com

## **Developing Strategic Planning of IS/IT using IT Balanced Scorecard: Case Study of Online Book Store In Indonesia**

**Ruchi Tantra, Alifiannisa Diar, Farisya Setiadi**

University of Indonesia

### **ABSTRACT**

Technology has disrupted the book publishing industry and changed the nature of publishing value chain. Electronic book and online bookstore are the innovation created to overcome the issue. However, it's also important for the organization to remove the operational silos on its business value chain, to gain more competitive advantage. Thus, one of the biggest online bookstore in Indonesia shall define its information system and technology (IS/IT) strategic plan inline with business strategies. This research proposed IS/IT strategy that developed using the Ward and Peppard model combined with IT Balanced Scorecard framework. The IT Balanced Scorecard used to ensure the alignment between the proposed organization IS/IT and business strategy. The critical issue of business and IS/IT from internal and external environment were identified using value chain and PESTEL method. Competitor analysis is also carried out to identify business opportunities and develop effective competitive strategies. The research final result is the recommendation of IS/IT strategic planning, to help the organization keep ahead in the market competition.

Keywords: Strategic IS/IT Planning, IS Management, IT Balanced Scorecard

### **Email Correspondence:**

ruchintan@gmail.com



## **Developing Strategic IS/IT Planning for Smarter Regional Development in Ternate Smart Island**

**Minhajuddin Kasman Ar, Farisya Setiadi**

University of Indonesia

### **ABSTRACT**

Regional development is a foundation of successful national development. In order achieve better regional development process, Ternate has been preparing their capability for smart city transformation with the title of Ternate Smart Island. However, the challenges faced by the government regarding ICT implementation and planning is tough to overcome due to the lack of strategy and capable human resources. That said, this research is conducted to identify strategic application portfolio based on Ward and Peppard's Strategic Model. Therefore, it can support regional development by Communication, Informatics, and Encrypting Services (DISKOMSANDI) which is directly involved to ICT management in Ternate. This research utilizes Value Chain, combination of SWOT and Porter's Diamond Model, and PEST to find out current condition along with McFarland Grid to map current and strategic applications. By the end of the research, a strategic application portfolio for smarter regional development in island territories which has a purpose of harmonizing and optimizing resources in order to deliver more effective and efficient services and regional development itself will be introduced.

**Keywords:** Strategic IS/IT Planning, Regional Development, Smart Island

### **Email Correspondence:**

didinkha@gmail.com

## **The Role of Cognitive & Affective Drivers in Building Satisfaction and Loyalty: Study on non dine in coffee shop in indonesia**

**Eka Prasiyuda, Tri Lestari, Muhammad Bahari Putra, Whony Rofianto**

STIE Indonesia Banking School

### **ABSTRACT**

Background – Non dine coffee shops started to grow as an alternative to dine in coffee shops in high mobility society. Amplified by the pandemic of COVID-19, it is interesting to research this type of coffee shop that potentially grows in a new normal condition.

Purpose – To perform a model retesting of cognitive and affective drivers in building satisfaction and loyalty, specifically in the context of non dine in coffee shops.

Methodology – The sample size used for this study was 150. The empirical data collected through a cross-sectional online survey to consumers in the JABODETABEK area.

Hypothesis testing is conducted using the Structural Equation Modelling (SEM) approach.

Findings - The result shows that, Perceived Quality, Brand Image , Pleasure positively drives brand satisfaction. Unexpectedly Perceived Value and Brand Awareness there is not a positive influence to pleasure and also brand satisfaction to brand loyalty.

Originality/value – The study of non dine in coffee shops are still rarely studied in the midst of research in the context of the Food Industry, especially those related to consumer response patterns under conditions of transformation towards the new normal.

Keywords: Brand Loyalty, Brand Satisfaction, Cognitive Aspects, Affective Aspects, Food Industry

### **Email Correspondence:**

ekaprasasyuda@gmail.com

## **The relationship between perceived risk, price, and image in forming purchased intention: study on brick & click fast fashion brands in the new normal context**

**Sherin Andiana Gatot, Whony Rofianto, Ajeng Dwi Utami, Anneria**  
STIE Indonesia Banking School

### **ABSTRACT**

**Background** – the existence of brick and click fashion stores in the fast fashion category is not new. However, new normal as a result of the covid pandemic 19 is predicted to leave a number of fundamental changes in consumer behavior. A deeper examination of consumer spending patterns for fast fashion products, especially those that occur online, is interesting to study more deeply.

**Purpose** – This study attempts to examine the relationship between perceived risk, price, and image in forming purchased intentions, especially in pandemic situations and shifts towards new normal.

**Methodology** – The sample size used for this study was 150 customers, collected through a cross sectional online survey. Furthermore, hypothesis testing was performed using structural equation modeling (SEM).

**Findings** - price image, brand image and perceived risk are very important aspects in building store image perception and purchase intention. This condition also applies in a pandemic situation and shifting condition towards the new normal, with some notes and further strategy suggestions.

**Originality/value** – retesting the store image model in the context of fast fashion shopping amid a pandemic and a shift towards the new normal, which is still rarely studied .

**Keywords:** Purchase Intention. Price Image, Brand Image, Perceived Risk, Fast Fashion

### **Email Correspondence:**

sherinandiana31@gmail.com

## **A CFD Study on Hydraulic and Disinfection Efficiencies of the Body Sterilization Chamber**

**Thanh Long Le, Tan Tien Nguyen**

Ho Chi Minh City University of Technology (HCMUT), VNU-HCM

### **ABSTRACT**

In this study, the numerical computation of the body sterilization chamber is used to develop a physical model and obtain the bactericidal effect of this device. It is needed to design a disinfection chamber system to server people working in areas affected by COVID-19, also ensure safety and limit the spread of this pandemic. This paper gives an illustration about using computational fluid dynamics approach to investigate the movement of disinfection solution flow, which is called anolyte. The results obtained from the numerical simulation demonstrate some of hydrodynamic values, streamlines and density of the anolyte solution. The ability to predict the hydraulic and disinfection efficiencies of this sterilization chamber is essential for obtaining the topology optimization design.

