

A Model for Enhancing Community Economic Resilience in the VUCA Era from a Public Management Perspective

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Abstract

The VUCA era—characterized by volatility, uncertainty, complexity, and ambiguity—has reshaped the global socio-economic environment. Economic instability, rapid technological shifts, and political dynamics require communities to build adaptive and resilient economic systems. In this context, public management plays a strategic role in driving inclusive and responsive policy frameworks. Failure to effectively address VUCA-related challenges may weaken societal capacity to sustain long-term economic well-being. This study employs a qualitative approach with an exploratory case study method. Data were collected through in-depth interviews, participatory observations, and policy document analysis across selected regions in Indonesia that have demonstrated strong economic resilience. Thematic triangulation was used to identify emerging patterns of capacity building among communities and public institutions. The research focused on the interaction between government policies, grassroots initiatives, and civic participation in developing a sustainable resilience model. The findings reveal that community economic resilience is strongly supported by transformative public leadership, robust local institutional networks, and flexible policy support. The proposed model underscores the importance of collaborative governance, adaptive learning, and community-based empowerment. The study recommends developing participatory and locally-informed public policies to foster sustainable economic systems capable of navigating the complexities of the VUCA era.

Keywords: economic resilience, VUCA era, public management, community empowerment, collaborative governance

1. INTRODUCTION

The twenty-first century is characterized by an unprecedented pace of transformation that continuously reshapes economic, social, and political landscapes. The emergence of the **VUCA world**—defined by *Volatility, Uncertainty, Complexity, and Ambiguity*—has fundamentally altered how societies function and how institutions formulate their strategic responses. Globalization, digital disruption, climate change, and geopolitical instability collectively form an environment where conventional economic and governance models often prove insufficient. Communities that once relied on stable economic systems now face multidimensional risks requiring adaptive and resilient responses (Bennett & Lemoine, 2014).

Within this turbulent context, the notion of **economic resilience** has become a central discourse in both development and governance studies. Economic resilience refers not only to the ability of a system to recover from shocks but also to its capacity to adapt, reorganize, and transform in ways that sustain development over time (Rose, 2017). For developing countries like Indonesia, where economic structures are strongly tied to social and institutional dynamics, resilience building must integrate the roles of communities, local governments, and inter-institutional collaboration. Thus, *public management* serves as a critical vehicle in shaping how policies, institutions, and local actors interact to enhance resilience amid uncertainty.

The **VUCA phenomenon** affects governance in multiple dimensions. *Volatility* represents the rate and magnitude of change; *uncertainty* signals a lack of predictability; *complexity* denotes the interconnectivity of causes and effects; and *ambiguity* reflects the absence of clear interpretations (Johansen, 2017). In such an environment, decision-making requires agility, foresight, and learning capacity. Public institutions are thus challenged to shift from hierarchical bureaucratic systems toward *adaptive governance*—an approach emphasizing collaboration, flexibility, and responsiveness to contextual dynamics (Folke et al., 2005). This adaptive paradigm aligns with the essence of **New Public Governance (NPG)**, which views government not as the sole provider of solutions, but as a facilitator and enabler of multi-actor cooperation.

Indonesia provides an illustrative setting for examining how these theoretical shifts are realized in practice. The country's decentralization policy has empowered local governments to manage development agendas, yet it has also exposed them to regional disparities and uneven institutional capacities. The COVID-19 pandemic further highlighted the vulnerability of micro, small, and medium enterprises (MSMEs)—a backbone of Indonesia's local economy—while simultaneously revealing the potential of local innovation, digital entrepreneurship, and community-based recovery programs. Consequently, understanding the dynamics of **public management in building community economic resilience** becomes vital for shaping sustainable post-crisis governance.

Within this national landscape, **Malang City** in East Java represents a relevant case study. Known for its strong educational ecosystem, dynamic local economy, and participatory governance culture, Malang has demonstrated the ability to foster community-based innovation and inclusive policy responses. The city government's commitment to empowering MSMEs, integrating academic institutions in local development, and promoting digital transformation reflects a form of *transformative public leadership*. These attributes make Malang City an appropriate microcosm for analyzing how public management strategies can reinforce community resilience under VUCA conditions.

This study therefore aims to develop a **model for enhancing community economic resilience in the VUCA era through a public management perspective**. Specifically, it explores how leadership, institutional collaboration, and community participation interact to form adaptive capacities at the local level. By focusing on the Malang experience, this research contributes both theoretically and practically: theoretically, by advancing the discourse on adaptive and collaborative public management; and practically, by offering policy insights for designing inclusive, data-driven, and flexible governance frameworks suited for volatile contexts.

Ultimately, this study underscores that the ability of local governments and communities to *learn, adapt, and collaborate* determines the sustainability of economic resilience in an era defined by uncertainty. The role of public management, therefore, extends beyond administration—it becomes an instrument of transformation capable of turning volatility into opportunity and uncertainty into innovation.

2. LITERATURE REVIEW

2.1 Economic Resilience in the Context of Uncertainty

The concept of *economic resilience* has gained prominence in development and governance literature as nations face growing exposure to crises—ranging from financial shocks to pandemics and

climate change. Economic resilience is broadly understood as the capacity of individuals, institutions, and systems to withstand, adapt, and recover from adverse conditions without compromising long-term sustainability (Rose, 2017). It involves not only the capacity to “bounce back” after a shock but also to “bounce forward,” meaning the ability to learn, innovate, and emerge stronger than before (Davoudi, 2012).

