

i-RIC 2024

INTERNATIONAL RESEARCH & INNOVATION CONFERENCE

PROCEEDING

“HARMONY IN DIVERSITY: FOSTERING UNITY
SUSTAINABLE RESEARCH AND INNOVATION SOCIETY”

24 & 25 JULY
| 20
| 24

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TABLE OF CONTENT

No.	Content	Page
1	Preface	xii
2	Editorial Board	xiii
3	List of Panel Reviewers	xiv-xv
4	List of Articles	1
	A. Engineering and Technology	
	The Study of Land Surface Temperature in Kulim Hi-Tech Using Landsat OLI 8 <i>Zuraini Basarudin^{1*}, Nurul Atiqah Suhaime², Amirul Afiq Azman³, & Mohd Farid Fahmi Abdul Halim⁴</i>	2-10
	The Study of Noise Emission Level Along KTM Kajang Railway Track to Surrounding Premises <i>Karthigeyan Ramachandran^{1*}, Mohd Eizzuddin Mahyeddin² & Mohd Kamaruzaman Musa³</i>	11-14
	Programme Educational Objectives (PEO) Attainment for Diploma in Electronic Engineering (Communication) at Politeknik Sultan Salahuddin Abdul Aziz Shah <i>M. Ramli^{1*} & R. M. Zali²</i>	15-24
	Raspberry Pi Wlan Cast as A Teaching and Learning Aid in Lecture Halls <i>Mohd Hafiz Haron^{1*}, Muhammad Tarmizi Ab Aziz² & Mohd Firdaus Ibrahim³</i>	25-37
	Remote Lab: An Enhancement in Technical and Vocational Education Training (TVET) <i>Vaina Malar Panneer Selvan^{1*} & Uma Devi Nadarajah²</i>	38-49
	PLC Based Automatic Mini Conveyor Control System Trainer Prototype Design Development <i>Bakiss Hiyana Abu Bakar^{1*}, Mokhtar Bin Hashim² and Sharmiza Kamaruddin³</i>	50-57
	The Impact of Intersection Design on Traffic Volume and Road Service Level <i>Zuraidah Hashim^{1*}, Adilen @ Lucia Sul² & Khairul Nizam Mat Amin³</i>	58-62
	Power Consumption Analysis of Centrifugal Force Apparatus TM 600 <i>Arman Md Said^{1*} & Ahmad Fariz Fauzi²</i>	63-68

Comparative Analysis of Charcoal and Banana Stem Fiber Filters in Fat, Oil, And Grease Traps: A Chemical Parameter Evaluation <i>Nor Aziah Fatma Abdul Ayah @ Abdul Aziz^{1*}, Mohd Azriman Mat Ali² & Rahayu Mhd Adnan³</i>	69-75
Development of a Wind-Powered Battery Bank for Mobile Phone <i>Noranizah Solihin^{1*} & Luqman Hazim Sakariah²</i>	76-83
Smart Early Detection of Rheumatoid Arthritis Tool on Nails with A Certainty Factor Technology Approach Based on Image Processing <i>Abi Mufid Octavio¹, Andinusa Rahmandhika^{2*}, Muhammad Lutfi Kamal³, Nuri Virdausia⁴, Frenischa Yincenia Wijaya⁵, Desta Karina⁶ & Achmad Fauzan Hery Soegiharto⁷</i>	84-88
Effect of Channel Model on Flame Stability in Meso-Scale Combustor <i>Murjito^{1*}, Achmad Fauzan Hery Soegiharto², Yogi Danu Krisnanto³ & Farhan Rahmatullah⁴</i>	89-96
Design of Learnifybot: Supporting Hands-On Experience of Stem Education in Malaysia <i>Juliyanna Aliman^{1*}, Ariffuddin Ibrahim² & Er Zhi Han³</i>	97-103
Design of Cloud-Based Hydroponic Plant Monitoring System Using Aiven Cloud MySQL Database <i>Ariffuddin Ibrahim^{1*}, Juliyanna Aliman² & Muhammad Syaifiq Lim³</i>	104-110
Evaluation of Tourism Development Potential of Traditional Villages in Sichuan <i>Zhou Zi Hua¹, Omar Jamaludin^{1*} & Doh Shu Ing¹</i>	111-124
Benefit of Bim at Design and Planning Stage: A Review <i>Huang Lei¹, Shu Ing Doh^{2*} & Zhang Bai Feng³</i>	125-131
Production of Biochar from Sugarcane Biomass under Slow Pyrolysis Process <i>Is Aizat Samsuri^{1*}, Auni Nurain Borhan², Nurul Insyirah Mohamad Noor³ & Nor Ahmad Danial Abdul Wahab⁴</i>	132-137
The Development of Indoor Hydroponic System <i>Johari Ahmad Ghazali^{1*}, Shanley Oyerd Bong² & Mohammad Qusayhairie Mohd Khairul³</i>	138-144
Evaluation of Biopesticides as a Sustainable Alternative for Controlling Pests on <i>Lactuca Sativa</i> (Green Coral Salad) <i>Muhammad Fadhli Tariq Ishak^{1*}</i>	145-147
Using Aloe Vera as Alternative to Rooting Hormone in <i>Petunia Hybrida</i> <i>Muhammad Fadhli Tariq Ishak^{1*}</i>	148-151

