



Technology, Leadership & Innovation for SME Sustainability in Bandung

Exploring how Small and Medium-sized Enterprises (SMEs) in Bandung can leverage technological capabilities, agile leadership, and innovation ambidexterity to achieve business sustainability during challenging times like the COVID-19 pandemic.

The COVID-19 Impact on Bandung SMEs

1M

SMEs Affected

Units impacted by COVID-19 across Indonesia

50-70%

Sales Decline

Average decrease in SME sales since March 2020

2,600

Small Enterprises

Small-sized enterprises in Bandung at risk

458

Medium Enterprises

Medium-sized enterprises facing challenges

Bandung, a major SME production hub for textile and leather industries in West Java, faces unprecedented challenges. Key manufacturing areas like T-shirt production on Suci street and shoe manufacturing in Cibaduyut are particularly threatened. While government stimulus has provided temporary relief, SMEs cannot rely solely on assistance and must find sustainable adaptation strategies.



Research Framework & Methodology

Study Overview

This quantitative research examined 400 SME respondents in Bandung from March to April 2021, using cross-sectional questionnaire survey design and Partial Least Square Estimation (PLS-SEM) analysis.

Sample Demographics

- 69% male, 31% female respondents
- 41% aged 21-30, 29% aged 31-40
- 53% bachelor's degree, 36% high school
- 44% businesses operating 1-5 years

Research Variables

- **Technology Capabilities:** IT resource management and deployment
- **Agile Leadership:** Adaptive, flexible response to change
- **Innovation Ambidexterity:** Balancing exploration and exploitation
- **Business Sustainability:** Long-term operational viability





Technology Capabilities: The Digital Foundation



IT Infrastructure

Technical systems and platforms that support business operations and enable digital transformation



Human Resources

Technical and managerial skills needed to effectively utilize and manage technology resources

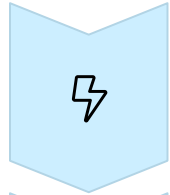


Knowledge Assets

Intangible resources including customer orientation, synergy, and accumulated technological expertise

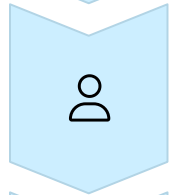
Technology capabilities enable companies to use and develop various technologies effectively, involving product development, production processes, and manufacturing procedures. These capabilities help SMEs mobilize IT resources, improve data collection and processing, respond to market changes timely, and identify new business opportunities in emerging markets.

Agile Leadership in Uncertain Times



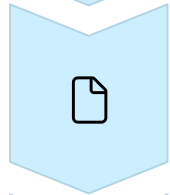
Quick Response

Swift, adaptable ability to respond to unexpected events and unusual circumstances



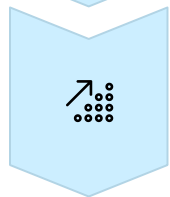
Flexible Adaptation

Thinking outside the box to align organizations with internal and external environments



Collaborative Mindset

Passion for building products and fostering teamwork within and outside the organization

