

DIES NATALIS UNIVERSITAS HAYAM WURUK PERBANAS - SURABAYA magister) manajemen







## MARKETING INTERNATIONAL SEMINARS AND THE 4<sup>th</sup> INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS

Surabaya, 29th January 2022

Pascasarjana.Perbanas.ac.id Ø mmuhw.perbanas

🚫 0822-4784-5434 📈 info.mm@perbanas.ac.id

#### Published by :

Program Studi Magister Manajemen Universitas Hayam Wuruk Perbanas JI. Wonorejo Utara No. 16 Rungkut Surabaya Telp. 031-5947151 | Ext. 2402 Fax. 031-87862621 Website. www.pascasarjana.perbanas.ac.id



The Strategy of Digital in Business for Gaining Competitive Advantages after Pandemic



## Keynote Speakers :







Le Minerale



**Co-Host:** 









## Sponsored by :





# ICOBBI

MARKETING INTERNATIONAL SEMINARS AND THE 4" INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS

Surabaya, 29<sup>th</sup> January 2022

## **Proceeding Book of** The 4<sup>th</sup> International Conference on Business and Banking Innovations (ICOBBI) 2022 "The Strategy of Digitalization in Business for Gaining Competitive **Advantages after Pandemic**"

## **Steering Committee**

Dr. Drs. Emanuel Kristijadi, M.M. Dr. Lutfi., S.E., M.Fin Dr. Basuki Rachmat, S.E., M.M.

### **Organizing Committee**

Manager Vice Manager Secretary and Treasury

**Publication and Proceeding Technology Supporting** 

Supporting

: Prof. Dr. Dra. Tatik Suryani, Psi., M.M. : Dr. Ronny, S.Kom., M.Kom., M.H. : Dewi Aliffanti, S.E. Tanza Dona Pratiwi, S.E. : Aditya Ramadhani, S.IIP., M.A : Sumantri., S.Kom Risky Andriawan, S.T. Anton Ghozali., S.Kom : Muhammad Ilham



#### MARKETING INTERNATIONAL SEMINARS AND THE 4" INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS

Surabaya, 29<sup>th</sup> January 2022

## **Reviewers :**

- 1. Chonlatis Darawong, Ph.D (Sripatum University, Thailand)
- 2. Assoc. Prof. Dr. Elissha Nasruddin (University of Science, Malaysia)
- 3. Dr. Sanju Kumar Singh (Tribhuvan University, Kathmandu, Nepal)
- 4. Prof. Dr. Dra. Tatik Suryani, Psi., M.M (Universitas Hayam Wuruk Perbanas, Indonesia)
- 5. Dr. Soni Harsono, M.Si (Universitas Hayam Wuruk Perbanas, Indonesia)

ICOBB

- 6. Prof. Abdul Mongid, Ph.D. (Universitas Hayam Wuruk Perbanas, Indonesia)
- 7. Dr. Lutfi, M.Fin. (Universitas Hayam Wuruk Perbanas, Indonesia)
- 8. Burhanudin, Ph.D. (Universitas Hayam Wuruk Perbanas, Indonesia)
- Mohammad Shihab, Ph.D. (Universitas 17 Agustus 1945 Surabaya, Indonesia) 9.
- 10. Dr. Yudi Sutarso, M.Si (Universitas Hayam Wuruk Perbanas, Indonesia)
- 11. Dr. Muazaroh, SE., MT (Universitas Hayam Wuruk Perbanas, Indonesia)
- 12. Abu Amar Fauzi, S.S., MM (Universitas Hayam Wuruk Perbanas, Indonesia)
- 13. Dr. Werner Ria Nurhadi, S.E, M.M (Universitas Surabaya, Indonesia)
- 14. Muhammad Sholahuddin, S.E, M.Si, Ph.D, (Universitas Muhammadiyah Surakarta, Indonesia)
- 15. Dr. Siti Mujanah, M.M (Universitas 17 Agustus 1945 Surabaya, Indonesia)
- 16. Dr. Miswanto, M.Si (STIE YKPN Jogyakarta, Indonesia)

## **Editor and Layout :**

- 1. Dr. Ronny, S.Kom., M.Kom., M.H.
- 2. Dewi Aliffanti. S.E.
- 3. Tanza Dona Pratiwi, S.E.

## Published 29<sup>th</sup> January 2022

Magister Manajemen Universitas Hayam Wuruk Perbanas, Surabaya, Indonesia Jalan Wonorejo Utara No. 16, Rungkut Surabaya, East Java 60296 Telpon 082247845434 Website : http://pascasarjana.perbanas.ac.id/ Indexed by google scholar

#### **ISBN**:

## The originality of the paper is the author's responsibility



🌐 Pascasarjana.Perbanas.ac.id



MARKETING INTERNATIONAL SEMINARS AND THE 4<sup>th</sup> INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS Surabaya, 29<sup>th</sup> January 2022

v

#### FOREWORD

ICOB

Alhamdulillah, praise be to Allah Subhanahu Wa Ta'ala for granting us the opportunity to organize and publish the proceedings of the 4<sup>th</sup> International Conference on Business and Banking Innovations (ICOBBI) with the topic "The Strategy of Digitalization in Business for Gaining Competitive Advantages after Pandemic". This proceeding contains several researches articles from many fields in Business & Marketing, Banking & Sharia Banking, Accounting & Financial Management, Human Resources Management, Operations Management, Investasi, Insurance & Capital Market, Strategic Management, Technology Management, and Information System.

The 4<sup>th</sup> International Conference on Business and Banking Innovations was held on 29<sup>th</sup> January 2022 by virtual (online) zoom meeting and organized by the Master Management Study Program of Universitas Hayam Wuruk Perbanas in Collaboration with five Higher Education Institutions in Indonesia and three Universities from Asia countries. Keynote speakers in this conference were: Chonlatis Darawong, P.hD (Sripatum University, Thailand), Associate Prof. Dr. Ellisha Nasrudin (University of Science, Malaysia), Dr. Sanju Kumar Singh (Postdoctoral Fellowship in Universitas Airlangga, Tribhuvan University Nepal) and Prof. Dr. Abdul Mongid, MA., P.hD (Universitas Hayam Wuruk Perbanas, Indonesia).