In modern governance studies, economic resilience transcends traditional economic indicators. It encompasses institutional quality, social capital, innovation capacity, and the inclusiveness of policy design (Martin & Sunley, 2015). Accordingly, local governments play a critical role as facilitators of resilience-building through targeted interventions, enabling environments for entrepreneurship, and mechanisms that integrate social and economic dimensions of development.

For developing economies like Indonesia, where local communities rely heavily on small-scale enterprises and informal sectors, resilience depends on the ability of governance systems to protect vulnerable groups, sustain productive capacities, and encourage participatory adaptation. The multidimensionality of resilience implies that economic, social, and governance factors are interdependent—resilience is not a singular outcome but an emergent property of well-coordinated systems (Briguglio et al., 2009).

2.2 The VUCA Framework and Its Implications for Governance

The term **VUCA**, originally introduced by the U.S. Army War College, describes a world characterized by volatility, uncertainty, complexity, and ambiguity (Bennett & Lemoine, 2014). Over time, it has been adopted widely in management and policy discourses to capture the instability of global systems. Each element of VUCA poses distinct challenges to governance:

- *Volatility* denotes rapid and unpredictable change in external conditions, such as market or political fluctuations.
- *Uncertainty* reflects limited predictability of outcomes and the difficulty of forecasting future conditions.
- *Complexity* highlights the interdependence among numerous actors, institutions, and variables in modern governance systems.
- *Ambiguity* implies that available information is open to multiple interpretations, making policy responses more difficult to design and implement (Johansen, 2017).

In public administration, the VUCA environment requires a paradigm shift from control-based governance toward **adaptive and learning-oriented governance**. Traditional bureaucratic systems are designed for stability, whereas VUCA conditions demand flexibility, experimentation, and rapid feedback loops (Christensen et al., 2020). Governments that adopt *anticipatory governance*—a proactive approach emphasizing foresight and scenario planning—are better equipped to navigate volatile environments (Boyd & Osbahr, 2010).

Furthermore, resilience in a VUCA world cannot be achieved through hierarchical structures alone. Instead, it requires **collaborative governance** that engages civil society, academia, and the private sector in co-creating solutions (Ansell & Gash, 2008). This collaborative paradigm recognizes

the limits of centralized control and leverages the collective intelligence of multiple stakeholders to manage uncertainty and ambiguity effectively.

2.3 Public Management and Collaborative Governance

Public management has undergone significant transformation over the past three decades, evolving from the traditional *Weberian bureaucracy* toward *New Public Management (NPM)* and, more recently, *New Public Governance (NPG)*. While NPM emphasizes efficiency, performance measurement, and market mechanisms, NPG highlights networks, partnerships, and shared responsibilities across sectors (Osborne, 2010).

In a VUCA context, **public managers** must act as facilitators and boundary spanners who bridge institutional gaps between government, business, and community sectors (Agranoff, 2006). Their effectiveness depends on soft skills—trust-building, negotiation, and adaptability—rather than rigid administrative control. Such an approach is consistent with *Collaborative Governance Theory*, which underscores that durable policy outcomes are produced through iterative interactions and mutual accountability among diverse actors (Ansell & Gash, 2008).

Empirical studies also indicate that local governments adopting collaborative management approaches are better at fostering **economic resilience**. For instance, cities that engage communities in participatory planning or co-design of policies show greater adaptability to crises (Healey, 2015). Collaboration generates social capital, enhances legitimacy, and enables the mobilization of local knowledge, which are all essential for sustainable recovery (Putnam, 1993).

2.4 Community Empowerment and Social Capital

Community empowerment is another key dimension in resilience-building. Empowered communities are not merely recipients of policy but active participants in shaping economic and social outcomes. According to Chambers (1997), empowerment involves expanding people's capabilities, choices, and influence over decisions affecting their lives. From a public management standpoint, this means designing institutional mechanisms that allow citizens to participate meaningfully in governance processes, from budget planning to policy evaluation.

Social capital—trust, networks, and norms of reciprocity—plays an equally critical role in strengthening resilience (Coleman, 1990). Communities with high levels of social capital tend to recover faster from crises because collective action and information sharing reduce coordination costs and enhance mutual support (Aldrich, 2012). In urban contexts like **Malang City**, social capital manifests through neighborhood associations (*rukun warga*), local cooperatives, and digital community platforms that enable real-time collaboration between citizens and local authorities.

2.5 Conceptual Synthesis

Synthesizing these theoretical perspectives suggests that **community economic resilience in a VUCA world** is best understood as a dynamic process shaped by four interrelated pillars:

1. **Adaptive Public Management** – institutions' ability to learn and adjust policies through feedback and experimentation.
2. **Collaborative Governance** – cross-sectoral cooperation that integrates local knowledge and shared responsibility.

3. **Community Empowerment** – active participation of citizens in decision-making and problem-solving.
4. **Social and Institutional Capital** – networks of trust and cooperation that sustain resilience mechanisms.

This synthesis underpins the development of the conceptual framework for the present study, which positions **public management as a strategic driver** of local economic resilience. The next section builds upon this foundation by elaborating the theoretical framework used to construct the *Public Management-Based Economic Resilience Model* and its application in the case of Malang City.

