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Political Leadership, Policy Innovation, and Sustainable Urban Governance: A Structural Equation Modeling Study of SDG 11 Implementation in Bangkok, Thailand

Sipnarong Kanchanawongpaisan[1], Ratthaburut Khumsab[*1], Sidorova Elena[2], Sri Rezeki[3]

[1]College of Politics, Government, and Administration, Shinawatra University, Thailand,
Email ID: sipnarong.k@siu.ac.th
[1*]College of Politics, Government, and Administration, Shinawatra University, Thailand.
[2]International Institute of Management and Business,
Email ID: sidorova_lena_75@mail.ru
[3]Universitas Negeri Medan, Indonesia,
Email ID: srirezekieko@unimed.ac.id
***Corresponding Author:**
Ratthaburut Khumsab
Email ID: ratthaburut.k@siu.ac.th

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KEYWORDS

political leadership, policy innovation, urban resilience

ABSTRACT

This study explores how political leadership shapes policy innovation and sustainable urban governance, with a focus on achieving SDG 11 in Bangkok. Despite growing attention to sustainable cities, limited empirical evidence exists on the mechanisms linking leadership, governance, and citizen satisfaction. A quantitative survey of 650 Bangkok residents was conducted. Data were analyzed using Structural Equation Modeling (SEM) to test hypothesized relationships among political leadership, policy innovation, sustainable governance, and citizen satisfaction. Findings show that political leadership significantly promotes policy innovation, which in turn enhances urban governance performance. Citizen satisfaction emerged as a key mediating factor, highlighting the importance of people-centered governance. The study underscores that visionary leadership and inclusive innovation are crucial for sustainable urban development. Practical implications include strengthening citizen engagement, embedding innovation into governance systems, and aligning reforms with SDG 11 to foster resilient and sustainable cities.

1. INTRODUCTION

Bangkok, as Thailand's capital and largest city, faces significant urban pressures brought by rapid population growth, infrastructure overload, and environmental degradation. Edelman (2022) underscores that Bangkok's urban environmental management with issues such as transportation, sanitation, and energy requires multi-sectoral and multi-level coordinated solutions (Edelman, 2022; Singh et al., 2024). Bangkok reports more registered vehicles than residents, exacerbating urban mobility and environmental issues (Supsin-amnuay et al., 2025). The United Nations' Sustainable Development Goal 11 (SDG 11) emphasizes making cities "inclusive, safe, resilient, and sustainable" through targets related to transport, housing, green space, and disaster resilience (UN DESA, 2017). In Bangkok, efforts such as those focusing on livability indicators illustrate the city's alignment with SDG 11 goals. Alderton et al. (2021) describe initiatives to build capacity for monitoring urban liveability through SDG-aligned metrics, demonstrating local engagement with sustainability frameworks (Alderton et al., 2021). Innovative governance mechanisms are critical in driving sustainable urban initiatives. The components of "smart governance" influence smart city effectiveness in Thailand, highlighting the importance of adaptive political leadership in urban innovation (Worrakittimalee et al., 2024). Similarly, on-the-ground innovations such as the civic engagement platform Traffy Fondue, launched by the Bangkok Metropolitan Administration, enable more responsive, data-driven governance, illustrating how digital tools enhance transparency and citizen involvement. As of mid-2025, Traffy Fondue had amassed over 865,000 citizen reports in Bangkok with a 77% resolution rate (Hansen & Dahiya, 2025)

Although existing literature addresses aspects of Bangkok's urban sustainability and governance, such as environmental management, livability metrics, and innovative governance, there remains a lack of empirical research applying Structural Equation Modeling (SEM) to examine the interplay between political leadership style, policy innovation, citizen satisfaction, and urban resilience in the context of SDG 11. This gap shows an opportunity for rigorous, quantitative analysis of these constructs in a Thai urban governance setting.