**Keywords:** Computational fluid dynamics, Disinfection chamber, Hydrodynamic, COVID-19

### **Email Correspondence:**

ltlong@hcmut.edu.vn



## **Marketing innovation in agricultural products through online marketing: Indonesian consumer perspectives during the Covid-19 pandemic**

**Stevia Septiani, Dikky Indrawan**  
IPB University

### **ABSTRACT**

The agricultural sector has an important and strategic role for a country because it contributes to the national economy and food security. Unfortunately, the problem of marketing distribution and trading system causes the bargaining position of farmers getting worst. This can be overcome through an online agricultural product marketing system. Especially during the Covid-19 pandemic, marketing of agricultural products through online media has become a momentum for this sector. So the main objective of this research is to analyze the potential of the agricultural sector through online marketing channel innovations based on consumer demand perspectives. This research was conducted in Jakarta, Bogor, Depok, Tangerang and Bekasi which obtained 648 respondents. Structural Equation Modeling (SEM) analysis is used to measure consumer purchase intentions in the Theory of Planned Behavior model. Based on market characteristics, it is known that the most frequently purchased agricultural products are vegetables (44.8%), followed by side dishes (34.4%) and fruit (20.8%). Before the pandemic, the majority of consumers buy fresh food in offline stores (74.4%). There was a shifting in the buying behavior of fresh food products, this can be seen from the increase in consumers who buy fresh food through online media, which initially grew 25.6% to 61.2%. SEM analysis results show that media exposure affects consumer fears of a pandemic, but does not affect buying intention. Buying intention is significantly caused by the attitudes and social groups or those closest to the consumer.

**Keywords:** agricultural product, marketing innovation, pandemic, consumer behavior, structural equation modeling

**Email Correspondence:**  
steviasseptiani@apps.ipb.ac.id

## Brand Awareness Development Strategy for IndonesiaX

Kesha Jonathan, Ani Nuraisyah, M Syamsul Maarif  
IPB University

### ABSTRACT

One of the online education platform that provides free courses is IndonesiaX. The purposes of this study are to analyze and describe customer characteristics, identify the marketing mix (4C) that has been done, identify and analyze the brand awareness pyramid based on the marketing mix (4C). The study was taken place at the IndonesiaX office. Data were collected by interviewing internal stakeholders and distributing questionnaires to IndonesiaX customers. The results showed that there was a tendency for similarities in the percentage of demographic characteristics, that is age, domicile, education level, and all behavioral characteristics. IndonesiaX has made several 4C marketing mix efforts. Based on the evaluation of the brand awareness pyramid, problems occur in brand recognition, brand recall, and top of mind. These results are caused by three problems in co-creation, two problems in the currency, one problem in communal activation, and two problems in the conversation.

Keywords: brand awareness, IndonesiaX, marketing-mix

#### Email Correspondence:

anynuraisyah@apps.ipb.ac.id

## IoT Based Disaster Management System & Rescue Robot

Vibesh V Panicker, Deepika Sasi, Swathi J  
TKM College of Engineering

### ABSTRACT

Natural calamities affect many parts of the world. In India particularly, Kerala has been facing severe floods for the past two years. The disaster caused the desolation of land and property. Many valuable lives were lost. The unprecedented scale and the number of disasters has urged emergency search and rescue communities to seek novel technology to enhance operational efficiency. This paper proposes a disaster management model using Wireless Sensor Nodes (WSN) which is very useful for the real-time monitoring of atmospheric changes like increase in temperature, rain and landslides. The disaster detection prototype uses Internet of Things (IoT) which is capable of sensing atmospheric changes and upload the data obtained to cloud storage. On occurrence of disastrous events, alerts are given using android application and simultaneously message is given to control station. Disasters also create emergency situations such as the rescue of people underneath collapsed buildings, or people trapped in isolated places. None of the existing humanoid robots has shown the capability to efficiently execute rescue tasks for transferring a human to safe places. To resolve this problem, a rescue robot is also proposed here to assist rescuers in dangerous situations where the direct intervention of humans is not possible. This rescue system contains a monitoring system using sensors unit and android camera for analyzing conditions and RF transceiver for transmitting data. The main objective of this project is to rescue more people by providing an efficient warning and a rescue system, thereby minimizing the effects caused by natural calamities.

Keywords: Wireless Sensor Nodes (WSN), Internet of Things (IoT), Cloud Storage, Rescue Robot, Sensors unit, RF transceiver

#### Email Correspondence:

vibeshpanicker@gmail.com

## **Social Entrepreneurship-Based Business Model Innovations through Digitalization of Book Charity**

**Laras Insiya Pertiwi, Arif Imam Suroso, Achmad Fadillah**  
IPB University

### **ABSTRACT**

The utilization of the digital platform as a donation media has quite a positive impact on increasing the level of public awareness to care and to help others, such as kitabisa.com, ayopeduli.com, and wecare.id. However, there is no charity digital platform (e-charity) that focuses directly on increasing community reading interest and literacy level in Indonesia. The objectives of this paper are (1) to identify the problems of customers and co-creators in the book charity, (2) to design product prototype of book charity based on a digital platform, and (3) to design social entrepreneurship-based business model innovation to achieve product-market-fit. The method used in this paper are customer discovery, webqual 4.0, and business model innovation methods. The results of this paper are identified main problems (donors difficult to find media for book donations and a lack of transparency in charity channeling.), a digital platform prototype for book charity, and a verified social entrepreneurship-based business model innovation. Book e-charity business model innovation is expected to increase social business and increase literacy levels in Indonesia.

**Keywords:** innovation business model, social entrepreneurship, the digital platform, book charity

### **Email Correspondence:**

achmadfadillah@apps.ipb.ac.id



## **The causality relationship between CO<sub>2</sub> emission, sectoral economic growth, household expenditure and renewable energy in Indonesia.**

**Andhyka Tyaz Nugraha, Nor Hasni Osman**

Universiti Utara Malaysia

### **ABSTRACT**

This study aims to investigate the relationship between CO<sub>2</sub> emission, sectoral economic growth, household expenditures, and renewable energy in Indonesia using annual data over the period 1973-2017. The Autoregressive Distributed Lag (ARDL) procedures are applied in this study. The result indicated that the economic growth of the industry sector caused increasing CO<sub>2</sub> emissions. In contrast, the economic growth in the service sector and an increase in renewable energy potentially reduced the amount of CO<sub>2</sub> emissions. Then, the economic growth in the industry sector inhibited economic growth in the agriculture sector, while the economic growth both in the agriculture sector and service sector influenced each other. An increase in household expenditures stimulated economic growth in the agriculture sector, while increasing CO<sub>2</sub> emission, economic growth in the agriculture sector, and household expenditure potentially inhibited the renewable energy development. Moreover, the result also revealed that economic growth both in the industry sector and service sector have a positive impact on renewable energy development. In conclusion, the sustainability of the sectoral economic growth significantly influenced the renewable energy development. Also, although an increase in household expenditures did not affect sectoral economic growth, but instead it indirectly inhibited the renewable energy development. Therefore, the sectoral economic growth and an increase in household expenditures should be accompanied by increasing proportion of renewable energy supply to encourage the sustainability of economic growth and improvement of environmental quality in Indonesia.

