i-RIC 2024

INTERNATIONAL RESEARCH & INNOVATION CONFERENCE

PROCEEDING

"HARMONY IN DIVERsITY: FOsTERING UNITY
SUsTAINABLE REsEARCH AND INNOVATION SOCIETY"

24 & 25 JULY

2024

Organizer

ULBI Universitas Logistik & Bisnis Internasional

POLITEKNIK MALAYSIA NILAI

KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI

Co-organizer

KEMENTERIAN PENDIDIKAN MALAYSIA
Jabatan Pendidikan Negeri Sembilan

University of Sfax
TUNISIA

DINAMIKA TVET

SELÇUK UNIVERSITY
FACULTY OF TECHNOLOGY

PROCEEDING

I-RIC 2024

INTERNATIONAL RESEARCH AND INNOVATION CONFERENCE

"HARMONY IN DIVERsITY: FOsTERING UNITY
SUsTAINABLE REsEARCH AND INNOVATION SOCIETY"

24 & 25 JULY

2024

Published by:

Politeknik Nilai Negeri Sembilan (PNS)
Kompleks Pendidikan Bandar Enstek,
71760, Bandar Enstek,
Negeri Sembilan

2024

eISBN 978-967-2742-35-7

TABLE OF CONTENT

E. Social Sciences

F. Logistic and Supply Chain Management

PREFACE

It is a great privilege for us to present the proceedings of the International Research and Innovation Conference (i-RIC 2024) to the authors and delegates. We hope that you will find it useful, exciting, and inspiring. The International Research and Innovation Conference (i-RIC 2024) was held online from 24 to 25 July 2024, organized by Politeknik Nilai in collaboration with Universitas Logistik dan Bisnis Internasional (ULBI) with the theme, "Harmony in Diversity: Fostering Unity Sustainable Research and Innovation Society."

i-RIC 2024 aims to gather more researchers, students, government agencies, and private sectors in an event with a larger international impact. The organization of this program also serves as a platform for sharing research findings, ideas, and knowledge among members of polytechnics, community colleges, higher education institutions, public universities, as well as government and private agencies involved. Researchers, academics, and experts from various sectors will have a global stage at i-RIC 2024 to discuss the latest findings and research that support sustainable development goals. The conference aims to generate knowledge to make our world greener and better for us and our future generations.

There were 4 keynote speeches covering different areas of the conference. The first day started with Associate Professor Dr. Ir. Agus Purnomo (ULBI Indonesia) talk on "How to Boost Green Supply Chain Resilience?" and Professor Dr. Mohamed Kchaou (University of Bisha, Saudi Arabia; University of Sfax, Tunisia) on "Latex Based Membrane for Oily Wastewater Treatment Technology Process and Perspectives". The second day featured Professor Dr. Recai Kus (Selcuk University, Turkey) on "Load Optimization of AISI 1040 and AISI 5140 Joint" and Dr. Umawathy a/p Technamurthy (Universiti Kebangsaan Malaysia) with her talk on "Harnessing the Potential of Maker Education in Enhancing Student Learning Outcomes".

A total of 124 presenters participated in the parallel presentation sessions, which ran smoothly over the two-day event supported by 109 i-RIC 2024 organizing committees. This included 16 online presentation moderators, 42 reviewers, 19 judges, and all participants who took the time to attend the online sessions. A total of 124 research papers and 56 innovations were presented in this program across 7 fields, namely:

A. Engineering and Technology
B. Business Management
C. Education, Teaching, and Learning
D. Health and Life Sciences
E. Social Sciences
F. Information Communication Technology
G. Logistics and Supply Chain

Information regarding i-RIC 2024 can be accessed through the Program Book at https://heyzine.com/flip-book/521619ef82.html and overall results can be found at http://iric.polinilai.edu.my/.../confe.../results-innovation.

We would like to express our heartfelt thanks and sincere appreciation to all the authors for their contributions to this publication. We also express our gratitude and appreciation to all of the reviewers for their constructive feedback on the papers. Warmest thanks to the members of the organizing committee for their hard work and dedication in ensuring the success of the event.

Congratulations to everyone involved in making this conference a success.