Integrating Biomimetic Design Principles from The Namib Desert Beetle into Landscape Rain Harvesting Systems to Enhance Water Collection Efficiency and Sustainability: An Early Phase <i>Mohd Khairil Hilmi Abd Halim^{1*}</i>	152-155
Numerical Study of The Thermal Characteristics of an Integrated Solar Collector-Storage System <i>Nasser Yahya Ayed Alahmary^{1*}, Mohamad Kchaou² & Mohammed Alquraish³</i>	156-167
Fabrication of Cat Bath Station Using Foot Paddling System <i>Mohd Rosli Saad^{1*}, Jessica Clair Peter Nonok² & Elyana Ann Rosly³</i>	168-174
Crashing Infrastructure Projects Considering Scheduling Flexibility <i>Ali Alyami^{1*}, Mohamed Alsharyah² & Mohammed Kchaou³</i>	175-181
B. Business and Management	
Leveraging Risk Management to Enhance ESG Performance <i>Ahmad Saiful Azlin Puteh Salin^{1*}, Roslan Abd Wahab,¹ Amizahanum Adam¹ & Wan Razazila Wan Abdullah¹</i>	183-189
The Knowledge and Practices Environmental Among Students of Kuching Polytechnic Sarawak <i>Faridah Che In^{1*}, Suraya Yope@Yahya² & Noorul`Ashikin Md Salih³</i>	190-194
Unveiling Greenwashing: Risks in Sustainability and ESG Reporting <i>Nurul Nazlia Jamil^{1*} & Ersya Tri Wahyuni²</i>	195-206
Is the Business Incubation Program a Catalyst in Implementing Digital Entrepreneurship Education? Developing a Multiple Case Study in Malaysian Polytechnics <i>Nur Syahirah Rosli^{1*}, Suhaida Abdul Kadir², Rahimah Jamaluddin³ & Enio Kang Mohd Sufian Kang⁴</i>	207-215
C. Education, Teaching, and Learning	
Immersive Learning Experience <i>Akhlak Islamiyyah</i> via Augmented Reality (AKHAR): ADDIE Model Approach <i>Mastura Mohamad¹, Norsalwati Mohd Razalli^{1*}, Asri Sabri¹, Zainal Ariffin Ahmad² & Ari Budiharto³</i>	217-222
YouTube for Research Courses: Implications on Learner Satisfaction & Subject Performance <i>Nurul Hidayana Mohd Noor^{1*}</i>	223-228
Engaging Culinary Students Through Game-Based Learning: Assessing the Culinaryconquest Board Game <i>Wan Ruhaifi Wan Yub Ibrahim^{1*}, Ahmad Ikhwan Fitri Arefin² & Mohamad Arif Abdul Kadir³</i>	229-234

