Journal of Asian Finance, Economics and Business

JAFEB

- The Journal of Asian Finance, Economics and Business (JAFEB): is an international peer-reviewed journal and is published twelve issues per year monthly in full English in joint sponsorship from the Korea Distribution Science Association (KODISA) and the Institute of Economics under the Ministry of Education and Science of the Republic of Kazakhstan (Institute of Economics).
- The Journal of Asian Finance, Economics and Business (JAFEB): publishes on the following dates: January 30, February 28, March 30, April 30, May 30, June 30, July 30, August 30, September 30, October 30, November 30, and December 30.
- The Journal of Asian Finance, Economics and Business (JAFEB): is published in international standards both in print and online with Digital Object Identifier (DOI) information: Print ISSN: 2288-4637 / Electronic ISSN: 2288-4645
- The Journal of Asian Finance, Economics and Business (JAFEB): is an Open Access journal distributed under the terms of the Creative Commons Attribution Non-Commercial License (CC BY-NC)
- Editorial Head Office: Anhui University of Finance and Economics (AUFE) School of International Economics and Trade [Postal Address: 962 Caoshan Road, Bengbu City, Anhui Province, China 233030] Email: jwlee119@yahoo.com; jungwan lee@aufe.eda.cn
- Publisher and Offprints Publishing Office:
 Korea Distribution Science Association (KODISA)
 Hawhin Officetel 1030, 2463-4 Shinheung-dong Sujeong-gu, Seongnam-city,
 Gyeonggi-do, KOREA Tel: (+82 31) 740-7292 Fax: (+82 31) 740-7361
 Email: kodisajoumals@gmail.com

Print ISSN: 2288-4637 / Online ISSN: 2288-4645

Editorial Board

EDITORIAL BOARD

Senior Editor-in-Chief

Jung Wan Lee, Ph.D.

School of International Economics and Trade, Anhui University of Finance and Economics, China

Editor for Southeast Asia

Hooi Hooi Lean, Ph.D.

School of Social Sciences, Universiti Sains Malaysia, Malaysia

Editor for East Asia

Teng-Tsai Tu, Ph.D.

Graduate Institute of International Business, National Taipei University, Taiwan

Editor for Central Asia

Azimkhan A. Satybaldin, Ph.D.

The Institute of Economics under the Ministry of Education and Science, Republic of Kazakhstan

Publishing Editor

Myoung-Kil Youn, Ph.D.

Department of Medical IT Marketing, College of Health Industry, Eulji University, Korea (the Republic of)

Associate Editors

Tripati Rao, Ph.D.

Professor of Economics. Business Environment Area, Indian Institute of Management Lucknow, India Wee-Yeap Lau, Ph.D.

Department of Applied Statistics, Faculty of Economics and Administration, University of Malaya, Malaysia Moh'd Mahmoud Ajlouni, Ph.D.

Department of Banking and Finance, Faculty of Economics, Yarmouk University, Jordan

Anel A. Kireyeva, Ph.D.

The Institute of Economics, under the Ministry of Education and Science, Republic of Kazakhstan

Nailya K. Nurlanova, Ph.D.

The Institute of Economics, under the Ministry of Education and Science, Republic of Kazakhstan Jung-Lieh Hsiao, Ph.D.

Graduate Institute of International Business, National Taipei University, Taiwan

Jooh Lee, Ph.D.

Department of Management &Entrepreneurship, College of Business, Rowan University, USA

Rajasekhara Mouly Potluri, Ph.D.

College of Business Studies, Al Ghurair University, Dubai, United Arab Emirates

Muhammad Ayub Siddiqui, Ph.D.

Bahria Institute of Management and Computer Sciences, Bahria University, Pakistan

Tahereh Alavi Hojjat, Ph.D.

Professor of Economics & Finance, Division of Business, DeSales University, USA

Tantatape Brahmasrene, Ph.D.

Professor of Finance and International Business, College of Business, Purdue University Northwest, USA

Ad Hoc Associate Editors

Helena M. Nobre, Ph.D.

DEGEIT - Economics, Management, Industrial Engineering and Tourism, GOVCOPP, University of Aveiro, Portugal

Yuliani Dwi Lestari, Ph.D.

Professor, School of Business and Management, Institut Teknologi Bandung, Indonesia

Nguyen Xuan Truong, Ph.D.

Professor, Faculty of Marketing, University of Finance - Marketing, Ho Chi Minh City, Vietnam

Soo-Joon Chae, Ph.D.

Division of Business Administration and Accounting, Kangwon National University, South Korea

Nguyen Ngoc Duy Phuong, Ph.D.

Professor, International University, Vietnam National University, Ho Chi Minh City, Vietnam

Jarunee Wonglimpiyarat, Ph.D.

Department of Aeronautics and Astronautics, Massachusetts Institute of Technology, USA

Yu Hsing, Ph.D.

Joseph H. Miller Endowed Professor. Department of Management & Business Administration, College of Business, Southeastern Louisiana University, USA.

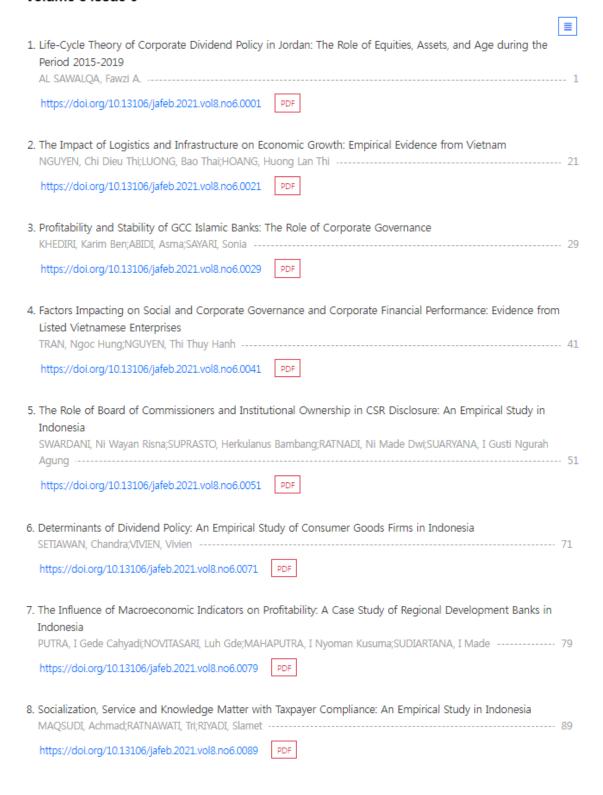
Yoon S. Shin, Ph.D.

Department of Finance, The Sellinger School of Business and Management, Loyola University, Maryland, USA

Ayşe Yüce, Ph.D.

Professor of Finance. Department of Finance, Ted Rogers School of Management, Ryerson University. Toronto, Canada

Volume 8 Issue 6



The Effect of Inflation on Performance: An Empirical Investigation on the Banking Sector in Jordan ALMANSOUR, Ammar Yaser; ALZOUBI, Haitham Mohammad; ALMANSOUR, Bashar Yaser; ALMANSOUR, Yaser Mansour			
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0097		
10.	The Effect of Financial Ratio on Firm Value: Empirical Evidence from Listed Firms in the IDX30 Index ICHSANI, Sakina;ZAENUDIN, Adinda Izlia Nurhalshaeni;DAMAYANTI, Gita Novia;TRESIA, Vela;PUTRI, Via Apriliana	. 103	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0103		
11.	The Effect of Social Capital and the Intention to Share Expertise on the Creation of Innovative Products: A C Study in Jordan JAWABREH, Omar A.;JARADAT, Muneer M.;ALRABEI, Ali M.		
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0113		
12.	Factors Affecting the Distribution of Working Capital Credit: A Case Study of Rural Banks in Indonesia ANDHIKA, Robby Satya;MUDA, Iskandar;ERWIN, Keulana	. 121	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0121		
13.	Relationship Between Efficiency, Management Risk, and Profitability: An Empirical Study of Listed Banks in S Arabia		
	MAHMOUD, Mutaz T.;NEFFATI, Mohamed R	. 133	
	11ttps://doi.org/10.15100/jare0.2021/void.100.0155		
14.	Accounting Conservatism and Profitability of Commercial Banks: Evidence from Jordan SHUBITA, Mohammad Fawzi	. 145	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0145		
15	Determinants of Pakistan Stock Exchange (PSX) Index Under Optimal Conditions: A Factor Analysis Approach		
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0153 PDF		
16	Entrepreneurial Intention to Venture into Flea Market Retailing: An Empirical Study in Oman ALSHANFARI, Noor;HASSAN, Hasliza;MIGIN, Melissa Wendy	163	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0163		
17.	. Gender and Innovation in Southeast Asia: The Moderating Role of Absorptive Capacity DOAN, Thi Ngoc Thuy;CHANG, Chia-Hua	169	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0169		

