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Program Book **PICSCAR**

PETRA INTERNATIONAL *Conference* on Sustainable Cities and Regions 2024

Toward Sustainable Cities and Regions:
Growth - Regeneration - Innovation



June 4-6 2024

Q Building
Petra Christian University
Surabaya 60236
East Java, Indonesia

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research
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**SUSTAINABLE CITIES &
SOCIAL INNOVATION
INTERNATIONAL
CONSORTIUM**



20

PCU SDGs*
INITIATIVES

* Sustainable Development Goals

Program Book

PICSCAR

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Consortium Institutions as Organizer



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About

PICSCAR 2024

Toward Sustainable Cities and Regions: Growth - Regeneration - Innovation

PICSCAR 2024 is a conference experience designed not only for presenting papers but also for sparking discussions and forging connections with fellow researchers. Hosted in Surabaya at Petra Christian University (www.petra.ac.id) from June 4-6, 2024, and supported by notable institutions like TU Dresden and the Alexander von Humboldt Foundation, PICSCAR focuses on sustainable urban and regional development, providing a rich environment for collaboration and innovation in the field.

The development of new cities in green spaces across Indonesia impacts urban sustainability, local communities, cultures, and governance. Ineffective management and planning lead to negative outcomes like farmer displacement and socioeconomic disparities. Sustainable Development Goal 11 highlights the need for inclusive, safe, and resilient urban areas, requiring multidisciplinary approaches and best practices. Transdisciplinary research and inclusive dialogue among stakeholders are essential for fostering sustainable cities and communities.

Regards,
PICSCAR's Committee



Foreword

Prof. Djwantoro Hardjito, Ph.D.
Rector, Petra Christian University,
Surabaya, Indonesia



Praise God from whom all blessings flow.

With great honor, I extend a warm welcome to our esteemed speakers, participants and partners to the Petra International Conference on Sustainable Cities and Regions 2024 (PICSCAR-2024), hosted on our campus, Petra Christian University (PCU), Surabaya, Indonesia. Our theme, 'Toward Sustainable Cities and Regions: Growth, Regeneration, Innovation,' sets the stage for meaningful dialogue and transformative collaboration.

The conference is co-hosted in partnership with Technische Universität Dresden, Germany, generously supported by the Alexander von Humboldt Foundation, Germany. In addition, we are grateful for the strong support from the City Government of Surabaya. Please allow me to express my sincere gratitude.

We are presently navigating a profoundly challenging global landscape, marked by pressing concerns such as climate change, dwindling natural resources, and the urgent need to cultivate greater sustainability in our cities and regions. This is a time when close collaboration among governments, researchers, academics, industries and communities is increasingly indispensable for effective implementation.

It is my highest expectation that this conference will serve as the melting pot for collective learning, unlearning and relearning, fostering the exchange of ideas, forging mutual and robust collaboration, and discovering pathways to enhance the sustainability of our cities and regions.

Thank you sincerely to all of sponsors, partners and the organizing committee for your dedicated efforts in ensuring the success of this conference. May God's blessings abound for each of you.

Sincerely yours,

Prof. Djwantoro Hardjito, Ph.D.

Rector, Petra Christian University, Surabaya, Indonesia

Foreword

Assistant Professor Pwee Leng
Head of PICSCAR 2024
Petra Christian University



Welcome and best wishes.

On behalf of the organizing committee, it gives me great pleasure to extend a warm welcome to our esteemed speakers, invited presenter and participants to the first Petra International Conference on Sustainable Cities and Regions direction on growth, regenerations, and innovations (PICSCAR 2024) in Petra Christian University-PCU, Surabaya, Indonesia.

The PICSCAR is the premier conference on sustainable cities and regions for concerning on topics of Community Engagement and Social Innovation, Urban planning and design, Sustainable Transportation and mobility, Community resilience to disaster and change, Innovation and access to basic services, Cultural heritage and identity, social inclusion and equity, Leadership Sustainability, Digital sustainability, Public-Private Partnership, and Creative Economy and City Development.

The PICSCAR provides a discussion forum, namely Research Discussion Session (RDS) for researchers, private developers, and municipal government to meet and exchange ideas on the latest developments as well as the future direction to achieve the sustainable goals. The RDS is divided into three main topics, growth, regeneration, and innovations. These themes provide a structured framework for in-depth exploration and discussion of specific aspects related to sustainable development goals and pertinent research areas. In this time, PICSCAR received research abstracts from twelve (12) countries, both in the form of extended abstract and posters submitted by fifty two (52) research teams for further discussion.

The PICSCAR is organized by Research and Community Service Institutions (LPPM) of PCU, and co-hosted in partnership with Technische Universitat-TU Dresden, Germany. The conference is also supported by Alexander von Humboldt Foundation, Germany.

We hope that the next Petra International Conference on Sustainable Cities and Regions (PICSCAR) will be as successful and stimulating as indicated with the contributions presented in these publications.