I would like to give high appreciation to the Rector of Universitas Hayam Wuruk Perbanas for his support at this event. Acknowledgments and thank you to all the steering and organizing committees of the ICOBBI for the extra ordinary effort during the conference until this proceeding published. Thank you very much to all presenter and delegates from various Universities. Beside it, I would like to express our gratitude to the three universities, namely Universitas 17 Agustus Surabaya, STIE YKPN Yogyakarta, Universitas Negeri Gorontalo, Universitas Surabaya and Universitas Muhammadiyah Surakarta which has been the co-host of this event.

Hopefully, the proceeding will become a reference for academics and practitioners, especially the business and banking industry to get benefit from the various results of the research field of Business and Banking associated with Information Technology. Proceedings also can be accessed online on the website http://eprints.perbanas.ac.id/

Chair of the Master Management Study Program Universitas Hayam Wuruk Perbanas

Prof. Dr. Tatik Suryani, M.M.





## **Tabel of Content**

Coveri	
Co-Host and Sponshorshipii	i
Committee	
Reviewersir	v
Foreword v	7
Table of Content	

ICOBBI

#### **Accounting and Financial Management**

The Influance of The Level of Financial Literacy, Materialism and Impulsive Buying to Management Financial Behavior Students Master of Management in Surabaya ......1-7 Dominika Rosvita Amadea Tarung; Muazaroh

The Effect of Perception of Confidentiality and Security, Perception of User Satisfaction, and Perception of Easy on The Implementation of E-Filling on Taxpayer Compliance in Submitting Wicak Ari Wibowo; Tri Ciptaningsih

The Effect of Attitude, Subjective Norms, Perceived Behavioral Control, And Tax Knowledge On Studentâ€<sup>™</sup>S Interest Who Join The Tax Volunteer Program For A Career In Taxation (Empirical Dheanira Ayu Hapsari; Tri Ciptaningsih

Differences un the Strenght of Financial Ratios and Financial Distress of Transportation Companies Ivana Oktarina Sopacua; Manggar Wulan Kusuma

Rusmawan W. Anggoro; Anita Kristiana

Fluctuation Of Rupiah Exchange Value, Interest Rate And Changes In Share Price...........35-44 Hais Dama; Meriyana Franssisca Dungga

Fraud Financial Statement Detection: Fraud Hexagon Model Analysis in the Financial Sector Listed Shinta Permata Sari; Diana Witosari

Attaining financial well-being: The essential effects of financial	experience, status, and
behavior	
Mochammad Zakariya Rosyid; Rr. Iramani	



#### MARKETING INTERNATIONAL SEMINARS AND THE 4<sup>th</sup> INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS

Surabaya, 29<sup>th</sup> January 2022

The Effect of Dividend Policy and Capital Structure on Company Value with Profitability as
Mediation Variable in The Food and Beverage Companies Listed on The IDX in 2015 –
2020
Atikah Resiana Fildzah: Wiwik Lestari

Factors Affecting Firm Value : Theoretical Study on Public Textile and	nd Garment Manufacturing
Company in Indonesia	
Cholis Hidayati; Lintang Puspitasari Wijanarko	

Principles and	Agents: 7	The Phenomeno	n of Agency	Theory in	The Business	Sector and The P	ublic
Sector							09
Maulidah Nara	stri;						

Company value of Indonesia State-Owned Enterprises during the Pandemic-Covid 19.... 110 Hwihanus;



The Effect of Fundamental and Macroeconomic Factors to Stock Return	
Aprilia Setiadi Lukas; Werner R. Murhadi; Arif Herlambang	

The Relationship of Sustainability Reporting Disclosure and Firm Performance, Risk, Value: Study on Banking Sub Sector Companies Listed Into Indonesia Stock Exchange (IDX) ...... 137-146 Alfiana Mufti Ainuna; Rina Trisnawati

### Banking and Shari'a Banking

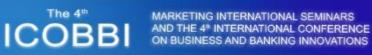
Stress Test of Financing Quality at Indonesian Islamic Rural Bank Using Montecarlo Simulation
Uvy Dian Rizky; Abdul Mongid
Macroeconomic Stress test of Credit Risk in Indonesian Banking using Monte Carlo Simulation
Nanda Diyah Syarifah; Abdul Mongid
The Effect of Credit Risk and Efficiency on Capital Adequacy With Proftiability as Intervening Variables
Mochamad Syafruddin Aji; Emanuel Kristijadi
Analysis Of The Effect Of Inflation, Capital Adequacy Ratio, Operation Cost Of Operating Income, And Net Performing Financing On The Profitability Of Sharia Commercial Banks in
Indonesia
The Effect of Liquidity Ratio, Asset Quality Ratio, Sensitivity Ratio, Capital Ratio and Efficiency Ratio Towards Return On Asset (ROA) on Foreign Exchange National Private Commercial



## ICOBBI

Planned Behavior Theory Testing (Case Study Of Financial Management In A Muslim Family In Sidoarjo)
Does Competition Make Regional Development Banks More Efficient?
Determinants of Indonesian Banking Profitability
The Influence of the Britama Savings Marketing Strategy on Customer Satisfaction at PT. Bank Rakyat Indonesia (Persero), Tbk. Batua Raya Makassar Unit
Business and Marketing
Social Media Marketing Activities, Brand Love and Brand Trust In Willingness to Participate Online (Co-Creation) with Satisfaction as Mediation Variable
The Influence of Social Media Marketing and Personal Selling on Purchase intention during the pandemic Covid-19: The Case of Discovery Property Agency
Factors Influencing Mobile Banking Adoption In Covid 19 Pandemic Period: The Mediating Role Of Behavioral Interest
How Coolness Affects The Brand Image On The Vans Fashion Footwear?
Implementation of Digital Marketing & Knowledge Transfer of Hollandpark Permaculture Products
Knowledge Management: Social Media & Public Knowledge About the Hazard of Mercury