3. THEORETICAL FRAMEWORK

3.1 Foundations of the Framework

The theoretical foundation of this study is built upon three major strands of scholarship—**Collaborative Governance**, **Adaptive Leadership**, and **Resilience Theory**—each offering complementary insights into how public management can strengthen community economic resilience under VUCA conditions. The integration of these perspectives provides a holistic analytical lens for understanding how leadership, institutions, and communities co-produce adaptive capacities that enable local economies to thrive amid volatility and uncertainty.

Public management serves as the integrative axis of these theories, linking leadership behavior, institutional collaboration, and community empowerment into a unified governance model. While resilience theory emphasizes systemic adaptation and sustainability, collaborative governance focuses on collective action and multi-actor participation, and adaptive leadership underscores the behavioral and strategic dimensions of navigating complexity. Together, these theoretical components define the normative and analytical foundation of the **Public Management-Based Economic Resilience Model** proposed in this paper.

3.2 Collaborative Governance Theory

The concept of **Collaborative Governance** emerged in response to the limitations of traditional hierarchical and market-driven governance models. Ansell and Gash (2008) define it as a process of decision-making that engages public agencies directly with non-state actors in a formal, consensus-oriented, and deliberative manner to make or implement public policy. This approach emphasizes inclusiveness, transparency, and shared accountability among government, private sector, and civil society.

Collaborative governance operates on the principle that complex socio-economic problems—such as economic shocks, environmental crises, or urban inequality—cannot be solved by government actors alone. Instead, solutions must emerge from **cross-sectoral cooperation** and continuous interaction among diverse stakeholders (Emerson, Nabatchi, & Balogh, 2012). These collaborations rely on mutual trust, joint learning, and institutionalized communication channels that enable policy adaptation based on feedback from the field.

In the context of **Malang City**, collaborative governance manifests in the partnership between the local government, universities, MSME associations, and community organizations. Through par-

ticipatory planning forums (*Musrenbang*), innovation hubs, and digital community platforms, these actors co-create economic development programs that enhance resilience at the grassroots level. The collaborative governance lens thus provides a framework for analyzing how networked interactions among institutions produce collective resilience.

3.3 Adaptive Leadership Theory

While collaborative governance explains *how* institutional cooperation occurs, **Adaptive Leadership Theory** (Heifetz, 1994; Heifetz & Linsky, 2002) offers insights into *how leaders mobilize people and systems* to deal with changing environments. Adaptive leadership emphasizes the capacity of leaders to diagnose complex situations, engage multiple stakeholders, and facilitate organizational learning. Unlike technical leadership, which applies known solutions to familiar problems, adaptive leadership addresses problems with no clear solutions, requiring experimentation, distributed intelligence, and iterative adaptation.

In VUCA environments, adaptive leadership becomes a critical competency. Leaders must operate with a dual focus: maintaining stability while simultaneously fostering innovation and flexibility. This requires balancing short-term crisis response with long-term capacity building (Uhl-Bien & Arena, 2018). Adaptive leaders are characterized by their ability to frame challenges constructively, empower others to take ownership of problems, and sustain engagement despite uncertainty and ambiguity.

In **public management**, adaptive leadership translates into the ability of local governments to facilitate inclusive learning processes, encourage experimentation in policy design, and leverage feedback mechanisms for continuous improvement. In **Malang City**, this leadership approach is evident in the government's response to post-pandemic recovery, where adaptive decision-making allowed for flexible budget reallocations, MSME digitalization programs, and rapid institutional learning through public-academic partnerships. Such practices align with the adaptive leadership principle of transforming uncertainty into a driver of systemic evolution.

3.4 Resilience Theory

Resilience theory provides the systemic and functional backbone of the framework. Originating from ecology (Holling, 1973) and later extended to social and economic systems (Folke et al., 2010; Walker & Salt, 2012), resilience theory conceptualizes the capacity of systems to absorb disturbance, reorganize, and adapt while maintaining core functions and structures. Rather than viewing resilience as a static end-state, the theory treats it as a **dynamic process of adaptation and transformation**.

In governance and public policy, resilience involves building institutional capacities for anticipation, absorption, and renewal (Boin & Van Eeten, 2013). Economic resilience, specifically, refers to the ability of local economies to minimize losses, recover swiftly, and maintain productive potential after disruption (Martin & Sunley, 2015). This perspective aligns with *adaptive governance*, which promotes flexibility, decentralized decision-making, and iterative learning (Folke et al., 2005).

In the case of Malang City, resilience theory helps explain how multi-actor systems—comprising local government, private enterprises, universities, and communities—collaborate to maintain stability amid uncertainty. Programs supporting MSME recovery, digital innovation, and community-based welfare are examples of “adaptive cycles” where institutions continuously adjust to environmental feedback while sustaining long-term developmental trajectories.

3.5 Integrative Conceptual Model

The integration of these theoretical perspectives results in the **Public Management-Based Community Economic Resilience Framework**, conceptualized as a triadic model:

1. **Collaborative Governance (Institutional Dimension)** – emphasizing horizontal linkages between government, community, and private actors to co-produce public value and shared outcomes.
2. **Adaptive Leadership (Behavioral Dimension)** – highlighting the capacity of leaders to interpret uncertainty, facilitate learning, and drive innovation.
3. **Resilience Systems (Functional Dimension)** – representing the collective ability of institutions and communities to absorb shocks, reorganize, and transform sustainably.