18. The Effect of Firm Size, Debt, Current Ratio, and Investment Opportunity Set on Earnings Quality: An Empirical Study in Indonesia HASANUDDIN, Rusdiah; DARMAN, Darman; TAUFAN, Muhammad Ybnu; SALIM, Agus; MUSLIM, Muslim; PUTRA, Aditya	
Halim Perdana Kusuma 17	79
https://doi.org/10.13106/jafeb.2021.vol8.no6.0179	
19. The Social Capital Capabilities of Halal Entrepreneurs: A Perspective of Innovative Entrepreneur Capabilities HAREEBIN, Yuttachai	39
https://doi.org/10.13106/jafeb.2021.vol8.no6.0189	
The Influence of Directors' Diversity and Corporate Sustainability Practices on Firm Performance: Evidence from Malaysia MOLLA, Mohammad Shahansha;HASAN, Mohammad Tariq;MIRAZ, Mahadi Hasan;AZIM, Mohammad Tahlil;HOSSAIN, Md. Kaium	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0201	
21. Potential Indicators of Japanese Technology and Business Innovation Policy Adoption Among Thai Businesses PROMMA, Watcharawat, AUJIRAPONGPAN, Somnuk	13
https://doi.org/10.13106/jafeb.2021.vol8.no6.0213	
22. The Influence of Related Party Transaction and Corporate Governance on Firm Value: An Empirical Study in Indonesia RAHMAN, Aulia Fuad; NUGRAHANTI, Yeterina Widi	23
https://doi.org/10.13106/jafeb.2021.vol8.no6.0223	
23. Determinants of Insurance Firms' Profitability: An Empirical Study of Saudi Insurance Market BEN DHIAB, Lassad	5
https://doi.org/10.13106/jafeb.2021.vol8.no6.0235	
24. The Effect of Financial Innovation and Bank Competition on Firm Value: A Comparative Study of Malaysian and Nigerian Banks OLALERE, Oluwaseyi Ebenezer; KES, Marniati S.E.M.; ISLAM, Md. Aminul; RAHMAN, Shafiqur	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0245	
25. The Relationship between Risk Disclosure and Firm Performance: Empirical Evidence from Saudi Arabia AL-DUBAI, Shehabaddin Abdullah A.; ABDELHALIM, Abeer M.M	5
https://doi.org/10.13106/jafeb.2021.vol8.no6.0255 PDF	
26. Institutional Ownership Heterogeneity and Earnings Management Practices: Empirical Evidence from Pakistan PARWAR, Muhammad Adnan;HUSSAIN, Shahzad;WAHEED, Abdul;MALIK, Qaisar Ali;MEHBOOB, Muddasir 26	7
https://doi.org/10.13106/jafeb.2021.vol8.no6.0267	

27. Senior Entrepreneurship in Malaysia: Motivations and Barriers AL-JUBARI, Ibrahim; MOSBAH, Aissa
https://doi.org/10.13106/jafeb.2021.vol8.no6.0277
28. Customer Perception of E-Service Quality: An Empirical Study in Indonesia ARILAHA, Muhammad Asril;FAHRI, Johan;BUAMONABOT, Irfandi
https://doi.org/10.13106/jafeb.2021.vol8.no6.0287
29. An Empirical Study on Consumer Behavior towards Food and Beverage Services in Vietnam DUONG, Nam Tien;LE HUA XUAN, Quynh;PHAM THI, Thuy Dung;PHAM, Van Kien;LE, Na
https://doi.org/10.13106/jafeb.2021.vol8.no6.0297
30. Online Purchasing Behavior of Green Products: A Case Study of Generation Y in Malaysia RAJADURAI, Jegatheesan;BATHMANATHAN, Vathana;AZAMI, Nurnazurah
https://doi.org/10.13106/jafeb.2021.vol8.no6.0305 PDF
31. Investigation of College Students' Intention to Accept Online Education Services: An Application of the UTAUT Model in Korea PARK, Myeong-Jun;LEE, Joon-Kyum
https://doi.org/10.13106/jafeb.2021.vol8.no6.0327
32. Factors Influencing Purchase Intention of Healthcare Products During the COVID-19 Pandemic: An Empirical Study in Indonesia HIDAYAT, Sutanto; WIBOWO, Wahyudi; GUNAWAN, Yoan Elisa; DEWI, Grace Citra; WIJAYANINGTYAS, Maranatha
https://doi.org/10.13106/jafeb.2021.vol8.no6.0337
33. The Impact of Perceived Risk and Trust on Adoption of Mobile Money Services: An Empirical Study in Pakistan NOREEN, Misbah;GHAZALI, Zahiruddin;MIA, Md. Shahin
https://doi.org/10.13106/jafeb.2021.vol8.no6.0347
34. The Impact of Social Media Adoption on Customer Orientation and SME Performance: An Empirical Study in Indonesia NUREARIDA Iva Nurdiana: SARWOKO Endi-ARIEE Mohammad
Indonesia NURFARIDA, Iva Nurdiana;SARWOKO, Endi;ARIEF, Mohammad 357
Indonesia NURFARIDA, Iva Nurdiana;SARWOKO, Endi;ARIEF, Mohammad
Indonesia NURFARIDA, Iva Nurdiana;SARWOKO, Endi;ARIEF, Mohammad

37.	7. Factors Affecting Job Satisfaction of Sugar Industrial Workers in Relation to Demographic Factors: An Empirical Study in Bangladesh				
	GAZI, Md. Abu Issa;TUSHAR, Hasanuzzaman;SHUVRO, Razuan Ahmed;SAHA, Sajun;RAHAMAN, Md. Atikur 387				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0387				
38.	Organizational Culture and Employee Performance: An Empirical Study of Islamic Banks in Indonesia SOPIAH, Sopiah;KAMALUDIN, Mahirah;SANGADJI, Etta Mamang;NARMADITYA, Bagus Shandy				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0395 PDF				
39.	The Effect of Managerial Capabilities, Strategic Alliance and Strategic Innovation on Product Lifecycle				
	Management: A Case Study in Indonesia SUDARMAN, Daman;KARTINI, Dwi;HELMI, R Arief;DEWI, Rita Komala				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0407				
40.	The Effect of Perceived Organizational Support on Employee Engagement During the COVID-19 Pandemic: An Empirical Study in Vietnam NGUYEN, Hai Ninh;TRAN, Manh Dung				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0415				
41.	The Effect of Using Game Dynamics Towards Employee Work Engagement: An Empirical Study in Indonesia RIATMAJA, Dodi Setiawan;SUYANTO, Mohammad;MUAFI, Muafi;PRAJOGO, Wisnu				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0427				
42.	The Efficiency of Human Resources Management During the Disruption and Pandemic Era: An Empirical Study of Indonesian Islamic Banks MUFRAINI, M. Arief; MURODI, Murodi; WICAKSONO, Ahmad Tibrizi Soni; FAUZIAH, Fauziah; MUBAROK, Faizul 437				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0437				
43	3. The Impact of the Working Environment and Welfare on Human Resources Maintenance: An Empirical Study in Vietnam KHANH, Vo Thi Van				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0447				
44	I. The Effect of Strategic Leadership and Organization Culture on Business Performance: An Empirical Study in Indonesia				
	MUNAWAROH, Munawaroh;SANTOSO, Budi;GUMILANG, Risa Ratna;HIDAYATULLAH, Deny;HERMAWAN, Adam;MARHANAH, Sri;GUNAWAN, Arie;SUNARSI, Denok;PURWANTO, Agus				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0455 PDF				
45	i. The Role of Job Satisfaction in Developing Administrative Performance and Creativity: An Empirical Study in Iraq MAHDI, Dalal Salih;AHMED, Mezher Abdullah;RASHEED, Firas Hasan				
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0465 PDF				