Finally, let me sincerely express my deepest respect for the entire committee team. Thank you for the spirit of appreciation, for the unwavering support and dedication in the team. Thank you for your consistent patience and incredible understanding. Thank you and God bless.

Warm regards,

Assistant Professor Pwee Leng

Head of PICSCAR 2024

Petra Christian University

Welcome remark

Assoc. Prof. Leenawaty Limantara
Humboldt Fellow
Petra Christian University



Welcome to the International Conference “Toward Sustainable Cities and Regions: Growth – Regeneration – Innovation”. The conference is the culmination of the three-year project “Cooperation for Sustainable Urbanization (CFSU)” supported by the Alexander von Humboldt Foundation through the Humboldt Research Linkage scheme. The main aim of the project is to generate new knowledge about sustainable urbanization in Indonesia, particularly on the interplay between municipalities and private sectors in shaping the regional landscape across the country.

The development of new urban centers in Indonesia often occurs within green spaces which can alter the landscape dynamics in the region. While urbanization offers benefits such as economic growth, job creation, and cultural enrichment, policymakers and planners mitigate the potentially negative impacts on local communities, local cultures, and urban governance. The reference to Sustainable Development Goal (SDG) 11 in urban planning is key to create inclusive, safe, resilient, and sustainable urban areas. The conference provides a dynamic platform for key stakeholders to cultivate sustainable cities and communities.

We express our gratitude to the Alexander von Humboldt Foundation for its continuous support. We trust that the transdisciplinary nature of the conference is essential for addressing urban challenges and serves as the starting point for driving sustainable initiatives in the future.

We wish you a fruitful conference.

Assoc. Prof. Leenawaty Limantara
Humboldt Fellow
Petra Christian University

Welcome remark

Prof. Dr. Dr. h.c. Bernhard Müller
Technische Universität Dresden
- TU Dresden, Germany



Dear participants

The Petra International Conference on Sustainable Cities and Regions (PICSCAR) 2024 marks a highlight of many years of close and fruitful cooperation for sustainable urbanisation between the former Chair of Spatial Development at TU Dresden, Germany, and, first Universitas Pembangunan Jaya (UPJ) in the Jakarta Metropolitan Area, and now Petra Christian University (PCU) in Surabaya.

Several years ago, we started our joint activities regarding research and teaching about sustainable urban development and its multi-faceted approaches. More recently, the role of private cities in sustainable urban development, a rather prominent topic in Indonesia, attracted our interest. During the past years, we have made ample contributions to research and the discussion and dissemination of research results as well as curricula development and the provision of policy advice and extension services of Indonesian universities to society.

Over many years, the Alexander von Humboldt Stiftung, Germany's major foundation for sponsoring "people instead of projects", has financially supported the cooperation between the mentioned universities from Germany and Indonesia. With about 40 Humboldtians out of more than 30,000 worldwide, Indonesia is among the countries, which still have high growth potentials, especially when one takes the population size and the academic sector of the country into consideration. Our gratitude goes to the foundation for its constant support and flexible encouragement of our work.

The Petra International Conference on Sustainable Cities and Regions (PICSCAR) 2024 is not the first conference in Indonesia, which Alexander von Humboldt Stiftung supports financially and focuses on urban challenges. However, it is the first of its kind organized by Petra Christian University. The solid preparation and the excellent program of the conference promise an inspiring academic environment for knowledge exchange and debate. Moreover, the City of Surabaya provides an insight into its manifold activities promoting urban sustainability. Therefore, we also appreciate the excellent support from PCU and the City of Surabaya.

Finally, the success of any conference is dependent on the participants and their engagement in presenting latest research results, groundbreaking practical experiences and future oriented discussion. Without you, the participants of the event from Indonesia and other countries, the Petra International Conference on Sustainable Cities and Regions (PICSCAR) 2024 would not have been possible and meaningful. Therefore, I would like to extend a warm welcome to all participants and wish everyone enjoyable and fruitful days with inspiring discussions and ideas for future action in order to make our future more sustainable.

Kind regards

Bernhard Müller

Technische Universität Dresden - TU Dresden

Welcome remark

Eri Cahyadi, S.T., M.T.
The Mayor of Surabaya



It is with immense pride and a deep sense of responsibility that I, as the Mayor of Surabaya, welcome our esteemed speakers, distinguished participants, and valued partners to PICSCAR 2024, held in our vibrant city of Surabaya, Indonesia. The theme of this year's conference, 'Toward Sustainable Cities and Regions: Growth, Regeneration, Innovation,' perfectly summarizes our ongoing mission to foster environments that are economically vibrant, sustainable, and resilient.

Surabaya's commitment to sustainable urban development is reflected in our collaborative efforts, such as through our partnership with Petra Christian University in various forms of cooperation activities, including in the fields of entrepreneurship and creative economy; housing; environmental, social and governance; cultural heritage and tourism; and the usefulness of technology. Currently, through PCU, there are opportunities for cooperation in partnership with universities and international institutions.

