

i-RIC 2024

INTERNATIONAL RESEARCH & INNOVATION CONFERENCE

PROCEEDING

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

24 & 25 JULY

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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>Karthigeyen 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 Syaftiq 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 & Saptano 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 & Saptano 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 Role of Dynamic Logistic Capabilities which is Influenced by Customer Experience and Operational Excellent for PT Pos Indonesia Regional West Java

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Abstrak

This research aims to determine and analyze the influence of customer experience and operational excellence on the dynamic logistic capabilities of PT Pos Indonesia (Persero) West Java. The type of research used in this research is quantitative research. The data collection method was carried out by interviews, with a list of questions (questionnaire). The population in this study was customers of PT Pos Indonesia (Persero) located in 20 cities and districts in West Java Province. The research sample uses the sampling / census method. In this study, the number of respondents from the population was relatively small, namely 55 people. Data processing was carried out using Partial Least Square SEM (SmartPLS) where the results obtained that there is a positive influence between customer experience (X1) on dynamic logistic capabilities (Y) and there is a positive and significant influence between operational excellence (X2) on dynamic logistic capabilities of PT Pos Indonesia (Persero) West Java.

1. Introduction

Currently, PT Pos Indonesia (Persero) as a state-owned company is a business entity that is experiencing the consequences of the hyper-competence century, where customers are getting smarter so they can easily compare existing services. With increasing customer demands, standards have shifted so that service that was previously considered great is now felt to be mediocre. The current demands of the public or users of logistics services are products that are cheap/efficient but delivered quickly. Apart from that, local and global competitors can easily mushroom and play on the same land. PT Pos Indonesia (Persero) West Java Regional has 3 main branch offices and 15 branch offices covering 20 cities and district areas throughout West Java Province. As a business entity, PT Pos Indonesia Regional West Java currently has a logistics business portfolio in 2024 that has grown from 2023, but the problem is that it has not yet reached the target set by the company. Influencing factors include customer experience and operational excellence, where these 2 factors will influence dynamic logistics capabilities which have an impact on the logistics revenue performance of PT Pos Indonesia (Persero) West Java Region.

2. Literature Review

Customer experience is different from customer service. Customer service provides solutions and handles customers, in this case the company as the subject is more active in providing services and providing solutions to customers. Customer experience is more about the customer's perspective when enjoying services from the company. Customer experience is customer satisfaction with the services or products the company offers (Dewi Maharani, 2022). Therefore, every business must be able to create a good customer journey according to customer needs. With good customer experience management, customers will trust the company's brand. The definition of customer experience is the customer's perception of rational, physical, emotional, subconscious, and psychological interactions with parts of an organization (Pradhita, 2013).

Customer experience indicators include: feel, sense, think, act, and relate (Febrina Salim and Catherine et al., 2013). Customer value is a customer's assessment of a product to compare whether there is added value from the product. With these 5 indicators, a survey is conducted on PT Pos Indonesia customers in the West Java Regional work area. The concept of operational excellence was first introduced in the early 1970s by Dr. Joseph M. Juran in teaching Japanese business leaders how to improve quality. Operational Excellence (OpEx) is a business management approach that emphasizes continuous improvement in all aspects of the business and all business processes by creating a culture where management and employees are invested in business results and are empowered to implement change (Found et al., 2018).

Every organization continues to be faced with many challenges, both internal and external. For this reason, organizations need to understand the importance of operational excellence. Operational excellence is a business strategy that will make an organization more consistent and superior to its competitors. They are able to run a business with lower operational risk, cheaper operational costs, and relatively higher income (Ifada & Ali, 2018).

Operational excellence can be measured by several indicators as follows: customer focus, continuous improvement, lean thinking, standardization, employee involvement, agility and flexibility, continuous learning and training, process visibility and transparency and leadership commitment and support. Wang and Ahmed (2007) identified three main component factors of dynamics capabilities, which can be considered as the three main dimensions of dynamic capabilities:

- Adaptive dimension
- Absorption dimensions
- Innovative dimension

3. Methodology

Research Design

This research uses an explanatory survey method which analyzes causal relationships between variables. Information from part of the population is collected empirically to find out the opinion of part of the population.

Data Sources and Sampling Techniques

After observing the problem and taking the title of the article, indicators for each variable were compiled. Next, a 17-question questionnaire that uses a five-point Likert scale was prepared. The questionnaires were distributed to corporate/logistics customers in all main branch offices and branch offices of PT Pos Indonesia in the West Java region, totaling 18 offices or 20 district cities in the West Java region. To make it easier to return the questionnaire, a Google link for respondents to make it easier to fill out the questionnaire was created and shared. This proposal establishes a customer experience and operational excellence model using variance-based Partial Least Squares Structural Equation Modeling (PLS-SEM).

4. Result

In this research, using PLS SEM software, 2 models were evaluated, namely the outer model and the inner structural model. Model evaluation is used to determine the validity and reliability of the model. Convergent validity is determined by a factor loading value ≥ 0.7 and an average variance extracted (AVE) value ≥ 0.5 . Meanwhile, discriminant validity is measured by ensuring that the square root of the AVE (Fornell-Lacker criterion) is greater than the correlation between latent constructs.

The reliability of the model was assessed using Cronbach's Alpha (≥ 0.70) and Composite Reliability (≥ 0.70). The model includes the R-squares value (determinant coefficient), Statistical T Value, and P-value. If the R-Squares are 0.75, 0.5, and 0.25, then it can be confidently concluded that the influence of the exogenous variable on the endogenous variable is strong, moderate, and weak. To determine the significance of the influence between variables with a significance level of 5%, a t value greater than 1.65 and a P value less than 0.05 are used.