EDITORIAL BOARD

Advisors

Tn. Haji Wan Zulkifly bin Wan Zakaria
(Director of Politeknik Nilai)
Dr. Ahmad Razimi bin Mat Lazim
(Head of Research and Inovation Unit, Politeknik Nilai)

Editor-in-Chief

Dr. Hjh. Nor Hayati Fatmi binti Talib – Politeknik Nilai

Editorial Team

Pn. Nur Hazeleen binti Bashah – Politeknik Nilai
Pn. Syafawati Noorhafizah binti Adnan Adli – Politeknik Nilai
Pn. Fauziah Shaheen binti Sheh Rahman – Politeknik Nilai
Pn. Norfaizah binti Bidin – Politeknik Nilai
Pn. Noriah binti Nawi – Politeknik Nilai
Pn. Fardhila Syahira binti Salmi Nordin – Politeknik Nilai
Dr. Yusni bin Mohamad Yusak – Politeknik Nilai

Proofreaders

Pn. Shammine a/p Dharmalingam – Politeknik Nilai
Pn. Liyana binti Ibrahim – Politeknik Nilai
Pn. Norliyana Bau binti Muhamad Affendi Bau – Politeknik Nilai
En. Muhammad Asyraf bin Abdul Ghani – Politeknik Nilai

SENARAI PANEL PENILAI

Pejabat Timbalan Ketua Pengaraj (Governan), JPPKK

1. Ts. Mohd Asnawi Abd Wahab

PPI, Jabatan Pendidikan Politeknik Dan Kolej Komuniti (JPPKK)

2. Dr. Siti Rosminah Md Derus

Bahagian Kurikulum Jabatan Pendidikan Politeknik dan Kolej Komuniti (JPPKK)

3. Ts. Dr. Raudyah Md Tap
4. Zamsalwani Zamri

Politeknik Nilai (PNS)

5. LAr Dr. Fara Diba Badrul Hisham
6. Dr. Nur Farahin Afiqah Daud
7. Dr. Yusni Mohamad Yusak
8. Dr. Wan Nor Aishah Wan Omar

Universitas Logistik dan Bisnis Internasional (ULBI)

9. Maniah

Faculty of Civil Engineering and Built Environment (UTHM)

10. Syed Burhanuddin Hilmi Syed Mohamad

Universiti Tun Hussein Onn Malaysia (UTHM)

11. Syed Burhanuddin Hilmi Syed Mohamad
12. Mohd Noor Abdullah

Universiti Malaysia Pahang al-Sultan Abdullah

13. PM Dr. Fazeeda Mohamad
14. PM Dr. Puteri Fadzline Muhamad Tamyez

Universiti Kebangsaan Malaysia (UKM)

15. Umawathy Techanamurthy

Universiti Teknologi MARA Melaka (UiTM)

16. Dr. Ahmad Rosli Mohd Nor

Politeknik Banting (PBS)

17. Nur Raihana Sukri

Politeknik Ibrahim Sultan (PIS)

18. Dr. Hjh. Nor Haniza Mohamad

Politeknik Kuching (PKS)

19. Dr. Jam'aah Suud

Politeknik Melaka (PMK)

20. Kannan Rassiah

Politeknik Metro Johor Bahru (PMJB)

21. Khairul Nizam Mohd Khalid

Politeknik Muadzam Shah (PMS)

22. Dr. Mohammad Ridhwan Nordin
23. Dr. Affizah Mohamad Ghaffar

Politeknik Mukah (PMU)

24. Ts. Dr. Bong Siaw Wee

Politeknik Port Dickson (PPD)

25. Mazlina Mohd Tahir
26. Dr. Mohamad Siri Muslimin

Politeknik Sandakan Sabah (PSS)

27. Dr. Annafatmawaty Ismail

Politeknik Sultan Azlan Shah (PSAS)

28. Nurulaini Hafizah Mohd Hafir

Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA)

29. Dr. Parameswari Shunmugam

Politeknik Tun Syed Nasir Syed Ismail (PTSN)

30. Hasyireen Abdul Halim
31. Khairunnisa A Rahman
32. Nor Hairul Palal

IPG Kampus Pendidikan Islam

33. Aminurrashid Ahmad Dahari

Kolej Komuniti Jelebu

34. Nur Hanim Othman

Kolej Komuniti Kuala Pilah

35. Helen Yong Lee Geok

Kolej Komuniti Kuching

36. Emaria Ahmad

Kolej Komuniti Mas Gading

37. Dr. Hayati Ibrahim

Kolej Komuniti Sungai Siput

38. Ts. Dr. Chow Khoon Keat

STAI Nusantara

39. Dr. Sri Andayani Mahdi Yusuf

LOGISTICS AND SUPPLY CHAIN MANAGEMENT

"HARMONY IN DIVERsITY: FOsTERING UNITY
SUsTAINABLE REsEARCH AND INNOVATION SOCIETY"