46. Understanding of Digital Payment Usage During COVID-19 Pandemic: A Study of UTAUT Extension Model in Indonesia
MUSYAFFI, Ayatulloh Michael;SARI, Dewi Agustin Pratama;RESPATI, Dwi Kismayanti
https://doi.org/10.13106/jafeb.2021.vol8.no6.0475
47. The Effect of E-Commerce Capabilities on Firm Performance: An Empirical Study in Indonesia PRIAMBODO, Ivan Triyogo;SASMOKO, Sasmoko;ABDINAGORO, Sri Bramantoro;BANDUR, Agustinus 483
https://doi.org/10.13106/jafeb.2021.vol8.no6.0483
48. Battling the Threat of Workplace Harassment: An Appraisal Based on Protection Motivation Theory ATTA, Ana;ZAMAN, Nadeem uz;KHAN, Hadi Hassan
https://doi.org/10.13106/jafeb.2021.vol8.no6.0491
49. The Effect of Leader-Member Exchange on Task Performance: Evidence from Knowledge Workers in China CHE, Xiaoli;FAKHRORAZI, A;HARIANI, Swarmilah;WEI-KIT, Loke;FOO-WAH, Lim 505
https://doi.org/10.13106/jafeb.2021.vol8.no6.0505
50. The Impact of Career Adaptability and Social Support on Job Search Self-Efficacy: A Case Study in Malaysia AL-JUBARI, Ibrahim;SHAMSOL ANUAR, Siti Nurzulaika Binti;AHMAD SUHAIMI, Ahmad Alif Bin;MOSBAH, Aissa 515
https://doi.org/10.13106/jafeb.2021.vol8.no6.0515
51. The Influence of Leadership on the Competitive Advantage of SMEs: Empirical Evidence from Indonesia TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden Andi;SAMPEADI, Sampeadi;NUHARDJO, Budi
TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden
TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden Andi;SAMPEADI, Sampeadi;NUHARDJO, Budi
TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden Andi;SAMPEADI, Sampeadi;NUHARDJO, Budi 525 https://doi.org/10.13106/jafeb.2021.vol8.no6.0525 PDF 52. Foreign Capital Inflows and Stock Market Development in Pakistan
TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden Andi;SAMPEADI, Sampeadi;NUHARDJO, Budi
TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden Andi;SAMPEADI, Sampeadi;NUHARDJO, Budi 525 https://doi.org/10.13106/jafeb.2021.vol8.no6.0525 PDF 52. Foreign Capital Inflows and Stock Market Development in Pakistan SAJID, Ali;HASHMI, Muhammad Arsalan;ABDULLAH, A;HASAN, Muhammad Amin
TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden Andi;SAMPEADI, Sampeadi;NUHARDJO, Budi 525 https://doi.org/10.13106/jafeb.2021.vol8.no6.0525 PDF 52. Foreign Capital Inflows and Stock Market Development in Pakistan SAJID, Ali;HASHMI, Muhammad Arsalan;ABDULLAH, A.;HASAN, Muhammad Amin
TOBING, Diana Sulianti Kristina;SUDARSIH, Sudarsih;APRIONO, Markus;KRISHNABUDI, Ng;SULARSO, Raden Andi;SAMPEADI, Sampeadi;NUHARDJO, Budi 525 https://doi.org/10.13106/jafeb.2021.vol8.no6.0525 PDF 52. Foreign Capital Inflows and Stock Market Development in Pakistan SAJID, Ali;HASHMI, Muhammad Arsalan;ABDULLAH, A;HASAN, Muhammad Amin 543 https://doi.org/10.13106/jafeb.2021.vol8.no6.0543 PDF 53. Asymmetric Effects of Oil Price Shock on Stock Markets in Vietnam: An Empirical Investigation Based on SVAR Model and NARDL Model HOANG, Tri M. 553 https://doi.org/10.13106/jafeb.2021.vol8.no6.0553 PDF
TOBING, Diana Sulianti Kristina; SUDARSIH, Sudarsih; APRIONO, Markus; KRISHNABUDI, Ng; SULARSO, Raden Andi; SAMPEADI, Sampeadi; NUHARDJO, Budi

Related Countries VO, Thi Quy;HO, Huu Tin	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0587	
57. The Role of Revenues in Reducing Local Government Fiscal Distress: An Empirical Study in Indonesia ANSORI, Al;NASIR, Nasir;DIANTIMALA, Yossi;ABDULLAH, Syukriy	597
https://doi.org/10.13106/jafeb.2021.vol8.no6.0597	
58. The Role of Institution on FDI and Environmental Pollution Nexus: Evidence from Developing Countries HA, Thanh Cong;NGUYEN, Hoang Nam	609
https://doi.org/10.13106/jafeb.2021.vol8.no6.0609 PDF	
59. Influence of Exchange Rate, World Income, Interest Rates, and Investments in Indonesian Exports SUDARUSMAN, Eka;PRASETYO, Tri Utomo;SUPARMONO, Suparmono;PARTINA, Anna	621
https://doi.org/10.13106/jafeb.2021.vol8.no6.0621 PDF	
60. The Relationship Between Human Capital Development and Economic Growth: Evidence from Malaysia WIDARNI, Eny Lestari; WILANTARI, Regina Niken	641
https://doi.org/10.13106/jafeb.2021.vol8.no6.0641	
61. The Impact of Exchange Rate, Bank Indonesia Certificate and Global Indexes on the Composite Price Ind (IHSG) in Indonesia YUNANTO, Muhamad;MEDYAWATI, Henny https://doi.org/10.13106/jafeb.2021.vol8.no6.0651	
62. Determinants of Corporate Cash Holdings Among Asia's Emerging and Frontier Markets: Empirical Evider	000
from Non-Financial Sector BAGH, Tanveer;KHAN, Muhammad Asif;MEYER, Natanya;SADIQ, Rashid;KOT, Sebastian	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0661 PDF	
63. The Impact of Voluntary Disclosure on Firm's Value: Evidence from Manufacturing Firms in Bangladesh QAMRUZZAMAN, Md.;JAHAN, Ishrat;KARIM, Salma	671
https://doi.org/10.13106/jafeb.2021.vol8.no6.0671	
64. Dynamic Linkages Between Profitability and Its Determinants: Empirical Evidence from Jordanian Comme Banks	
BEKHET, Hussain A.;ALSMADI, Ahmad Mohammad;KHUDARI, Mohamed	0ŏ/
65. Determinants of Banks Profitability in the Middle East and North Africa Region JREISAT, Ammar;BAWAZIR, Hana	701
https://doi.org/10.13106/jafeb.2021.vol8.no6.0701 PDF	

66.	The Relationship between Working Capital Management and Financial Performance: Evidence from Jordan ALMOMANI, Tareq Mohammad;ALMOMANI, Mohammad Abdullah;OBEIDAT, Mohammed Ibrahim	713
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0713	
67.	The Relationship Between Debt Securities Issuance and Operational Performance: An Empirical Study of Bar in Indonesia LESTARI, Rohmini Indah;INDARTO, Indarto	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0731	
68.	The Effect of Entrepreneurial Orientation, Market Orientation and Gender on Business Performance: An Emp Study of SMEs in Bangladesh RAHAMAN, Md. Atikur;LUNA, Kaniz Fatema;MITE, Shi;ISLAM, Monwarul;WAFIK, H.M. Atif	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0741	
69.	Working Capital Management and Banks' Performance: Evidence from India SENAN, Nabil Ahmed Mareai;ANAGREH, Suhaib;AL-DALAIEN, Borhan Omar Ahmad;ALMUGARI, Fatehi;KHALED, Am S.D.;AL-HOMAIDI, Eissa A	
70.	Does Tax Avoidance Induce Earnings Persistence? An Empirical Study in Korea CHOI, Yun-Yee	759
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0759 PDF	
71.	The Impact of Credit Concentration on Firm Performance: An Empirical Study of Jordanian Commercial Bani ALFARAJ, Fadi Kamal;HAMOURI, Qasem	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0769	
72.	Factors Determining Decision to Rent Low-Cost Flats (RUSUNAWA): A Case Study in Indonesia SIAHAAN, Elisabet; FACHRUDIN, Khaira Amalia; FACHRUDIN, Hilma Tamiami; MUDA, Iskandar	779
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0779 PDF	
73.	Relationship Between Firm Size and Profitability with Income Smoothing: Evidence from Food and Beverages (F&B) Firms in Jordan OBEIDAT, Mohammed Ibrahim Sultan	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0789	
74.	The Effect of COVID-19 on Investment Decisions in Saudi Stock Market ATASSI, Huda;YUSUF, Nadia	797
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0797	
75.	Determinants of Firm Value: An Empirical Study of Listed Trading Companies in Vietnam NGUYEN, Lan;TAN, Thi Khanh Phuong;NGUYEN, Thu Ha	809
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0809 PDF	

