

Adaptive Governance or Status Quo? Unpacking the City of Jakarta's Approach to the Air Pollution Control Program

Adaptive Governance atau Status Quo? Membongkar Pendekatan Kota Jakarta dalam Program Pengendalian Polusi Udara

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Abstract

In recent years, Jakarta has experienced an increase in air pollution which has the potential to have a significant impact on Jakarta residents not only in terms of health, but socio-cultural and productivity. This encourages the need for effective governance strategies to overcome air pollution problems. This study seeks to critically analyze the approach used by the city of Jakarta in dealing with air pollution, to find out whether the city of Jakarta's air pollution control policy has led to innovative, flexible and adaptive governance, or is still more inclined towards maintaining the status quo. Based on qualitative data, including in-depth interviews, policy analysis, and consultation with stakeholders, this research examines Jakarta's policy mechanisms, community participation pathways, and inter-agency coordination in controlling air quality and dealing with pollution. The research results show a lack of alignment between progressive policy frameworks and implementation challenges, thus underscoring the need for a more adaptive and dynamic approach. The approach adopted in Jakarta appears to be dominated by a top-down, government-led model, where policies and decisions are primarily formulated and implemented with minimal participation from non-governmental institutions. Such models, while ensuring efficient decision making, may exclude valuable insights of other stakeholders and hinder innovative and context-specific solutions. Additionally, these rigid structures appear to lack the flexibility and responsiveness that are hallmarks of adaptive governance, potentially reducing cities' ability to effectively address air pollution challenges. This research underscores the need for a more inclusive and adaptive governance framework in managing air pollution in Jakarta.

Keywords: adaptive governance, status quo, air pollution, Jakarta

Abstrak

Dalam beberapa tahun terakhir, Jakarta mengalami peningkatan polusi udara yang berpotensi berdampak signifikan bagi warga Jakarta tidak hanya dari segi kesehatan, namun sosial budaya hingga produktivitas. Hal ini mendorong perlunya strategi tata kelola yang efektif untuk mengatasi permasalahan polusi udara. Studi ini berupaya menganalisis secara kritis pendekatan yang digunakan kota Jakarta dalam mengatasi polusi udara untuk mengetahui apakah kebijakan pengendalian polusi udara Kota Jakarta sudah mengarah pada tata kelola yang inovatif, fleksibel, dan adaptif, atau masih lebih condong ke arah mempertahankan status quo. Berdasarkan data kualitatif, termasuk wawancara mendalam, analisis kebijakan, dan konsultasi dengan pemangku kepentingan, penelitian ini menelaah mekanisme kebijakan Jakarta, jalur partisipasi masyarakat, dan koordinasi antar lembaga dalam pengendalian kualitas udara dan menangani polusi. Hasil penelitian menunjukkan kurangnya keselarasan antara kerangka kebijakan progresif dengan tantangan pelaksanaannya, sehingga menggarisbawahi perlunya pendekatan yang lebih adaptif dan dinamis. Pendekatan yang diterapkan di Jakarta tampaknya didominasi oleh model yang bersifat top-down dan dipimpin oleh pemerintah, dimana kebijakan dan keputusan terutama dirumuskan dan dilaksanakan dengan partisipasi minimal dari lembaga non-pemerintah. Model seperti itu, meskipun memastikan pengambilan keputusan yang efisien, mungkin mengesampingkan wawasan pemangku kepentingan lain yang berharga dan menghambat solusi inovatif dan konteks spesifik. Selain itu, struktur yang kaku ini tampaknya tidak memiliki fleksibilitas dan daya tanggap yang merupakan ciri-ciri tata kelola adaptif, sehingga berpotensi mengurangi kemampuan kota untuk secara efektif mengatasi berbagai tantangan polusi udara. Penelitian ini menggarisbawahi perlunya kerangka tata kelola yang lebih inklusif dan adaptif dalam pengelolaan polusi udara di Jakarta.

Kata kunci: tata kelola adaptive, status quo, polusi udara, Jakarta

Introduction

Jakarta, Indonesia's densely populated capital, has long grappled with major urban challenges, with many pressing environmental problems. Rapid urbanization in Jakarta, a large city home to more than 10 million residents, has given rise to a series of environmental challenges, one of which is air pollution. As city grows, the government's ability to respond to dynamic environmental changes becomes critical. Jakarta consistently ranks as one of the cities with the worst air pollution levels in the world. According to a report from IQAir AirVisual 2019, Jakarta is ranked 5th in cities with the worst air quality among other large cities globally (IQAir AirVisual, 2019). Air pollution in Jakarta has a significant impact on population health. One of the main pollutants in Jakarta is PM_{2.5} fine particles which have a diameter of less than 2.5 micrometers. High concentrations of PM_{2.5} are very dangerous because these particles can enter the bloodstream through the lungs (World Health Organization, 2021). Growing concern over deteriorating air quality in Jakarta underscores the urgent need to address and manage threats that impact public health and the environment.