Relationship Between Talent Management And Employees Performance: Case In Gorontalo
The Effect Of Security, Responsiveness, Convenience, And Reliability Of Services On BRI Customer Satisfaction In Using Mobile Banking
Impact Of Wfh In Surabaya City The Effect Of Workload, Employee Burnout On Work Life Quality And Employee Performance
Analysis Of Marketing Strategy, Product Quality And Service Quality To Repurchase Intention
The Effect of Customer Satisfaction and Trust on Performance Expectancy and Word of Mouth (WOM) at Shopee Applications Users
Does Brand Matter in Driving Purchase Intention of the Banking Services?
The Effect of Perceived Quality and Value on Brand Trust of Express Delivery Services during Pandemic Covid 19 in Indonesia
The Determinants of Brand Equity in Banking
Entrepreneurial Intention for Students at Universities in Sleman, Yogyakarta Special Region, Indonesia
The Effects of Commitment, Perceived Quality, and Satisfaction on Brand Equity: The Medating Role of Brand Trust and Brand Loyalty
Behaviour Intention of Digital Banking Adoption UTAUT2 and Covid-19 Pandemic as Factors
Popy Novita Pasaribu; Auzi Naufal Rabbani





MARKETING INTERNATIONAL SEMINARS AND THE 4" INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS

Factors Influencing Online Purchase Intention Through E-Commerce in The Millennial	
Generation	345
Delta Sagita Riandana; Delta Sagita Riandana	

ICOB

Analyze of Customer Loyalty on Customer Oriented and Marketing Communication PT. Bank Verawaty;

The Effect Of Experiential Marketing On E-Wom (Electronic Word Of Mouth) And Customer Value As Intervening Variables In Tourism Destinations Rawa Bento Kerinci Regency Jambi Deci Fachrosi; Johannes; Sylvia Kartika Wulan B

#### **Human Resources**

The Effect Of Leadership Style, Work Environment, Compensation On Job Satisfaction At Pt Pln
(Persero) Sikka Regency
Krisanty Natalia Mariani Parera, Emanuel Kristijadi, Tjahjani Prawitowati

The Mediating Role of User Satisfaction in the Influence of Organizational Learning Culture and Online Learning Engagement To Net Benefit Outcome In Indonesia During Covid 19 Pandemic Heni Kusumawati;

Muchtar Ahmad; Djoko Lesmana Radji; Hais Dama

The Internalization of Patient Safety Culture in The Quality of Performance of Nurses in Sisilia Andri Soelistyani; Ika Yunia Fauzia

The Role of Work Ability and Servant Leadership on Employee Performance in a TIKI Delivery Siti Mujanah;

The Effect of Organizational Commitment, Organizational Culture, Self-Efficacy on Employee Performance with Job Satisfaction as Mediator Literature Review and Proposed Model .. 385-393 Vega Hardikasari; Burhanuddin; Emma Julianti;

Determinants Of Millenials Employee Engagement In Indonesia: Systematic Literature Febby Ayu Ramadhani; Tatik Suryani



MARKETING INTERNATIONAL SEMINARS AND THE 4<sup>th</sup> INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS

## Investment, Insurance and Capital Markerts, Information System, and Technology Management

ICOBB

Technology Acceptance and Adoption of Mobile Application: A Systematic Review. .. 406-415 Boonchai Wongpornchai; Chonlatis Darawong

Analysis of The Indonesia Capital Market Reaction to The Announcement Implementation of Emergency Community Activity Restriction (PPKM) (Event Study on Companies. ...... 426-433 Said Setiandika Pambudi; Suyatmin Waskito Adi

The Effects of Interpersonal Communication and Self-Efficacy on Job Satisfaction of LSP P1 Assessor of Higher Education Institutions in Surabaya, East Java Province, Indonesia. . Ida Aju Brahmasari; Irmasanthi Danadharta; Ida Aju Brahma Ratih



## PROCEEDING BOOK OF THE 4<sup>TH</sup> INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS(ICOBBI) 2022

"The Strategy of Digitalization in Business for Gaining Competitive Advantages after Pandemic"

## 29<sup>th</sup> January 2022 At Zoom Meeting

### **Published by:**

Magister Manajemen Universitas Hayam Wuruk Perbanas, Surabaya, Indonesia Jalan Wonorejo Utara No. 16, Rungkut Surabaya, East Java 60296 Telpon 082247845434 Website : http://pascasarjana.perbanas.ac.id/ MARKETING INTERNATIONAL SEMINARS AND THE 4<sup>th</sup> INTERNATIONAL CONFERENCE ON BUSINESS AND BANKING INNOVATIONS Surabaya, 29<sup>th</sup> January 2022

## Behaviour Intention of Digital Banking Adoption UTAUT2 and Covid-19 Pandemic as Factors

Popy Novita Pasaribu<sup>1\*</sup>, Auzi Naufal Rabbani<sup>2</sup>

<sup>1</sup> Universitas Ibn Khaldun Bogor <sup>2</sup> Universitas Bina Nusantara \*Corresponding author. Email: pnovita@yahoo.com

#### ABSTRACT

This research studied the behaviour intention (BI) of adoption digital banking using UTAUT2 and covid-19 pandemics as factors with sex and type of digital banking as control variables and the relations were moderated by education and frequency of using digital banking. The locus was DKI Jakarta. The total samples were 329 and used purposive methos as sampling procedure. Data analysis used regression analysis with the help of SPSS 26.0 software, The factors that influence significantly were Effort Expectancy, Social Influence, Hedonic Motivation, Price Value and Habit. Only the Effort expectancy factor had a negative influence. While the Performance Expectancy factor and Facilitating conditions in using digital banking did not have a significant effect. Covid-19 Pandemic with three indicators also did not affect BI. Adopting digital banking type (mobile banking, internet banking or both) were proven as control variables. Frequency of using digital banking moderated Social Influence, Hedonic Motivation to behaviour intention in using digital banking moderated Social Influence, mobile banking. Education background moderated Hedonic Motivation to behaviour intention and Habit to behaviour intention of adoption mobile banking by the residents of DKI Jakarta.

Keywords: Digital Banking, Utaut2, Behaviour Intentions, Covid-19 Pandemic, Moderating variables

#### **1. INTRODUCTION**

The digital banking industry offers many digital facilities, including in the form of mobile banking and internet banking. This is in line with the National Non-Cash Movement (GNNT) which was launched by Bank Indonesia since August 14, 2014. On the other hand, according to Deloitte Indonesia, in 2013, almost 60% of all Indonesians who should have used banking facilities, did not have a bank account [1]. McKinsey studies conclude that Indonesian consumer acceptance is very open to digital banking. Data from the 2017 survey results from 900 users of banking facilities, there was 37.6% of non-digital respondents who would have used digital banking [2]. Internet penetration in Indonesia has shown a positive trend over the last decade. Starting from 500,000 users in 1998 and reaching 196,714,070 internet users in the second quarter of 2020 with a growth of 8.9% from the previous year. Respondents who have mobile banking are 43.3% while respondents who have internet banking are 31.8%. Furthermore, in terms of the frequency of financial services and products using the internet, respondents with frequent use of financial

services and products chose mobile banking by 7.4%, while for internet banking 3.9% and fintech 5.5% [3].