The Impact of Ambidextrous Leadership, Logistics Organizational Culture, Logistics Organizational Structure, On Logistics Innovation and Its Implications for Company Performance PT Pos Indonesia Bangkalan Branch Office

AhmadRosadi[1] & Saptono Kusdanu Waskito[2]
[1&2]Program Studi S2 Manajemen Logistik, Fakultas Logistik, Teknologi, & Bisnis
Universitas Logistik dan Bisnis Internasional, Jl. Sariasih No.54 Sarijadi, Sukasari Bandung 40151
[1]Gomeed84@gmail.com & [2]Saptono@ulbi.ac.id

Abstract

The author conducted a study on the performance of PT Pos Indonesia Bangkalan branch Office 69100, focusing on parcel revenue in 2023. The parcel revenue recorded was IDR 3,015,510,283 from a target of IDR 3,666,031,000, which means only 82.26% of the target was achieved. The failure to meet the target indicates a performance issue at PT Pos Indonesia Bangkalan Branch Office 69100. The author conducted the study titled "The Impact of Ambidextrous Leadership, Logistics Organizational Culture, and Logistics Organizational Structure on Logistics Innovation and Its Implications for the Performance of PT Pos Indonesia Bangkalan Branch Office." The population was 229 customers, with a sample size of 146 respondents determined based on the Slovin formula. All indicators had values greater than 0.7 and were declared valid. All dimensions had Cronbach's Alpha values above 0.7 and were declared reliable. There was a positive and significant influence of ambidextrous leadership on logistics innovation with a path coefficient value and a p-value of 0.001. There was a positive and significant influence of logistics organizational culture on logistics innovation with a path coefficient value of 0.207 and a p-value of 0.010. There was a positive and significant influence of logistics organizational structure on logistics innovation with a path coefficient value of 0.253 and a p-value of 0.034. There was a positive and significant simultaneous influence of ambidextrous leadership, logistics organizational culture, and logistics organizational structure on logistics innovation with an R Square value of 0.577. There was a positive and significant influence of logistics innovation on the performance of PT Pos Indonesia Bangkalan branch office with a path coefficient value of 0.762 and a p-value of 0.000. PT Pos Indonesia Bangkalan branch office should continue to innovate to increase revenue

Keywords: Ambidextrous Leadership, Logistics Organizational Culture, Logistics Organizational Structure, Logistics Innovation, Company Performance

1. Introduction

The revenue realization of PT Pos Indonesia in 2023 was only 82.26% of the target. This information indicates performance issues within PT Pos Indonesia. According to Utarayana (2021), company performance is the result of an organization's work over a specific period (one month, one quarter, one semester, one year) in line with organizational goals. The dimensions of company performance, according to Utarayana (2021), consist of financial performance, marketing performance, and operational performance. Company performance, as stated by Kyunga na (2019), Faturachman (2023), Kiragu (2020), Sibuea (2020), and Fathona (2020), is influenced by logistics innovation. Fathona (2024) describes logistics innovation as a mental process leading to the creation of new phenomena, new products, and new services in the logistics field. Fathona

(2020) explains that the dimensions of logistics innovation consist of logistics process, logistics value, and various logistics services.

According to Oluwafemi (2019), Mascareno (2021), Fadilah (2021), Schlosser (2023), Zhang (2024), Mascareno (2021), and Fadilah (2021), logistics innovation is influenced by ambidextrous leadership. Zhang (2024) explains that ambidextrous leadership can be defined as the ability to foster both explorative and exploitative behaviors in followers by increasing or reducing variance in their behavior and flexibly switching between those behaviors. The dimensions of ambidextrous leadership are opening leadership behaviors, closing leadership behaviors, and temporal flexibility.