**Keywords:** CO<sub>2</sub> emission, sectoral economic growth, household expenditures, renewable energy, Indonesia

#### **Email Correspondence:**

andhykasriwijaya@gmail.com

## Re-Design Digital Marketing Innovation of Food SMEs in The Era of Industry 4.0

Achmad Fadillah, Retnaningsih, Wisnu Murti Khaliffaturrahman  
IPB University

### ABSTRACT

MSMEs have a large contribution to national GDP from a market share of more than 55% and employment absorption of 97% in Indonesia. However, there was a decrease in income and profits received by the Food SMEs caused by decreasing of market targets, the market began to saturate, the coverage of narrow geographical and demographic market segments, less accurate marketing, business concepts without strong differentiation, and the brand product life cycle (PLC) is entering a phase of decline. Therefore, the marketing strategy design is needed by Food SMEs through a marketing mix of human (customer) centric based on the customer path experience approach. The objectives of this paper are to identify the current marketing mix of Food SMEs, to analyze the customer path map experience of the Food SMEs, and to formulate the Food SMEs through the 4C marketing mix. The method used in this paper are the marketing mix approach (7P and 4C) and customer path 5A experience methods. The results of this study revealed that the implementation of marketing mix 7P by Food SMEs is not yet optimal in the digital economy, the characteristics of Food SME's customers dominated by young people or early millennial women, the improvements of customer experience in the customer path map, and the marketing mix 4C design to increase food SMEs business sustainability.

Keywords: food SMEs, digital marketing, marketing innovation, customer experience, customer path

### Email Correspondence:

achmadfadillah@apps.ipb.ac.id

## Can Big Data and Cloud Computing based on IoT Support Animal Disease Surveillance in Indonesia?

Achmad Fadillah, Dikky Indrawan, Nur Hasanah  
IPB University

### ABSTRACT

Surveillance is needed because many infectious diseases and further spread of endemic are emerging in animals in developing countries. However, a paper-based disease reporting system has been associated with a number of challenges which include underreporting animal diseases, poor surveillance, lack of coordination among stakeholders and sectors, and difficulties to submit hard copies of the disease surveillance forms. Big data and cloud computing based on internet of thing (IoT) offers new opportunities for disease reporting. This paper aims to present a conceptual framework and business model of animal disease surveillance systems based on information technology that can be developed and implemented in Indonesia. It has to solve the problem of animal disease information management. The proposed framework in this paper was the cloud computing platform and business model. This study based on the description of the basic proposal, technology, and the characteristics of cloud computing. We analyzed the feasibility and problem of cloud computing application in the management of animal disease information resources in Indonesia. We provided the cloud computing business model of animal disease information resources with its applied scenarios and problems. This paper concluded that cloud computing based on IoT will change the management of animal disease information resources in Indonesia. The primary lesson learned was any system implementation plan and business model must consider the time needed to bring in support from users and stakeholders.

**Keywords:** animal disease surveillance, animal disease information management, cloud computing, big data, business model

#### **Email Correspondence:**

achmadfadillah@apps.ipb.ac.id

## **Business Model Innovation for Sustainable Food Logistics System in the Covid-19 Pandemic Era**

**Achmad Fadillah, Dikky Indrawan, Siti Jahroh**

IPB University

### **ABSTRACT**

Food logistics programs in the Covid-19 pandemic era have not been effective. It can be seen from the many food logistic problems that were not quickly handled by relevant stakeholders. In addition, there are several causes of the difficulty of dealing with food logistics in Covid-19 pandemic era such as lack of availability, accessibility, stability, and utilization of food logistics. Business model innovation has changed the many sectors' direction and open a new opportunity for the food logistics system. This paper aims to identify the main problems of national food logistics and to design business model innovation for sustainable food logistic system. The methods used in this paper are descriptive analysis and business model innovation methods. The results show that the main problem of food logistics is the lack of good coordination among sectors and stakeholders. Business model innovation can be a solution for designing sustainable food logistics systems that are efficient, accurate, targeted, and impactful. A new way of the food logistics system is needed to integrate stakeholders across sectors based on Penta-helix collaboration (government, academia, business, community, and media). The impacts of the business model innovation development for food logistics are improved effectiveness of food logistics programs, reduced wrong targets, and increased sustainability of food logistics programs.

**Keywords:** Business Model Innovation, Sustainable, Food Logistics System, Covid-19 Pandemic Era, Penta-helix collaboration

### **Email Correspondence:**

achmadfadillah@apps.ipb.ac.id



## **Re-Food: Digital Platform-based Innovation Solutions for National Food Waste Problems**

**Achmad Fadillah, Arief Daryanto, Rafii Yoga Pramana**  
IPB University

### **ABSTRACT**

The problem of food waste in Indonesia is an important issue to overcome. Indonesia is the second-largest producer of food waste in the World. This makes national food waste issues get more attention. This paper aims to identify problems in food waste prevention, to formulate prototype of food waste application, to design digital platform-based business models innovation that complies with consumer preferences, and to map the impact generated by the presence of Re-Food. The method used are the customer discovery method with a qualitative descriptive approach and business model innovation methods. The results of this paper are verified social enterprise business model innovation offering an application that can help in utilizing excess food and help in the social problems of hunger and poverty. The potential impact generated by the Re-Food business model is the opportunity to contribute to social problems by utilizing environmental issues and increasing education on environmental issues, especially in food waste issues.