These three dimensions interact dynamically through feedback loops of learning, innovation, and empowerment. Public management acts as the *mediating mechanism* that aligns these elements into coherent governance strategies. The model thus reflects a **learning-oriented, participatory, and adaptive governance system**—a form of institutional resilience particularly relevant for urban governance in the VUCA era.

3.6 Relevance to Malang City Context

Applying this framework to Malang City provides an opportunity to contextualize theoretical insights within a real-world governance environment. Malang’s urban ecosystem—characterized by a strong academic base (through Universitas Brawijaya and other higher education institutions), vibrant MSME sector, and community-driven initiatives—offers fertile ground for studying the interplay of leadership, collaboration, and resilience.

The city’s participatory governance model illustrates how adaptive leadership fosters institutional learning, while collaborative networks amplify innovation and policy responsiveness. Through the lens of this integrated framework, Malang City represents a *microcosm of local resilience-building* in Indonesia, offering policy lessons that can inform broader national and regional strategies for economic sustainability under VUCA conditions.

4. METHODOLOGY

4.1 Research Design

This study employs a **qualitative exploratory case study design**, an approach well-suited for examining complex social phenomena where boundaries between context and phenomenon are not clearly defined (Yin, 2018). The qualitative design allows for an in-depth understanding of how public management processes, leadership behaviors, and collaborative networks contribute to community economic resilience in a VUCA environment.

The *exploratory* nature of the research aligns with the study’s aim—to identify and interpret emerging patterns of adaptive governance and resilience-building at the community level. Rather than testing predefined hypotheses, the study seeks to **develop a conceptual model** that captures the dynamic interactions among institutions, actors, and local policies in Malang City.

4.2 Case Study Context: Malang City, Indonesia

Malang City, located in East Java, Indonesia, serves as the focal case of this research. The city represents a dynamic urban ecosystem characterized by a strong educational base, diverse economic sectors, and an active civil society. With a population exceeding 850,000 and an economy largely driven by micro, small, and medium enterprises (MSMEs), Malang has positioned itself as a regional innovation hub supported by universities, startups, and creative industries.

Following the COVID-19 pandemic, Malang experienced both economic disruption and institutional learning. The city government implemented several recovery strategies, such as MSME digitalization programs, community-based entrepreneurship training, and participatory budgeting reforms. These initiatives make Malang an ideal setting to explore **how local governance adapts to volatility and uncertainty** through collaborative and transformative practices.

Thus, Malang City is treated as a **representative case** (Stake, 1995), where lessons derived from its governance and community-based responses can be extended to broader theoretical and policy discussions about local resilience in Indonesia and other developing economies.

4.3 Units of Analysis

The research focuses on three interconnected units of analysis:

- 1. Institutional Actors:** local government departments (particularly the Office of Cooperatives and MSMEs, the Regional Planning Agency, and the Department of Economic Affairs).
- 2. Community Actors:** neighborhood associations (*rukun warga*), MSME networks, women's cooperatives, and youth innovation groups.
- 3. Policy Instruments:** local regulations, participatory planning mechanisms (*Musrenbang*), and recovery programs implemented between 2022–2024.

By analyzing interactions across these levels, the study captures how governance structures and community participation jointly influence the city's economic resilience.

4.4 DATA COLLECTION METHODS

Data were collected using multiple qualitative techniques to ensure **triangulation** and enhance analytical robustness:

- 1. In-depth Interviews:** Conducted with 24 key informants, including local government officials, community leaders, entrepreneurs, and academic experts. Interviews were semi-structured to allow flexibility in exploring emerging themes.
- 2. Participatory Observation:** The researcher attended public consultation meetings, MSME training sessions, and community development forums to observe real-time interaction among stakeholders.
- 3. Document Analysis:** A review of local policy documents, strategic plans, and performance reports was conducted to trace the institutional evolution of resilience initiatives.

4. **Secondary Data Review:** Supplementary data were obtained from national and regional statistics, previous studies, and media archives to contextualize local developments within broader national trends.

These combined methods allow for a holistic view of Malang's governance ecosystem and how it responds to uncertainty.

4.5 DATA ANALYSIS TECHNIQUES

The data were analyzed using **thematic analysis** (Braun & Clarke, 2006), a systematic approach for identifying, analyzing, and interpreting patterns (themes) across qualitative data sets. The analysis process involved several stages:

1. **Data Familiarization:** Transcripts, notes, and documents were read repeatedly to gain a comprehensive understanding of the context.
2. **Initial Coding:** Segments of text were labeled according to conceptual categories related to governance, leadership, and resilience.
3. **Theme Development:** Codes were organized into higher-level themes, such as *transformative leadership*, *institutional networking*, and *policy flexibility*.
4. **Interpretation and Model Synthesis:** The emergent themes were integrated with theoretical concepts from the literature to construct the **Public Management-Based Economic Resilience Model**.

To enhance interpretive rigor, the analysis incorporated *triangulation of sources and perspectives*, comparing narratives from different actors and validating them through documentary evidence.