In this case, governance systems play an important role to address complex environmental challenges. The concept of adaptive governance has emerged as a major theoretical lens in environmental studies, advocating resilience, learning, and flexibility in dealing with environmental change (Dietz et al., 2003). At the heart of adaptive governance is the ability of institutions and society to adapt and respond dynamically to environmental feedback, especially in rapidly changing urban contexts (Huiteima et al., 2009). The concept of adaptive governance has gained attention in several literatures because it emphasizes flexibility, stakeholder involvement, and the capacity to learn and make adjustments in the face of uncertainty and change (Chaffin et al., 2014).

However, although the theoretical aspects of adaptive governance have been widely explored, its practical application, especially in the context of large, rapidly developing cities such as Jakarta, remains understudied, particularly in the socio-political and cultural environments of cities in developing countries, is still a complicated endeavor. Previous research shows that urban areas in developing countries often face a mismatch between progressive policy frameworks and realities on the ground, which can hinder the effectiveness of environmental governance (Ostrom, 2010). In this regard, increasing levels of air pollution in Jakarta, caused by factors such as vehicle emissions, industrial activity and construction dust provide a relevant case study. This situation becomes more complex considering Jakarta's socio-political landscape, which is characterized by interactions between various levels of government and various stakeholders (Firman, 2009).

In addition, previous studies only emphasized the difference between policy ideals and their implementation in the field (Andonova et al., 2009). In the Jakarta context, addressing air pollution is not just an environmental issue; this intersects with urban planning, transportation policy, industry regulations, and public awareness. A complex network of stakeholders, ranging from local

communities, NGOs, industry, to various government agencies, adds complexity to the governance process (Firman, 2009). In this regard, an important question arises in this study: Is Jakarta's response to the air pollution crisis characterized by adaptive governance principles, or is this response more in line with efforts to maintain the current situation, namely the status quo? A critical exploration of this question not only sheds light on Jakarta's current strategy but can also serve as a reference point for other urban areas facing similar challenges. This research aims to prepare the foundation for a comprehensive exploration of air pollution management strategies in Jakarta, bridging the gap between theoretical ideals and practical governance realities.

Although the phenomenon of air pollution in urban contexts has attracted significant academic attention, exploration of specific governance mechanisms in addressing these challenges remains patchy, particularly in the context of developing megacities in countries in the South (Bulkeley & Betsill, 2005). Although Jakarta faces serious challenges in terms of air pollution, it is still underrepresented in the global discourse on adaptive governance. Central to the environmental governance discourse is the implementation of adaptive strategies, which prioritize flexibility, stakeholder involvement, and iterative learning (Dietz et al., 2003). However, much of the existing literature is largely conceptual, with limited empirical investigations into the practical translation of adaptive governance in specific socio-political landscapes such as Jakarta (Aaral & Hartley, 2013).

In addition, research that explores environmental governance in the context of the development of large cities often takes a broad approach, namely by looking at governance structures in general without delving into specific adaptive practices or the opposite tendency towards the status quo (Ostrom, 2010). In the case of Jakarta, although there is research that acknowledges increasing levels of air pollution and its impact on health, deeper exploration of governance mechanisms – their adaptability, strengths and weaknesses – is still missing. The interaction between formal policy mechanisms, grassroots movements, industrial stakeholders, and the wider community in forming air pollution management strategies in Jakarta is an area that requires further research (Firman, 2009). Given this context, an interesting research gap emerges: an in-depth analysis of Jakarta's approach to air pollution management, specifically exploring whether the approach leans towards adaptive governance or is rooted in the status quo.

Adaptive Governance

Adaptive governance is an increasingly important concept in facing complex and dynamic environmental challenges. This concept expands understanding of how institutions, both formal and informal, can adapt to environmental change and uncertainty effectively (Chaffin et al., 2014). Folke et al. (2005) emphasize that adaptive governance involves the capacity of institutions and stakeholders to respond dynamically to feedback, which is essential in the context of complex and

fluctuating environmental challenges. This includes recognizing that rapid and unpredictable environmental change requires a flexible and responsive approach.