**Keywords:** digital platform, business innovation, food waste, social enterprise, re-food

### **Email Correspondence:**

achmadfadillah@apps.ipb.ac.id

## **Marketing Innovation for Healthy Food and Beverage Business in the New Normal after Pandemic Covid-19 Era**

**Achmad Fadillah, Andre Eka Hizkia Barus, Noer Azam Achsani, Lien Herlina,  
Febriantina Dewi, Fithriyyah Shalihati**  
IPB University

### **ABSTRACT**

Coronavirus (Covid-19) pandemic has occurred in many countries in the world in 2020. Some impacts on society are limited activities to leave their house and increased awareness to maintain hygiene and health. It forced people to change the way people live and shopping behavior for food and beverage. The aims of this paper are 1) to identify changes and the impacts of Covid-19 on the healthy food and beverage business, 2) to analyze marketing innovation strategies for the healthy food and beverage business after the pandemic Covid-19 era. The methods used in this paper are qualitative descriptive analysis and innovation marketing mix 4C methods. The results show that there are some changes in consumer behavior when new normal after the coronavirus epidemic ends: 1) increasing interest in products that support health and wellness, 2) stockpiling food and beverage products that provide health benefits, 3) increased spending through e-commerce, and 4) having new standards regarding lifestyles that emphasize health, hygiene, and the use of e-commerce. The marketing innovation strategies for healthy food and beverage business include: 1) crowdsource ideas for innovation/improvement from consumers for food and beverage from websites and social media as well as transparency in co-creation activities, 2) creating the best deal for consumers with a time-based subscription program, 3) facilitating the shopping experience with the collaboration of micro-influencers in the field of food enthusiast and integration between websites and business features on social media, and 4) Creating a campaign uses strong, useful and relevant hashtags.

**Keywords:** marketing innovation, healthy product, food and beverage, covid-19, new normal

**Email Correspondence:**  
andrebarusid@gmail.com

## **Strategy Analysis to Increase Revisit Intention of International Mobility Students: A Study for IPB University and Universiti Putra Malaysia**

**Fariz Shidqi, Pramono D Fewidarto, Hamimah Hassan**

IPB University

### **ABSTRACT**

Key Performance Indicators (KPI) as the quality of higher education institution to be the best world class university is through the number of international students as one of the qualified, this can be found in the ranking assessment of institutions both nationally and internationally such as the QS World University Ranking, and Times Higher Education University Ranking. IPB University and Universiti Putra Malaysia (UPM) as the top 1 agricultural university in their own country should be maintain the total number of their international students in order to increase their world rank and reputation. Revisit intention is one of alternative way that would be help university to maintain and increase the total number of international students. Through the great performance of host destination attributes such as amenity, accessibility, accountability, affordability, and activity, IPB and UPM can increase revisit intention of international students to study again in both universities on the future. This research aims to identify which indicator of attribute that become as the first priority to be improved in achieving an optimal performance by university, and analyse the strategy recommendation that can improve them in order to increase revisit intention of their international students. The method used in this research are Cross Tabulation, Important-Performance Analysis (IPA), and the last stage is using Simple Analytical Hierarchy Process (AHP) in order to decide the strategy recommendation. The results of the strategy recommendations of this study divided into three focuses, procedural implementation, service processes and operations, as well as collaboration and policy development.

**Keywords:** Host Destination Attribute, Revisit Intention, Simple Analytical Hierarchy Process (AHP)

**Email Correspondence:**  
farizshidqi15@gmail.com

## **Financial Literacy: A Comparative Study Among Undergraduate Students at IPB University and Universiti Putra Malaysia**

**Ilham Rizky Ghozali, Rindang Matoati, Abdul Rashid Abdullah**  
IPB University

### **ABSTRACT**

Lack of financial literacy is becoming an issue for both developing countries and developed countries. Indonesia and Malaysia government have launched a strategy to struggle with a low level of financial literacy. The college student is one of the main targets of the strategies. The purpose of this study is to (1) analyze the level of financial literacy and (2) analyze the factors influencing financial literacy among undergraduate students. The subject of this study is undergraduate students at IPB University (IPB) and Universiti Putra Malaysia (UPM). The factors analyzed are gender, semester level, level of income, and parent's marital status. The analytical methods used in this study are descriptive analysis and multiple linear regression. The result of this study indicates that the level of financial literacy of undergraduate students at IPB is higher than UPM. Both are included in the category of sufficiently literate. Factors that significantly influence the financial literacy of undergraduate students at IPB are gender, semester level, and level of income. Meanwhile, the factors that significantly influence the financial literacy of undergraduate students at UPM are semester level and level of income.

**Keywords:** Factors influencing financial literacy, Financial literacy, Undergraduate students

**Email Correspondence:**  
ghazaliilham@gmail.com



## CONSUMERS' PERCEPTION TOWARD PURCHASING HALAL PRODUCTS: A COMPARATIVE STUDY BETWEEN MUSLIM AND NON-MUSLIM STUDENTS IN FEM IPB UNIVERSITY AND SBE UPM

**Dexan Seganoval Cahyadi, Pramono D Fewidarto, Noor Azlin Ismail**  
IPB University

### ABSTRACT

The demand for halal products has seen significant growth over the past few years and at the same time the halal industry also has been evolving and growing at a rapid pace over. From the marketing point of view, investigating consumers' perceptions will provide a good consumer insight. Moreover, it will contribute toward the future progress of the halal industry. The consumer focus of this study are Muslim and non-Muslim students in FEM IPB University and SBE UPM. This paper will identify which factors influenced consumers' perspective to purchase and consume halal products, analyze the linkages between consumers' characteristics and their purchase decision, and to recommend priority strategy in increasing consumers' purchasing tendencies. The data of this research will gather by using a questionnaire and will analyze by descriptive data analysis method, independent samples t-test, cross-tabulation analysis, and analytic hierarchy process (AHP). This study will help to further development of halal product market segments and the halal industries in Indonesia and Malaysia to effectively move forward by using data and having a better understanding of current consumer trends.

**Keywords:** Analytic Hierarchy Process (AHP), Consumer Trends, Cross-tabulation Analysis, Descriptive Data Analysis Method, Halal Products

**Email Correspondence:**

dexanseanovalc@gmail.com

## **Employee Compensation Evaluation Based on Cost of Living Adjustment (COLA) in Retail Industry Bogor, Indonesia : Comparison Study**

**Aldy Rizaldy, Lindawati Kartika, Roni Jayawinangun**

IPB University

### **ABSTRACT**

The retail industry is a field that has a high contribution to the Indonesian economy. This research will examine the compensation based on the need of decent living for retail workers. The purpose of this study are (1) Analyze and evaluate the fulfillment of compensation and the requirements of cost of living adjustment (COLA) with standard of living known as Kebutuhan Hidup Layak (KHL) from Indonesia Manpower and Labour Minister Regulation number 12 year of 2012 (2) Creating design and compensation strategy based on the requirements of decent living in Bogor. The type of data in this study is primary data (interview and questionnaires) and secondary data obtained from the website of Bogor City and Regency, BPS, literature study, and relevant report. The method used is the descriptive analysis, gap analysis, Control chart and Eckenrode-based point system method. The results shows that according to 60 components of Living Standards / KHL, only 53 items have been fulfilled and the rest (7 items are expected to be reviewed/Omitted) and equal to Rp 2,753,000 which are below to Minimum Wage in Bogor. There are priority in financial compensation and non-financial compensation, which are health benefits, holiday benefits, work accidents and work incentives and non-financial compensation consists of career systems, work facilities, responsibilities, work status, working conditions. According to the control chart only 38% of the total respondents whose number of the COLA can be fulfilled above the average retail sector worker.