The Development of Jawi Tutor Mobile Application using Kodular <i>Farrah Waheda Abdullah^{1*}, Nurzaitul Natasya Forkan¹ & Siti Nur'ain Maligan¹</i>	235-243
Evaluation of Pedestrian Walkways Quality at POLISAS CAMPUS using P-Index and PLOS Methods <i>Adilen @ Lucia Suil^{1*}, Tee Lian Yong² & Zuraidah Hashim³</i>	244-250
Cultivating a Culture of Trust: Enhancing Organizational Effectiveness in Malaysian Technical Education <i>Ying-Leh Ling^{1*}, Cynthia Yu Shung Chen² & Charles Muling Libau³</i>	251-256
The Effectiveness of the GDB Compiler: Online Tool for Student Learning in Programming C++ <i>Noor Afzan Ahmad^{1*}, Anis Awi² & Zuraidah Mohd Ramly³</i>	257-262
Maker Market Use: Case Survey in Temerloh Community College <i>Rozallienny Zainal^{1*} & Paliza Deraman²</i>	263-268
The Usefulness of Steps to Effective Presentation (StEP) for Beginners Module in Improving Student Presentation Skills at Sarikei Community College <i>Lesta Engkamat^{1*}, Mohammad Zahir Mohd Yazid², Ngu Toh Onn³ & Ying-Leh Ling (Ph.D)⁴</i>	269-274
The Perception of Mechatronic Engineering Diploma Students at Polytechnic Sultan Azlan Shah Towards the Implementation of Interactive Augmented Reality (AR) Visualization for Autonomous Vehicle Robots <i>Ninie Farahana Kamarulzaman^{1*}, Nur Raihana Sukri² & Limi Chong³</i>	275-281
An Analysis of Grammatical Errors in Students' Written Assignment: A Thorough Look at Dialogue Writing <i>Nor Azma Manan^{1*} & Lukman Hakimi Ahmad²</i>	282-289
The Development of Switchless for Multi-Level User <i>Mohd Saifuddin Ahmad^{1*}, Muhammad Ahmad Kamal² & Maheran Sulaiman¹</i>	290-298
Portable Solar Kit as a Teaching Tool for the Course SEE 10013: Electrical Fundamental of Certificate of Electrical Technology Programme <i>Muhamad Hafiz Abd Razak^{1*}, Jamil Sharipuddin² & Mohd Soffian Abdul Samat³</i>	299-304
Compact Solar Fish Dryer <i>Siti Saleha Abdul Azis^{1*}, Mohamad Asyraf Othoman² & Adzuikeen Nordin²</i>	305-310

Tahap kemahiran, Kefahaman dan Minat Pelajar Melalui Bengkel Penghasilan Produk Berinovasi sebagai Program Pembelajaran Sepanjang Hayat <i>Ariffuddin Ibrahim^{1*} & Juliyanna Aliman²</i>	311-317
Stakeholders Perspectives on Industry Engagement Sessions in Final Year Project (FYP) Title Refinement <i>Aminah Bibi Bawamohiddin^{1*}, Munirah Abdullah¹ & Nor Hanani Mohd Yusoff¹</i>	318-323
Analysis of Malaysian Polytechnic Students that Successful Commissioned RELASIS Brigade Credit Co-Curriculum Course towards Producing Quality TVET Graduates <i>Mohammad Fahmy Ibrahim^{1*}, Kamarul Ariffin Abd Rashid² & Norfazila Ahmad³</i>	324-330
Tiktok Addiction and its Impact on Academic Performance among Teenagers <i>Amirah Othman^{1*} & Mohamad Hafizul Mohd Zaid²</i>	331-340
D. Health and Life Sciences	
Preliminary Investigation on the Use of Organic Waste as a Medium for Fast-Acting Biofiltration Systems <i>Mohamad Azlan Yusuff Abdul Rahim^{1*}, Mugilan Nalliannan², Darshini Sree Ahnathan³ & Azizah Alias⁴</i>	342-346
The Effectiveness of Tannic Acid from Tea Waste as a Coagulant for Reducing Solids & Cod in Wastewater Treatment <i>Mohamad Azlan Yusuff Abdul Rahim^{1*}, Is Aizat Samsuri², Nurul Syafika Zulkifli³, Siti Nurafiqah Nasir⁴ & Muhammad Hariz Hazwan Hamidi⁵</i>	347-350
Study of Malay Traditional Architecture Approach in Landscape Architecture Design <i>Mohamad Hafiz Sulaiman^{1*}</i>	351-357
The Potential of Shrub Plants as Soil Erosion Control <i>Mohamad Hafiz Sulaiman^{1*}</i>	358-363
Climate Change Increases the Risk of Infectious Diseases and Solutions to Address the Issues <i>Rabiatul Adawiyah Mohd Radzuan¹ & Nur Adibah Mohidem^{1*}</i>	364-379
Telang Flower: A Novel Approach to Pharmaceutical Innovation in Malaysia <i>Saiful Mohamed Shuib^{1*}, Elena Anwar² & Anwar Abdul Rahman³</i>	380-386
Development of Bio-Board from Reutilization of Spent <i>Pleurotus Cajor-Saju</i> Substrate <i>Muhammad Naim Razali^{1*} & Shaveena Devi Venilen²</i>	387-392