The penetration rate of internet users in Indonesia is high according to the APJII survey in 2020, which is at 73.7% of the total population of Indonesia. Likewise, the percentage of internet users in DKI Jakarta based on the total population is the highest compared to other provinces in Java, which is 85% with a growth of 5.7% from the previous year. However, the results of the APJII survey show that in Indonesia there are still 56.7% of respondents who do not have a mobile banking application and 61.2% has no internet banking. Of the percentage who have mobile banking, 22% of them never use mobile banking applications and 26% from internet banking owners that are not using it [3].

The COVID-19 pandemic that has hit the world and including Indonesia has accelerated digital society, including in finance and banking. Hamilton stated that there has been a digital banking trend in the new normal era [4]. During this pandemic, the use of mobile banking channels of Bank BNI year on year grew by almost 50 percent. So the growth of people in the use of digital channels has reached 46 percent [5]. The adoption of

info.mm@perbanas.ac.id

digital financial behaviour and changes in the behaviour of our society towards a digital economy have been accelerated by the Covid-19 pandemic. Sri Mulyani, Minister of Finance, said that the digital economy, including digital banking, is not talking about single-digit linear growth, but exponential growth. The total sales value of the digital economy merchandise value in Indonesia in 2021 will reach US\$70 billion, which is the largest value in Southeast Asia [6].

Literature review on an adoption of internet banking in developing countries conducted by Hama Khan from 28 articles which were selected from a total of 110 found that The Technology Acceptance Model, Theory of Reasoned Action, Theory of Planned Behaviour, Unified Theory of Acceptance and Use of Technology (UTAUT) and Self Designed models have been used by most of the researchers in this review with a higher frequency of the Technology Acceptance Model [7]. UTAUT has used for many researches for behaviour intention on adoption technology [8]-[13]. Acceptance of digital banking during covid-19 pandemic has been studied by [14]-[16] and [17]. This research was studied the behaviour intention of adoption digital banking using UTAUT2 and covid-19 pandemics as factors. The novelties of this research were the use of sex and type of digital banking (mobile banking, internet banking) as control variables and the relations were moderated by education and frequency of using digital banking.

#### 2. LITERATURE REVIEW

#### 2.1. Digital Banking

Mobile banking is one of the interface technology innovations that allows customers to access the banking system via mobile phones anywhere and anytime, whereas internet banking only need device with internet connection. The advantage of mobile banking and internet banking facilities is that internet banking still requires a security number that is generated by tokens that function to authenticate banking transactions such as transfers, purchases, and payments. Therefore, in this case mobile banking is more practical than internet banking, however internet banking more secure. Furthermore, internet banking can be used outside the country of the bank due to no attachment to mobile phone number of customer [18].

#### 2.2. UTAUT2

The UTAUT model brings together the best characteristics derived from other theories of technology acceptance [19]. The extended UTAUT to UTAUT2 was

adding three factors: hedonic motivation, price value and habit [20].

#### 2.2.1. Performance Expectancy (PE)

PE is composed of five variables from several previous models, namely: perceived usefulness, extrinsic motivation, job-fit, relative advantage, and outcome expectations. In terms of the use of digital banking applications, PE is the customer's perception of using digital banking which will increase banking activities. Customers will use digital banking services if they believe the system provides a positive impact on banking transaction activities and services. The researches shows that PE has a positive effect on behaviour intention to use digital banking [10], [11] and [21]. So that PE is expected to be a significant factor that directly affects the behaviour intention.

#### 2.2.2. Effort Expectancy (PE)

EE is defined as the ease of use of a system that can reduce a person's effort in the form of energy and time in activities [19]. Research shows EE has a positive effect on behaviour intention [8]–[13].

#### 2.2.3. Social Influence (SI)

The use of certain technologies is influenced by social environmental factors such as the opinions of friends and family who use the technology. With a positive opinion or support will encourage users to start using the technology [19]. Previous research also explained that SI influences behaviour intention in using mobile banking [10] and [13].

#### 2.2.4. Facilitating Condition (FC)

FC is an individual's level of comfort to use a system that is supported by technical and organizational infrastructure, namely explaining a person's perception that infrastructure in the form of equipment or knowledge supports the use of a system or technology [19]. FC features in digital banking such as demos or tutorials, online chat and customer care calls. Thus, FC has a positive effect on behaviour intention intention to use digital banking [10], [13].

#### 2.2.5. Hedonic Motivation (HM)

HM is the extent to which a person gets pleasure from the technology he is currently using [20]. Research which states that hedonic motivation has a positive effect on interest in using digital banking by referring to the pleasant user experience or pleasure when using technology-based applications. The use of technology is



driven by the aspiration to engage in fun and entertaining activities [8], [9], [12], [13], [21], [22].

#### 2.2.6. Price Value (PV)

When the perceived benefits are greater than the costs incurred, consumers show a willingness to adopt a particular technology, in other words it is a trade-off between the costs paid and the benefits derived from using the technology [20]. Investigations related to the relationship between price value and behaviour intention have been carried out in several previous studies related to the adoption of digital banking technology. The results of studies state that PV has a positive effect on behaviour intention [12], [23], while other study find a negative effect [21].

#### 2.2.7. Habits (HB)

Habit shows the extent to which users tend to use technology automatically because of previous learning with the habit of using technology as an indicator. There is a significant influence of consumer habits on personal technology use as they face a diverse and ever-changing environment [20]. Researches shows that HB has a positive effect on behaviour intention [9], [12], [22].

#### 2.2.8. Behaviour Intention (BI)

Behaviour Intention (BI) is the behaviour intention to use technology which is the main concept in UTAUT [19] and UTAUT2 [20]. BI is defined as the extent to which a person has formulated a conscious plan of what behaviour to do with certain things in the future [8]. Researchers use BI as the dependent variable and or intermediate variable in the acceptance of technological innovation using the UTAUT model [8], [9], [12], [22], [23].