76. Risk Measurement and Stock Prices during the COVID-19 Pandemic: An Empirical Study of State-Owned Ein Indonesia AHADIAT, Ayi;KESUMAH, Fajrin Satria Dwi	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0819	
77. Determinants of Technical Efficiency of Microenterprises in Vietnam: A Case Study of Coconut Handicraft Industry LE, Nghiem Tan; LE, Hau Long; TRAN, Truc Viet Thanh	829
https://doi.org/10.13106/jafeb.2021.vol8.no6.0829	
78. Determinants of Firm Value: A Case Study of the Food and Beverage Sector of Indonesia BAHRAINI, Syintia;ENDRI, Endri;SANTOSO, Sugeng;HARTATI, Leni;PRAMUDENA, Sri Marti	839
https://doi.org/10.13106/jafeb.2021.vol8.no6.0839 PDF	
79. The Impact of Executive Compensation, Ownership, and Capital Requirement on Earning Management: Exfrom Indonesia Banking Companies HUSNI, Tafdil;RAHIM, Rida;WIRANDA, Nadya Ade;D, Rizki Fadhel	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0849 PDF	
80. The Influence of Annual Reports' Disclosure Delay on the Analysts' Forecast Behavior: An Empirical Study China TANG, Kai;BAE, Khee Su https://doi.org/10.13106/jafeb.2021.vol8.no6.0859	in 859
81. Knowledge, Self-Image, and Attitude on Pro-Environmental Behavior: An Empirical Study in Indonesia GARAIKA, Garaika;SUGANDINI, Dyah	869
https://doi.org/10.13106/jafeb.2021.vol8.no6.0869 PDF	
82. The Impact of Foreign Ownership on Firm Performance: An Empirical Study of Listed Firms in Vietnam DUONG, Quynh Nga;VU, Thanh Binh;VO, Thi-Phuong;NGUYEN-LE, Ngoc Hoan;NGUYEN, Van Diep	879
https://doi.org/10.13106/jafeb.2021.vol8.no6.0879 PDF	
83. Company Characteristics, Disclosure of Social Responsibility, and Its Impact on Company Performance: A Empirical Study in Indonesia HIDAYAH, Nurul;NUGROHO, Lucky;PRIHANTO, Hendi;PRIHANTINI, Dwi	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0889	
84. SMEs' Digital Transformation Competencies on Platform Empowerment: A Case Study in South Korea MIN, Sun A;KIM, Bo Young	897
https://doi.org/10.13106/jafeb.2021.vol8.no6.0897	
85. Transformational Leadership and Organizational Innovation: The Role of Goal-Oriented Synergistic Intera KARTONO, Eka Listiani;BERNARTO, Innocentius;SUDIBJO, Niko;PRAMONO, Rudy	
https://doi.org/10.13106/jafeb.2021.vol8.no6.0909	

86	5. The Relationship Between Business Resources, Outside Cooperation, Dynamic Capability, and Performance of Startup Enterprises: A Case Study in Vietnam VU, Dong Van; PHAM, Tai Van; TRAN, Ghi Nha; NGUYEN, Anh Phuong Thi; NGUYEN, Cong Van	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0921	
87	The Influence of Startup Business Characteristics on Investment Decisions of Business Angels: A Case Study Indonesia KARTINI, Kartini;CALLISTA, Galuh Candya	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0931	
88	3. Jumps Across Asset Classes and Their Diversification Benefits: Evidence from Vietnamese Asset Markets HOANG, Tri M.	939
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0939	
89	D. The Influence of Dynamic Capability on Sustainable Competitive Advantage: An Empirical Study of Small Businesses in Indonesia PRABOWO, Hartiwi;SRIWIDADI, Teguh;IKHSAN, Ridho Bramulya	949
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0949 PDF	
90	The Impact of Executive Pay Gap on Audit Pricing in China YIN, Hong;DU, Yanbin	961
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0961	
91	Corporate Environmental Performance and Firm Value-Using Emission Metrics: An Empirical Study in India SHARMA, Jeevesh; VERMA, Suhasini	975
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0975	
	The Role of Corporate Social Responsibility and Sharia Compliance on Islamic Banks Performance in Indone and Malaysia	sia
	SISWANTI, Indra;SHARIF, Sabri Mohammad;INDRAJAYA, Sonny	983
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0983	
	Quality of Financial Statements in Indonesian Local Governments: An Empirical Investigation ASWAR, Khoirul;WIGUNA, Meilda;HARIYANI, Eka;ERMAWATI, Ermawati	993
	https://doi.org/10.13106/jafeb.2021.vol8.no6.0993	
	The Effect of Service Marketing Mix on Relationship Quality and Revisit Intentions for Korean Restaurants in Vietnam CHUN, Byung Suk; PARK, No Hyun	
	https://doi.org/10.13106/jafeb.2021.vol8.no6.1001	

95. Does COVID-19 Affect Online Experience Towards Repurchase Intention? An Empirical Study in Indonesia SUDARYANTO, Sudaryanto; SUBAGIO, Ari; MELIANA, Meliana	13
https://doi.org/10.13106/jafeb.2021.vol8.no6.1013	
96. Empowering Service Value of Custom and Cultural Events to Tourism Destination Revisit: An Empirical Study in Indonesia	
SIMANJUNTAK, Mariana;FARIDA, Naili	25
https://doi.org/10.13106/jafeb.2021.vol8.no6.1025	
97. Factors Affecting Tourists' Satisfaction in Associated Tourism Chains: Evidence from Vietnam NGUYEN VAN, Ha;DO, Thi Kim Hao;NGUYEN, Thi Viet Ha;NGUYEN, Ngoc Tien	37
https://doi.org/10.13106/jafeb.2021.vol8.no6.1037	
98. Student Satisfaction and Perceived Value on Word of Mouth (WOM) During the COVID-19 Pandemic: An Empirical Study in Indonesia GIANTARI, I Gusti Ayu Ketut;YASA, Ni Nyoman Kerti;SUKAWATI, Tjokorda Gde Raka;SETINI, Made	47
https://doi.org/10.13106/jafeb.2021.vol8.no6.1047	
99. Collective Achievement Spirit and Salespeople' Performance: An Empirical Study in Indonesia KEN, Sudarti;OLIVIA, Fachrunnisa	57
https://doi.org/10.13106/jafeb.2021.vol8.no6.1057 PDF	
100. The Tourist Motivation and Behavior of International Backpackers Attending the Full Moon Party in Thailand BOONKAEW, Sunthorn;AUJIRAPONGPAN, Somnuk;KAEWPRASERT RAKANGTHONG, Neeranat;POTIYA, Nattakorn;JUTIDHARABONGSE, Jaturon	67
https://doi.org/10.13106/jafeb.2021.vol8.no6.1067	
101. The Strength of Tourist Involvement in Mediating the Relationship Between Experience Value, Destination Imag and Tourist Loyalty: An Empirical Study in Indonesia SETIAWAN, Heri;MARWA, Taufiq;WAHAB, Zakaria;SHIHAB, Muchsin Saggaf	ne.
https://doi.org/10.13106/jafeb.2021.vol8.no6.1079 PDF	
https://doi.org/10.13106/jafeb.2021.vol8.no6.1079 PDF 102. Technology Acceptance Model and Factors Affecting Acceptance of Social Media: An Empirical Study in Vietna NGUYEN, Phuong Minh Binh;DO, Yen Thi;WU, Wann Yih)79 am
102. Technology Acceptance Model and Factors Affecting Acceptance of Social Media: An Empirical Study in Vietna)79 am
102. Technology Acceptance Model and Factors Affecting Acceptance of Social Media: An Empirical Study in Vietna NGUYEN, Phuong Minh Binh;DO, Yen Thi;WU, Wann Yih	079 am 091
102. Technology Acceptance Model and Factors Affecting Acceptance of Social Media: An Empirical Study in Vietna NGUYEN, Phuong Minh Binh;DO, Yen Thi;WU, Wann Yih	079 am 091
102. Technology Acceptance Model and Factors Affecting Acceptance of Social Media: An Empirical Study in Vietna NGUYEN, Phuong Minh Binh;DO, Yen Thi;WU, Wann Yih	am 091

105. Effects of Leadership, Employee Engagement and Job Satisfaction on Employee Performance: An Empirical Study in Indonesia
NUR, Edwar M.;LUBIS, Abdul Rahman;TABRANI, Mirza;DJALIL, Muslim A
https://doi.org/10.13106/jafeb.2021.vol8.no6.1129 PDF
106. Managers' Propensity for Participative Decision-Making with the Components of Theory of Planned Behavior: Evidence from Bangladesh ISLAM, Md Enamul;AZAD, Abul Kalam
107. Conceptualizing the Role of Organizational Performance in Indonesia SOELTON, Mochamad; NOERMIJATI, Noermijati; ROHMAN, Fatchur; MUGIONO, Mugiono
https://doi.org/10.13106/jafeb.2021.vol8.no6.1151 PDF
108. Halal Supply Chain Management: Analysis of Decision-Making Factors for Aqiqah Business Suppliers in Indonesia FAUZI, Muchamad;ANIQOH, Nur Aini Fitriya Ardiani;HARIZAHAYU, Harizahayu;FW POSPOS, Ade Fadillah;SAEDIMAN,
Haji
109. How Adversity Quotient and Organizational Justice Reduce Turnover Intention Empirical Evidence from Indonesia ARYANI, Rita;WIDODO, Widodo;CHANDRAWATY, Chandrawaty
https://doi.org/10.13106/jafeb.2021.vol8.no6.1171 PDF
110. Factors That Influence Financial Management: A Case Study in Indonesia ATMADJA, Anantawikrama Tungga;SAPUTRA, Komang Adi Kurniawan;MANURUNG, Daniel T.H.;WULANDARI, Retno
https://doi.org/10.13106/jafeb.2021.vol8.no6.1203
111. The Influence of Structure, Resources, Disposition and Communication on Small- and Medium-Sized Enterprises' Empowerment Policy Implementation in Indonesia SULILA, Ismet
https://doi.org/10.13106/jafeb.2021.vol8.no6.1213