4.6 Validity and Reliability

Given the interpretive nature of qualitative inquiry, ensuring the **trustworthiness** of findings is crucial. The study follows Lincoln and Guba's (1985) criteria for qualitative rigor:

- **Credibility:** achieved through triangulation of data sources, prolonged engagement in the field, and member checking with key informants to confirm interpretations.
- **Transferability:** ensured by providing thick descriptions of the context, enabling other researchers to assess applicability to similar settings.
- **Dependability:** maintained through systematic documentation of research procedures and coding processes.
- **Confirmability:** enhanced by keeping a reflective journal to monitor researcher bias and maintain analytical transparency.

These measures collectively strengthen the internal and external validity of the study, ensuring that the findings are both contextually grounded and theoretically meaningful.

4.7 Ethical Considerations

Ethical approval was obtained from the **Research Ethics Committee of Universitas Brawijaya**. All participants were informed of the research objectives, confidentiality measures, and their right to withdraw at any time. Anonymity was maintained by assigning codes instead of real names in transcripts and reporting.

Moreover, the study adheres to the **principles of participatory ethics**, ensuring that the research process benefits local stakeholders by sharing insights and recommendations with government officials and community organizations in Malang City.

4.8 Limitations of the Study

While qualitative case studies provide rich contextual insights, their generalizability is inherently limited. The findings from Malang City should therefore be interpreted as **analytical generalizations** rather than statistical ones. Furthermore, since data were collected within a specific period (2022–2024), temporal changes in political leadership or economic conditions may influence future dynamics of resilience.

Nevertheless, the methodological design allows for deep understanding of local processes, offering a robust foundation for developing theoretical models and informing comparative studies in other Indonesian regions.

5.1 Overview of Findings

The empirical investigation in Malang City revealed three interrelated dimensions that collectively strengthen community economic resilience in a VUCA environment:

- (1) **Transformative Public Leadership**,
- (2) **Institutional Network Strength**, and
- (3) **Policy Flexibility and Adaptive Governance**.

These dimensions emerged through iterative thematic analysis of interviews, field observations, and document reviews. Together, they form a coherent system in which leadership drives adaptive learning, institutional networks facilitate collaboration, and flexible policies provide enabling structures for community empowerment and innovation.

5.2 Transformative Public Leadership

Leadership emerged as the central catalyst for resilience building in Malang City. The findings indicate that **transformative public leadership**—defined by vision, adaptability, and inclusiveness—has been crucial in mobilizing collective efforts across sectors.

Local government leaders, particularly those in the Mayor’s Office and the Department of Cooperatives and MSMEs, adopted an *adaptive leadership style* characterized by openness to innovation, data-informed decision-making, and proactive engagement with diverse stakeholders. For example, during the post-pandemic recovery phase, the local administration initiated “*Malang Bangkit*” (Malang Rise) programs that integrated digital training for MSMEs, participatory budgeting, and academic partnerships.

These actions demonstrate Heifetz's (1994) notion of adaptive leadership, in which leaders do not simply impose solutions but create environments that enable stakeholders to learn and co-create adaptive responses. By framing crises as opportunities for innovation rather than purely as threats, Malang's leaders cultivated a culture of optimism and experimentation—key elements of resilience thinking (Uhl-Bien & Arena, 2018).

Transformative leadership also played a symbolic role: local leaders served as “sense-makers” in times of uncertainty, aligning community values with long-term developmental visions. This resonates with the concept of *public value leadership* (Moore, 1995), which emphasizes moral responsibility, shared purpose, and long-term societal benefits.

In summary, leadership in Malang functioned not as command authority but as **a facilitator of collective intelligence**, enabling adaptive governance processes that turned uncertainty into opportunity.

5.3 Institutional Network Strength

The second key finding concerns the **strength and connectivity of local institutional networks**. Economic resilience in Malang City was found to depend heavily on cross-sectoral collaboration among government agencies, universities, community organizations, and private enterprises.

Through programs such as *Kampung Tematik* (Thematic Villages) and *Malang Creative Fusion*, the city successfully linked grassroots initiatives with academic research and market access. Universities—particularly Universitas Brawijaya—played a pivotal role as *knowledge brokers*, providing technical assistance, data analytics, and entrepreneurship mentoring for MSMEs.

This collaborative ecosystem exemplifies the *Triple Helix Model* (Etzkowitz & Leydesdorff, 2000), where innovation arises from the interaction among government, academia, and industry. In Malang's context, this interaction evolved into a “Quadruple Helix” system with the inclusion of communities as active co-producers of innovation.

Institutional network strength also reflects **relational governance**—a shift from hierarchical coordination to mutual interdependence. The city government intentionally cultivated trust through transparent communication and participatory forums such as *Musrenbang Kelurahan* (community-level development meetings).

Such practices align with the principles of **Collaborative Governance Theory** (Ansell & Gash, 2008), where legitimacy and policy effectiveness derive from deliberation and shared accountability. By embedding collaboration into formal and informal governance routines, Malang City institutionalized resilience as an ongoing process rather than a reactive mechanism.

In essence, institutional network strength provided the **structural foundation** for community resilience—ensuring that adaptive leadership was supported by enduring partnerships and continuous knowledge exchange.

5.4 Policy Flexibility and Adaptive Governance

The third major finding highlights the significance of **policy flexibility** in sustaining economic resilience under volatile conditions. Malang City demonstrated the ability to rapidly reorient policies and budgets to address emerging challenges.