#### 2.3. Covid-19 Pandemic (Cov)

The pandemic period encourages and changes conventional customers into digital banking customers and creates a new trend in the global banking ecosystem, customers going digital by using banking in the new normal era of the COVID-19 pandemic [4]. Several studies have been used the notion of pandemic era in adoption digital banking [15], [17]. Other studies use covid-19 pandemic as variable independent [24]-[26].

Covid-19 pandemic regarding adoption mobile banking using three indicators: concerns about visiting bank branches or ATMs; the increase of payment online market or e-commerce and digital baking as life styles [16]. Concern on physical contact indicator of Cov is in line with the Cov fear variable in the study behaviour intention staying at home during covid-19 pandemic [24],

[25]. The second indicator of Cov is the increase in the use of online market places or e-commerce so that it requires mobile banking services in payments, as the awareness variable of the impact of Cov on online shopping [27]. The third indicator of Cov is the use of mobile banking as part of a lifestyle such as buying electricity tokens, cashless payments and others. This indicator as single indicator on the perception of Cov which is "Covid-19 pandemic affects my lifestyle" on the behaviour of mobile banking and internet banking adoption [14]. Cov also is being used as moderating variable between UTAUT2 and behaviour intention on mobile banking adoption [16].

#### 2.4. Hypotheses

Based on the framework, where performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating conditions (FC), hedonic motivation (HM), price value (PV), habit (HB) are the independent variables in the UTAUT2 model together with the covid-19 pandemic (Cov) affect the behaviour intention (BI) of using mobile banking, so eight research hypotheses can be formulated. Sex of respondent and type of digital banking that being used (mobile banking, internet banking or both) was applied as control variables. Frequency of using digital banking and education background of respondent then added as moderating variables.

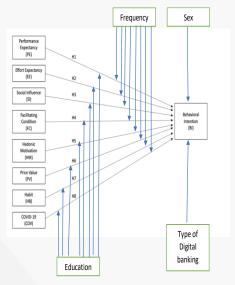


Figure 1 Research Framework of Digital Banking Adoption using UTAUT2 and covid-19 pandemic.

#### 3. METHODS

This study was using quantitative approach. Object of the study was digital banking customer and locus at DKI

Jakarta. The sampling technique used was the convenience sampling method with two criteria, first the respondents were residents in Jakarta and second respondent were digital banking users. Due to the pandemic conditions, the authors chose to use an online questionnaire using Google Form because it is easier to fill out, distribute and collect without any physical contact with the respondent. The questionnaires were distributed through social media, e-mail, and What's App. groups, then applying snowball sampling technique, in which respondents who had filled out were asked to spread out to their communities and so on. The questionnaire for the model variables UTAUT2 and Behaviour Intention (BI) was adopted [23] with an adaptation of the questionnaire which is specific for digital banking customer [9]. The measurement for each unit uses a six (6) point Likert scale from 1="strongly disagree" to 6= "strongly agree".

This questionnaire was distributed to the population of DKI Jakarta and got 355 respondents who gave their responses to this questionnaire. Of the 355 responses that were filled in by the respondents, there were 26 respondents' responses that could not be processed due to the respondent's requirements that did not meet, so that 329 respondents' response data were obtained which would then be processed for this research.

The data was then processed using regression analysis using SPSS (Statistical Product and Service Solutions) version 26.0. Regression analysis was also carried out regarding the behaviour of mobile banking adoption using the UTAUT2 model in Vietnam [9]. Beforehand, instrument test was done regarding validity and reliability, the test of classical assumption test and then regression analysis. Regression analysis was done through couple steps. Firstly, with UTAUT2 factors and covid-19 pandemic, secondly as robustness test adding sex and type of digital banking as control variables. Lastly, adding moderating variables: frequency and education to relation of the significant factors towards behaviour intention. Moderating regression analysis (MRA) was done using the interaction of factors and moderating variables.

#### 4. RESULTS AND DISCUSSION

#### 4.1. Results

#### 4.1.1. Demography of Respondents

The demography of respondents can be seen at Table 1. Female respondents were slightly dominant compared to male respondents. Millennial respondents with age 25year-old below were dominant consist of 38.9%.

Education background of respondent were most from undergraduate background which were 60.5%. Respondents were as workers 54.1% and next as students 21.9%. South Jakarta was the place of resident most of respondents, the figure was 55%.

Table 1 Demography of respondent	ents.
----------------------------------	-------

	Characteristics	N = 329	
		Sum	%
Sex	Female	185	56.2
	Male	144	43.8
Age	15-20	50	15.2
-	21-25	78	23.7
	26-30	30	9.1
	31-35	37	11.2
	36-40	33	10
	41-45	32	9.7
	46-50	43	13.1
	51-55	19	5.8
	>56	7	2.1
Education	Junior High	2	0.6
	School		
	High School	53	16.1
	D1/D2/D3	21	6.4
	Undergraduate	199	60.5
	Master Degree	42	12.8
	Doctoral	12	3.6
Employability	Students	72	21.9
	Housewife	24	7.3
	Self-employed /	48	14.6
	entrepreneur		
	Workers	178	54.1
	Retired	7	2.1
Resident	South Jakarta	181	55.0
	West Jakarta	44	13.4
	East Jakarta	72	21.9
	Central Jakarta	24	7.3
	North Jakarta	8	2.4

Characteristics of respondents regarding digital banking adoption can be seen at Table 2. BCA digital bank was the most used product consist of 46.5%. Other banks that had less than 5% respondents used it were Bank Jenius BTPN, Bank CIMB Niaga, Bank Muamalat, Bank DKI, Bank Permata, MayBank, Bank Panin, BTN, BJB and Danamon Syariah. Type of digital banking was dominated by mobile banking 75.4%, using both mobile banking and internet banking 9.7% and internet banking only 4.9%. Frequency of using the digital banking figures were seldom 12.5%, often 44.7% and always 42.9%.

Table 2 Demography respondent based on digital banking behaviour.