**Keywords:** Compensation, Eckenrode, Salary, Standard of Living

### **Email Correspondence:**

aldyrizaldy997@gmail.com

## **Factor influencing city readiness to adopt Electric Vehicles: a conceptual paper**

**Nooraini Ismail, Nor Hasni Osman, Siti Norhasmaedayu Mohd Zamani**

Universiti Utara Malaysia

### **ABSTRACT**

At this present time, transportation is one of a sector that highly demanded as benefits to the owner as quick access to any geographical location in the world. However, some disadvantages that are arisen is when the pollution is contributed by this sector is higher to the environment worldwide. Due to this situation, the transportation industry has come out with many technological advances to reduce global warming. One of the alternatives is by bringing electric vehicle (EVs) to the sector as technology adoption and also for business innovation. Before the implementation of EVs, the readiness factors to be successfully adopting the technology should be identified. This paper gathered and analyzed the previous literature that discusses the factors that are essential to evaluate the readiness to adopt electric vehicle towards becoming a zero-carbon city. These factors can be divided into 4 categories which are technology, legal, infrastructure and user acceptance. In the technology category, the safety to use the car, the ethics and the vehicle technology itself should be considered. In addition, for the legal category, the cybersecurity, liability and privacy should be mull over. Otherwise, from the infrastructure category, the cost of infrastructure, the technology of roads, communication, and traffic signs is important. Lastly, the cost of EVs, the marketing and advertising, and the trust from the consumer is very significant in user acceptance category.

**Keywords:** Readiness city, electric vehicles, adoption to technology

#### **Email Correspondence:**

mail.noraini@gmail.com

## Kediri's Typical Pecel Sauce Business Model "Mbak Hani" with Customer Discovery Method

Yudha Heryawan Asnawi, Hanifah Rosyidah Sari

IPB University

### ABSTRACT

This study aims to gain a business model canvas of the Kediri's typical pecel sauce "Mbak Hani" and using the customer discovery method with an action research approach by processing primary data from interviews with respondents. The problems found in the Kediri's typical pecel sauce products are (1) the packaging is not as attractive as a souvenir (2) tasteless, too sweet, and less spicy, and (3) the oil that comes out of the package. The results of this study indicate that the typical pecel sauce "Mbak Hani" offered as a solution to the problem. The results of testing the solution and verifying the business model canvas shows 100% of respondents have an interest in buying it. The results of a business feasibility analysis Net Present Value (NPV) shows positive > 0 results of Rp 340 513 836, Internal Rate of Return (IRR) > discount rate of 47%, Net Benefit and Cost (B / C) of 4 more than 1, and Payback Period (PP) shows results for 1 year 2 months 27 days.

Keywords: pecel sauce, customer discovery, business model canvas

### Email Correspondence:

hanirosyid72@gmail.com



## **Study of Functional Beverage Business Model: New Product Development Framework for Fresh Ginger Beverage**

**Anita Primaswari Widhiani, Febriantina Dewi, Nada Widyanto Rizki**  
IPB University

### **ABSTRACT**

One of the popular ginger-based products in Indonesia is ginger tea. It is believed that ginger can boost immune system. Targeted customers are adults under 50 years old, who will go back to work at the office for new normal era at this covid-19 pandemic. The purpose of this study was to develop ginger tea product for the targeted customers using customer discovery and business model canvas. According to targeted customers, previously available products' taste is not fresh, lack of pungent and spicy taste of ginger, not packaged properly so it loses its warmth, difficult to get and not enough information available on the products. The proposed product and its business model are done in one iteration. The result shows that targeted consumers are interested in the proposed product's value proposition. The proposed ginger tea product is seen as fresh with functional and attractive packaging, easy to get and clear product information.

**Keywords:** Business model canvas, Customer discovery, Fresh ginger drink, Young consumers

**Email Correspondence:**  
nrizki602@gmail.com

## Graduate.id: Graduation Equipments E-marketplace

Arif Imam Suroso, Febriantina Dewi, Dita Yuniar  
IPB University

### ABSTRACT

Graduation ceremony, especially from higher education institutions, is a cause for celebration in Indonesia, where graduates and their family will dress to the teeth and have their photo taken by professional photographer. Therefore, there is high demand for clothes, accessories, professional make-up artist and professional photo service. However, there is no marketplace that cater to the specific need for graduation ceremony. This research aims to identify customers problems related to preparing for their graduation ceremony, to design product that provide solutions for those problems and to develop business model for the product. This research use design thinking for making product prototype and business model canvas to design the business model. We develop graduate.id, e-marketplace specialized for graduation ceremony related needs. There are two iterations of product prototype and business model canvas. The proposed values of graduate.id are try at home feature, reputable vendors, product exchange warrantee, choices of products and services, graduation references and bidding feature.

Keywords: Business model, Design thinking, E-marketplace, Graduation equipments, Prototype

**Email Correspondence:**  
yuniardita48@gmail.com

## SETTING UP A BUSINESS ENVIRONMENT TO INTRODUCE A NEW MATERIAL FOR PACKAGING IN INDONESIA

Andina Oktariani, Nyayu Lathifah Tirdasari, Nur Hasanah, Dikky Indrawan  
IPB University

### ABSTRACT

Along with the development of consumer behavior that focus on environment, it encourages company to use eco-friendly as attribute to the value proposition on generated product. Although Indonesian consumer aware of environment issues, still they prefer to choose another aspect instead of environmentally friendly on the product that bought by consumer. The aim of this research was to study the factors of environment business that able to support the success of new material development on the environmentally friendly packaging. The method that used in this research is factor analysis. The result of this research show that there are 2 (two) cluster of factors which supported the success of new material development on the environmentally friendly packaging, first factor is advocacy factor towards the innovation of using new material that competitive and logistic infrastructure factor of new material which supported by institutional network. The study is useful for policy maker to organize the right strategy formulation to be implemented on the development of new resource for the environmentally friendly packaging.