E. Social Sciences

Consumer Rights: What Consumers Should Know in Dealing with E-Commerce Transactions <i>Nur Farahin Afiqah Daud¹</i>	394-399
Mastery Level of Generic Skills Among Students' Community College of Sarawak Region Through Teaching and Learning Processes Via Genral Courses (MPU) <i>Chong Chiew Ching¹, Liu Tse Hui² & Ngu Toh Onn³</i>	400-405
Development of Tofu Sausage Tomyam <i>Nur Nafisa Shafie@Mohd Alias^{1*}, Latifah Mahmood² & Norzilahwati Md Noh³</i>	406-409
Retail Management Education in Malaysia: Identifying and Integrating Essential Skills <i>Nur Aliyah Azizi^{1*} & Noor Rahayu Mohd Salleh²</i>	410-415
Students' Intention Towards Sustainability: The Moderating Role of Emotional Intelligence <i>Siti Yummy Faridatul Akmar Mohamad¹</i>	416-421
Literasi Kewangan Pelajar Diploma Pengajian Perniagaan Jabatan Perdagangan Politeknik Ungku Omar <i>Sazaliana Shairali^{1*} & Yanti Yusop²</i>	422-428
Effects of Biofeedback Training on Heart Rate Variability and Performance of College Golf Players <i>Huang Donghai¹, Muhammad Nubli Abdul Wahab^{2*} & Zhang Xiuling³</i>	429-434
Levels of Student Involvement in Green Programs and Their Impact on Environmental Stewardship Attitudes <i>Zainatun Nisa Sapaat¹ & Halizah Alwi²</i>	435-440
Islamic Digital Marketing Template for Asnaf in Perlis <i>Izwan Nurli Mat Bistaman^{1*}, Muhammad Nurfiqri Mohd Hajar² & Razinda Tasnim Abdul Rahim³</i>	441-445

F. Logistic and Supply Chain Management

The Influence of Organizational Ambidexterity, Business Strategies, and Supplier Performance on Customer Satisfaction, and Its Implications on Logistics Performance at Bandung Main Branch Office of PosIND <i>Yogi Sudrajat^{1*} & Saptono Kusdanu Waskito¹</i>	447-453
Analysis of Factors That Influence the Effectiveness of Export Performance (Case Study at PT. Sinergi Mitra Lestari Indonesia) <i>Anida Wafiq Adawiyah S. Log¹ & Erna Mulyati, S.T., M.T²</i>	454-460