The idea of sustainable cities and regions is at the core of the global development agenda, which seeks to solve problems faced by increasing urbanization, environmental degradation, and socioeconomic inequality. On the other hand, Sustainable Development Goal (SDG) 11 to create inclusive, safe, resilient, and sustainable urban areas, highlighting the importance of holistic solutions that consider economic, social, and environmental sustainability, is gaining increasing attention among policymakers, city managers, developers, and civil society organizations.

Multi- and transdisciplinary research that combines the study of urban development, urbanization and its impacts, sustainable social transformation, tradition to modernity, and cultural preservation is very important. Research that has produced studies from the perspective of urban development, urban growth, and urban society as well as the integration of scientific studies across disciplines really needs to be known by stakeholders in planning urban sustainability.

Therefore, scientific meetings involving elements of city management, academia, industry, and society such as the Petra International Conference on Sustainable Cities and Regions (PICSCAR) are expected to strengthen inclusive and sustainable societies and have a direct impact on sustainable cities and communities, this conference becomes a critical platform for dialogue and exchange, where theories meet practice, and practical solutions emerge from scholarly discussions. It is our hope and belief that PICSCAR 2024 will ignite innovative ideas and foster the partnerships necessary to advance our common goals of sustainability in Surabaya and beyond. Thank you for joining us on this important journey. May your time in Surabaya be both enlightening and enjoyable.

Eri Cahyadi, S.T., M.T.
The Mayor of Surabaya

Keynote Speaker



Prof. Dr. Dr. h.c. Bernhard Müller

Technische Universität Dersden - TU Dresden, Germany

Since July 2019, Prof. Dr. Dr. h.c. Bernhard Müller is a senior professor at TU Dresden. The senior professorship is part of the Faculty of Environmental Sciences. Until June 2019, Prof. Müller was professor and chair holder of the Chair of Spatial Development at TU Dresden. Simultaneously, he was the Director of the Leibniz Institute of Ecological Urban and Regional Development (IOER) from 1997 until June 2019. Prof. Müller was a vice president of the Leibniz Association and the initiator and (co-) founder of the Dresden Leibniz Graduate School (DLGS).

He is member of the German Academy of Science and Engineering (acatech), the Saxon Academy of Sciences and Humanities in Leipzig (SAW), the Academy for Spatial Development in the Leibniz Association (ARL) and an international member of the Serbian Academy for Engineering Sciences.

Bernhard Müller and his team worked in a variety of research projects during the past years, mostly connected to his function as the Director of IOER. Currently, the senior professorship carries out research work in a large international research and innovation action project funded by the European Union (TRANS-URBAN-EU-CHINA) where Bernhard Müller is at the same time the project director. Moreover, there are also other mainly international research activities, carried out by the team members of the senior professorship.



Keynote Speaker

Prof. TPr. Dr. Jamalunlaili Abdullah

Deputy Vice Chancellor, Universiti Teknologi MARA, Malaysia / Professor
Urban and Regional Planning, UiTM / Urban Development Expert

Prof. TPr. Dr. Jamalunlaili Abdullah is currently the Deputy Vice Chancellor for Industry, Community and Alumni Linkages at Universiti Teknologi MARA (UiTM), Malaysia. He is also a Professor of Urban and Regional Planning as well as past Assistant Vice Chancellor of College of Built Environment, UiTM, an institution he joined in 1997 after completing his PhD at Cornell University, New York.

Professionally he is a registered Town Planner and serves as a member of Board of Town Planners Malaysia and Advisory Board of Malaysian Institute of Planners. He is an urban development expert in Malaysia since he has been involved in almost 40 consultancy and contract research projects, presented almost 100 papers including as keynote and invited speakers and published more than 80 papers especially those related to Urban Development. He has been appointed as technical advisor and expert to various government and private entities in Malaysia. In addition he is currently the Commanding Officer of KD Sri Klang, the largest reservist training unit for Royal Malaysian Navy with the rank of Captain.

Keynote Speaker



Eri Cahyadi, S.T., M.T.

The Mayor of Surabaya – East Java, Indonesia

Eri Cahyadi, S.T., M.T. is the Mayor of Surabaya, and has served since February 26 2021 until now. Previously, he was Head of the Surabaya City Development Planning Agency (2018-2020) and Head of the Public Housing and Settlement Areas, Cipta Karya and Surabaya City Spatial Planning Service (2017–2018). Eri completed his vocational education majoring in Civil Engineering at the Sepuluh Nopember Institute of Technology Surabaya in 1999. He studied at the undergraduate level majoring in Civil Engineering at the Adhi Tama Institute of Technology Surabaya, graduating in 2001. While working as a public servant in the Surabaya City Government bureaucracy, he completed his postgraduate education majoring in Project Management at ITS Surabaya in 2005, and Master in Civil Engineering at UNTAG Surabaya, in 2008.