In the context of adaptive governance, Dietz et al. (2003) underscore the importance of multi-level governance. This concept recognizes that environmental issues often cross multiple jurisdictions and require coordination across multiple levels of government. This means that a holistic and collaborative approach between local, regional and national governments is key to effectively addressing environmental challenges. Huitema et al. (2009) highlighted the importance of stakeholder involvement in adaptive governance in resolving air pollution cases (Suaedi et. al, 2019). Involving various stakeholders, including local communities, NGOs, and industry representatives, in the decision-making process is necessary to ensure that developed policies and solutions reflect a range of experiences and knowledge (Hariani, 2023). This helps in increasing the relevance and effectiveness of the policies produced.

Iterative learning is also an important component of adaptive governance. Pahl-Wostl et al. (2007) emphasize the importance of regular review and adjustment of policies based on recent results, new research, and changing environmental conditions. This allows institutions to continuously adapt and improve policies to address the challenges of an ever-changing environment. Chaffin et al. (2014) added that adaptive governance also requires a system-centered approach. This indicates that social-ecological systems are complex and interrelated entities, where changes in one part can affect the entire system. This approach requires a deep understanding of the interrelationships between humans and nature, and how policies can affect both. Therefore, adaptive governance is a comprehensive and flexible approach, designed to deal with uncertainty and rapid change in the environmental context. This requires coordination, collaboration, stakeholder involvement, and the ability to learn and adapt continuously.

Institutional Inertia

Institutional Inertia, or what is often referred to as status quo, is an important concept in institutional and organizational studies related to resistance to change. North (1990) identified institutional inertia as the tendency of institutions to resist change, often resulting from entrenched power structures, bureaucratic norms, or resistance from key stakeholders. These factors often hinder timely and effective responses to challenges, including environmental challenges.

A number of researchers have explored various aspects of institutional inertia. Selznick (2007) highlighted how organizations tend to develop certain patterns that become difficult to change over time, primarily because of the norms and values that have become embedded in the organizational culture. At a more micro level, Oliver (1992) examined how inertia manifests in everyday

organizational practices and routines, often becoming a barrier to adopting innovation or change.

In an environmental context, institutional inertia is often considered a major obstacle to implementing sustainable solutions. Lawrence & Suddaby (2006) revealed that institutional inertia can prevent organizations from responding to environmental changes, regulations, or social pressures that require adaptation or innovation. Institutional inertia is also closely related to path dependence theory, described by Pierson (2000). This theory states that decisions or actions taken in the past significantly influence possible choices in the future. In this context, long-standing habits, procedures and norms often lead to the continuation of the status quo, even though external conditions have changed.

The contrast between adaptive governance and institutional inertia is central to understanding organizational and policy dynamics. While adaptive governance emphasizes the importance of adaptation and flexibility in responding to change, institutional inertia indicates a tendency to maintain existing systems and policies, even though they may be ineffective or outdated. Overcoming this inertia is often a major challenge in applying adaptive governance principles in practice.

Method

This research uses a qualitative approach chosen to understand in depth the governance mechanisms and stakeholder dynamics in the context of air pollution management in Jakarta. This research uses a case study method which focuses on in-depth analysis of certain phenomena in their real context, namely the management of air pollution in Jakarta. In this series of research, the first stage carried out was document analysis, where the scope included a review of policy documents, regulations, government publications and strategy papers related to air pollution management in Jakarta. The aim of this stage is to map the official stance, strategies and interventions that the Jakarta government has taken. The analysis was carried out using a thematic analysis approach to identify indications of adaptive governance principles or tendencies towards institutional inertia, as explained by Bowen (2009).

The next stage of research involved semi-structured interviews with key informants. Participants in this interview are key informants and stakeholders involved in air pollution management in Jakarta. The aim is to gain in-depth insight into the processes, challenges, perceptions and experiences related to policy creation and implementation. In the analysis of interview data, transcript coding methods were used to identify recurring themes, contrasting views, and emerging patterns, in accordance with Braun & Clarke's (2006) approach. After that, a Focus Group Discussion (FGD) was held with participants consisting of population groups from various regions in Jakarta, with a diversity of ages, socio-economic status and other demographic factors. The aim of the FGD is to understand the public's perceptions, experiences and suggestions regarding air pollution and its

management in Jakarta, which is a confirmation of the two previous data collection techniques. Analysis of FGD data was carried out using a grounded theory approach to identify emerging themes and community sentiment, following the Glaser & Strauss (2017) method.