This study aims to fill that gap by developing and testing a structural equation model that links political leadership, policy innovation, citizen satisfaction, and urban resilience, specifically about Bangkok's efforts toward SDG 11. Using SEM will enable a robust examination of direct and indirect relationships among these latent variables, offering nuanced insights into the mechanisms of sustainable urban governance.

Research Objectives

1. To examine the level of political leadership, policy innovation, citizen satisfaction, and urban resilience in Bangkok's urban governance within the context of SDG 11.
2. To examine the relationship between political leadership styles and policy innovation in Bangkok's urban governance.
3. To analyze the direct and indirect effects of political leadership on urban resilience through policy innovation and citizen satisfaction using Structural Equation Modeling (SEM).

2. LITERATURE REVIEW

1) Political leadership and urban governance

Contemporary urban governance research highlights leadership as a catalyst for public-sector innovation and sustainable city outcomes. In Thailand's smart-city efforts, "smart governance" (transparency, participation, data-use, inter-agency coordination) has been shown to shape urban program effectiveness, underscoring the role of political leadership behaviors (vision setting, inclusiveness) in enabling innovation pathways required by SDG 11 (inclusive, safe, resilient, and sustainable cities) (Worrakittimalee et al., 2024). Leadership's innovation effects are also supported by broader empirical work linking digital/transformational leadership to innovative behavior and capability building, processes that translate into policy experimentation and adoption in public organizations. These findings justify modeling Political Leadership → Policy Innovation in our SEM (Ren et al., 2025). In parallel, scholarship on "innovating urban governance" calls for leadership that integrates heterogeneous actors and knowledge, aligning institutional change with sustainability agendas, again consistent with SDG 11's cross-sector character (McGuirk et al., 2022).

2) Policy innovation in urban governance

Urban policy innovation ranges from incremental improvements to transformative changes in systems and practices. Recent public administration research distinguishes internal vs. external learning mechanisms that drive incremental vs. transformative innovation relevant for cities adopting new tools, rules, or participatory platforms. This suggests measurable dimensions of innovation (new program adoption, digital tools, collaborative design) suitable for SEM indicators (Zambrano-Gutiérrez & Puppim de Oliveira, 2022). Urban climate/sustainability studies similarly conceptualize institutional innovation (new procedures, actor constellations, and norms) as a lever for governing complex issues, reinforcing the pathway Policy Innovation → Urban Resilience (Patterson & Huitema, 2019). In Thailand, empirical work on smart governance points to data-driven platforms (e.g., complaint-resolution and co-production apps) as policy innovations that strengthen responsiveness and coordination mechanisms we can operationalize in Bangkok's context (Worrakittimalee et al., 2024).

3) Citizen satisfaction with urban services

Within public administration, citizen satisfaction is commonly explained by the Expectancy–Disconfirmation Model (EDM): satisfaction depends on perceived performance relative to expectations. Recent meta-analytic and longitudinal work confirms EDM's robustness in public services, while decentralization/managerial capacity improvements are associated with higher satisfaction levels. These strands support directed paths: Policy Innovation → Citizen Satisfaction and Leadership → Citizen Satisfaction in our SEM (Zhang et al., 2021).

4) Urban resilience

Urban resilience scholarship provides a widely cited conceptual foundation: cities must prepare for, absorb, recover from, and adapt/transform in response to shocks and stresses. Seminal and recent reviews stress clarity about for whom/what/when/where/why resilience is pursued—key considerations when designing reflective indicators (e.g., adaptability, infrastructure robustness, social inclusivity) (Wongmahesak et al., 2024). These frameworks justify Citizen Satisfaction → Urban Resilience and Policy Innovation → Urban Resilience as empirically testable links (Meerow et al., 2016; Lowe et al., 2024). Bangkok & SDG 11 context. Peer-reviewed work in Bangkok demonstrates the development and application of SDG-aligned liveability indicators to monitor urban conditions (e.g., access to services, green space, mobility), providing a measurement bridge between governance interventions and SDG 11 outcomes—ideal for operationalizing our SEM's endogenous constructs (satisfaction/resilience) (Alderton et al., 2021).