Logistics innovation, according to Vinh The (2019), Siswanti (2022), Fraihat (2023), Anggraini (2023), and Alateeg (2024), is influenced by logistics organizational culture. Alateeg (2024) explains that organizational culture encompasses the shared values, beliefs, and norms that shape the way employees think, act, and interact within the organization. The dimensions of logistics organizational culture are knowledge sharing, risk-taking, and openness to new ideas. Logistics organizational structure, according to Lestari (2022), Anggraini (2023), Fraihat (2023), Ananda (2023), and Asbari (2024), influences logistics innovation. Fraihat (2023) explains that logistics organizational structure is a system that outlines how specific activities are handled to fulfill a strategic mission; rules, roles, and obligations are all part of all activities.

The organizational structure also determines the flow of information between divisions within the corporation. The dimensions of logistics organizational structure are centralization, formalization, and departmentalization.

The unique factors that distinguish the current researcher from the articles mentioned above are:

1. There is a positive but not significant influence of digital transformation on business model innovation.
2. There is a positive but not significant influence of logistics competence on business model innovation.
3. There has been no quantitative research examining the influence of business model innovation on company performance.

2. Body of Paper

Research Methods

This study employs a quantitative, descriptive, and verificative research. It uses quantitative, descriptive, and analytical methods. According to Sugiyono (2021), the quantitative research method is a research method used to study the behavior of a population or a sample (a part of the population). The author conducts research using the descriptive method. According to Sugiyono (2021), descriptive research is research aimed at obtaining a description or overview of certain characteristics of the variables being studied, usually depicted in the form of average variable values.

The author also conducts research using the verificative method. According to Siregar (2023), verificative research is used to test the validity of existing knowledge in a particular field. Verificative research is used to prove experts' opinions regarding the influence of independent variables on intervening variables, and the influence of intervening variables on dependent variables.

Research Model

The research model in this study is presented in Figure 2.1

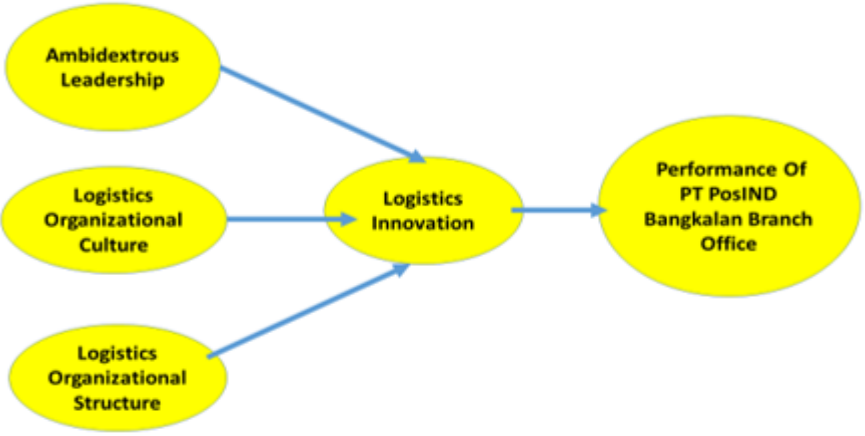

Figure 1: Research Model

The population consists of 235 customers of PT Pos Indonesia Bangkalan branch office. The sample size was determined using the Slovin formula, resulting in 146.

Hypotheses

The author proposes the following:

No			Hypotheses
1.	H_1	:	There is a positive and significant influence of ambidextrous leadership on logistics
2.	H_2	:	There is a positive and significant influence of logistics organizational culture on logistics innovation
3.	H_3	:	There is a positive and significant influence of logistics organizational structure on logistics innovation
4.	H_4	:	There is a positive and significant simultaneous influence of ambidextrous leadership, logistics organizational culture, and logistics organizational structure on logistics innovation
5.	H_5	:	There is a positive and significant influence of logistics innovation on company performance

3. Results

The research results indicate that the mean values of each indicator range from 2.753 to 3.425, classifying them as fairly good to good, but not yet optimal. Therefore, the variables in this study are deemed suitable for further research. Hasnita (2021) states that research results are considered valid if each indicator has a factor loading value above 0.7. The research results show that the factor loading values of all indicators for the variables range from 0.756 to 0.892. These values are higher than 0.700. Hence, according to Hasnita (2021), all indicators in this study are declared valid since all factor loading values exceed 0.700. Hasnita (2021) also explains that a variable is considered reliable if each variable has a Cronbach's Alpha value greater than 0.700. All variables have Cronbach's Alpha values ranging from 0.801 to 0.903, which are above 0.70, therefore, all variables are declared reliable for research.