The final step in this research method is data triangulation, where findings from document analysis, interviews, and FGDs are cross-referenced to provide a comprehensive and robust understanding of adaptive governance (or lack thereof) in air pollution management in Jakarta. This research also pays special attention to ethical considerations. This includes ensuring informed consent from all participants, maintaining confidentiality, and ensuring data protection throughout the research process, in accordance with the research ethics guidelines described by Israel & Hay (2006). With this comprehensive and ethical approach, this research aims to provide new insights into the governance of air pollution management in Jakarta.

Result and Discussion

Management of Air Pollution in Jakarta

Through the research approach we have chosen, we seek to comprehensively understand the dynamics involved in the creation and implementation of air pollution management policies in Jakarta. This analysis also aims to reveal how Jakarta is facing these significant environmental challenges, and whether the city is moving towards more dynamic adaptation or remaining in the grip of institutional inertia.

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From this analysis, it seems that most policies for handling air pollution in Jakarta are still within the framework of Institutional Inertia. Most policy documents highlight a top-down approach to air pollution management, with limited evidence of iterative policy updates or inclusion of input from diverse stakeholders. These policies tend to be top-down, with little evidence of flexible adaptation, learning from past strategies, or active collaboration with non-governmental organizations. This approach can limit the effectiveness of policies in responding to rapidly changing environmental dynamics and diverse societal needs.

Table 1. Analysis of Policy Documents for Handling Air Pollution in Jakarta

Policy	Policy Content	Policy Approach	Policy Implementation
Odd-Even Traffic Limitation System	Policies like the odd-even system for motor vehicles aim to reduce congestion and	Top-down	Short-term solutions that do not comprehensively address the root causes of

Policy	Policy Content	Policy Approach	Policy Implementation
	exhaust emissions, leaning more towards institutional inertia		air pollution are classified under the status quo.
Motor Vehicle Emission Regulation	Regulations that set maximum emission limits for vehicles and industries can be seen as steps towards adaptive governance if updated regularly.	Top-down	In terms of implementation, it is inflexible and has not undergone significant change over time, thus falling into the category of institutional inertia.
Greening and Development of Green Open Spaces	Efforts to increase green space in Jakarta, including the development of parks and tree planting, can be considered adaptive as they support sustainable solutions and long-term quality of life improvements.	Top-down and some Bottom-up (community contributes to green space)	Not followed by evaluation or adjustment based on effectiveness, so it falls into the category of institutional inertia in terms of implementation.
Incentives for Clean Energy and Environmentally Friendly Vehicles	Regulations aimed at reducing pollution, including the use of clean technology and better waste management, can be classified into adaptive governance if there is a sustained effort to update policies with the latest technology.	Top-down	Often hampered by rigid implementation and lack of stakeholder engagement, thus becoming the government's status quo.
Public Transportation Development	The development of public transportation infrastructure, such as MRT and busways, is a progressive step in adaptive governance.	Top-down	The lack of integration and adaptation to user needs indicates characteristics of the status quo.

(Result of Analysis, 2023)

The diverse and complex dynamics in handling air pollution in Jakarta show striking contrasts between various stakeholders. On the one hand, there is a majority of government officials who, during interviews, appeared confident in their current approach and expressed resistance to external suggestions or criticism. A senior official categorically stated,

"We believe that the strategy we have implemented is quite competent in dealing with air pollution problems. We are certainly open to input, but a lot of the criticism we

receive does not take into account the limitations and complexities we face." (I.1)

Instead, a different narrative emerged from interviews with NGOs, community and industry representatives. They expressed feelings of limited involvement in the decision-making process. They also reported a lack of regular review meetings or mechanisms to provide feedback on policy effectiveness.

"Too often we feel like we're just being invited to fulfill a formality, as if we're just being called upon to fill a quorum without really being given the opportunity to contribute and really being given the opportunity to influence policy..." (I.5)

Echoing this sentiment, an industry figure said that closer collaboration between the government and the industrial sector is essential, especially when it comes to crafting realistic and effective policies.

"We feel there is a huge gap between those of us on the ground and policymakers. We in industry have practical experience and innovative ideas that can be very helpful, but often we feel unheard. We want to engage more deeply, but too often we felt like our presence was more symbolic than substantive."

Furthermore, community members involved in the FGD expressed their feelings about their voices being ignored in discussions regarding air pollution management. Community members expressed their feelings of being sidelined in air pollution management discussions. Their experiences with deteriorating air quality and its impact on health are often not acknowledged in official strategies.