Characteristics	Sum	%	
-----------------	-----	---	--



Bank*	BCA	155	46.5
N=333	Mandiri	52	15.6
	BNI	37	11.1
	BSI	31	9.3
	BRI	16	4.8
	Bank Sumut	8	2.4
	DBS	7	2.1
	Others	27	8.2
Digital	Mobile	248	75.4
Banking			
N=329	Internet	16	4.9
	Mobile &	65	9.7
	Internet		
Frequency	Seldom (1/week)	41	12.5
N=329	Often (2-5/week)	147	44.7
	Always	141	42.9
1.0	•		

\*Respondent can answer more than one

#### 4.1.2. Instrument Tests

Instrument test showed the validity and reliability test. Validity test to measure whether the question items or instruments of each variable on the questionnaire were valid. The result of validity test proofed that all items were valid. Table 3 presented the covid-19 pandemic validity test, where all value of r (inter item correlate) above r table which was 0.11 that meant the three indicators were valid.

Table 3 Validity test for covid-19 pandemic variable.

	Cov1	Cov2	Cov3	CovTotal
Cov1	1.000	0.595	0.685	0.547
Cov2	0.595	1.000	0.606	0.688
Cov3	0.685	0.606	1.000	0.534
Cov_Total	0.547	0.688	0.534	1.000

Reliability test is to measure how consistent an instrument is in measuring a concept. The reliability all variables were 0.6 and were declared reliable. The Cronbach alpha of variable covid-19 pandemic was 0.861.

#### 4.1.3. Test of Classical Assumption

Multiple linear regression model can be called a good model if it meets the classical assumption test, therefore the classical assumption test is needed before performing regression analysis. Classical assumption test consists of: Normality test, Multicollinearity test and Heteroscedastic test. Normality Test based on the Kolmogorov-Smirnov showed sig alpha less than 0.05 which meant the data did not distribute normally. Samples with large data should be normally distributed. Some experts in research also argue that the normality test is not a requirement for

To find out whether there is a high correlation between independent variables, a multicollinearity test is carried out. If there is multicollinearity between the independent variables, the regression coefficient for that variable cannot be determined. Based on the tolerance value, there were no variable with a tolerance value below 0.10; namely Performance Expectancy of 0.502, Effort Expectancy of 0.574, Social Influence of 0.576, Facilitating Condition of 0.611, Hedonic Motivation of 0.337, Price Value of 0.613, Habit of 0.424, and Covid-19 Pandemic of 0.752. This showed that there was no multicollinearity.

The Spearman Rank Correlation Test is done by looking for a correlation between the residual value and the independent variable. Heteroscedasticity can be concluded to occur if there is a correlation between the independent variables and the residual value. Based on the results, the sig value in the eight independent variables had a value greater than 0.05, it meant no heteroscedasticity problem. After the Classical Assumption Test met the criteria, then the Multiple Regression Test can be carried out.

#### 4.1.4. Regression Analysis

F test gave result that sig F below 0.05, meant that model was good fit and all the factors of Utaut2, and covid-19 pandemic simultaneously had a significant effect towards behaviour intention in adopting digital banking. The model gave R square 71.2% that meant only 28.8% behaviour intention of adoption digital banking was explained by other than Utaut2 and Covid Pandemic factors. Partially test form t test showed that performance expectancy, facilitating conditions and covid-19 pandemic did not give significant effect on behaviour intentions (Table 4).

Table 4 Regression Analysis Based Model.

Variable	Coefficient	Sig.	Decision of
	Regression		Hypotheses
Constant	7.033	0.007	Significant
PE	0.047	0.370	Not Significant
EE	-0.130	0.006	Significant
SI	0.106	0.002	Significant
FC	-0.045	0.292	Not Significant
HM	0.266	0.000	Significant
PV	0.089	0.002	Significant
HB	0.511	0.000	Significant
Cov	0.037	0.233	Not Significant

F sig = 0.0000	
R Square = 71.2%	

Next step was the robustness of model test by adding two control variables, sex (male and female) and type of digital banking (mobile banking, internet banking and respondent using both). Based model was the eight factors (Utaut2 and covid-19 pandemic) and second model was based model with sex and digital banking type as control variables. Robustness test using the value of F change that should not gave significant result (F change sig above 0.05), while the F test was good, R square was the same and all the significant factors were not changed. The result showed that F change sig was above 0.05, R square of second model and significant factors were the same which meant sex and digital banking type were control variables (Table 5). While the multicollinearity test gave no collinearity of control variable (value of tolerance > 0.1)

Table 5 Robustness test with control variables.

	Based (1 <sup>st</sup> )	2 <sup>nd</sup> Model**
	Model*	
R square	0.712	0.712
Sig F Change	0.000	0.925
Sig F Model	0.000	0.000
Sig T		
EE, SI, HM, PV, HB	< 0.05	< 0.05
PE, FC, Cov	> 0.05	> 0.05
Sex, Digital Banking		> 0.05
Indonondant vonichlage		

Independent variables:

\*PE, EE, SI, FC, HM, PV, HB, Cov

\*\* PE, EE, SI, FC, HM, PV, HB, Cov, Sex, Digital Baking

MRA was used with the interaction of significant independent variables (EE, SI, HM, PV, HB) and moderating variables, frequency, and education. F change of based model with control variables and MRA model was exhibited at Table 6. The results showed that R square of model with moderating variables was 76.2%, five-percent higher than second model, therefore Sig F change was below 0.05 which meant there was significant different with moderating variables.

**Table 6** MRA F Change with interaction with frequency
 and education as moderating variables.

	2 <sup>nd</sup> Model	MRA model
R square	0.712	0.762
Sig F Change	0.000	0.000
Sig F Model	0.000	0.000

The result of t test from MRA model found that frequency of using digital banking significantly moderating the relations of SI, HM, PV and HB,

correspondingly education background moderating significantly HM and HB. Frequency negatively moderated the nexuses of SI, HM and PV, but positively on HB towards BI. Education background moderated negatively between HB and BI, while positively on HM and BI. The test of multicollinearity of the interaction variables resulted that the tolerance values were above 0.1, meant no collinearity (Table 7).

Table 7 T test of MRA and multicollinearity test of moderating variables.