The research results show that the path coefficient value of ambidextrous leadership on logistics innovation is 0.363 with a p-value of 0.001. This means there is a positive and significant influence of ambidextrous leadership on logistics innovation. There is a positive and significant

influence of logistics organizational culture on logistics innovation with a path coefficient value of 0.207 and a p-value of 0.010. There is a positive and significant influence of logistics organizational structure on logistics innovation with a path coefficient value of 0.253 and a p-value of 0.034. There is a positive and significant simultaneous influence of ambidextrous leadership, logistics organizational culture, and logistics organizational structure on logistics innovation with a determination coefficient value of 0.577. The path coefficient value of the influence of logistics innovation on company performance is 0.762 with a p-value of 0.000. This means there is a positive and significant influence of logistics innovation on company performance.

The overall research results using the Structural Equation Model (SEM) with the PLS application are presented in Figure 2.1 below:

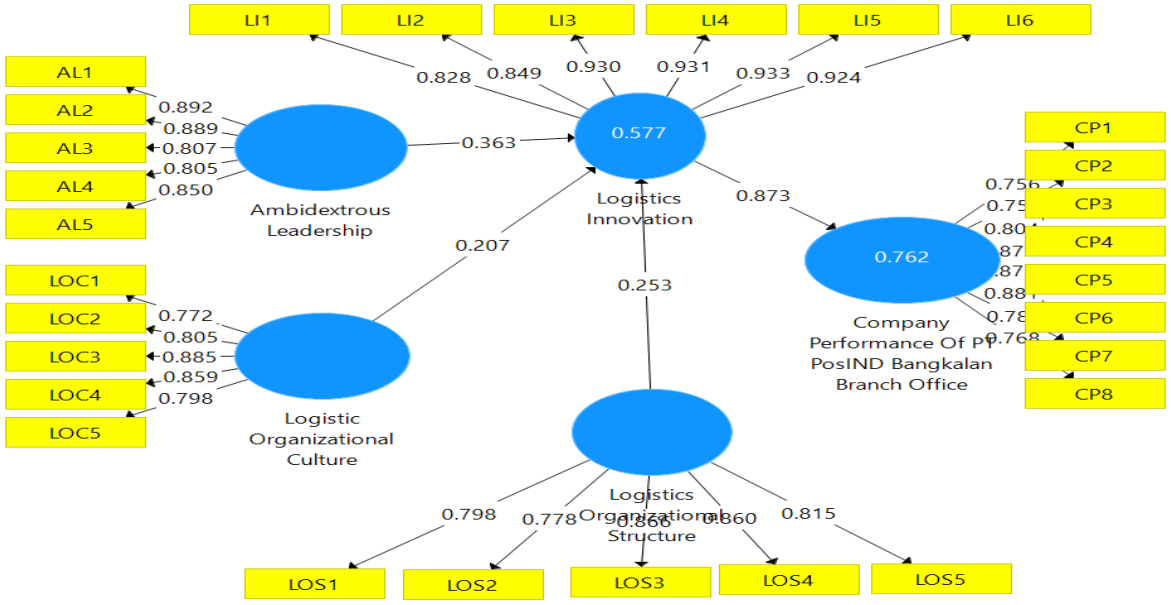

Figure 2.1. Result Research

4. Implication and Direction for Future Research

Implication

Considering that the path coefficient value of the logistics organizational culture variable is the smallest compared to the other two independent variables, the author recommends that the implementation of logistics organizational culture, specifically ethical culture *(budaya akhlak)*, should be further enhanced in daily operations. This enhancement aims to improve the implementation of ethical culture, thereby fostering logistics innovation in the Bangkalan Branch Office environment.

Direction

The author has successfully demonstrated that logistics innovation influences the corporate company PT Pos Indonesia, with a contribution of only 0.762 or 76.20%. This information suggests that there are still opportunities for other researchers to investigate other variables that may affect the company. For example, variables like green logistics, agility, and lean logistics could be explored.