Print ISSN: 2288-4637 / Online ISSN 2288-4645 doi:10.13106/jafeb.2021.vol8.no6.0621

Influence of Exchange Rate, World Income, Interest Rates, and Investments in Indonesian Exports*

Eka SUDARUSMAN¹, Tri Utomo PRASETYO², Suparmono SUPARMONO³, Anna PARTINA⁴

Received: March 10, 2021 Revised: May 08, 2021 Accepted: May 15, 2021

Abstract

This study aims to test the influence of world income, interest rates, and investments on Indonesian exports for the period from 1986 to 2018. We use the Autoregressive Distributed Lag (ARDL) model with Error Correction Mechanism (ECM) version, which can provide long-term impact analysis and short-term dynamic results. The results showed that, in the short run, exchange rate, world income, and investments, respectively, positively affect Indonesian exports, ceteris paribus. These results correspond to the proposed hypotheses. Meanwhile, interest rates also show a positive influence on Indonesian exports in the short run, ceteris paribus, but this direction does not correspond to the research hypotheses. The research also found that there is cointegration between variables. Indonesian export value adjusts the exchange rate, world income, interest rates, and investments with delay, which is a 30.93% difference in long-term and short-term export values corrected. In the long run, world income and investment have a positive effect on exports. This indicates that multinational companies do not solely invest to dominate the domestic market, but they also promote Indonesian exports. Following the results of this research, the increase in FDI will grow exports. Increased exports will certainly increase GDP and ultimately promote economic growth.

Keywords: Real Exchange Rate, Consumer Income, Lending Interest Rate, FDI, Autoregressive Distributed Lag

JEL Classification Code: F00, F14, F43, P45

1. Introduction

Trade between countries is better known as international trade terms. International trade arose due to a commodity

*Acknowledgements:

The authors are grateful for the support granted by Sekolah Tinggi Ilmu Manajemen YKPN Yogyakarta and for constructive comments from reviewers.

¹First Author and Corresponding Author. Assistant Professor, Department of Management, Sekolah Tinggi Ilmu Manajemen YKPN, Yogyakarta, Indonesia [Postal Address: Jl. Palagan Tentara Pelajar Km. 7 Yogyakarta, 55581, Indonesia]

Email: ekasud@yahoo.com

²Instructor, Department of Management, Sekolah Tinggi Ilmu Manajemen YKPN, Yogyakarta, Indonesia.

Email: tri.utomo.p@stimykpn.ac.id

³Assistant Professor, Department of Management, Sekolah Tinggi Ilmu Manajemen YKPN, Yogyakarta, Indonesia.

Email: suparmono@stimykpn.ac.id

⁴Assistant Professor, Department of Management, Sekolah Tinggi Ilmu Manajemen YKPN, Yogyakarta, Indonesia.

Email: grace.annaone60@gmail.com

© Copyright: The Author(s)

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (https://creativecommons.org/licenses/by-nc/4.0/) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

that could not be produced by any country due to resource limitations, natural and climate conditions. It regards as a result of the interaction between competing demands and supplies (Choi, 2018).

There are two categories in international trade, namely, trade in goods and services. Based on economic theory. trade (export and import) is one of the keys to a country's economic growth, in addition to consumption, investment, and government expenditure. Exports become an essential factor for the growth and industrialization and accumulation of foreign reserves of trade surplus (Wang, Wong, & Yip, 2018). By using the Gross Domestic Product (GDP) as an indicator, the growth of the Indonesian economy is very dynamic. The gap between real GDP per capita relative to developed and weak economies has increased (Wang, Wong, & Yip, 2018). In the New Order era, economic growth stabilizes at a range of 6%–7% per year. At the time of the crisis, especially in the 1998 period, Indonesia's economy contracted with a growth rate of negative 13.12%. After that period, the Indonesian economy began to rise with a growth rate ranging from 5% to 6% per year.

Interest rates are the prices given to investors from the use of investment funds based on the calculation of economic value within a specified period. Bank interest rates are used as industrial controllers of a country. Low interest rates lead to reduced risk perceptions and increased risk tolerance (Chaudron, 2018). Governments regulate interest rates aimed at maintaining the economic sustainability of their country. The ups and downs of commodity prices also influence the economy of a nation. The continuous trend of price increases can affect import-export activities. The constant improvement in the number of export commodities in the international market cannot compete, which ultimately resulted in declining export activities. Nominal interest rates can remain substantially below the average half of the last century, as central banks have the aim of controlling inflation below the average rate of inflation (Kiley & Roberts, 2017).

There are several differences in previous research results. Studies are showing the positive influence of real exchange rates on export growth (Chaudhary, Hashmi, & Khan, 2016; Kang & Dagli, 2018; Xu, 2018), but insignificant (Majeed & Ahmad, 2007). Other studies have shown that the nominal exchange rate positively affects the export of luxury commodities, e.g., Bordeaux as Cardebat and Figuet (2019) found that the more expensive the goods, the more quantity is demanded. On the other hand, the influence of consumer income also affects positively and consistently, based on the results of previous research (Arize, Osang, & Slottje, 2008; del Rosal, 2019; Nanang, 2010; Xu, 2018). Credit interest rates can have a negative effect, but there are research results indicating credit interest rates have no effect on exports. Most studies found positive effect of investments on exports (Bhatt, 2013; Majeed & Ahmad, 2007), but Safitriani (2014) found short-term negative effect of investments on Indonesian exports.

From the above description, we attempt to analyze the linkages between investments, US dollar exchange rate, lending interest rates, and world income with Indonesian exports. This research is a case study with a quantitative approach aimed at testing the theory and providing empirical evidence.

2. Literature Review

A country that has a real exchange rate that has been depreciated indicates that the price of goods in the country is lower relative to the cost of assets abroad. These changes encourage consumers, both at home and overseas, to buy more products from the domestic market and fewer items from other countries. As a result, exports of the country will rise, and imports fall. In developing countries, the exchange rate is an industrial policy instrument that diversifies the economy toward long-term growth (Guzman, Okampo, & Stiglitz, 2018). In developed countries like European countries, the inflow of capital that appreciates real exchange rates erode international competitiveness

and causes dislocation and requires regulatory policies (Thorbecke & Kato, 2018). Empirical studies show that there is a positive and significant impact of real exchange rates on export volumes (Chaudhary, Hashmi, & Khan, 2016; Kang & Dagli, 2018; Xu, 2018).

In addition to prices, other factors that may affect the number of goods requested are consumer income. In standard products, increased consumer income – when the cost of goods and other factors are considered constant – will increase the quantity of goods demanded. GDP is the market value of all final products and services manufactured in a country within a specific time. The expenditure (or market value) of all goods and services can also be interpreted as an income for the region's economy. As such, GDP can also be construed as a country's income. Previous studies, such as Bayramoglu and Sukruoglu, 2016, Çakmak, Gökçe, and Çakmak, 2016, Durmaz and Lee, 2015, and Oktay and Gözgör, 2013, per capita GDP is used as a proxy for consumer income. The difference is that we use world GDP, except for Indonesian GDP.

The interest rate is the percentage of interest on borrowed funds. Investors or lenders require high-interest rates because they give higher returns. However, the higher the interest rate, the higher the cost to pay by the borrower funds. The high-interest rate would impede producers from acquiring capital. Capital limitations can then reduce production capacity. Reduced production capacity will undoubtedly decrease the number of products that can export. As such, the interest rate of loans is suspected of having a direct influence on exports.

Investment is an activity conducted by investors in the hopes of generating profit. Investments in Indonesia are divided into two groups, namely, domestic investment and foreign investment. Most countries, especially developing countries, seek to attract FDI into their economies as they expect long-term economic growth from additional stable resources in host countries. Some more fundamental reasons support the attractiveness of FDI (Iamsiraroj, 2016). FDI is very beneficial for host countries, being a means of transferring technology, stimulating domestic investments, and facilitating the increase of human capital and institutional reform (Goh, Sam, & McNown, 2017). The high amount of local investment will increase domestic production. The rise in output is expected to increase exports abroad. Unemployment can be influenced by investment and innovation of firms' decisions, which can then affect the distribution of revenues (Paramati & Nguyen, 2019). One prominent explanation is that FDI and export-promoting activities are essential contributors to economic growth. Export activities will drive more efficient production by exploiting differences in comparative excellence across the country, achieving economies of scale, and lowering costs (Goh, Sam, & McNown, 2017).