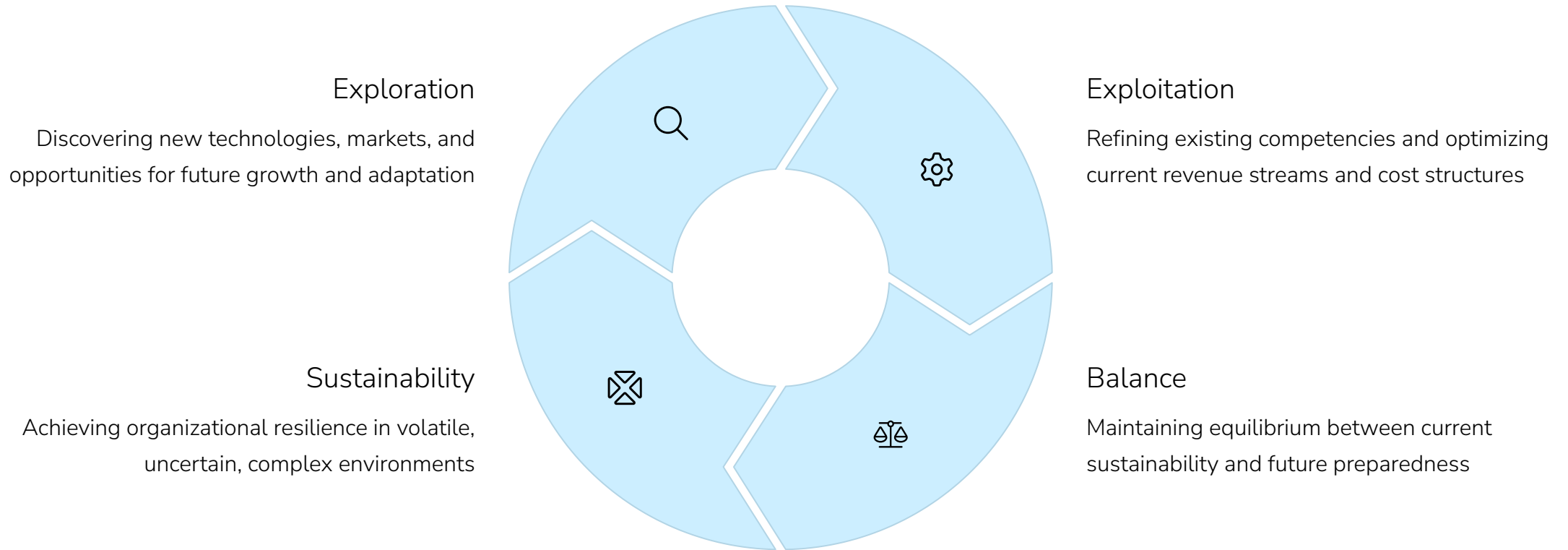


Change Management

Humanistic approach based on fundamental values to create positive organizational change

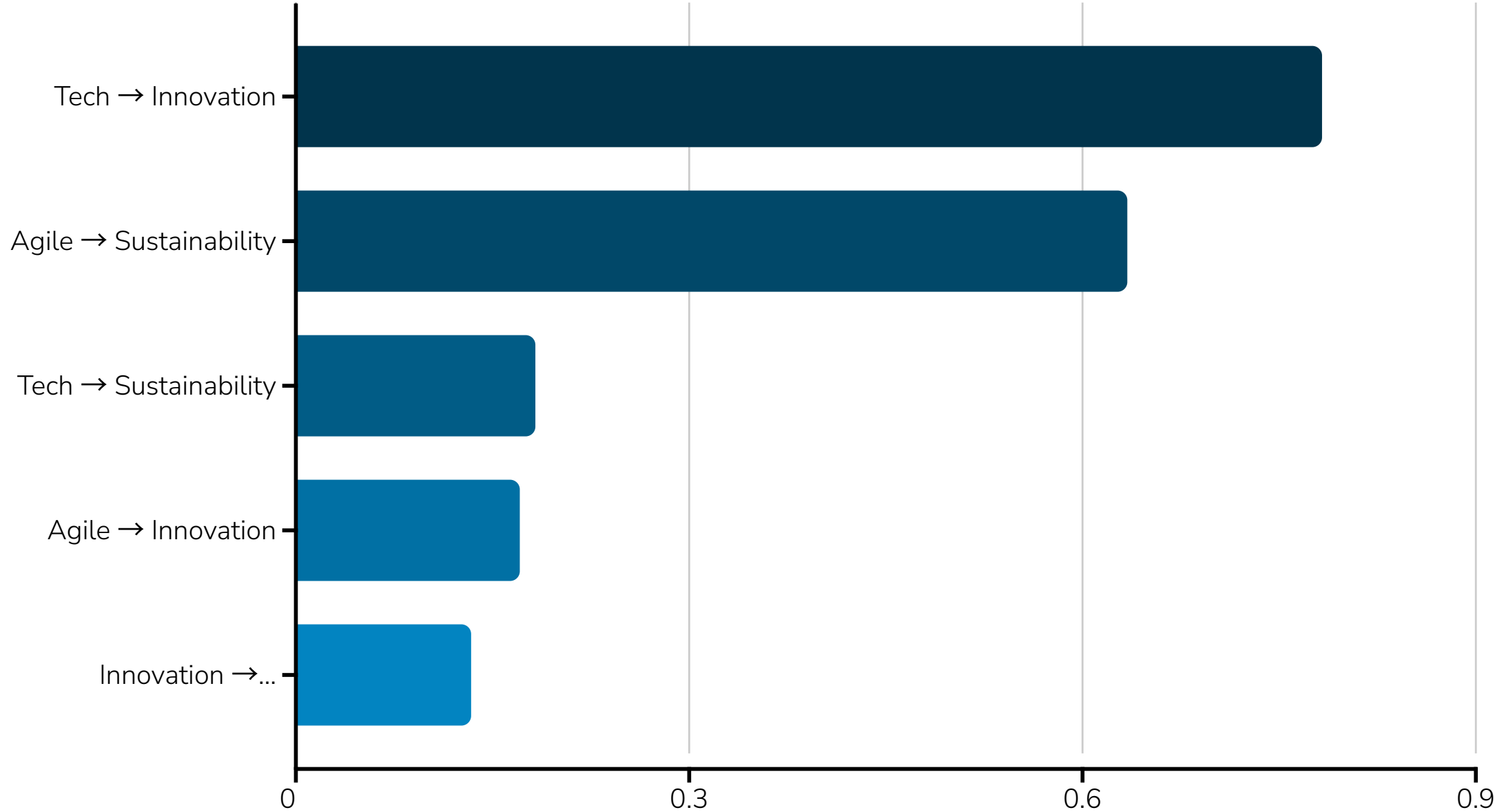
Agile leadership represents a leader's ability to manage uncertainties and changes for innovative development. It involves creating atmospheres where employees are encouraged to experiment and contribute to business sustainability through effective change management.