Keywords: new material, packaging, eco-friendly, factor analysis

### Email Correspondence:

andina.oktariani@apps.ipb.ac.id

## **Setting Up Women Sociopreneurship Model Based On Textile Waste**

**Armaudiah Putri, Andina Oktariani, Arief Daryanto**  
IPB University

### **ABSTRACT**

Textile waste, known as patchwork, is solid waste which is difficult to decompose and thus requires treatment to reduce the impact on the environment. Convection centers make housewives who are part of residents around the area employed as tailors. This research raises the issue of empowering female tailors to be able to utilize textile waste. This study aims to identify the needs of customers and tailors for textile waste-based women's sociopreneurship products, and develop a women's sociopreneurship business model. This study uses a customer discovery approach with a lean canvas model. The results of this study found that empowering female tailors must be able to produce unique, contemporary, simple, neutral-colored product designs and reusable packaging, environmentally friendly and there is product information and can be accepted by the market. The women's sociopreneurship business model that must be designed produces attractive design products selected totebag products to get benefits and profits for female tailors. The implementation of the sociopreneurship women's business model can be in the form of a hybrid type or profit for benefit.

**Keywords:** textile waste, women sociopreneurship, customer discovery, lean canvas

**Email Correspondence:**  
armaudiahp@gmail.com



## **BREAKFAST FOR TEEN BUSINESS MODEL**

**Novsa Fakhira, Andina Oktariani, Nimmi Zulbainarni**  
IPB University

### **ABSTRACT**

Most teenagers in Indonesia ignore breakfast as an important activity and fulfill breakfast with a low quality. Consumption patterns on teenagers today also like practicality and type of food is not monotonous. This aim of this study is to provide solutions to overcome breakfast for teenagers who like practicality with smoothies. The solution offered by a smoothie's business model is right to be used as a business opportunity in fulfilling the need for breakfast. This study uses a customer discovery approach with the Business Canvas model. The results of this study found that 100% of teenagers claimed to be interested in buying smoothies for breakfast with the value proposition of smoothies offered, which is a practical breakfast made from tropical fruits and vegetables mixed with milk and without artificial sweeteners. With positive responses from teenagers, the sale of smoothies can be done through collaboration with schools and colleges for the availability of smoothies for students and college students. The financial results of the smoothie's business show that this business is profitable.

**Keywords:** breakfast, business model canvas, customer discovery, smoothies

#### **Email Correspondence:**

novsa\_fakhira@apps.ipb.ac.id

## SETTING UP SUSTAINABLE DEVELOPMENT OF SOCIAL ENTERPRISES MODEL IN INDONESIA

Nastasya Larasati Lontoh, Andina Oktariani, Joyo Winoto  
IPB University

### ABSTRACT

Social Enterprise is a business explicitly aimed at social, community, and environment through business structures that can lead to sustainability (Bull and Crompton 2006). In recent years there has been a definite trend towards the development of the social enterprise business model. This phenomenon also occurs in Indonesia. At this time, significant impacts have been felt. Therefore, the existence of social enterprise becomes the principal, helping Indonesia embody the sustainable development. To support social enterprise in Indonesia, this paper conducted a benchmarking on SE in Canada. Canada is a country nominated by the Thomas Foundation 2019 as the first rank for the best country in its social enterprise development. On this study, systematic literature review was applied in order to reach the objectives. This Research has succeeded in identifying several gaps that occur in SE in Indonesia and Canada. Four gaps come from the technology side, business ecosystem, government support. This paper concludes with several recommendation points made to close the gap.

Keywords: Business Model, Social Enterprise, Sustainable Development, Systematic Literature Review

#### Email Correspondence:

nastasya\_larasati@apps.ipb.ac.id

## Testing the asymmetric effect in the volatility of food prices in Indonesia

Linda Karlina Sari, Noer Azam Achsani, Bagus Sartono, Lukytawati Anggraeni  
IPB University

### ABSTRACT

This paper investigates the presence of the asymmetric effect on the volatility of food prices in Indonesia over the period 2009-2019. Before testing asymmetric effects, it is necessary to identify the best model in describing the volatility of commodity prices. Modeling of volatility uses the GARCH family model, both symmetric and asymmetric. The GARCH asymmetric model is used to capture asymmetric effects on volatility. The results showed that the GARCH asymmetric model shows better performance than the symmetric GARCH. Through the best GARCH asymmetric model, the food commodities used in this study showed a statistically significant asymmetrical effect on volatility.

Keywords: agricultural commodity, asymmetric effect, asymmetric GARCH, modeling volatility

#### Email Correspondence:

[lindakarlinas@apps.ipb.ac.id](mailto:lindakarlinas@apps.ipb.ac.id)

## **DAYA: An Indonesian Community-Based Financial Inclusion Through An Integrated ABCG Collaboration**

**Suhendi, Noer Azam Achsani, Mukhamad Najib, Tanti Novianti**  
IPB University

### **ABSTRACT**

Financial inclusion is the key to driving economic growth, poverty alleviation, and inequality. In Indonesia, one implementation of financial inclusion that has been carried out and developed is in Micro, Small and Medium Enterprises (MSMEs). However, it was realized that the implementation of financial inclusion for MSMEs experienced many obstacles. Both formal (banking) and informal financial institutions with a variety of strategies continue to strive so that Financial Inclusion can be implemented at MSMEs. Daya is a program run by BTPN by integrating community-based quadruple helix ABCG (Academics, Business, Community and Government) collaboration. This study aimed to describe and explore the ABCG collaboration model that support the effectiveness of Financial Inclusion and measure its impact in improving the performance of MSMEs and Financial Inclusion in Indonesia. This research used qualitative and quantitative methods. The former used Focus Group Discussion, in-depth interviews, and observation while the latter used a Likert scale through surveys to the respondents. The results showed that the role of the actors involved has facilitated financial inclusion, and the ABCG collaboration model has a positive impact in achieving community goals, business independence, solving operational problems, increasing income, opening market access, and increasing the skills and knowledge of MSMEs.