2.1. Hypotheses

The depreciation of the real exchange rate shows that the price of goods in the country becomes cheaper relative to the products abroad. This research uses the shortest term, i.e., the rupiah exchange rate per 1US dollar. Thus, there is a suspected positive influence between the exchange rate and Indonesian exports. Exports of a country will depend on consumer income (Mankiw, 2012). As consumer income increases, the ability to buy goods will also increase, increasing the volume of exports. The high interest rate will limit the supply of funds for business actors to impede the development of its business. The obstructed effort will lower the production rate and will ultimately reduce the export volume. The high amount of domestic investment will increase domestic production. The increase in output is expected to increase exports.

This study examines the effects of exchange rates, world income, interest rates, and investment on Indonesian exports. The investigation is based on the following hypotheses:

H1: The exchange rates have a positive effect on exports.

H2: Consumer or world income has a positive effect on exports.

H3: Interest rates have a negative effect on exports.

H4: Investments have a positive effect on exports.

3. Methodology

The research used a quantitative approach. The data used in this research are secondary data sourced from the World Bank. The exchange rate is measured using the IDR/USD term. We use the real exchange rate by adjusting the nominal exchange rate at relative prices in Indonesia and abroad using the following formula (Cardebat & Figuet, 2019).

$$RER = IDR/USD \times CPI_{IISA}/CPI_{INA}$$
 (1)

Where the RER is the real exchange rate, IDR/USD is the nominal exchange rate of the Rupiah to one US dollar, and the CPI ratio shows the relative price in Indonesia and the US. We chose the US as the world's consumer price proxy because the currency of the country has become commonly used in international trade in Indonesia. Besides, this determination is also based on the nature of this study, researching Indonesian exports in aggregate. The use of the US is expected to reflect conditions in international markets.

In this study, the world income is measured by real income per capita worldwide except Indonesia. We measure the world's incomes by collecting real GDP data of 2010 in US dollar units and also populations, both for the whole world and Indonesia. We further subtract Indonesia's GDP

from World GDP and divide it by the world population that differs from the Indonesian population. Thus, the world income is obtained per capita, representing consumer income in export destinations or international markets.

The interest rates used in this research are the shortand medium-term loan interest rates charged by banks to debtors in the private sector. This data has a percent unit and is to illustrate the public view of investors and business actors in the perspective of the cost of lending. Furthermore, the investment used is FDI that entered into Indonesia. Investment in question is a net investment, i.e., the subtraction of divestment from investment conducted by foreigners. This variable is measured using the FDI ratio of Indonesian GDP.

Indonesian export data used in this research are from the World Bank. Exports value is defined as the value of goods and services exported all around the world. This includes the value of merchandise, cargo, insurance, transportation, travel, control, licensing, and other services, such as communications, construction, finance, information, business, personal, and government services. We transformed the data into a natural logarithm form because of smoothing reasons.

In order to answer the research questions, we used a regression method. The ARDL model will be conducted in this research. The decision of using ARDL models is based on the nature of time-series data that are mostly non-stationary. If the data are non-stationary, the use of a simple linear regression will result in spurious regression (Gujarati, 2015). We used the ARDL model to avoid spurious regression results. The ARDL model used is as following.

$$\begin{split} \text{LN_EXPORTS}_{t} &= \alpha_{0} + \sum_{t=1}^{p} \alpha_{1t} \text{LN_EXPORTS}_{t-1} \\ &+ \sum_{t=0}^{q_{1}} \alpha_{2t} \text{LN_RER}_{t-1} \\ &+ \sum_{t=0}^{q_{2}} \alpha_{3t} \text{LN_WI}_{t-1} \\ &+ \sum_{t=0}^{q_{3}} \alpha_{4t} \text{IR}_{t-1} + \sum_{t=0}^{q_{4}} \alpha_{5t} \text{FDI}_{t-1} + u_{t} \end{split} \tag{2}$$

Equation (2) generates the ARDL model of (p, q_1, q_2, q_3, q_4) . The letters p and $q_1, ..., q_4$ indicate the lag applied in the model. The maximum lag length is determined by using the Akaike (AIC) criterion in the VAR estimation of each model. Furthermore, statistical software will provide the optimal lag combination of the ARDL model. The optimal ARDL model is indicated by the lowest AIC value.

Next is to test the cointegration between variables. Cointegration is the integration of the variables. This integration is tested using the Bounds test (Pesaran, Shin, & Smith, 2001). The Bounds test produces a statistical value of F, which is then compared with a critical value based on the table of Pesaran, Shin, and Smith (2001). If the

statistical value of F is more than the upper critical value or I(1), then the variable has a long-run relationship. Thus, it is necessary to further estimate using ARDL with error correction adjustments (Error Correction Mechanism, ECM). If the value is less than the lower critical value or I(0), then the variable has no long-run relationship or is not cointegrated. Thus, the only estimation of the ARDL model is required without error correction. By entering the error correction mechanism, the adjusted ARDL model is as follows.

$$\Delta LN_EXPORTS_{t} = \alpha_{0} + \sum_{t=1}^{p} \beta_{t} \Delta LN_EXPORTS_{t-1}$$

$$+ \sum_{t=0}^{q_{1}} \gamma_{t} \Delta LN_RER_{t-1}$$

$$+ \sum_{t=0}^{q_{2}} \delta_{t} \Delta LN_WI_{t-1}$$

$$+ \sum_{t=0}^{q_{3}} \theta_{t} \Delta RI_{t-1} + \sum_{t=0}^{q_{4}} \rho_{t} \Delta FDI_{t-1}$$

$$+ \varphi_{1} LN_EXPORTS_{t-1}$$

$$+ \varphi_{2} LN_RER_{t-1}$$

$$+ \varphi_{3} LN_WI_{t-1} + \varphi_{4} RI_{t-1}$$

$$+ \varphi_{5} FDI_{t-1} + u_{t}$$

$$(3)$$

Where $\Delta X_{t} = X_{t} - X_{t-1}$, the coefficients β , γ , δ , ϑ , and ρ indicate a short-term relationship, while the coefficient φ indicates a long-run relationship.

Cointegration is tested using the Bounds test. This test is based on a combined hypothesis test on all coefficients φ . The null hypothesis in this test is that all coefficients φ are equal to zero or there is no long-term relationship. The decision-making criteria are based on the critical value of F in Pesaran, Shin, and Smith (2001).

4. Results and Discussion

Table 1 shows that the natural logarithm of Indonesian export value (LN_EXPORTS) has a normal distribution, as well as the natural logarithm of world income (LN_WI) and interest rates (IR). This can be seen from the Jarque-Bera statistical value, each of which is less than the critical value χ^2 with a degree of freedom of 2. On the other side, the natural logarithm of the real exchange rates (LN_RER) and FDI do not have a normal distribution. Thus, two of the four independent variables do not have a normal distribution; while the dependent variable has a normal distribution.

The first step is to ensure that the data on each variable is not integrated into the second order. From the Augmented Dickey-Fuller (ADF) test, each of the variables is incorporated into the first order. In other words, the whole variable is stationary on the first difference and not up to the second difference. The second step is to determine the optimal lag amount on the ARDL model. Using the help of EViews 10 software, the optimal model is ARDL (1, 3, 3, 3, 3). The third step is to test for cointegration on the ARDL model. If a cointegration were found, the ARDL model would be adjusting to the Error Correction Mechanism (ECM). An integrated model indicates that there is an equilibrium in the short term that will then move toward long-run equilibrium. The cointegration test result using the Bounds test (Pesaran, Shin, & Smith, 2001) indicates there is a long-run relationship (see Table 2). As such, we use the ARDL model with the ECM version (see Table 3).