After three years working as a consultant in Jakarta (1999–2001), Eri followed in his father's footsteps and became a public servant at the Surabaya City Government. Eri served as Head of the Public Housing and Settlement Areas, Human Settlements and Spatial Planning Department for the City of Surabaya (2017–2018), Plt. Head of the Surabaya City Cleanliness and Green Open Space Service (2018), Head of the Surabaya City Development Planning Agency (2018–2020), until he was elected Mayor of Surabaya (2021–present). Since serving as a civil servant in the Surabaya City Government bureaucracy (2001–2020) and serving as Mayor of Surabaya (since 2021), he has served the citizens of Surabaya City for more than two decades.



Keynote Speaker

Joseph Lukito Utohardjo

Operations Director – PRO EDGE

Joseph is Operations Director of Pro Edge based in Surabaya, He is responsible to develop business and net working in Indonesia which now he focused on East Java. He also directs lead project and also service support like strategic advisory for residential, commercial and industrial logistics, including sales and marketing.

Joseph has more than 25 years experience in the Property industry; primary in transactions and advisory services. Joseph has successfully managed the negotiation and delivery of numerous commercial property transactions. Major clients that have been assisted are Nestle, Sampoerna, Citibank, HSBC, United Air Product, Keppel-Land, Heineken, Exel-logistic, DHL-logistic, Linfox-logistic, Philips, DFAT, Panasonic, Mitsui Soko, DSM, Patra Niaga-Pertamina, Shell, Parolamas, SPIL, Cohive, Prasadseed, ISEKI, Re-pal, GE. Prior to joining Pro EdGe, Joseph worked at Tanrise Tbk as Sales and Marketing Director, Head of Surabaya Office (Director)- Jones Lang LaSalle, Operations Director -Colliers Jardine and Ray White Bubutan and Bukit Mas (Principals). Joseph graduated from Surabaya University with a degree in Management and had concluded several financial (appraisal) and property trainings. He is also active as assessor in LSP BPN as Vice Dewan Pengarah, BNSP license, AREBI DPD East Java as Dewan Kehormatan, REI DPD Jawa Timur and UBAYA Foundation as Treasurer.

Keynote Speaker



Josua Tarigan., PhD, CMA, CFP, CSRA, CBV.

Associate Professor & Dean of School of Business and Management,
Petra Christian University

Josua has demonstrated exceptional academic and professional accomplishments throughout his career. He was honored with the “Best Lecturer Performance” award from the East of Java Higher-Education Ministry (LLDIKTI VII) in 2011, reflecting his outstanding contributions to teaching and education. In 2015, he was awarded the prestigious Netherland Fellowship Program (NFP), further enhancing his expertise and global perspective in his field. Most recently, in 2022, he completed the International Dean’s Course (IDC) of the German Academic Exchange Service (DAAD), underscoring his commitment to continuous professional development. With over eighteen years of experience in Accounting Education, Josua is a distinguished educator and leader in his discipline.

Besides almost two years of experience in ERP-related work (Siemens Company) and several years in freelance consulting, Josua has strong knowledge and skills in Strategic Management Accounting and Strategic Cost Management. He serves on the Editorial Board for the Arab Gulf Journal of Scientific Research (Emerald-Scopus), the International Journal of Sustainable Society (Inderscience-Scopus), Green and Low-Carbon Economy, and the Rangsit Journal of Social Sciences and Humanities (RJSH).

Since 2018, Josua has been a reviewer for several journals, including the Social Responsibility Journal, Corporate Governance, Journal of Asia Business Studies (Q1-Emerald), SAGE OPEN, Financial Innovation (Q2-Springer), International Journal of Emerging Markets, International Journal of Social Economics, Journal of Applied Research in Higher Education (Q2-Emerald), Nankai Business Review International, Accounting Research Journal (Q3-Emerald), International Journal of Learning and Intellectual Capital (Q3-Inderscience), and IGI Global Book Chapter (Global Challenges and Strategic Disruptors in Asian Businesses and Economies). He has reviewed more than 30 articles for publishers such as Emerald, Inderscience, SAGE, and Springer.

Josua has been invited as a keynote speaker at various international conferences, including the Rangsit University (Thailand) international conference in 2019 and 2020, the Petra International Business and Accounting Conference 2023, the Professional Schools International Research Conference 2024 (Singapore), and the Petra International Conference on Sustainable Cities and Regions 2024. Additionally, he has served as a visiting lecturer in Germany for the “Financing and Investment Appraisal” course in 2019 (Munich), 2020 (Berlin), and as a speaker for an online field trip at the University of Applied Science in Mainz in 2022.

Proficient in written and spoken English and computer literate, Josua possesses excellent interpersonal, communication, and intercultural skills, honed through exploration in more than 20 countries, including the European Union (EU), the United States of America (USA), Australia, Japan, China, Macau, Hong Kong, and Dubai.