**Keywords:** Financial Inclusion, ABCG, Community, MSMEs

**Email Correspondence:**  
suhendi.sbipb@gmail.com



## Performance Analysis of BUMDs of Food Sector in DKI Jakarta

**Henry Siahaan, DS Priyarsono, Bustanul Arifin, Amzul Rifin**  
IPB University

## ABSTRACT

The purpose of this study is to analyze the performance of BUMDs of food sector in DKI Jakarta Provincial Government. Previous research by Asaari (2000) shows that performance of BUMDs in DKI Jakarta are still weak due to unprofessional managements, BUMD commissioners have personal relationships with BUMD leaders, unprofessional state institutions, and clients of BUMD do not have a critical attitude towards BUMD performance. This study uses secondary data, namely financial statements, management reports, annual reports and interview methods to 6 key persons from the three BUMDs to confirm the findings. Analysis of quantitative descriptive data using financial and non financial ratios for 5 years. The results of this study indicate that the growth trend of assets and company earnings is positive but it is not stable where the value of the coefficient of variation (CV) fluctuates high so it tends not to describe the actual trend. Likewise, financial performance where the profitability ratio the company is relatively low and fluctuating, the liquidity ratio with a tendency that continues to grow even up to 10 times. For non-financial performance, the reality is 2-8 percent market domination, business synergy of the three BUMDs is partial and ad-hock. This study concludes that the performance of BUMDs in the food sector has not fully met the expectations of the DKI Jakarta Provincial Government and the company's target.

**Keywords:** Corporate performance, region-owned company(BUMD), corporate growth, corporate restructuring

**Email Correspondence:**  
henrympsiahaan@gmail.com

## **Business Resilience of Traditional Market in Coping with Pandemic Covid-19 (Case Study of Cisalak Market)**

**Lokita Rizky Megawati, Siti Jahroh, Annisa Falimantik**  
IPB University

### **ABSTRACT**

Cisalak Market is one of the traditional markets in Depok City in which operates for 24 hours every day. Technical Implementation Unit (abbreviated as UPT) as manager of the Cisalak Market has a vision of realizing its market as a center of economic growth in the orderly, clean, beautiful and comfortable trade sector. Like the traditional markets in general, activities in Cisalak Market are still running normally and are still crowded with buyers. But since the outbreak of COVID-19, market activities have also been limited and caused a decrease in the number of visitors as well as in purchasing power. Community activities had also been quiet due to the massive spread of corona virus or COVID-19. This situation will affect the performance of Cisalak Market, especially on the amount of income received by traders in the market. This paper aims to analyze the Cisalak Market in coping with this pandemic issue using a risk management approach. In particular, it aims (1) to identify the risk and determine risk treatment of the Cisalak Market in the midst of this pandemic and (2) to provide possible solutions in order to be resilient in conducting its business. This study will use fishbone analysis which will formulate the problem, search for the cause, and find the solution. Some respondents will be interviewed such as UPT of Cisalak Market as the market manager and traders in Cisalak Market. This study will find major problems and provide possible solution strategies.

**Keywords:** fishbone analysis, risk assessment, risk management, risk treatment

### **Email Correspondence:**

lokita.rizky@apps.ipb.ac.id

## **Product Service System (PSS) Business Model Innovation on Energy-Saving Company (ESCO)**

**Eka Sudarmaji, Noer Azam Achsani, Yandra Arkeman, Idqan Fahmi**  
IPB University

### **ABSTRACT**

Product System Service (PSS) is an excellent way to create new customer value under hyper- competition. Both product and service components are not used individually but in integrating product, service, and system as well as their valid combinations. This paper is exploring different business models (BMs) for the energy conservation service company or energy- saving company (ESCO). The paper used the morphological analysis for exploring the possible patterns of the alternative PSS business models. Through collecting, mixing, and matching a set of predefined building blocks available in the business model cases database. A single business case study is applied to illustrating current practices of how ESCO's company managed to change the structure of the energy-saving market. The changes happened due to new technological, innovative services, supply chain management, optimized cost structures, and their unique resources. In the end, a selected new PSS business model of ESCO will be represented at the business model canvas (BMC) as a visual representation of how an organization creates, delivers, and adds value.

Keywords: ESCO PSS, BMC, Morphological

**Email Correspondence:**  
esudarmaji@gmail.com

## Operational Risk Analysis at Agribusiness and Technology Park (ATP) IPB, Bogor, Indonesia

M. Fauzi Aditra, Popong Nurhayati, Siti Jahroh  
IPB University

### ABSTRACT

ATP IPB is an autonomous business unit under Teaching Farm Sub Directorate of IPB's Business and Entrepreneurship Development Directorate. It produces fruits and vegetables from its own farm and farmers as its partners, and also sells the produces mainly to modern markets. It faces risks in operating its business, especially operational risk. This study aims to: (1) identify ATP operational risk, (2) measure risk based on likelihood and impact, (3) analyze the root causes of ATP operational risk, and (4) provide alternative solutions to the underlying causes. The study was conducted in January to April 2019. Risk level map, risk map, and cause-effect diagram were employed in this study. Results showed three main risks, namely (R1) the output of ATP's partner did not reach the target, (R2) the output of ATP's partner exceeded the target, and (R3) the farmer's production did not reach ATP standard. Risk R2 is included in the low risk level, risks R1 and R3 are included in the extreme risk level. The root causes of the three risks are ineffective penalties, no priority for the screen-house, no priority for increasing the workforce, relationship between supervisor and partner farmers are still transactional. Alternative solutions that can be proposed are participatory assistance, contract review, screen-house implementation, and the formation of farmer groups.

Keywords: Risk Levels, Risk Map, Root Causes

**Email Correspondence:**  
fauziaditra97@gmail.com



## Operational Risk Management in the Digital Food Supply Chain Business of Etanee

Dystiana Putri Abistha, Henny K. Suwarsinah, Annisa Ramadanti  
IPB University

### ABSTRACT

Etanee is a start-up engaging in food product distribution. In its operational activities, etanee faces risks in the field of technology and food product distribution arising in its business processes. The prevention actions for these risks need to be analyzed to reduce their impacts on the company. The purpose of this study was to determine the risk events and their causes, the scale of impacts and the level of occurrence of risk-causing agents, and risk prevention actions to be applied at etanee. This study used descriptive analysis method to describe the etanee business process and House of Risk (HOR) to identify and formulate the risk prevention actions. The stages of risk management undertaken were setting the context, identifying, analyzing, evaluating, and treating the risks. There were 15 risk events with 19 risk-causing agents that arised in the etanee business process. The risk prevention actions that can be carried out are creating or tightening Standard Operating Procedure (SOP), adding human resources, and improving storage or shipping techniques.