When we know there is cointegration in the model, we estimate the long-run equation (see Table 4). The model in Table 4 shows a good model because (1) the residuals are normally distributed; (2) there is no autocorrelation;

Tak	ole	1:	Desci	riptive	Statistics
-----	-----	----	-------	---------	------------

Statistics	LN_ EXPORTS	LN_RER	LN_WI	IR	FDI
Mean	25.4423	9.2457	9.0653	17.6455	1.1215
Median	25.3518	9.2453	9.0485	17.7600	1.2700
Maximum	26.2506	9.9639	9.3179	32.1500	2.9200
Minimum	24.3922	8.8397	8.8287	10.5400	-2.7600
Std. Dev.	0.5573	0.2427	0.1502	5.2661	1.3332
Skewness	-0.2139	1.0022	0.0891	0.7058	-1.0718
Kurtosis	1.9178	3.8643	1.6396	3.0483	3.9856
Jarque-Bera	1.8621	6.5511	2.5883	2.7431	7.6537
Probability	0.3941	0.0378	0.2741	0.2537	0.0218
Sum	839.5972	305.1073	299.1561	582.3000	37.0100
Sum Sq. Dev.	9.9401	1.8851	0.7215	887.4100	56.8806
Observations	33	33	33	33	33

(3) it is homoscedastic; and (4) the coefficients are stable based on CUSUM and CUSUMSQ test.

The use of an ECM version of ARDL models can provide long-run impact analysis and short-run dynamics (Wooldridge, 2016). In the short run, the real exchange rates,

Table 2: Bounds Test Result

F-Bounds Test	Null Hypothesis: No Levels Relationship			
Test Statistic	Value	Sig.	<i>I</i> (0)	<i>I</i> (1)
	Asymptotic: n = 1000			
F-statistic	6.22	10%	2.45	3.52
k	4	5%	2.86	4.01
		2.50%	3.25	4.49
		1%	3.74	5.06
Actual Sample	30	Finite Sample: n = 30		
Size		10%	2.752	3.994
		5%	3.354	4.774
		1%	4.768	6.67

world income, interest rates, and investments influence the value of Indonesian exports.

In the LN RER variable, the direct effect of the depreciation of the IDR/USD exchange rate of 10% increased the Indonesian export value of 0.34%, ceteris paribus. Referring to Purwono, Mucha, and Mubin (2018), there is a positive effect of IDR/USD on Indonesia's current account, meaning that the depreciation on IDR would increase Indonesian exports. On the other side, this result contradicts Oktora and Firdani's (2019) study regarding natural rubber in China. The higher real effective exchange rate of the export destination country against the exporting countries will cause the commodity prices in the export destination country to be lower than the exporting countries (Oktora & Firdani, 2019). Thus, exported goods will decline as consumers choose to consume domestic goods rather than imported goods. Furthermore, an increase of 10% of the world's consumer income will lead to the rise in Indonesian export value by 31.3% at that moment, ceteris paribus. This result is supported by Arize, Osang, and Slottje (2008) in Latin America.

In the variable interest rate, the direct effect of changes in the lending interest rate of 1 unit (percent) will lead to an increase in the Indonesian export value of 0.02%, ceteris paribus. The direct influence of interest rates on the export

Table 3: ARDL Model Results with ECM

Dependent Variable: D(LN_EXPORTS) ARDL(1, 3, 3, 3, 3)					
С	-7.096029	1.111233	-6.385728	0.0000	
D(LN_RER)	0.033519	0.057262	0.585358	0.5692	16.11383
D(LN_RER(-1))	-0.587235	0.067330	-8.721755	0.0000	(0.0002)
D(LN_RER(-2))	-0.123001	0.058196	-2.113554	0.0562	
D(LN_WI)	3.130210	0.529519	5.911420	0.0001	10.88448
D(LN_WI(-1))	-2.095010	0.504671	-4.151240	0.0013	(0.0010)
D(LN_WI(-2))	-0.788423	0.497686	-1.584179	0.1391	
D(IR)	0.018503	0.003713	4.983326	0.0003	3.700941
D(IR(-1))	-0.014462	0.003756	-3.849887	0.0023	(0.0428)
D(IR(-2))	-0.006705	0.004112	-1.630627	0.1289	
D(FDI)	0.043609	0.008498	5.131788	0.0002	6.856342
D(FDI(-1))	-0.021121	0.008358	-2.526871	0.0266	(0.0061)
D(FDI(-2))	-0.022182	0.008167	-2.715973	0.0187	
ECT(-1)	-0.309356	0.048033	-6.440529	0.0000	
R^2	0.962182	F-statistic			31.3141
Adjusted R ²	0.931455	Prob. <i>F</i> -statistic			0.0000

Note: aThe number in parentheses indicates probability value.

Variables	Coefficient	Std. Error	t-statistic	Prob.
LN_RER	0.477891	0.322048	1.483913	0.1636
LN_WI	4.659370	1.218576	3.823618	0.0024
IR	0.090788	0.042739	2.124239	0.0551
FDI	0.274764	0.063587	4.321070	0.0010
С	-22.938055	10.126375	-2.265179	0.0428

Table 4: The Long-Run Coefficient Estimation Result

Note: bThe dependent variable is LN_EXPORTS, i.e. natural logarithm of Indonesian exports value.

value of Indonesia is alleging because the distribution of credit that proscribes with the average loan interest rate is not specific to the export-commodity producers, so it is not able to explain the movement of exports in this research.

While in the FDI variable, the direct effect of an increase of 1 unit (percent) of FDI ratio to Indonesian GDP will lead to a rise in export value by 0.04%. When foreigners invest in the country, more capital can use to increase production capacity. Investment theory, which states that increased investment in production capacity will increase exports proved through empirical evidence in this research.

Data analysis results indicate long-run relationships or cointegration between exchange rate, world income, interest rates, and investments in the value of Indonesian exports. The coefficient of ECT(-1) is -0.309356 and statistically significantly different from zero. This coefficient indicates that the volume of Indonesian exports adjusts the exchange rate, world income, interest rates, and investments with inaction, which is about 30.93% the difference in long-run and shortrun export value is corrected in 1 year. Consequently, it will take about three years to return to the full long-run balance.

In the long run, all of the variables examined have positive coefficients, but only the LN_WI and FDI variables are statistically significantly different from zero. An increase of 1% of the world's consumer real income will increase by 4.66% of Indonesian export value, ceteris paribus. This shows that in aggregate, Indonesian export commodities apply to normal goods – increasing consumer income will increase demand for goods. Our finding supports previous studies (Cardebat &Figuet, 2019; Choudhry, 2005; Nanang, 2010; Xu, 2018). Mohammadi, Taghavi, and Bandidarian (2012) showed a positive influence of Iran's national income on import demand. These findings strengthen our conclusion that Indonesian export is positively affected by the consumer's income abroad.

While 1 unit (percent) increase in the ratio of FDI-to-GDP will increase export value by 0.27%. The coefficient sign is positive as expected and also supports previous studies (Andraz & Rodrigues, 2010; Bhatt, 2013; Majeed & Ahmad, 2007), also contradict the findings of Nguyen and Do (2020). This positive effect of investment on export indicates that multinational companies do not

solely invest to dominate the domestic market, but they also promote Indonesian export value (Majeed & Ahmad, 2007). Furthermore, the elasticity of Indonesian export value changes as a result of investment change (FDI/GDP) is 0.308149. This indicates that the elasticity in Indonesian export value changes as a result of the FDI/GDP change is inelastic.

The influence of exchange rates on the value of Indonesian exports is statistically insignificant despite the positive coefficient. The positive insignificant coefficient shows a weak impact of the exchange rate on the export value. A depreciation of Rupiah relative to US dollar does not necessarily promote Indonesian exports (Majeed & Ahmad, 2007). Other studies also found an insignificant effect of the exchange rate on the trade balance, such as Rose (1991), Siddiqui and Akhtar (1999), Wilson and Tat (2001).

The empirical results in this study showed a positive coefficient between the interest rate of the loan to Indonesian export value. This means that the more expensive debt costs will increase the number of exports. The direct influence of the interest rate of the loan to Indonesian export value is alleging because the credit distribution that is proscribing with the average loan interest rate is not specific to the export, so it is not able to explain the movement of exports in this research.

5. Conclusion

The exchange rate used in this study is Rupiah against the US dollar. World income is intended to measure the consumer income of Indonesian exports. This variable is measured using the constant value of the world and Indonesian GDP per capita. The interest rate used is the interest rate of the loan charged to the debtor by various banks for short- and medium-term loans. Investments are measured using the net FDI ratio of Indonesian GDP based on constant price.

The results showed that in the short term, exchange rate, world income, and investments respectively positively affect the value of Indonesian exports, ceteris paribus. These results correspond to the proposed hypothesis. Meanwhile, interest rates also show a positive influence on Indonesian export value in the short-run, ceteris paribus, but this direction does not correspond with the research hypothesis.

The research also found that there is cointegration or long-run relationship. Indonesian export value adjusts the exchange rate, world income, interest rates, and investments with inaction, which is a 30.93% difference in long-run and short-run export values corrected in 1 year. In the long run, only world income and investments influence the number of Indonesian exports, each of which has a short-run effect.