Time	Remarks	Location
4.30 PM	Departure from pick-up point	Pickup points at Novotel (for delegates) and between P and Q buildings (for PCU staff)
6.00 PM	Gala Dinner	Surabaya City Hall
9.00 PM	Departure to Novotel and PCU	Surabaya City Hall

Time	Remarks	Location
8.15 AM	Welcoming delegates and registration	Amphitheater, Q building level 2
9.00 AM	Plenary Hall Opening Session	Amphitheater, Q building level 2
9.10 AM	Welcome from the Rector of PCU: Prof. Dr. Ir. Djwantoro Hardjito, M.Eng	Amphitheater, Q building level 2
9.20 AM	Introduction to Keynote Session by Moderator: Dr. Ricky	Amphitheater, Q building level 2
9.30 AM	Towards Sustainable Cities and Regions through Carbon Neutrality - An International Perspective Prof. Dr. Dr. h.c. Bernhard Muller (Technische Universität Dresden – TU Dresden)	Amphitheater, Q building level 2
9.50 AM	Summary by Dr. Ricky	Amphitheater, Q building level 2
9.55 AM	Urban Redevelopment in Malaysian Cities. Prof. TPr. Dr. Jamalunlaili Abdullah (Universiti Teknologi Mara)	Amphitheater, Q building level 2
10.15 AM	Summary by Dr. Ricky	Amphitheater, Q building level 2
10.20 AM	How to Achieve Ideal and Sustainable Development in Surabaya Drs Ec Joseph Lukito U, MBA (Real Estate Indonesia; DPD Jatim)	Amphitheater, Q building level 2
10.40 AM	Summary by Dr. Ricky	Amphitheater, Q building level 2
10.45 AM	Performance	Amphitheater, Q building level 2
10.55 AM	Keynote speaker introduction by Dr. Ricky	Amphitheater, Q building level 2
11.00 AM	Sustainability as the 'Language of Business': Global & Indonesia Context Josua Tarigan, S.E., MBA., Ph.D. (Petra Christian University)	Amphitheater, Q building level 2
11.20 AM	Summary by Dr. Ricky	Amphitheater, Q building level 2
11.25 AM	The Vision and Mission of Surabaya City Supporting the Sustainable Development Goals (SDGs) Eri Cahyadi, S.T., M.T. (The Mayor of Surabaya)	Amphitheater, Q building level 2
11.40 PM	Consortium Signing	Amphitheater, Q building level 2
12.10 PM	Summary and Closing of Plenary Session	Amphitheater, Q building level 2
12.30 PM	Lunch Break	Room 3.03, Q buidling level 3

Time	Remarks	Location
1.30 PM	Poster Session	Room 3.02, Q buidling level 3
2.00 PM	Research Group Discussion Session 1 (4 RDS are on-going parallel)	Innovation: Room 4.01 Regeneration A: Room 4.07 Regeneration B: Room 4.08a Growth: Room 4.09
3.30 PM	Coffee Break	Amphitheater, Q building level 2
4.00 PM	Research Group Discussion Session 2 (4 RDS are on-going parallel)	Innovation: Room 4.01 Regeneration A: Room 4.07 Regeneration B: Room 4.08a Growth: Room 4.09
5.30 PM	End of Research Discussion Session	Q building
5.30 PM	Return back to Novotel (transport by the Committee)	Q building

Start	Research Discussion Rundown
2.00 PM	Invited Speaker Presentation
2.20 PM	Presentations
2.50 PM	Discussion session
3.30 PM	Coffee break
4.00 PM	Invited Speaker Presentation
4.20 PM	Presentations
4.50 PM	Discussion session
5.30 PM	End of RDS

Surabaya City Excursion

Free of charge, lunch is included

Time	Remarks
8.00 AM	Check out; Store luggage to Concierge at Novotel Hotel
9.00 AM	Departure to Excursion
9.15 AM	Visit to Padat karya (paving, lele dan ayam) - Labor-Intensive Work (paving, catfish, and chicken)
10.45 AM	Visit to Harmoni Park (Transformed Final Disposal Site)
11.45 AM	Visit to Rumah Anak Prestasi - House of Children's Achievements
12.55 PM	Visit to MPP Siola - Public Service Mall Siola & Surabaya Kriya Galeri, Siola - Surabaya Craft Gallery, Siola
13.55 PM	Return to Hotel Novotel Samator

EXCURSION ROUTE

- 1. Padat karya (paving, lele dan ayam) - Labor-Intensive Work (paving, catfish, and chicken)
- 2. Transform TPA - Taman Harmoni (DLH) - Transformed Final Disposal Site - Harmony Park (DLH)
- 3. Rumah Anak Prestasi - House of Children's Achievements
- 4. MPP Siola - Public Service Mall Siola
- 5. Surabaya Kriya Galeri, Siola - Surabaya Craft Gallery, Siola