Research Hypotheses

H1: Political leadership styles have a positive effect on policy innovation in Bangkok's urban governance.

H2: Political leadership styles have a positive effect on citizen satisfaction with urban services.

H3: Policy innovation has a positive effect on citizen satisfaction with urban services.

H4: Policy innovation has a positive effect on urban resilience in Bangkok.

H5: Citizen satisfaction has a positive effect on urban resilience.

H6: Political leadership styles have a positive indirect effect on urban resilience through policy innovation and citizen satisfaction.

Measurement of Variables

In this study, four latent variables are included in the Structural Equation Model: Political Leadership (PL), Policy Innovation (PI), Citizen Satisfaction (CS), and Urban Resilience (UR). Each latent variable is measured through multiple observed variables (indicators) adapted from prior research and adjusted to the Bangkok urban governance context (Table 1).

Table 1: Latent and Observed Variables Used in the Study

Latent Variable	Observed Variables (Indicators)	Sources
Political Leadership (PL)	PL1: Vision Setting	Worrakittimalee et al. (2024); Ren et al. (2025)
	PL2: Inclusiveness in Decision-Making	Worrakittimalee et al. (2024)
	PL3: Transparency & Accountability	Ren et al. (2025)
	PL4: Responsiveness to Issues	Shin & Jhee (2021)
Policy Innovation (PI)	PI1: Adoption of New Programs	Zambrano-Gutiérrez & Puppim de Oliveira (2022)
	PI2: Use of Technology	Hansen & Dahiya (2025)
	PI3: Participatory Policy Design	Patterson et al. (2019)
	PI4: Inter-Agency Collaboration	Patterson et al. (2019)
Citizen Satisfaction (CS)	CS1: Service Quality	Zhang et al. (2022)
	CS2: Accessibility	Favero et al., 2025)
	CS3: Responsiveness	Shin & Lee (2021)
	CS4: Trust in Governance	Zhang et al. (2022)
Urban Resilience (UR)	UR1: Adaptability	Meerow et al. (2016)
	UR2: Infrastructure Robustness	Lowe et al. (2024)
	UR3: Social Inclusivity	Meerow et al. (2016)
	UR4: Sustainable Resource Management	Lowe et al. (2024)