Under normal conditions, not in a crisis such as the COVID-19 pandemic, the Government can establish better bilateral or multilateral relationships so that export barriers can be minimized. This is because, based on the results of the research, real income consumers significantly affect the value of Indonesian exports. If not utilized properly, then Indonesia cannot gain the potential for increased exports through the increase of world consumer income.

Besides, we also argue that some steps need to be taken to attract more FDI. FDI can be improved by easing the foreign investment regulations. Following the results of this research, the increase in FDI will increase export. Increased exports will certainly increase GDP and ultimately promote economic growth.

References

- Andraz, J. M., & Rodrigues, P. M. M. (2010). What causes economic growth in Portugal: Exports or inward FDI? *Journal of Economic Studies*, 37(3), 267–287. https://doi. org/10.1108/01443581011061276
- Arize, A. C., Osang, T., & Slottje, D. J. (2008). Exchange-rate volatility in Latin America and its impact on foreign trade. *International Review of Economics and Finance*, 17(1), 33–44. https://doi.org/10.1016/j.iref.2006.01.004
- Bayramoglu, A. T., & Sukruoglu, D. (2016). Non-Energy Import Demand Function in Turkey: New Evidence. *Asian Economic and Financial Review*, 6(12), 750–761. https://doi.org/10.18488/journal.aefr/2016.6.12/102.12.750.761
- Bhatt, P. R. (2013). Causal relationship between exports, FDI and income: The case of Vietnam. *Applied Econometrics and International Development*, *13*(1), 161–172. http://www.usc.es/economet/reviews/aeid13113.pdf
- Çakmak, U., Gökçe, A., & Çakmak, A. Ö. (2016). The Key Determinants of the Import and Policy Recommendations for Turkish Economy. *Journal of Economics and Sustainable Development*, 7(6), 96–103. https://www.iiste.org/Journals/ index.php/JEDS/article/view/29525
- Cardebat, J. M., & Figuet, J. M. (2019). The impact of exchange rates on French wine exports. *Journal of Wine Economics*, 14(1), 71–89. https://doi.org/10.1017/jwe.2019.2
- Chaudhary, G. M., Hashmi, S. H., & Khan, M. A. (2016). Exchange Rate and Foreign Trade: A Comparative Study of Major South Asian and South-East Asian Countries. *Procedia - Social* and Behavioral Sciences, 230(May), 85–93. https://doi. org/10.1016/j.sbspro.2016.09.011

- Chaudron, R. F. D. D. (2018). Bank's interest rate risk and profitability in a prolonged environment of low interest rates. *Journal of Banking and Finance*, 89, 94–104. https://doi.org/10.1016/j.jbankfin.2018.01.007
- Choi, M. S. (2018). Effects of Exchange Rate on Value-Added International Trade. *Proceedings of the 10th International RAIS Conference on Social Sciences and Humanities*, 54–59. https://www.ceeol.com/search/chapter-detail?id=710437
- Choudhry, T. (2005). Exchange rate volatility and the United States exports: Evidence from Canada and Japan. *Journal of the Japanese and International Economies*, 19(1), 51–71. https://doi.org/10.1016/j.jjie.2003.11.002
- del Rosal, I. (2019). Export Diversification and Export Performance By Destination Country. *Bulletin of Economic Research*, 71(1), 58–74. https://doi.org/10.1111/boer.12181
- Durmaz, N., & Lee, J. (2015). An empirical analysis of import demand function for Turkey: An ARDL bounds testing approach. *The Journal of Developing Areas*, 49(4), 215–226. https://doi.org/10.1353/jda.2015.0142
- Goh, S. K., Sam, C. Y., & McNown, R. (2017). Re-examining foreign direct investment, exports, and economic growth in Asian economies using a bootstrap ARDL test for cointegration. *Journal of Asian Economics*, 51, 12–22. https:// doi.org/10.1016/j.asieco.2017.06.001
- Gujarati, D. (2015). *Econometrics by example* (2nd ed.). London: Palgrave.
- Guzman, M., Ocampo, J. A., & Stiglitz, J. E. (2018). Real exchange rate policies for economic development. *World Development*, 110, 51–62. https://doi.org/10.1016/j.worlddev.2018.05.017
- Iamsiraroj, S. (2016). The foreign direct investment-economic growth nexus. *International Review of Economics and Finance*, 42, 116–133. https://doi.org/10.1016/j.iref.2015.10.044
- Kang, J. W., & Dagli, S. (2018). International trade and exchange rates. *Journal of Applied Economics*, 21(1), 84–105. https://doi. org/10.1080/15140326.2018.1526878
- Kiley, M. T., & Roberts, J. M. (2017). Monetary Policy in a Low Interest Rate World. *Brookings Papers on Economic Activity*, 2017(1), 317–396. https://doi.org/10.1353/eca.2017.0004
- Majeed, M. T., & Ahmad, E. (2007). FDI and exports in developing countries: Theory and evidence. *Pakistan Development Review*, 46(4). https://doi.org/10.30541/v46i4ipp.735-750
- Mankiw, N. G. (2012). *Brief Principles of Macroeconomics* (6th ed.). Cengage Learning.
- Mohammadi, T., Taghavi, M., & Bandidarian, A. (2012). The Effect of Exchange Rate Uncertainty on Import with TARCH Approach. *International Journal of Management and Business Research*, 1(4), 211–220. https://www.sid.ir/en/journal/ViewPaper.aspx?ID=291909
- Nanang, D. M. (2010). Analysis of export demand for Ghana's timber products: A multivariate co-integration approach. *Journal of Forest Economics*, *16*(1), 47–61. https://doi.org/10.1016/j.jfe.2009.06.001

- Nguyen, V. C., & Do, T. T. (2020). Impact of Exchange Rate Shocks, Inward FDI and Import on Export Performance: A Cointegration Analysis. *Journal of Asian Finance*, *Economics and Business*, 7(4), 163–171. https://doi.org/10. 13106/jafeb.2020.vol7.no4.163
- Oktay, E., & Gözgör, G. (2013). Estimation of disaggregated import demand functions for Turkey. *Economics Bulletin*, 33(1), 575–585. https://openaccess.dogus.edu.tr/xmlui/handle/11376/2176
- Oktora, S. I., & Firdani, A. M. (2019). Natural rubber economics between China and Southeast Asia: The impact of China's economic slowdown. *Journal of Asian Finance, Economics and Business*, 6(2), 55–62. https://doi.org/10.13106/jafeb.2019. vol6.no2.55
- Paramati, S. R., & Nguyen, T. P. T. (2019). Does financial market growth improve income distribution? A comparison of developed and emerging market economies of the global sample. *International Journal of Finance and Economics*, 24(1), 629–646. https://doi.org/10.1002/ijfe.1683
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16(3), 289–326. https://doi.org/10.1002/jae.616
- Purwono, R., Mucha, K., & Mubin, M. K. (2018). The Dynamics of Indonesia's Current Account Deficit: Analysis of the Impact of Exchange Rate Volatility. *Journal of Asian Finance, Economics and Business*, *5*(2), 25–33. https://doi.org/10.13106/jafeb.2018.vol5.no2.25

- Rose, A. K. (1991). The role of exchange rates in a popular model of international trade. *Journal of International Economics*, 30(3–4), 301–316. https://doi.org/10.1016/0022-1996(91)90024-Z
- Safitriani, S. (2014). International trade and foreign direct investment in Indonesia. *Buletin Ilmiah Litbang Perdagangan*, 8(1), 93–116. http://jurnal.kemendag.go.id/bilp/article/view/89
- Siddiqui, R., & Akhtar, N. (1999). The Impact of Changes in Exchange Rate on Prices: A Case Study of Pakistan. *The Pakistan Development Review*, *38*(4II), 1059–1066. https://doi.org/10.30541/v38i4iipp.1059-1066
- Thorbecke, W., & Kato, A. (2018). Exchange rates and the Swiss economy. *Journal of Policy Modeling*, 40(6), 1182–1199. https://doi.org/10.1016/j.jpolmod.2018.07.002
- Wang, P., Wong, T. N., & Yip, C. K. (2018). Institutional barriers and world income disparities. *Federal Reserve Bank of St. Louis Review*, 100(3), 259–279. https://doi.org/10.20955/r.100.259-79
- Wilson, P., & Tat, K. C. (2001). Exchange rates and the trade balance: the case of Singapore 1970 to 1996 1. *Journal of Asian Economics*, 12(1), 47–63. https://doi.org/10.1016/S1049-0078(01)00072-0
- Wooldridge, J. M. (2016). *Introductory Econometrics* (6th ed.). Boston, MA: Cengage Learning.
- Xu, Z. (2018). China's exports, export tax rebates and exchange rate policy. *The World Economy*, 41(5), 1288–1308. https://doi. org/10.1111/twec.12570