Abstract

PICSCAR

PETRA INTERNATIONAL CONFERENCE
on Sustainable Cities and Regions 2024

Toward Sustainable Cities and Regions:
Growth - Regeneration - Innovation

PICSCAR

PETRA INTERNATIONAL *Conference* on Sustainable Cities and Regions 2024

Toward Sustainable Cities and Regions:
Growth - Regeneration - Innovation

RDS Regeneration A Q.407

1. Retno Ardianti
The interrelationship of community resilience and business resilience: A qualitative study on the role of community for small business survival
2. Wanwalee Inpin, Reni Juwitasari, Maya Dania, Yuki Miyake
Making Special Economic Zone (SEZ) Inclusive, Safe, and Resilient: Case Study of Cosmolocalism Process in Chiang Khong (Thailand) Through Eco-DRR Initiatives Towards SDG 11
3. Yohanes Sondang Kunto, Stefan Wahlen
Women's Empowerment and Urban-Rural Disparity in Household Food Security: Evidence from the World Values Survey Indonesia 2018
4. Gunawan Tanuwidjaja
Co-redesigning Framework for Inclusive Heritage Libraries Involving People with Disabilities
5. Nurul Sahida Fauzi, Soffia Adillah Selamat, Siti Nadiah Mohd Alir, Huraizah Arshad Lizawati Abdullah, Timothy Tunde Oladokun
Investigating the Key Challenges Managing Platinum Green Office Building
6. Wahyu Supartono, Anggoro Cahyo Sukartiko, Rendayu Jonda Niesyafitri, Yosephin Anandati Pranoto
Synergy between Universitas Gadjah Mada (UGM) and Sleman Local Government in Promoting Food Safety and Security in Promotion House of Jadah
7. Pwee Leng, Ellena Arinda Luciana, Juan William, Phebe
ESG implementation by Indonesia Financial Sector Firms for the Initiatives Towards SDG
8. Gunawan Tanuwidjaja, Antonio Erlanda Doni Saputra, I Putu Bagus Paramananda, Jeremia Marvel
Perceptions of People with Visual Impairment on the Pedestrian Paths Accessibility in Gubernur Suryo Street, Surabaya, Indonesia
9. Gunawan Tanuwidjaja, Priskila Adiasih, Melissa Dewi, Cherielyn Wijaya, Gillian Hannah
Socio-Economic Benefit of Heritage Building Reuse: Majestic Theatre Apartments
10. Yakuttinah Marjan, Zuyyinna Choirunnisa
Maintaining the Balance of Marine Ecosystem Pollution due to Mining by Cultivating Seaweed in North Konawe
11. Gunawan Tanuwidjaja, Priskila Adiasih, Anna Fajriatin Arif Sugiharto, Herdiyan Maulana, Underbone Ramadhani Satria Putri, Ilham Bintang
Analysis of the Programs' Effectiveness of the Surabaya Municipality Social Service Section and the Well-being of Children with Disabilities: A Case Study of the Rumah Anak Perubahan (RAP)

The interrelationship of community resilience and business resilience: A qualitative study on the role of community for small business survival

Retno Ardianti

School of Business Management, Petra Christian University, Surabaya, Indonesia

Email address: retnoa@petra.ac.id

1. INTRODUCTION

Community resilience is a concept that has been widely discussed across multiple disciplines, from engineering, sociology to psychology and economics [1]. The topic has gained wide attention following the rise of natural disasters, human induced disasters and the Covid 19 pandemic. The recent pandemic has tested the resilience of communities due to its effects on physical health, psychological wellbeing and business activities. To recover from adverse events such as disasters or pandemics, government bodies put priorities on programs that help to alleviate further sufferings such as the recovery of physical infrastructures, social systems and economic impacts.

Entrepreneurial actions either as spontaneous efforts or as a policy-based interventions have demonstrated their significant roles to alleviate further sufferings and poverty of the community members [2]. Following adverse events, entrepreneurs often act as the key agent who mobilize resources needed to rebuild the community. Meanwhile, local governments often focus on using entrepreneurial actions as the strategy to create jobs by supporting the creation of new ventures to rebuild the economy [3]. However, despite the potential role of new venture creations to support the economic recovery of the community, new venture creation itself is a long and challenging process. Data shows that on average, the ability of new businesses to survive in the first five years after being founded is less than 50% [4]. The level of business survival is even lower for businesses that were founded during the crisis with the risk of failures increases to 61% [5]. Many factors can contribute to the survival of new ventures. These may include individual factors such as values, goals and motivations of the entrepreneurs, business-related factors such as the availability of start-up funding, and contextual factors such as the supply of resources and the demand of the products in the area where the new ventures operate [6]. These contextual factors may change overtime, making the persistence of venturing efforts become more difficult and unpredictable.

Given the high risk of failure of business ventures particularly those that were founded during the period of crises, we, therefore, aim to explain factors that may affect the survival of business ventures during a crisis. More specifically, we aim to explore the role of community for the survival of business ventures following the Covid 19 pandemic in Indonesia. A better understanding of this topic is important given that venture survival is an indication of business resilience [7] and surviving ventures can help the community to recover from the economic impacts of crises as they activate value chains and create jobs. In doing so, we believe that our study contributes to entrepreneurship literature by explaining the interrelationship between community resilience and small business resilience. Moreover, our findings may contribute to the design of resilience recovery programs particularly on those focusing on economic empowerment by bringing empirical evidence on an important factor that contribute to venture survival following an adverse event.