Analysis of Factors That Influence the Effectiveness of Hazardous and Toxic Materials Waste Warehouse Management at the Company PT Sinergi Mitra Lestari Indonesia <i>Muhammad Andrey Alfian, S. Log.¹, Dr. Erna Mulyati, S.T., M.T.²</i>	461-467
Challenges and Strategies for Rice Price Stability: A Systematic Review of Supply Chain Dynamics in Indonesia During Critical Periods <i>Rizki Alifnur Harmawan^{1*} & Erna Mulyati²</i>	468-476
Analysis and Implementation of the User-Centered Design Method in Designing a Web-Based Bidding Participation Information System: A Case Study at PT Pos Indonesia (PERSERO) <i>Kokoh Handoko^{1*} & Agus Purnomo¹</i>	477-483
The Impact of Digital Transformation, Logistics Competence, Transformational Leadership on Business Model Innovation and Its Implications for Company Performance <i>Realyta B. U. Sirait¹ & Saptono Kusdanu Waskito²</i>	484-490
A Literature Review: Analysis of Courier Business Strategies in Facing Global Challenges <i>Emay Marsita¹ & Maniah²</i>	491-500
From Farm to Fork: Leveraging Blockchain Technology to Improve Food Supply Chain Integrity in Indonesia <i>Syifa Salsabila¹ & Agus Purnomo²</i>	501-512
Integrating Advance Technology and Logistics Customer Service for Optimal Logistics Performance: A Study at Shopee Express Pangalengan Branch <i>Muhamad Faisal Nasrudin^{1*} & Agus Purnomo¹</i>	513-524
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 <i>Ahmad Rosadi¹ & Saptono Kusdanu Waskito²</i>	525-529
Risk Management Design in Optimizing Employee Performance with The Approach of Enterprise Risk Management (ERM) <i>Ramadani Al Mantinu^{1*}</i>	530-537
Proposed Logistics Distribution Pattern for Regional Head Election in Bulukumba Regency (Case Study of the 2024 Regional Head Election) <i>Mirza Azzahra Damayanti¹ & Melia Eka Lestiani²</i>	538-551
The Impact of Export Parcel Price, Parcel Service Quality, and Logistics Service Innovation on Purchasing Decisions and the Implications for Company Performance at PT PosIND KCU Denpasar <i>Depi Darpiyan¹ & Erna Mulyati²</i>	552-557

- The Impact of Dedicated Storage and Class-Based Storage Methods on the Warehouse Layout of KPK PosIND Jakarta Centrum on the Distance and Time of Item Movement 558-568
Hendri Lasmana¹ & Agus Purnomo²
- The Effect of Express Mail Service (EMS) Tariff, Direct Flight, and Logistics Competence on Service Quality and the Implications for Company Performance at PT PosIND KCU Denpasar 569-572
Yullia Ika Setyanhi¹ & Erna Mulyati²
- The Role of Dynamic Logistic Capabilities which is Influenced by Customer Experience and Operational Excellent for PT Pos Indonesia Regional West Java 573-576
Arif Yudha Wahyudi & Agus Purnomo M. T. (Dr.)

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.

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LOGISTICS AND SUPPLY CHAIN MANAGEMENT

**“HARMONY IN DIVERSITY: FOSTERING UNITY
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The Effect of Express Mail Service (EMS) Tariff, Direct Flight, and Logistics Competence on Service Quality and the Implications for Company Performance at PT PosIND KCU Denpasar

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Abstract

The author conducted a study on the performance of the courier and logistics business at PosIND KCU Denpasar. The issue identified is the continuous decline in revenue from Express Mail Service (EMS), indicating a performance problem within PT PosIND KCU Denpasar. The research aims to analyze the impact of Express Mail Service (EMS) Tariff, direct flight, and logistics competence on company performance, with service quality as an intervening variable. The method used was quantitative, and data analysis was conducted using the smartPLS application. The study population consisted of 250 customers, with a sample size of 154 determined by the Slovin formula. The load factor and Cronbach's Alpha values for all variables were above 0.700, indicating that the data for all variables were valid and reliable. The T Statistics value for EMS Tariff was 3.434, where $T \text{ Statistics} > 1.96$ and $p\text{-value} = 0.001$, indicating a positive influence of EMS Tariff on Service Quality. There was a positive influence of Direct Flight on Service Quality, with a T Statistics value of $2.277 > 1.96$ and a $p\text{-value} of 0.023 < 0.050$. There was a positive influence of logistics competence on service quality, with a T Statistics value of 2.661 and a $p\text{-value} of 0.000 < 0.05$. The R Square value was 0.612, indicating a positive and significant influence of EMS Tariff, direct flight, and logistics competence on service quality. Additionally, there was a positive and significant influence of service quality on company performance, with a T Statistics value of 13.132 > 1.96 and a $p\text{-value} of 0.000 < 0.05$. PT PosIND should evaluate the implementation of direct flights for EMS services to enhance customer service quality and potentially increase company revenue.