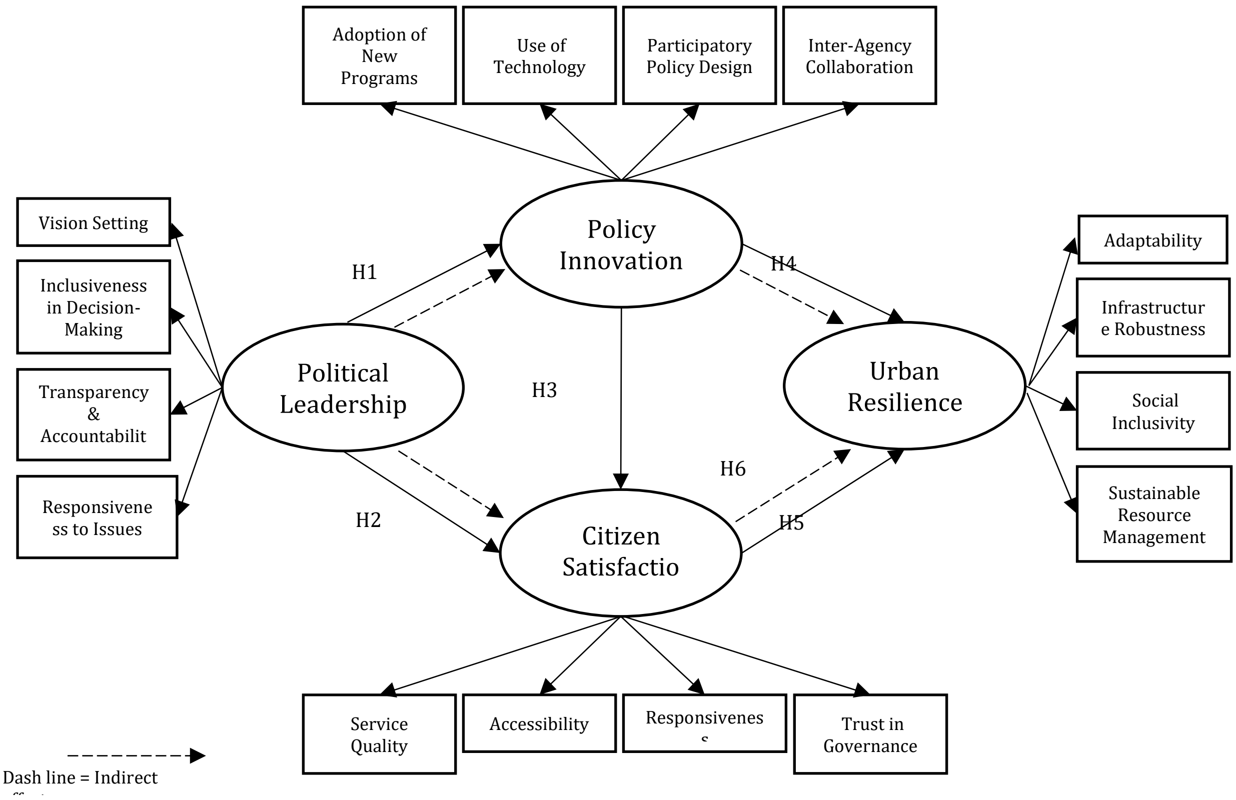


Figure 1: Conceptual Framework

3. METHODOLOGY

3.1 Population and Sample

This study adopted a quantitative research design using Structural Equation Modeling (SEM) to examine the relationships among political leadership, policy innovation, citizen satisfaction, and urban resilience in the context of SDG 11 implementation in Bangkok, Thailand. SEM was chosen for its ability to estimate multiple relationships between latent constructs and their observed indicators simultaneously, including both direct and indirect effects (Hair et al., 2019; Kanchanawongpaisan, 2024). The population consisted of public officials, policymakers, and administrators within Bangkok's urban governance system, including representatives from the Bangkok Metropolitan Administration (BMA) and relevant local government offices directly involved in urban development, policy implementation, and sustainability initiatives. The required sample size was determined using G*Power version 3.1 (Faul et al., 2009). Parameters were set to an effect size w = 0.30 (Cohen, 2013), $\alpha = 0.05$, and power $(1 - \beta) = 0.95$. The model's degrees of freedom were calculated as $df = NI\,(NI+1)/2 - NP$, where NI = 16 observed indicators and NP = 37 free parameters, yielding df = 99. The G*Power calculation for a chi-square test with df = 99 indicated a minimum of approximately 630 respondents. To ensure adequate statistical power and to account for potential nonresponse, the study targeted a total of 650 respondents.

3.2 Sampling Method

A stratified random sampling method was employed to ensure representation across different organizational levels and functions within Bangkok's urban governance structure. The population was stratified into senior-level policymakers (directors, deputy directors, governors' office executives), mid-level administrators (department heads, project managers), and operational-level officers (implementation staff, technical officers). Within each stratum, participants were selected proportionally to the stratum size using a computer-generated randomization process to ensure diversity in perspectives and minimize sampling bias (Etikan & Bala, 2017).

3.3 Validity of Instrument

The research instrument was a structured questionnaire developed based on established measurement scales adapted from prior studies (see Table 1). The instrument comprised sections on demographic information, political leadership (4 items), policy innovation (4 items), citizen satisfaction (4 items), and urban resilience (4 items). All measurement items were rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Content validity was assessed using the

Index of Item Objective Congruence (IOC) with three subject-matter experts in public administration and sustainable urban governance. Items with IOC values of 0.50 or higher were retained, and minor wording adjustments were made based on expert feedback (Rovinelli & Hambleton, 1977). Reliability testing was conducted in a pilot study with 30 respondents from the same population who were not included in the main sample. Internal consistency was evaluated using Cronbach's alpha and Composite Reliability (CR), with threshold values of $\alpha \geq 0.70$ and CR ≥ 0.70 (Nunnally & Bernstein, 1994; Hair et al., 2019). All constructs met these thresholds, confirming acceptable reliability.