During the pandemic and its aftermath, the local government adopted a flexible budgeting framework that allowed reallocation of resources to MSME recovery, healthcare support, and digitalization initiatives. This adaptability is consistent with the principles of **adaptive governance** (Folke et al., 2005), which emphasize flexibility, experimentation, and decentralized decision-making.

For instance, the *Digital Transformation for MSMEs* program—initially a small pilot initiative—was quickly scaled up after successful community feedback. Similarly, the city integrated *data-driven decision tools* to monitor the economic performance of small enterprises and identify sectors requiring targeted intervention.

Policy flexibility in Malang was also reflected in regulatory innovation. Rather than rigidly enforcing uniform rules, the government experimented with *context-sensitive policy design*, tailoring interventions to local needs and feedback. This policy agility strengthened the city's capacity to cope with volatility while maintaining accountability and transparency.

The findings indicate that **resilience is institutionalized when flexibility becomes a governance norm**—not an exception. By embedding learning mechanisms into policy processes, Malang City effectively converted crisis-induced uncertainty into a continuous cycle of adaptation and improvement.

5.5 Synthesis of Findings

Synthesizing the three dimensions reveals that community economic resilience in Malang City operates through a **synergistic governance model**. Transformative leadership provides direction and inspiration; institutional networks ensure collaboration and knowledge diffusion; and policy flexibility enables rapid adjustment and innovation.

These three components form a **self-reinforcing system**—a feedback loop in which leadership drives collaboration, collaboration generates learning, and learning informs adaptive policy. This cyclical relationship aligns with the logic of *resilience systems theory*, which conceptualizes resilience as an emergent property of adaptive interactions across multiple governance levels (Folke et al., 2010).

Moreover, the empirical evidence from Malang validates the theoretical assumption that **public management is both a driver and an outcome of resilience**. Effective management practices—anchored in trust, participation, and continuous learning—create the institutional conditions necessary for sustainable resilience.

5.6 Discussion: Linking Theory to Practice

The findings contribute to broader theoretical debates in three important ways:

1. Bridging Resilience and Public Management:

The study shows that resilience is not merely a technical or economic attribute but a *governance capability*. Public management systems that integrate adaptive leadership and collaborative mechanisms are more capable of navigating volatility.

2. Operationalizing Collaborative Governance in Local Contexts:

Malang City demonstrates that collaborative governance is not an abstract ideal but a practical strategy for co-producing innovation and social trust. The success of participatory planning and academic partnerships exemplifies how networked governance enhances resilience outcomes.

3. Embedding Adaptive Learning into Policy Systems:

The city's iterative policy cycles—based on monitoring, feedback, and flexibility—illustrate how learning-oriented governance transforms uncertainty into a developmental resource.

These findings advance the discourse on *adaptive and collaborative public management* in developing economies and offer a locally grounded model for resilience-building in the VUCA era.

6. MODEL DEVELOPMENT: PUBLIC MANAGEMENT-BASED ECONOMIC RESILIENCE MODEL

6.1 Model Conceptualization

The synthesis of empirical findings and theoretical insights leads to the formulation of the **Public Management-Based Economic Resilience Model (PM-ERM)**. This model conceptualizes resilience not as a static condition but as a *dynamic governance capability*—the ability of institutions and communities to continuously learn, adapt, and transform in response to volatility, uncertainty, complexity, and ambiguity (VUCA).

At its core, the PM-ERM positions **public management** as the *integrating mechanism* that aligns leadership behavior, institutional collaboration, and policy flexibility within a coherent governance framework. The model views local governments as catalysts for collective adaptation—facilitating networks, distributing leadership, and institutionalizing learning systems.

The model is grounded in three foundational dimensions derived from the Malang case:

1. **Transformative Public Leadership** – the behavioral and strategic capacity to mobilize adaptive learning and foster shared vision under uncertainty.
2. **Institutional Network Strength** – the structural dimension emphasizing inter-organizational collaboration and trust-based governance.
3. **Policy Flexibility and Adaptive Governance** – the procedural dimension that enables innovation, experimentation, and iterative feedback loops in policy systems.

Together, these dimensions create a *self-organizing system* in which resilience emerges from interaction rather than centralized control.

6.2 The Structure of the PM-ERM

The **Public Management-Based Economic Resilience Model** can be visualized as a **triadic framework** operating through *feedback, integration, and transformation* cycles:

- **Transformative Leadership (Direction and Mobilization):**

Leaders act as facilitators of learning and sense-makers who frame challenges constructively. Their role is to mobilize cross-sectoral collaboration and cultivate a culture of adaptability.

- **Institutional Collaboration (Network and Knowledge Exchange):**

Institutions interact horizontally through collaborative governance arrangements. Knowledge, resources, and responsibilities are shared through partnerships among government, academia, private sector, and community actors.

- **Adaptive Policy Systems (Flexibility and Experimentation):**

Policies are designed as living frameworks, capable of evolving through real-time data, monitoring, and participatory evaluation. Feedback from the community and institutions informs ongoing policy refinement.

These three pillars operate within a continuous **adaptive cycle** consisting of:

1. *Sense-making and Visioning* (led by leadership),
2. *Co-creation and Partnership Building* (driven by institutional networks), and
3. *Policy Adjustment and Learning* (supported by adaptive governance).