Innovation Ambidexterity: Balancing Act



Innovation ambidexterity requires organizations to simultaneously manage current operations while preparing for technological changes and shaping new innovations. This dual capability is essential for thriving in volatile business environments and ensuring both present and future sustainability.

Research Findings: Strong Positive Relationships



All seven hypotheses were accepted with significant t-statistics above 1.96 and p-values below 0.05. The strongest relationship exists between technology capabilities and innovation ambidexterity (0.783), followed by agile leadership's impact on business sustainability (0.634). These findings demonstrate that technological capabilities serve as the primary driver of innovation, while agile leadership directly influences sustainability outcomes.



Key Research Insights

Technology as Innovation Driver

SMEs with stronger technological capabilities demonstrate significantly higher innovation ambidexterity, enabling them to explore new opportunities while optimizing current operations.

Leadership Impact on Sustainability

Agile leadership shows the strongest direct impact on business sustainability, emphasizing the critical role of adaptive management in uncertain environments.

Innovation Mediates Success

Innovation ambidexterity serves as a crucial mediator, channeling both technological capabilities and agile leadership into sustainable business outcomes.

The research reveals that SMEs in Bandung possess good foundational capabilities but require enhancement in technology utilization, leadership development, and innovation strategies. The positive correlations across all variables indicate significant potential for improvement through targeted interventions.

Practical Recommendations for SMEs

01

Enhance Technology Adoption

Invest in basic technology infrastructure, provide digital literacy training, and integrate technology into core business processes for improved efficiency and market responsiveness.

02

Develop Agile Leadership

Train leaders in adaptive management, change leadership, and crisis response. Foster collaborative mindsets and humanistic approaches to organizational transformation.

03

Balance Innovation Strategies

Implement both exploratory innovations (new products, markets) and exploitative improvements (process optimization, cost reduction) to ensure current and future sustainability.

04

Build Collaborative Networks

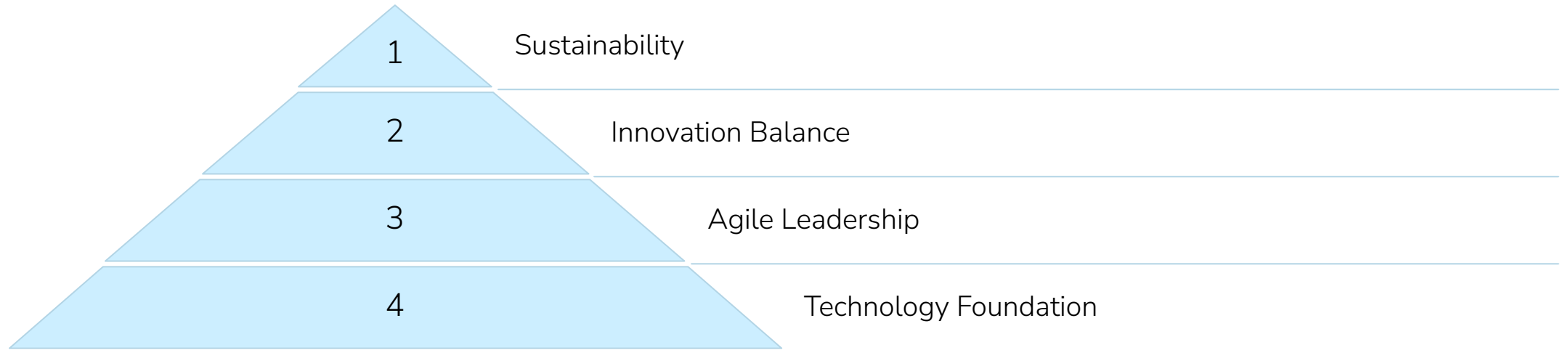
Partner with other businesses, engage in knowledge sharing, and participate in industry associations to leverage collective capabilities and market opportunities.

05

Prepare for Uncertainty

Develop contingency plans, diversify revenue streams, and build organizational resilience to handle future disruptions like pandemics or economic shocks.

Building Resilient SMEs for the Future



This research provides a comprehensive framework for SME sustainability in Bandung, demonstrating that technological capabilities, agile leadership, and innovation ambidexterity work synergistically to enhance business resilience. The findings offer valuable insights for both academic literature and practical application, supporting SME owners in navigating uncertain business environments.

For policymakers and government agencies, these results highlight the importance of supporting SME development through technology infrastructure, leadership training programs, and innovation incentives. The study contributes to understanding how small businesses can thrive despite challenges like the COVID-19 pandemic through strategic capability development.