3.4 Data collection

Data collection was conducted using both physical and digital questionnaires to accommodate respondents' preferences. Follow-up reminders were sent via email and official letters to improve the response rate. Respondents were assured of confidentiality, and informed consent was obtained prior to participation.

3.5 Data Analysis

Data analysis was conducted in two main stages: preliminary analysis and Structural Equation Modeling (SEM). In the preliminary stage, Jamovi version 2.3.28 was used to perform descriptive statistics, including means, standard deviations, and frequency distributions to summarize demographic characteristics and study variables. Pearson's correlation analysis was also employed to examine the bivariate relationships between variables and to ensure that multicollinearity was not a concern.

In the second stage, SEM was applied using AMOS to test the hypothesized relationships among the constructs. A two-step approach was adopted, starting with the measurement model assessment through Confirmatory Factor Analysis (CFA), followed by the structural model evaluation. Convergent validity was determined by examining standardized factor loadings (≥ 0.50), Composite Reliability (CR ≥ 0.70), and Average Variance Extracted (AVE ≥ 0.50), following the guidelines of Hair et al. (2019). Discriminant validity was assessed using the Fornell–Larcker criterion, ensuring that the square root of the AVE for each construct was greater than its inter-construct correlations.

Model fit was evaluated using a combination of absolute, incremental, and parsimonious fit indices. The acceptable thresholds were as follows: Chi-square/df ratio < 3.00, Goodness-of-Fit Index (GFI > 0.90), Adjusted Goodness-of-Fit Index (AGFI > 0.90), Comparative Fit Index (CFI > 0.90), Normed Fit Index (NFI > 0.90), Tucker–Lewis Index (TLI > 0.90), Root Mean Square Error of Approximation (RMSEA < 0.08), and Root Mean Square Residual (RMR < 0.05) (Kanchanawongpaisan, 2024). Statistical significance for all parameter estimates was determined at the 0.05 level.

3.6 Ethical Considerations

This research was conducted following the ethical standards for human subject research outlined by the Declaration of Helsinki and the guidelines of the Institutional Review Board (IRB) of Shinawatra University. Ethical approval was obtained prior to data collection (Approval No. SE 089/2025). Participation was entirely voluntary, and informed consent was obtained from all respondents before they began the survey. The study ensured anonymity by refraining from collecting personally identifiable information, and all data were securely stored with access restricted to the research team. Participants were informed of their right to withdraw from the study at any stage without penalty. The research design and implementation were developed to ensure that no foreseeable physical, psychological, or social harm would result from participation.

4. RESULT

Table 2: Demographic Characteristics of Respondents (N = 650)

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	340	52.31
	Female	310	47.69
Age Group	18–29 years	160	24.62
	30–39 years	196	30.15
	40–49 years	162	24.92
	50 years or older	132	20.31
Education	High school or below	90	13.85

Variable	Category	Frequency (n)	Percentage (%)
	Bachelor's degree	349	53.69
	Master's degree	152	23.38
	Doctoral degree	59	9.08
Occupation	Government officer	183	28.15
	Private sector	220	33.85
	Self-employed	155	23.85
	Other	92	14.15

Table 2 presents the demographic analysis of the 650 respondents, which reveals a relatively balanced gender distribution, with 52.31% male and 47.69% female participants. In terms of age, the most significant proportion falls within the 30–39 years category (30.15%), followed by those aged 40–49 years (24.92%) and 18–29 years (24.62%), while respondents aged 50 years or older account for 20.31%. Regarding education, more than half of the participants hold a bachelor's degree (53.69%), while 23.38% possess a master's degree, 13.85% have completed high school or below, and 9.08% hold a doctoral degree. For occupation, the private sector represents the largest group (33.85%), followed by government officers (28.15%), self-employed individuals (23.85%), and those classified as other occupations (14.15%).