2. METHODS

This study uses qualitative approach, using interview data from small business entrepreneurs whose businesses were able to survive from the Covid 19 pandemic. Our focus was on retail business, given that this type of business was heavily impacted by mobility restriction policy in all over the world including Indonesia [8]. Our interviews were conducted in three different communities, representing a village, a small city, and a big city. This is inline with the definition of a community which refers to the aggregation of individuals within a specific geographical area who are connected by a shared location [9].

The first interview was conducted in late 2021; after the height of the pandemic. The second and the third interview were conducted in 2023, when small businesses began to recover from the crisis. Initially, these interviews were conducted as a part of three different research projects. However, the three research projects have similarities in terms of the purpose and the targeted informants. The three interviews were targeted at small business entrepreneurs to unpack the impact of pandemic on their businesses and the important factors that contribute to the survival of their businesses.

Our first interview was conducted in Molompar Raya, a small village in Sulawesi Island where we interviewed five entrepreneurs who run retail businesses, such as restaurants and furniture stores. The second round was conducted in Blitar, a small city in east Java, where we interviewed four entrepreneurs who run their businesses in the city centre. The last one was conducted in Surabaya, the second biggest city in Indonesia, where we interviewed five entrepreneurs who operated their businesses near a campus. A total of 38 interviews were conducted, covering interviews to fourteen entrepreneurs, their family members, and their customers to triangulate the data. In the data analysis process, the author and teams read and codes the transcripts separately, to create and identify themes within and across each case. We conducted data analysis within each case of the small ventures, followed by a cross-case comparison [10].

3. RESULTS AND DISCUSSION

Our findings indicated that in the small village as the first community that we interviewed, Covid 19 pandemic had a minor effect to the community. The limited mobility of community members outside their village had made the number of active Covid 19 were low. During the pandemic, small businesses continued to operate with minimal disruptions given that customers could still come to the stores. In addition, the businesses run by the entrepreneurs that we interviewed have utilized online channels to reach customers. They relied on personal Facebook account to offer products and use the messaging feature to receive orders and to communicate with customers who were also their friends and neighbours. This made the sales performance of the small ventures did not experience a significant decline.

Meanwhile, the results of our interviews in the second community which took place in a small city indicated a significant impact of pandemic on community members and small businesses. The relatively high active Covid cases and the mobility restriction policy had made local residents limit their activities outside their homes. Consequently, sales were dropped to zero as customers stopped coming to the city centres where their stores operated. Meanwhile, their suppliers also stopped their operations, adding more threats to the survival of their ventures.

The results of our interviews in the big city as the third community indicate severe impacts of pandemic to communities and small businesses. The combination of mobility restriction and working and studying from home practices had created a shock to the community as individuals who previously lived or worked in the areas moved to safer places or went back to their hometowns. Moreover, a number of entrepreneurs in our data including their families and employees were even infected by the virus. As a result, they had to close their businesses to avoid health risks and because their customers were no longer coming.

Our data also show that while in the first community business could relatively open as usual, in our second and third community, small businesses had to implement adaptive strategies or simply chose to wait for the situation to get better. For example, in the second community, the entrepreneurs chose to continue opening their stores and implemented health protocols to reduce the risk of infections despite almost no customers coming to their stores. Some of them also tried to activate online channels such as social media and electronic marketplace to connect with customers. However, the complete recovery of their businesses finally took place after the pandemic, where locals started to go back to city centres for shopping. In the third community, business had to close for weeks to months, leaving the entrepreneurs in a situation where they had to sell their assets or switched to other jobs to get income. When the number of infections started to decline, entrepreneurs then tried to re-open their businesses by targeting local residents as their customers, given that students and workers had not came back to live in the area. Similar to businesses in the second community, their businesses started to recover when the pandemic ended, thus attracting students and workers to go back to live in the area.

Our findings thus highlight the important role of local communities for business survival. During the pandemic, businesses that were disrupted were businesses that operated in an area where the locals had to limit their daily activities such as going shopping. Moreover, businesses that had to shut down were businesses where the people in the area moved somewhere else during the pandemic. The businesses were able to re-open after the entrepreneurs adjusted their target to locals and when students and workers started to come back and lived in the area. In addition, our study also highlights the impact of surviving businesses on the local community. First, we found that surviving businesses were those who provide value for local customers. These were businesses whose loyal customers were able to obtain products that they perceived as having high quality, affordable prices, or offering services that solved customers' problems. Second, our data showed that all of the surviving business employing family members and local workers, thus ensuring the availability of jobs in the area. As discovered in the data from our second community, despite experiencing a loss of revenues, entrepreneurs continued to hire their employees because of strong bounds between them.