Keywords: digital platform, food supply chain, operational risk, risk management, House of Risk

**Email Correspondence:**  
dystianaputria@gmail.com

## **Analysis of The Operational Risk Management of Agrotourism PTPN. VIII Gunung Mas Puncak, Bogor West Java**

**Savelia Salsa Bila, Agustina Widi Palupiningrum, Hartoyo**  
IPB University

### **ABSTRACT**

Risk management is a foundation for a company to meet the company's target. By managing the risk, a company would reduce losses so that enhance the profit and sustainability of the business. The objectives of the study are to identify operational risks dealing by the company, to assess the probability and the impact of the risks, and to formulate suggestions to mitigate the risks. The study was taken place at the agritourism business at Gunung Mas, a business unit of PTPN VIII. Data were collected by interviewing both internal and external (customer) stakeholders. The results showed there were 13 identified risks which were divided into four categories which are human resources, system, facilities, and external. From the 13 risks, there were three risks at the extreme level, three risks in the high level, four risks in the medium level, and three risks at the low level. In addition, risk assessment from the customer's perspective shows differences in the level of internal and external stakeholders' understanding, especially on service risk. The strategy is prioritized to minimize the extreme level and high-level risks to the medium level.

Keywords: agritourism, operational, risk management

#### **Email Correspondence:**

saveliasalsabila6@gmail.com

## **Analysis of Quality Control of Chicken Nugget Products by Using Six Sigma Method at PT. XYZ**

**Neldo Irawan, Salsa Dilla, Anny Ratnawati**

IPB University

### **ABSTRACT**

PT. XYZ is a company that produces chicken nugget. The company faces quality problems, namely the discovery of defective products. The purpose of this research was to identify and analyze the factors causing the occurrence of defective products in the chicken nugget production process; analyze product quality and propose improvements in improving product quality. The data collection techniques used were interviews, observations and documentation conducted for 1 month on February 13, 2020 to March 13, 2020. The Six Sigma method chosen in this study as an approach to the problem that consists of 5 stages, namely, Define, Measure, Analyze, Improve and Control. The value of Six Sigma for each process was 3.69 (Industry average in Indonesia) for the selection and preparation of raw materials, 4.1 (Industry average in Indonesia) dough cutting process and 4.3 (Industry average in USA) for the coating process of cuts. The proposed strategy is divided into 6 short-term proposals and 4 long-term proposals. If this defect product problem is solved, it can maintain the brand image, reputation, profitability, and sustainability of the company. Some proposed improvements that have been applied were found to decrease the number of defects as much as 48% in dough cutting process and coating of cuts. In addition, the company could potentially maximize profits by cutting losses by approximately 8 million rupiah/year.

**Keywords:** Chicken Nugget, Quality Improvement, Six sigma

### **Email Correspondence:**

neldo\_irawan@apps.ipb.ac.id

## **Internal Audit and Risk Management: an International Evidence**

**Setyo Wibowo, Noer Azam Achsani, Arif Imam Suroso, Hendro Sasongko**  
IPB University

### **ABSTRACT**

In a VUCA world, the board as a governing body of an organization has to see the risk management process more stringently. Their risk oversight is based on various assurance providers, which can be categorized into three lines of defense. As the third line of defense, internal audit needs to coordinate the combined assurance of the three to avoid gaps and overlaps, but little is known on this role. This study proposes binary logistic regression to explore factors associated with internal audit involvement in the organization's combined assurance of risks. The data in this study is drawn from the common body of knowledge survey performed by the Institute of Internal Auditors Global in 2015. The study result will fill the gap in combined assurance knowledge and be beneficial to internal audit practitioners, regulators, and standard-setting bodies.

**Keywords:** Risk Management, Internal Audit, CBOK Survey, International Study

### **Email Correspondence:**

setyo.wibowo@gmail.com



## **Risk Management of Digital Platform-Based Builder Service Tukang.com in The VUCA Era**

**Achmad Fadillah, Abdul Jabbar Hartanto, Noer Azam Achsani, Nur Hasanah**  
IPB University

### **ABSTRACT**

Internet users in Indonesia reached 143,260 million people or equivalent to 54.7% of the national population in 2017. The development of information technology affects business competition and business risk in the VUCA era. Business managers are required to be more creative and anticipatory in dealing with every risk and in developing their business, due to a fundamental change in the business competition system which is now beginning to utilize technology. The objectives of this paper are (1) to identify the risk factors faced by Tukang.com as a digital platform-based builder service, (2) to measure the risk levels faced by Tukang.com, and (3) to formulate a strategy to manage risk and protect the business value of Tukang.com. The method used in this paper are Severity Index, Probability and Impact Matrix, and VRIO (Value, Rareness, Imitability, and Organization) methods. The results of this paper are identified risk factors faced by Tukang.com (finance, customers, internal business processes, and learning and growth), financial factors are the biggest risk factor in the Tukang.com business, and managing risk using VRIO analysis is expected to help Tukang.com in protecting their business values. By managing the risks, Tukang.com as a digital platform-based builder service would reduce losses so that it enhance the profit and sustainability of the business.

**Keywords:** risk management, the digital platform, Tukang.com, Protecting Value, VUCA era

### **Email Correspondence:**

achmadfadillah@apps.ipb.ac.id

## **Protecting Value and Managing Risk Strategy for National Industry affected by Coronavirus (Covid-19)**

**Achmad Fadillah, Adisti Permatasari Putri Hartoyo**

IPB University

### **ABSTRACT**

The growth performance of the manufacturing industry sector also declined from 4.80% in the first quarter of 2019 to 2.01% in the first quarter of 2020. One of the causes is the existence of a pandemic coronavirus (Covid-19) which occurs almost all over the world including Indonesia. The aims of this paper are 1) to map manufacturing industry sub-sectors that affected by a coronavirus (Covid-19), 2) to measure the contribution of manufacturing industry sub-sector to GDP, 3) to formulate the strategies for protecting the value and managing risk for national industry affected by a coronavirus (Covid-19). The methods used in this paper are descriptive analysis and PEST analysis methods. The results show that there are 3 (three) categories of processing industries affected by a coronavirus (Covid-19): hard-hit/suffer, moderate, and high demand. 60% of the national industrial sector is categorized as hard-hit/suffer and 40% is categorized as moderate and high demand. Based on the PEST analysis several strategies that can be carried out include: 1) coordinating the fulfillment of raw material needs for the agro-industry due to the impact of Covid-19, 2) facilitation and coordination of absorption of domestic agro-industry products, 3) facilitation and coordination of simplification of agro-industry exports, 4) facilitation of the development of disaster emergency management applications, 5) development of SMEs centers especially for the facilitation of raw materials and supporting materials, 6) organizing business incubators for the establishment of new business entrepreneurs for SMEs affected by Covid-19.

**Keywords:** protecting value, managing risk, national industry, PEST analysis, Covid-19

### **Email Correspondence:**

achmadfadillah@apps.ipb.ac.id