References

Al-Khawaldah, R. A., Al-Zoubi, W. K., Alshaer, S. A., Almarshad, M. N., Alshalabi, F. S., Altahrawi, M. H., & Al-Hawary, S. I. (2022). Green Supply Chain Management and Competitive Advantage: The Mediating Role of Organizational Ambidexterity. *Uncertain*

Supply Chain Management, *10*(3), 961–972. https://doi.org/10.5267/j.uscm. 2022.2.017

Andrini, D., & Susanto, P. (2022). Peran Ambidextrous Leadership Memediasi Hubungan Antara Orientasi Kewirausahaan, Budaya Inovasi dan Kinerja Sekolah di Kota Payakumbuh. *Jurnal Ekonomika dan Bisnis (JEBS)*, *2*(1), 334–342. https://doi.org/10.47233/jebs.v2i1.106

Arikunto. (2021). *Prosedur Penelitian*. Rineka Cipta, Jakarta

Cherchata, A., Popovychenko, I., Andrusiv, U., Gryn, V., Shevchenko, N., & Shkuropatskyi, O. (2022). Innovations in Logistics Management as a Direction for Improving the Logistics Activities of Enterprises. *Management Systems in Production Engineering*, *30*(1), 9–17. https://doi.org/10.2478/mspe-2022-0002

Cho, Y., & Lee, C. (n.d.). *The Effects of Process Innovation and Partnership in SCM: Focusing on the Mediating Roles*. *21*(2), 453–472.

Csedő, Z. (2023). Sustainability change management in inter-organizational innovation networks. *Society and Economy*, *45*(4), 355–371. https://doi.org/10.1556/204. 2023.00011

Daugherty, P. J., Chen, H., & Ferrin, B. G. (2011). Organizational structure and logistics service innovation. *International Journal of Logistics Management*, *22*(1), 26–51. https://doi.org/10.1108/09574091111127543

Elvi, M. (2013). *Research Paper Organizational Structure and Logistics Service Innovation*. *31*(September), 14–31.

Feng, T., Si, Z., Jiang, W., & Tan, J. (2024). Supply chain transformational leadership and resilience: the mediating role of ambidextrous business model. *Humanities and Social Sciences Communications*, *11*(1), 1–12. https://doi.org/10.1057/s41599-024-03099-x

Grawe, S. J. (2009). Logistics innovation: A literature-based conceptual framework. *The International Journal of Logistics Management*, *20*(3), 360–377. https://doi.org/10. 1108/09574090911002823

Hasnita. (2021). *Model Praktek PLS.* Padang, Universitas Padang

Karagöz, İ. B., & Akgün, A. E. (2015). The Roles of its Capability and Organizational Culture on Logistics Capability and Firm Performance. *Journal of Business Studies Quarterly*, *7*(2), 23. http://eserv.uum.edu.my/docview/304876413?accountid=42599

Kusdanu Waskito, Saptono.(2023).*Terampil Mengolah Data Regresi, Path Analysis, Structural Equation Model Menggunakan SPSS, AMOS*. Alfabeta, Bandung

Ližbetinová, L., Lorincová, S., & Caha, Z. (2016). Primjena Instrumenta Procjene Organizacione Kulture (OCAI) na logističke tvrtke. *Nase More*, *63*(3), 170–176. https://doi.org/10.17818/NM/2016/SI17

Ramdan, M. R., Abdullah, N. L., Isa, R. M., & Hanafiah, M. H. (2021). Organizational Ambidexterity within Supply Chain Management: A scoping Review. *Logforum*, *17*(4), 531–546. https://doi.org/10.17270/J.LOG.2021.618

Saputra, N. (2022). Menakar Pengaruh dari Ambidextrous Leadership terhadap Business Agility dari Perusahaan Publik di Masa Krisis. *Ideas: Jurnal Pendidikan, Sosial, Dan Budaya*, *8*(4), 1435. https://doi.org/10.32884/ideas.v8i4.845

Sudaryono, D. (2015). *Metodologi Riset di Bidang TI. Yogyakarta: Andi.*

Sunyoto, Danang. (2013). *Metodologi penelitian akuntansi*.

Yudha Pratama, T., & Kistyanto, A. (2024). Ambidextrous Leadership on Innovation Performance: The Mediating Role of Employee Creativity at PT Pertamina Patra Niaga Jatimbalinus. *Journal of Business and Management Review*, *5*(5), 360–375. https://doi.org/10.47153/jbmr55.9762024.