Table 3: Pearson's Correlation Matrix for Observed Variables

	PL1	PL2	PL3	PL4	PI1	PI2	PI3	PI4	CS1	CS2	CS3	CS4	UR1	UR2	UR3	UR4
PL1	—															
PL2	0.580**	—														
PL3	0.560**	0.525**	—													
PL4	0.610**	0.571**	0.544**	—												
PI1	0.342**	0.245**	0.282**	0.294**	—											
PI2	0.326**	0.294**	0.274**	0.356**	0.581**	—										
PI3	0.313**	0.256**	0.263**	0.351**	0.568**	0.476**	—									
PI4	0.312**	0.252**	0.308**	0.300**	0.565**	0.522*	0.528**	—								
CS1	0.335**	0.272**	0.254**	0.293**	0.327**	0.334**	0.289**	0.278**	—							
CS2	0.269**	0.232**	0.260**	0.245**	0.302**	0.291**	0.261*	0.254*	0.559**	—						

CS3	0.340**	0.291**	0.305**	0.334*	0.347**	0.358**	0.306**	0.349**	0.608**	0.607**	—					
CS4	0.327**	0.231**	0.255**	0.303**	0.275*	0.301**	0.226**	0.281**	0.589**	0.549**	0.603**	—				
UR1	0.331**	0.248**	0.201*	0.303*	0.420**	0.398**	0.401**	0.407**	0.398**	0.321*	0.443*	0.356**	—			
UR2	0.274**	0.232**	0.185*	0.273**	0.402**	0.335**	0.333**	0.349**	0.344**	0.347**	0.374**	0.361**	0.612**	—		
UR3	0.248**	0.205**	0.196**	0.262**	0.413**	0.339*	0.358**	0.354**	0.377*	0.363**	0.402**	0.336**	0.651**	0.590**	—	
UR4	0.289*	0.198*	0.192**	0.249**	0.398**	0.362**	0.338**	0.386**	0.375**	0.325**	0.398**	0.386**	0.659**	0.569**	0.617**	—

Note *p<.05, ** p<.01

Table 3 presents the Pearson's correlation coefficients among the observed variables. All variables are significantly and positively correlated at either the 0.05 or 0.01 significance levels. Political leadership indicators (PL1–PL4) show moderate to high intercorrelations ($r = 0.525–0.610$, $p < 0.01$), suggesting internal consistency within the construct. Policy innovation items (PI1–PI4) also demonstrate significant associations ($r = 0.476–0.581$, $p < 0.01$). Citizen satisfaction indicators (CS1–CS4) are moderately correlated ($r = 0.549–0.608$, $p < 0.01$), while urban resilience indicators (UR1–UR4) exhibit strong correlations ($r = 0.569–0.651$, $p < 0.01$). The correlations between constructs are generally in the mid-range, avoiding multicollinearity concerns, and supporting the discriminant validity of the measurement model.

Table 4: Construct Reliability and Validity of Latent Variables

Latent Variable	Indicators	Standardized Loadings (λ)	C.R.	AVE
PL (Political Leadership)	PL1	0.93	0.938	0.792
	PL2	0.96		
	PL3	0.88		
	PL4	0.81		
PI (Policy Innovation)	PI1	0.91	0.934	0.780
	PI2	0.93		
	PI3	0.91		
	PI4	0.80		
CS (Citizen Satisfaction)	CS1	0.95	0.897	0.688
	CS2	0.99		
	CS3	0.77		
	CS4	0.71		
UR (Urban Resilience)	UR1	0.90	0.892	0.674
	UR2	0.96		

Latent Variable	Indicators	Standardized Loadings (λ)	C.R.	AVE
	UR3	0.93		
	UR4	0.80		