This cycle reflects the *learning-based logic of resilience systems*, where uncertainty is leveraged as an opportunity for institutional renewal and innovation.

6.3 Mechanisms of Resilience Building

The PM-ERM identifies several operational mechanisms that enable the translation of governance capacity into community-level resilience outcomes:

1. **Feedback Integration:**

Public management ensures that feedback from citizens, entrepreneurs, and institutions is systematically incorporated into policy processes. This mechanism creates agility and responsiveness.

2. **Distributed Leadership:**

Leadership is not confined to formal authority but shared across sectors and levels of governance. This allows for diverse problem-solving approaches and local innovation.

3. **Institutional Trust and Legitimacy:**

Collaboration thrives where mutual trust and transparency are maintained. Participatory governance forums enhance legitimacy and strengthen collective ownership of policies.

4. **Knowledge Co-Production:**

Partnerships between universities, government agencies, and communities transform knowledge into actionable innovation—an essential feature of resilient systems.

5. **Iterative Learning and Adaptation:**

Governance becomes a process of continuous experimentation, where failures are treated as learning opportunities and successes as prototypes for scaling.

Together, these mechanisms operationalize the principles of *collaborative, adaptive, and learning-oriented public management* that underpin sustainable resilience.

6.4 Application to Malang City

In **Malang City**, the PM-ERM can be observed in practice through the interplay of local leadership, institutional collaboration, and flexible policymaking.

The *Mayor's Office* provides transformative direction, framing economic recovery as an inclusive movement; local agencies and universities facilitate collaborative programs such as the *Kampung*

Tematik initiative; and adaptive policies support MSME digitalization, creative industries, and community entrepreneurship.

This configuration demonstrates how resilience emerges from *governance interaction* rather than isolated interventions.

For example:

- Leadership inspired the development of digital MSME training programs (reflecting vision and mobilization).
- Institutional partnerships with Universitas Brawijaya and business associations produced co-created innovation spaces (reflecting collaboration and knowledge sharing).
- Flexible policy mechanisms enabled real-time budget adjustments for recovery programs (reflecting adaptive governance).

As such, the PM-ERM provides a conceptual explanation for Malang City's relative success in maintaining economic stability and social cohesion amid uncertainty.

6.5 Theoretical and Practical Contributions

The model offers both theoretical and empirical contributions:

(1) Theoretical Contributions

- It integrates *Collaborative Governance Theory*, *Adaptive Leadership Theory*, and *Resilience Theory* into a unified public management framework.
- It conceptualizes resilience as an *emergent governance capability* rather than a fixed state, highlighting the role of public institutions in shaping adaptive systems.
- It advances the literature on *New Public Governance* by incorporating VUCA-oriented adaptability and learning mechanisms into local policy practice.

(2) Practical Contributions

- It provides policymakers with a structured framework for designing **resilient governance systems** capable of absorbing shocks while fostering innovation.
- It demonstrates how leadership, institutional networking, and policy flexibility can be operationalized through participatory planning, collaborative budgeting, and data-driven management.
- It offers a scalable model applicable to other cities in Indonesia and similar developing contexts, particularly where community-based economies and public trust are key determinants of sustainability.

6.6 Policy Implications

From a policy perspective, the PM-ERM underscores the need for governments—especially at the local level—to transition from **reactive crisis management** to **proactive adaptive governance**.

Key recommendations include:

1. **Institutionalize Learning Mechanisms:** Embed feedback loops and policy review systems to transform lessons from crises into long-term institutional memory.
2. **Promote Leadership Development:** Train public managers in adaptive leadership, foresight analysis, and collaborative facilitation.
3. **Strengthen Multi-Actor Platforms:** Create structured partnerships between local governments, universities, civil society, and private enterprises for co-innovation.
4. **Encourage Policy Experimentation:** Implement pilot programs and sandbox regulations that allow for controlled experimentation and quick scaling of successful initiatives.
5. **Invest in Community Empowerment:** Build social capital and entrepreneurship capacity at the grassroots level to ensure that resilience extends beyond institutional boundaries.

These implications align with the United Nations' Sustainable Development Goals (SDGs), particularly Goal 8 (*Decent Work and Economic Growth*) and Goal 11 (*Sustainable Cities and Communities*), emphasizing the interconnection between adaptive governance and sustainable development.

6.7 Summary

In summary, the **Public Management-Based Economic Resilience Model (PM-ERM)** offers a strategic framework for understanding and enhancing community resilience in the VUCA era. By linking leadership, institutional collaboration, and adaptive governance, the model transforms uncertainty into a driver of collective learning and innovation.

The case of Malang City illustrates that when governance is participatory, flexible, and learning-oriented, resilience becomes not an outcome of stability—but a product of continual transformation.

In essence, **public management is redefined not as administration under certainty, but as leadership through uncertainty.**

7. CONCLUSION AND POLICY IMPLICATIONS

7.1 Summary of Key Findings

This study has examined the dynamics of **community economic resilience** within the context of the **VUCA era**, focusing on how **public management**—through leadership, institutional collaboration, and policy flexibility—creates adaptive capacity in the face of volatility, uncertainty, complexity, and ambiguity. Using **Malang City, Indonesia** as a case study, the research demonstrates that local governance can serve as a strategic platform for resilience-building when it embraces *collaboration, learning, and innovation* as its core operating principles.