"I feel that our experience with pollution and its impact on health is not sufficiently acknowledged in the policies that are made," (I.7)

Apart from that, a sentiment that often arises among residents is the lack of a platform to voice their concerns, experiences or suggestions. They also felt there was a lack of platforms to voice their concerns, experiences or suggestions.

"We are the ones who live and breathe here every day, but our experiences with air pollution don't seem to be considered in policy making. We want our voices to be heard, but there doesn't seem to be adequate channels for that," said another resident. (I.6)

From the findings of this study, it is clear that there is a gap in perception and engagement between government officials and other groups such as NGOs, industry and the community. While government officials demonstrated confidence in existing approaches and resistance to external input, other groups felt a lack of participation and recognition of their contributions and experiences. This shows a strong tendency towards institutional inertia in handling air pollution in Jakarta, where the status quo is maintained without adequate adaptation or broad inclusion of all stakeholders.

Adaptive governance encourages flexibility, multi-stakeholder engagement, and iterative learning. The findings in Jakarta contradict these principles. The top-down approach, as evidenced in policy documents and interviews, inhibits a dynamic response to the changing nature of the air pollution challenge. Limited involvement of diverse stakeholders, especially community and industry representatives, has thwarted the principle of inclusiveness of adaptive governance. Additionally, the absence of a mechanism to review and adapt policies based on their effectiveness, input from the community, and new research is another deviation from the principles of adaptive governance (Folke et al., 2005).

The findings of this study are more aligned with the concept of institutional inertia. The dominant top-down approach, resistance to external suggestions, and lack of platforms for public involvement indicate a system that is resistant to change (North, 1990). Such inertia, while providing stability, can be detrimental in dealing with dynamic environmental challenges such as air pollution, which require timely, flexible and inclusive interventions.

Implications of a Dominant Government Approach

While government-led initiatives can provide direction and resources, the exclusion of other stakeholders can lead to limited perspectives and missed opportunities for innovative solutions. Potential government weaknesses, such as underestimating community experience or industry's ability to contribute positively, can lead to less-than-optimal policy decisions. In addition, without broad support from stakeholders, policy effectiveness can be hampered because policy implementation often requires collaboration across sectors and society (Dietz et al., 2003).

This approach can result in policy making that is less responsive to the actual conditions and needs of citizens. Without substantial input from a wide range of stakeholders, including NGOs, industry, and especially directly affected communities, policies may not fully reflect or address the problems faced by those most affected. Lack of transparency and dialogue in the decision-making process can weaken the legitimacy of the policies made and reduce public compliance with these policies.

Jakarta's current approach to air pollution management shows significant indications of

institutional inertia. The potential to transition to a more adaptive governance model requires not only policy reform, but also a paradigm shift in recognizing the value of the contributions of diverse stakeholders and the need for flexibility in dealing with complex environmental challenges. This dominant top-down approach indicates a strong tendency towards institutional inertia. This has the potential to maintain the status quo despite evidence indicating the need for change or adaptation. Thus, this approach can slow down or even hinder efforts to deal with air pollution in Jakarta effectively and sustainably.

Conclusion

This research has revealed deep challenges in Jakarta's approach to air pollution. While the aspirations for adaptive governance are laudable, the reality on the ground, as interpreted through the qualitative findings of this research, shows the existence of entrenched institutional inertia. Jakarta's still top-down and government-dominated attitude limits the city's ability to flexibly respond to the dynamic and diverse challenges posed by air pollution. This approach not only ignores valuable insights and input from non-government stakeholders, but also has the potential to hinder innovative solutions that could emerge from a more inclusive policymaking process. This research underscores the importance of a paradigm shift. Moving toward a truly adaptive governance model requires the Jakarta government to recognize the importance of engaging diverse stakeholders, encouraging transparency, and ensuring policies are continuously reviewed and refined based on their effectiveness and emerging environmental data.

The focus of this research is primarily on Jakarta, which means the results cannot be generalized directly to other cities or regions. Additionally, stakeholders, especially government officials, may display some form of bias in response, and may present their actions and perspectives in a more positive light than they actually are. Given that governance approaches and environmental challenges may change, these findings may reflect a temporary phase in Jakarta's journey towards better air pollution management. Although steps have been taken to ensure objectivity, personal bias may still influence the conclusions drawn. To address these limitations, future research could provide more comprehensive insights into air pollution governance in Jakarta and offer avenues for more effective and adaptive interventions.

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