Table: Outer Struktur Model Result Table 1 Validity and Reliability of the Variables

Vrb	Ide	F_L	Cron_α	Com_R	A_VE
Customer Experience					
			0,859	0,865	0,704
CE1	An interesting experience regarding the services offered by PT Pos Indonesia	0,779			
CE2	Satisfied with the services provided by PT Pos Indonesia	0,894			
CE3	Satisfied with the problem solving provided by PT Pos Indonesia	0,867			
CE4	Customers get added value for the services provided by PT Pos Indonesia when compared to other Courier and Logistics services	0,811			
Operational Excellence					
			0,933	0,937	0,654
OE1	PT Pos Indonesia Focus on customers	0,732			
OE2	PT Pos Indonesia make continuous improvements	0,771			
OE3	PT Pos Indonesia provides simple and streamlined services	0,806			
OE4	PT Pos Indonesia has standardization in service	0,863			
OE5	PT Pos Indonesia really pays attention to employee involvement	0,855			
OE6	PT Pos Indonesia has great agility and flexibility	0,837			
OE7	PT Pos Indonesia carries out continuous learning and training	0,826			
OE8	PT Pos Indonesia has process visibility and transparency	0,764			
OE9	PT Pos Indonesia has commitment and leadership support	0,814			
Dynamic Capabilities					
			0,844	0,866	0,763
DC1	PT Pos Indonesia is able to identify and exploit emerging markets, including the company's ability to adapt their product-market scope to respond to external opportunities	0,930			
DC2	PT Pos Indonesia is able to recognize the value of new external information, understand it, and utilize it for commercial purposes	0,835			
DC3	PT Pos Indonesia has the company's ability to develop new products and/or markets, through aligning strategic innovation orientation with innovative processes and behavior	0,853			

Composite reliability value is more than 0.7 and value Cronbach's Alpha is more than 0.7, then it meets the reliability criteria. The AVE value is more of 0.5 then it meets the criteria

Table 2 Validity and Reliability of the Variables

	Customer Experience	Dynamic Capabilities	Operational Excellence
Customer Experience	0,839		
Dynamic Capabilities	0,593	0,874	
Operational Excellence	0,694	0,809	0,809

Inner Structure Model Result Table 3 R-Squares (Determinant Coefficient)

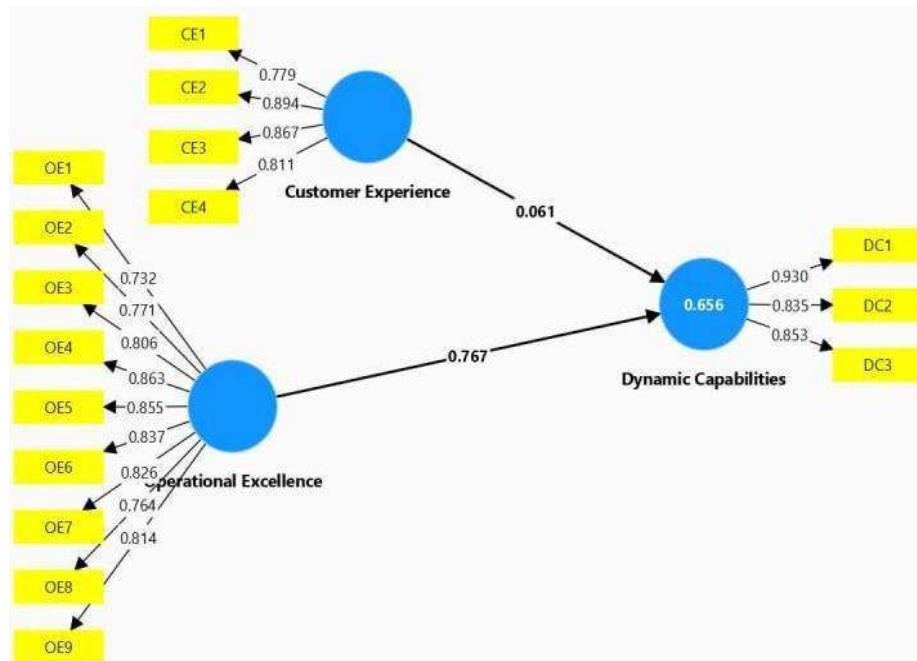
To determine the significance of the influence between variables at the 5% significance level, a t-value greater than 1.65 must be used and a P value less than 0.05 must be used.

	R-square	R-square adjusted
Dynamic Capabilities	0,656	0,643

The R Square value of 656 means that the endogenous variable dynamic capabilities is influenced by 65.6% by the customer experience and operational excellence variables, while 34.4% is influenced by other factors outside the variables studied.

Table 4: Hypothesis Testing Conclusion for all Research Hypotheses

	Original Sample (O)	Sample Mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV))	P values	HTC
CE	0,905	0,900	0,033	27,120	0,000	Accepted
DC	0,906	0,904	0,027	33,183	0,000	Accepted
OE	0,944	0,943	0,014	67,103	0,000	Accepted



5. Conclusions and Implications

This research aims to examine the direct influence of customer experience and operational excellence on the dynamic logistics capacity of PT Pos Indonesia (Persero) in the West Java region. Research results show that customer experience has a direct impact on dynamic capacity. The operational excellence factor also has a direct and significant influence on the dynamic logistics capacity of PT Pos Indonesia (Persero) in the West Java Region. With this research we draw out two main theoretical implications. First, proposing the use of customer experience as a strategic effort to be implemented both internally and externally. Second, operational excellence is a strategic effort to increase the dynamic capacity of PT Pos Indonesia (Persero) so that PT becomes the choice for consumers to use its logistics services. The role of human resources is very important in improving both providing an excellence experience to customers and operational excellence in delivering logistics services.

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