Keywords: Express Mail Service (EMS) Tariff, Direct Flight, Logistics Competence, Service Quality, Company Performance

1. Introduction

One of the core businesses of PT PosIND is the courier and logistics business, which includes both domestic and international shipment services. Denpasar, being one of the most visited cities in Indonesia by international tourists, has a significant potential for international shipments. One of PosIND's products preferred by customers for international shipping is Express Mail Service (EMS). The revenue from EMS at PT PosIND KCU Denpasar has been declining from 2022 to 2024. In 2022, EMS revenue was IDR 11,560,000,000, which dropped to IDR 9,251,000,000 in 2023, experiencing a negative growth of -24.95%. For the period from January to May 2024, the revenue further decreased compared to 2023, amounting to IDR 5,050,574,042 in 2023 and IDR 4,874,648,720 in the same period of 2024, indicating a decline of -3.48%.

The declining EMS revenue at PosIND KCU Denpasar will undoubtedly affect the company's performance, one of which is a decrease in company profits. According to Yuen et al. (2022), company performance is a multidimensional outcome of an organization's operational and strategic activities. The indicators of company performance, according to Yuen et al. (2022), include operational efficiency, on-time delivery, customer satisfaction levels, market share, and profitability.

According to Apriyani (2023), Yulia (2023), Yusuf (2022), and Aprielia (2022), price or tariff affects service quality. Apriyani (2023) defines price/tariff as the amount of money charged for a product or service or the value exchanged by customers to gain the benefits of owning or using a product or service. The indicators of tariff include price competitiveness, affordability, transparency in pricing, flexibility in pricing, and value for money.

According to Rizki Fauzi (2020), direct flights affect service quality. Rizki Fauzi (2020) defines direct flights as flights that do not have any stops between the origin and destination, thus reaching the final destination more quickly and efficiently. The indicators of direct flights include reduced transit time, reliability, reduced handling, consistency, and network coverage. According to Kim (2020), Liu (2022), and Esterlinus (2023), logistics competence affects service quality. Kim et al. (2020) defines logistics competence as a set of capabilities and skills possessed by logistics companies to manage and optimize their logistics operations. The indicators of logistics competence include technological integration, staff competence, process innovation, customer feedback utilization, and sustainable practices.

Based on previous research, the influence of tariff, direct flight, and logistics competence on company performance is still debatable, with some researchers supporting and others opposing these influences. Hence, the model cannot be generalized yet. The purpose of this study is to analyze the influence of Express Mail Service (EMS) Tariff, direct flight, and logistic competency on the performance of PT PosIND KCU Denpasar, with service quality as an intervening variable.

2. Body of Paper Research Methodology

This study uses a quantitative research method to test the established hypotheses. According to Creswell (2014), quantitative research is a systematic approach to testing theories by examining the relationships between variables, expressed in numbers and analyzed using statistical techniques. Data were collected through the distribution of questionnaires to respondents who are customers of PT PosIND Denpasar Main Branch Office.

In determining the sample size, the researcher used the Slovin formula with a margin of error of 5%, resulting in a sample size of 154 respondents from a population of 250 customers. Data collection was carried out by distributing questionnaires both directly and through online platforms. The questionnaire used in this study consists of structured questions designed to measure variables such as EMS Tariffs, direct flights, logistics competence, and service quality. The collected data were then processed using the PLS-SEM (Partial Least Squares Structural Equation Modeling) application.