	Beta	Sig t	Decision of	Tolerance
			Hypotheses	
EExF	-0.032	0.575	Not	.699
			Significant	
SIxF	-0.105	0.020	Significant	.628
HMxF	-0.149	0.049	Significant	.679
PVxF	-0.103	0.013	Significant	.547
HBxF	0.380	0.000	Significant	.607
EExEd	0.037	0.345	Not	.800
			Significant	
SIxEd	0.031	0.298	Not	.648
			Significant	
HMxEd	0.131	0.020	Significant	.770
PVxEd	-0.024	0.501	Not	.601
			Significant	
HBxEd	-0.170	0.001	Significant	.649
Гſ				

F: frequency

Ed: Education background

#### 4.2. Discussion

The model showed that effort expectancy (EE) had negative influence towards behavior intention (BI) on adopting mobile banking among DKI Jakarta residents. Research conducted in Gauteng, South Africa on millennials in adopting mobile banking applications, gave the same result, although the result was not significant [22]. The significant negative relationship between EE and BI can be explained by the demographics of the respondents, where the respondent's education was dominated by higher education (bachelor, master and doctoral degree), 76.9%. It was suspected that the complexity of an innovation increases intention behavior to adopt new innovations such as mobile banking applications and internet banking because with higher education, respondents were already accustomed to solving complex problems.

The influence of others or social influence (SI) in adopting digital banking also found positively significant. It was also supported by research in adopting mobile banking in Indonesia [10] and Vietnam [13]. However, frequency of using digital banking moderated negatively in relation of SI and behavior intention. It



means, SI gives strong effect at the starting of adoption digital banking.

The pleasure of using digital banking or hedonic motivation (HM) affected BI significantly and it was in line with other studies [8], [9], [12], [21], [22]. Frequency of using digital banking and education background found significant as moderating variables, but frequency's effect was negative and education background's effect was positive. HM affects BI more strongly with higher education. The implication of this, that innovation of user interface and user experience (UI/UX) can be maximized to get higher desire.

The nexus between price value (PV) and BI was positive, as the same result of previous studies [12], [23]. Frequency was moderated negatively towards BI. It means PV becomes less significant along the more frequent using of digital banking. The implication of this, bank can improve features that provide added value without worrying about trade off with fees that will be imposed.

Habit (HB) influenced positively BI and it was also found in other researches [9] and [12]. Frequency of using digital bank gave habit more effect towards BI, but education background of customer bank moderated negatively the nexus of HB and BI. The conveniency of using digital banking as habit becomes more stronger when customers use it, However, with higher education adoption of digital banking already as habit because it is a necessity. It can be explained also from the demography of respondents in digital banking characteristic where respondents have more than one bank in using digital bank, therefore higher education background customer are more familiar with digital technology.

Two other UTAUT2 factors, namely performance expectancy (PE) and facilitating condition (FC) did not significantly affect the Behavioral Intention of using mobile banking for the residents of DKI Jakarta. The results of this study are supported by other researches [12], [23] where PE has no significant effect on Behavioral Intention (BI). FC has no significant effect on BI, which is in line with the results of these studies [8]-[11].

The Covid-19 pandemic (Cov) factor did not significantly affect the Behavioral Intention of using mobile banking for the residents of DKI Jakarta. This is not in line with the research in Romania [14]. This can be explained by the research results where the results show that teleshopping does not make a significant contribution to reducing activities outside the home due

to the COVID-19 pandemic [29] and the research where the perception of the emergency of the Covid-19 Pandemic (Cov) does not significantly affect the desire to stay at home [25]. The research data was taken at the end of June 2021, which is a year and three months since the COVID-19 pandemic with the first case in Indonesia, in contrast to the research which was carried out in 2020 when the covid-19 pandemic was still at the start [14]. It is suspected that the residents of DKI Jakarta are already used to the Covid-19 Pandemic and becoming a new normal in using mobile banking, so the results show that it is not significant.

R square of MRA model gave 76.2%, which meant Utaut2, perception of covid-19 pandemic, the interaction of frequency and education could explain the behavior intention of mobile banking adoption. Other factors that may include on the model to give higher R square are trust [9], [10]; risk [11], [12], [21] and perceived usefulness [13].

#### **5. CONCLUSIONS**

The UTAUT2 development model with the Covid-19 pandemic perception variable in using digital banking affected behavioral intention. The factors that influence significantly were Effort Expectancy, Social Influence, Hedonic Motivation, Price Value and Habit. Only the Effort expectancy factor had a negative influence. While the Performance Expectancy factor and Facilitating conditions in using digital banking did not have a significant effect. Covid-19 Pandemic with three indicators also did not affect BI. Adopting of digital banking in the end of second year of pandemic era already became a new norm.

Sex (female, male) and Digital banking type (mobile banking, internet banking or both) were proven as control variables. Frequency of using digital banking moderated Social Influence, Hedonic Motivation, Price Value and Habit towards behavior intention in using digital banking. Education background moderated Hedonic Motivation to behavior intention and Habit to behavior intention of adoption mobile banking by residents of DKI Jakarta.

#### **AUTHORS' CONTRIBUTIONS**

Popy Novita Pasaribu contributions were on conducting moderating regression analysis, the result and discussion part and harmonising the writing as the article template. Auzi Naufal Rabbani Kemora made literature reviews of the previous studies, collecting data and did analysis of instrument test, test of classical assumptions.