Three major findings underpin the study:

1. **Transformative Public Leadership** fosters a shared vision and mobilizes collective learning across sectors. Leadership acts not as control but as facilitation—turning crises into opportunities for innovation.
2. **Institutional Network Strength** enables trust-based collaboration between government, academia, private enterprises, and communities, producing co-created solutions that reinforce adaptability.

3. **Policy Flexibility and Adaptive Governance** provide procedural agility, allowing institutions to continuously adjust strategies, reallocate resources, and experiment with new models of public service delivery.

These findings collectively confirm that resilience is not an end-state but a *dynamic process of continuous adaptation*. Public management becomes the mechanism through which uncertainty is transformed into a stimulus for institutional and social innovation.

7.2 Theoretical Implications

From a theoretical perspective, this study makes several significant contributions to the evolving discourse on **public management and resilience governance**:

1. It integrates **Collaborative Governance Theory, Adaptive Leadership Theory, and Resilience Theory** into a single analytical framework, offering a multidimensional understanding of how resilience operates at the intersection of institutions, leadership, and policy systems.
2. It advances the notion that resilience is not merely a property of systems but a *governance capability*—a collective capacity to learn, adapt, and innovate in turbulent environments.
3. It contributes to the literature on **New Public Governance (NPG)** by embedding adaptability, feedback loops, and distributed leadership within the structure of local governance.
4. It empirically validates the theoretical claim that *public value* is created when leadership mobilizes collaboration and learning in response to uncertainty (Moore, 1995; Ansell & Trondal, 2018).

Thus, the **Public Management-Based Economic Resilience Model (PM-ERM)** proposed in this study provides a theoretical advancement in understanding how local governance systems evolve under complex and unpredictable conditions.

7.3 Practical and Policy Implications

The empirical findings yield several actionable insights for policymakers, public managers, and development practitioners:

1. Institutionalize Adaptive Learning in Governance:

Local governments should embed learning mechanisms—such as regular policy reviews, after-action assessments, and citizen feedback systems—to ensure continual adaptation to changing contexts.

2. Enhance Leadership Capacity for Complexity Management:

Training programs for public officials should emphasize adaptive leadership competencies, including systems thinking, foresight analysis, and facilitative communication.

3. Foster Multi-Actor Collaboration Platforms:

Resilience thrives in networked environments. Governments should establish collaborative ecosystems involving universities, the private sector, NGOs, and citizen groups to co-create innovative economic solutions.

4. Develop Flexible and Responsive Policy Frameworks:

Policies should be treated as evolving instruments that can be modified based on emerging data and stakeholder feedback. This requires legal and institutional reforms that support experimentation and rapid learning.

5. Empower Communities through Participatory Governance:

Community empowerment must go beyond consultation; it should involve co-decision and co-production in local development planning. Strengthening local social capital is essential for sustainable resilience.

Collectively, these implications emphasize a paradigm shift—from bureaucratic stability to **adaptive governance**—where flexibility, participation, and trust become the cornerstones of economic sustainability.

7.4 Implications for Indonesia's Development Policy

At a broader national level, the insights from Malang City suggest the importance of reorienting Indonesia's development governance toward *decentralized resilience systems*.

This entails granting local governments greater autonomy to experiment with locally grounded innovations while maintaining national-level coordination and knowledge-sharing.

In alignment with **Indonesia's Vision 2045** and the **Sustainable Development Goals (SDGs)**, public management reform should prioritize:

- Strengthening *evidence-based policymaking* through data integration across ministries and local governments.
- Enhancing the *resilience of MSMEs* as anchors of local economic stability.
- Institutionalizing *cross-sectoral resilience councils* that bridge academia, industry, and government in adaptive planning.

Such initiatives will ensure that resilience becomes a systemic feature of Indonesia's governance architecture rather than a temporary response to crises.

7.5 Limitations and Directions for Future Research

While the study provides valuable insights, several limitations warrant further exploration.

First, as a single-case study, its findings offer **analytical generalization** rather than statistical representativeness. Future studies could adopt comparative case designs across cities in Indonesia to validate the applicability of the PM-ERM in diverse institutional contexts.

Second, the research primarily relied on qualitative data; integrating **quantitative resilience metrics**—such as local economic indicators, social capital indices, or governance performance scores—could strengthen empirical generalization.

Finally, future research could explore the **temporal evolution of resilience**, examining how governance capacity matures over multiple crisis cycles and leadership transitions.

Such extensions will deepen theoretical understanding of how public management systems evolve adaptively under prolonged volatility.

7.6 Concluding Remarks

This study concludes that **economic resilience in the VUCA era** depends not merely on economic resources or infrastructure but on the *governance intelligence* embedded in public management systems.

Resilience emerges when governments act as learning organizations—capable of sensing change, mobilizing collaboration, and transforming uncertainty into collective innovation.

The case of **Malang City** illustrates that even in resource-constrained environments, strong leadership, institutional synergy, and participatory governance can generate enduring economic stability.

Hence, the future of public management lies not in maintaining equilibrium but in cultivating **adaptive capacity**—the ability to thrive amid change.

As volatility becomes the new normal, resilience must become the new paradigm of governance.

In this sense, **public management is not only about governing the present but designing institutions that can learn their way into the future.**

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