Previous research has indicated that company performance is influenced by service quality. According to Adeshina (2021), George K (2023), Hasan U (2020), Tomy F (2023), and Sayed E (2022), company performance is affected by service quality. Sayed E (2022) defines service quality as the capacity of a company to offer services that meet and exceed customer needs or expectations. The dimensions/indicators of service quality include tangibles, responsiveness, empathy, assurance, reliability, and access.

According to Hair et al. (2019), PLS-SEM is a structural equation modeling technique suitable for analyzing data with small sample sizes and non-normal data distributions. Furthermore, Ramayah et al. (2021) emphasized that PLS-SEM is particularly advantageous in exploratory research due to its flexibility in handling complex models with multiple indicators and constructs. The SmartPLS application was used to analyze the relationships between the variables in the research model, including testing the validity and reliability of the research instruments and hypothesis testing. This analysis allows researchers to identify direct and indirect effects between the independent and dependent variables in this study.

3. Research Model

The research model in this study is presented in Figure 1.

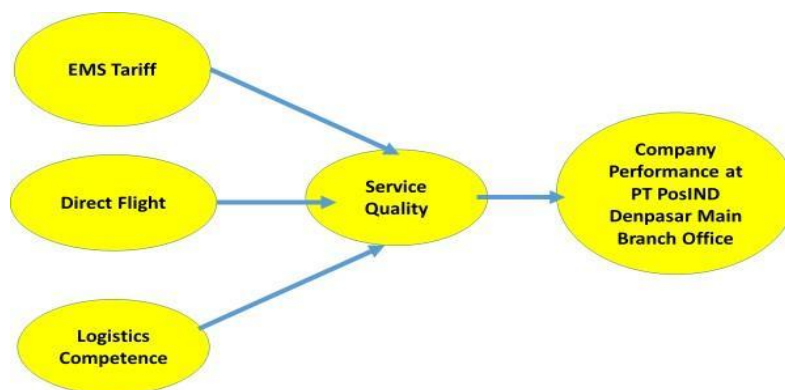


Figure 1: Research Model.

The total population is 250 customers of PT PosIND Denpasar branch with a margin of error of 5%, thus the sample size is determined using the Slovin's formula, totaling 154 people.

4. Hypotheses

The author formulates the hypotheses as follows:

No Hypotheses

1. H₁ : There is a positive and significant influence of EMS Tariff on service quality.
2. H₂ : There is a positive and significant influence of direct flight on service quality.
3. H₃ : There is a positive and significant influence of logistics on service quality.
4. H₄ : There is a positive and significant influence of EMS Tariff, direct flight, and logistics competence on service quality.
5. H₅ : There is a positive and significant influence of service quality on company performance.

5. Results

The results of the study indicate that the average value for each indicator ranges from 2.760 to 3.448, which are categorized as fairly good to good variables. Since the variables have average values that are not yet very good, it can be explained that the variables in this study meet the criteria for further investigation.

The tools used to test the quality of the questionnaire are validity and reliability tests. The validity test ensures that respondents are given the opportunity to express their opinions by rating each statement in the questionnaire on a scale from strongly agree to strongly disagree. The validity test also verifies that respondents correctly exercise their right to provide opinions ranging from strongly agree to strongly disagree. The study results indicate that the load factor values of all indicators in the examined variables are greater than 0.700. Therefore, according to Hasnita (2021), all indicators in this study are considered valid. Hasnita (2021) explains that a variable is deemed reliable if each variable has a Cronbach's Alpha value greater than 0.700. All variables have Cronbach's Alpha values above 0.700, making them reliable for this research.