#### REFERENCES

- [1] Deloitte, "Investment Window into Indonesia ( IWI )," 2021.
- [2] McKinsey & Company, "Digital banking in Indonesia: Building loyalty and generating growth," 2019.
- [3] APJII, "Laporan Survei Internet APJII 2019 -2020," Asos. Penyelenggara Jasa Internet Indones., vol. 2020, pp. 1-146, 2020.
- M. Hamilton, "Digital Banking Trend in The [4] New Normal Era," 2020.
- [5] Bisnis.com, "Capai Rp160 Triliun, Nilai Transaksi Aplikasi Mobile BNI Lampaui ATM." 2021, [Online]. Available: https://finansial.bisnis.com/read/20211216/90/1 478511/capai-rp160-triliun-nilai-transaksiaplikasi-mobile-bni-lampaui-atm.
- Bisnis.com, "Sri Mulyani: Transaksi Ekonomi [6] Digital RI Terbesar di Asia Tenggara."
- Y. M. Hama Khan, "An Essential Review of [7] Internet Banking Services in Developing Countries," e-Finanse, vol. 15, no. 2, pp. 73-86, 2019, doi: 10.2478/fiqf-2019-0013.
- [8] C. M. Chao, "Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model," Front. Psychol., vol. 10, no. JULY, pp. 1-14, 2019, doi: 10.3389/fpsyg.2019.01652.
- [9] T. T. Nguyen, H. T. Nguyen, H. T. Mai, and T. T. M. Tran, "Determinants of digital banking services in Vietnam: Applying utaut2 model," Asian Econ. Financ. Rev., vol. 10, no. 6, pp. 680–697, 2020, doi: 10.18488/journal.aefr.2020.106.680.697.
- [10] M. Mufingatun, B. Prijanto, and H. Dutt, "Analysis of factors affecting adoption of mobile banking application in Indonesia: an application of the unified theory of acceptance and use of technology (UTAUT2)," BISMA (Bisnis dan Manajemen), vol. 12, no. 2, p. 88, 2020, doi: 10.26740/bisma.v12n2.p88-105.
- [11] M. N. Kholid, "Determinants of intention to use Islamic mobile banking: Evidence from millennial generation," J. Ekon. Keuang. Islam, vol. 5, no. 2, pp. 53-62, 2019, doi: 10.20885/jeki.vol5.iss2.art2.
- [12] N. Auliya, "Penerapan Model Unified Theory of Acceptance and," pp. 1–10, 2018.
- P. V. Le-Hoang, "Intention to use m-banking [13]

application: an empirical study in Ho Chi Minh City," Indep. J. Manag. Prod., vol. 12, no. 2, pp. 637-653, 2021, doi: 10.14807/ijmp.v12i2.1256.

- C. G. Baicu, I. P. Gârdan, D. A. Gârdan, and G. [14] Epuran, "The impact of COVID-19 on consumer behavior in retail banking. Evidence from Romania," Manag. Mark., vol. 15, no. s1, pp. 534-556, 2020, doi: 10.2478/mmcks-2020-0031.
- [15] Y. Zhao and F. Bacao, "How does the pandemic facilitate mobile payment? An investigation on users' perspective under the COVID-19 pandemic," Int. J. Environ. Res. Public Health, vol. 18, no. 3, pp. 1–22, 2021, doi: 10.3390/ijerph18031016.
- P. N. Pasaribu, "The Nexus of Covid-19 [16] Pandemic and Behavioral Intention in Using Mobile Banking among Students," Duconomics Sci-meet (Education Econ. Sci. Meet), vol. 1, pp. 402-413, 2021, doi: 10.37010/duconomics.v1.5487.
- A. B. Nair, K. S. Prabhu, B. R. Aditya, C. V. [17] Durgalashmi, and A. S. Prabhu, "Study on the Usage of Mobile Banking Application during COVID-19 Pandemic," Webology, vol. 18, no. SpecialIssue2, pp. 190-207, 2021, doi: 10.14704/WEB/V18SI02/WEB18066.
- [18] S. A. Raza, N. Shah, and M. Ali, "Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model," J. Islam. Mark., vol. 10, no. 1, pp. 357–376, Jan. 2019, doi: 10.1108/JIMA-04-2017-0038.
- [19] V. Venkatesh, M. G. Morris, G. B. Davis, and F. D. Davis, "User Acceptance of Information Technology: Toward a Unified View," MIS Q., vol. 27, no. 3, pp. 425-478, Jun. 2003, doi: 10.2307/30036540.
- [20] V. Venkatesh, J. Y. L. Thong, and X. Xu, "Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology," MIS Q., vol. 36, no. 1, pp. 157–178, Jun. 2012, doi: 10.2307/41410412.
- [21] M. Iskandar, H. Hartoyo, and I. Hermadi, "Analysis of Factors Affecting Behavioral Intention and Use of Behavioral of Mobile Banking Using Unified Theory of Acceptance and Use of Technology 2 Model Approach," Int. Rev. Manag. Mark., vol. 10, no. 2, pp. 41-49, 2020, doi: 10.32479/irmm.9292.
- P. Thusi, "the Acceptance and Use of Mobile [22] Banking Apps Among Millennials in Gauteng,

South Africa," *Diss. Univ. Jahannesbg.*, no. August, 2017.

- [23] A. Andrianto, "Faktor Yang Mempengaruhi Behavior Intention Untuk Penggunaan Aplikasi Dompet Digital Menggunakan Model Utaut2," *J. Ilm. Ekon. Bisnis*, vol. 25, no. 2, pp. 111–122, 2020, doi: 10.35760/eb.2020.v25i2.2412.
- [24] B. A. Soomro and N. Shah, "Examining the intention to stay home due to COVID-19: a pandemic's second wave outlook," *Health Educ.*, vol. 121, no. 4, pp. 420–435, 2021, doi: 10.1108/he-12-2020-0118.
- [25] S. Sumaedi *et al.*, "Factors influencing intention to follow the 'stay at home' policy during the COVID-19 pandemic," *Int. J. Heal. Gov.*, vol. 26, no. 1, pp. 13–27, 2021, doi: 10.1108/IJHG-05-2020-0046.
- [26] G. Narayanamurthy and G. Tortorella, "Impact of COVID-19 outbreak on employee performance – Moderating role of industry 4.0 base technologies," *Int. J. Prod. Econ.*, vol. 234, no. October 2020, p. 108075, 2021, doi: 10.1016/j.ijpe.2021.108075.
- [27] V. K. Pham, T. H. Do Thi, and T. H. Ha Le, "A study on the COVID-19 awareness affecting the consumer perceived benefits of online shopping in Vietnam," *Cogent Bus. Manag.*, vol. 7, no. 1, pp. 1–17, 2020, doi: 10.1080/23311975.2020.1846882.
- [28] A. Alsa, "Kontroversi Uji Asumsi Dalam Statistik Parametrik," *Bul. Psikol.*, vol. 9, no. 1, pp. 18–22, 2015, doi: 10.22146/bpsi.7437.
- [29] M. Z. Irawan, P. F. Belgiawan, T. B. Joewono, F. F. Bastarianto, M. Rizki, and A. Ilahi, "Exploring activity-travel behavior changes during the beginning of COVID-19 pandemic in Indonesia," *Transportation (Amst).*, no. 0123456789, 2021, doi: 10.1007/s11116-021-10185-5.