4. CONCLUSIONS

Our study highlights the interrelationship between community resilience and business resilience. This study showed that when community members were able to recover from the health risks of pandemic, small businesses were also able to recover by continuing their operations that once were disrupted. The surviving businesses also benefit the local community with valuable offerings to enjoy and by providing jobs for the locals. Our findings thus may inform policy makers on the importance of contextual factor for economic recovery program following an adverse event. Government sponsored new venture creations initiatives should be aimed at exploiting local opportunities by fulfilling local demands of products and services while at the same time empowering local entrepreneurs. This is to increase the chance of survival of small ventures as the continuity of small businesses rely on their communities. This message is important amidst the higher preference of government and venture capitalists to support new ventures creation initiatives that display the potential for a fast growth by utilizing high technology and targeting wide geographical area of market. Although this type of venturing is important, however, the economic impact of local small venturing for community is also evident, thus should not be overlooked.

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PCU SDGs Initiatives Exhibition

PICSCAR

PETRA INTERNATIONAL CONFERENCE on Sustainable Cities and Regions 2024

Toward Sustainable Cities and Regions: Growth - Regeneration - Innovation

The PCU Sustainable Development Goals (SDGs) Initiatives Exhibition is an exhibition of some of the results of teaching, research and community service initiated by Petra Christian University in its contribution to supporting the SDGs (Sustainable Development Goals). This exhibition was held as part of the Petra International Conference on Sustainable Cities and Regions (PICSCAR) 2024: Toward Sustainable Cities and Regions: Growth - Regeneration - Innovation. Learning, research and community service oriented towards responding to the SDGs are exposed to become examples and inspiration for the implementation of learning, research and community service in synergy with each other to contribute to the SDGs.

The following are some of the PCU SDGs initiatives that have been implemented through research and community service:

- Pilot Project of the Healthy Coloring Village within clean and health characteristic in urban village of Surabaya.
- Brackish Water Treatment with Local Materials.
- Communication Assemblage at Preview Stage of Persuasive and Adaption-Based Inspirational Media Development.
- Ngeskrip: Campus-Based Startup Development Based on Creative Script Production and Talent Pool Monetisation.
- Optimizing Centrifugal Drying for Moisture Reduction in Plastic Waste: A Design of Experiment and Decision Tree Analysis Approach.
- Renewable energy driven chopper of ruminant livestock fodder in Turi hamlet for the increase of cow's milk production and improvement of the quality of ruminants.
- The Role of Food Consumption Value and Attitude Toward Food on Behavioral Intention: Culinary Tourist Behavior in Indonesia.
- Eyeballing Internal Auditors' and the Firms' Intention to Adopt Metaverse Technologies: Case Study in Indonesia.
- Rational Versus Irrational Behavior of Indonesian Cryptocurrency Owners in Making Investment Decisions.
- Integrated and Continous Community Empowerment for A Sustainable Food House Area Program (KRPL Serpis Kebun Kita).
- Develop Interest in Learning Mathematics, Accounting and Architecture Creatively in Community Reading Parks in Surabaya.



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- Smart Urban Farming Student Creativity Program Based on IOT and Artificial Intelligence.
- Minimizing Waste: Maximizing Wastra Nusantara and Multiple Fabrics with Zero Waste Techniques.
- Design Diversification Community Service to Increase Production Capacity at The Penggaron Weaving Center, Jombang.
- Digitalization and Integration of Environmentally Friendly Supply Chains to Build Supply Chain Resilience Towards Competitive Advantage.
- The Influence of Supplier Competency on Business Performance Through Supplier Integration, Vendor-Managed Inventory, and Supply Chain Collaboration in Fuel Station: an Evidence From Timor Leste.
- Supply Chain Collaboration and Production Technology for New Product Development.
- The Influence of Social Media Marketing on Customer Loyalty Through Perceived Usefulness of Streaming Technology, Perceived Enjoyment, and Brand Loyalty.
- Impact of SCM Integration on Firm Performance Through Information Sharing, Quality Integration and Innovation System.
- The Influence of Human-Machine Interface on Operational Performance Through Supply Chain Agility.



The results of learning proses using the service learning method carried out in the Packaging course with partners served at Tegalsari Distict are an example of a concrete contribution to the city of Surabaya, related to the issue of SDGs 11: Sustainable Cities and Communities. This learning involved 20 SMEs in Tegalsari District operating in various business fields, including food, beverage and other processed snack businesses that need to be improved in terms of branding and packaging that can raise the value of the product as well as the identity of the city of Surabaya.

List of Participants

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Priskila Adiasih	Adaptive Use of Heritage Building: From Public Spaces of Theatre to Personal Spaces of Majestic Theatre Apartments Analysis of the Programs' Effectiveness of the Surabaya Municipality Social Service Section and the Well-being of Children with Disabilities: A Case Study of the Rumah Anak Perubahan (RAP) Socio-Economic Benefit of Heritage Building Reuse: Majestic Theatre Apartments	Petra Christian University, Indonesia	priskila@petra.ac.id
Pwee Leng	Empowering Youth Organization in Bangkalan to Increase Economic and Positive Social Impact by Seaweed Cultivation ESG implementation by Indonesia Financial Sector Firms for the Initiatives Towards SDG	Petra Christian University, Indonesia	priskila@petra.ac.id
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