The study results show that the T-Statistic value for the EMS Tariff variable is 3.434, where the T-Statistic > 1.96 , p-value = 0.001. This means there is a positive and significant influence of EMS Tariff on service quality. There is a positive and significant influence of direct flight on service quality with a T-Statistic value of 2.277 > 1.96 and a p-value of 0.023 < 0.050 . There is a positive and significant influence of logistics competence on service quality with a T-Statistic value of 2.661 and a p-value of 0.000 < 0.05 . The study results indicate that the R-Square value is 0.612, meaning there is a positive and significant influence of EMS Tariff, direct flight, and logistics competence on service quality. There is also a positive influence of service quality on company performance with a T-Statistic value of 13.132 > 1.96 and a p-value of 0.000 < 0.05 .

The overall research model can be explained in Figure 2.1 below:

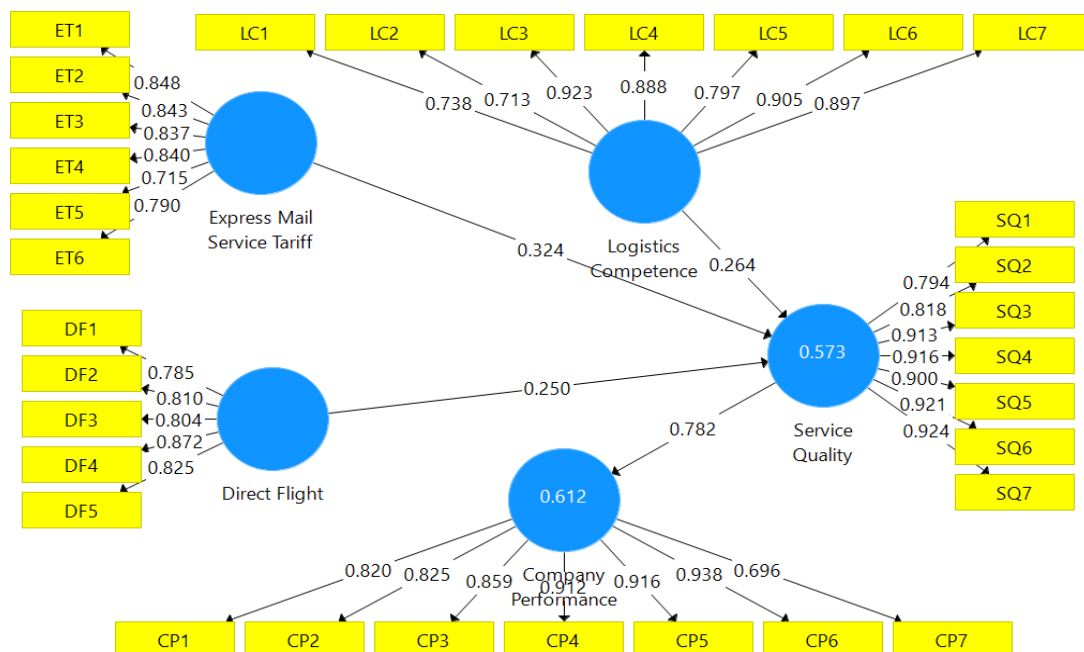


Figure 2.1. Result Research

From the model/diagram above, it can be concluded that Express Mail Service (EMS) Tariff, logistics competence, and direct flight all contribute positively to service quality. Additionally, service quality has a very strong influence on company performance, indicating that improvements in service quality will have a significant impact on the company's performance.

6. Implication and Direction for Future Research

Implication

From the research results, all variables have a positive effect on service quality. However, given that the T Statistic value for the direct flight variable is 2.277, which is the smallest value, it is necessary to reevaluate whether implementing direct flights from Denpasar to destination countries will significantly impact the performance of PT PosIND KCU Denpasar. Alternatively, the company could offer other options that would encourage customers to continue using the services at PosIND KCU Denpasar.

7. Future Research

From the research conducted at PT PosIND KCU Denpasar, the author has successfully demonstrated that EMS Tariff, direct flight, and logistics competence have a positive impact on service quality, and that service quality has a positive and significant impact on company performance. Considering that the variables used in this study still have a relatively small influence on service quality, the author recommends that future researchers seek out or add other variables that could have a stronger impact on service quality, such as innovation, technology, customer feedback, etc.

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