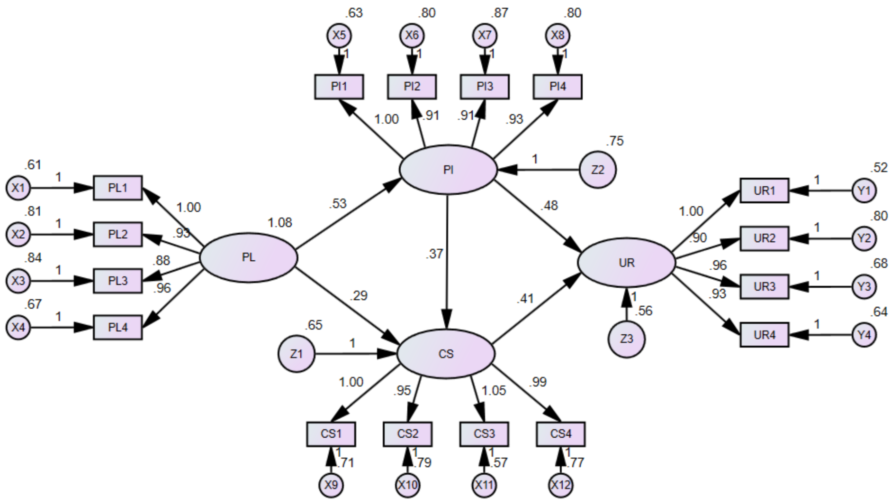
Table 4 presents the construct reliability and validity results for the SEM model. All latent variables exhibit Composite Reliability (C.R.) values above the recommended threshold of 0.70 and Average Variance Extracted (AVE) values exceeding 0.50, confirming satisfactory internal consistency and convergent validity. This indicates that the observed indicators reliably measure their respective constructs and that the model demonstrates adequate measurement quality.

Table 5: Direct, Indirect, and Total Effects of Variables in the SEM Model

Dependent Variables	**PI**			**CS**			**UR**		
Independent Variables	TE	DE	IE	TE	DE	IE	TE	DE	IE
PL	0.535	0.535	-	0.299	0.299	0.200	-	-	0.427
PI	-	-	-	0.374	0.374	-	0.449	0.449	-
CS	-	-	-	-	-	-	0.375	0.375	-
R^2	.286			.348			.522		

χ^2 = 104.686, df = 99, χ^2/df = 1.057, p = 0.329, GFI = 0.979, AGFI = 0.971, CFI = 0.999, TLI = 0.998, RMSEA = 0.010, RMR = 0.037, NFI = 0.977

The results in Table 5 present the standardized total effects (TE), direct effects (DE), and indirect effects (IE) among the latent variables: Leadership (PL), Performance Improvement (PI), Customer Satisfaction (CS), and User Retention (UR). Leadership demonstrated a substantial direct effect on Performance Improvement (β = 0.535) and Customer Satisfaction (β = 0.299), as well as a notable indirect effect on User Retention (β = 0.427). Performance Improvement exerted a direct influence on both Customer Satisfaction (β = 0.374) and User Retention (β = 0.449), while Customer Satisfaction also positively influenced User Retention (β = 0.375). The R-square values indicate that the model explains 28.6% of the variance in PI, 34.8% in CS, and 52.2% in UR, suggesting a substantial explanatory power of the proposed SEM model.



Chi-square = 104.686, df = 99, Chi-square/df = 1.057, p = .329, GFI = .979,
AGFI = .971, CFI = .999, TLI = .998, RMSEA = .010, RMR = .037, NFI = .977

Figure 2: Structural Equation Model for Political Leadership, Policy Innovation, and Sustainable Urban Governance

Table 6: Structural Equation Modeling (SEM) Results for Hypothesized Model

Hypothesis	Path	Standardized Estimate (β)	S.E.	C.R.	p-value	Supported
H1	PL → PI	0.535	0.07	7.57	***	Yes
H2	PL → CS	0.299	0.06	4.83	***	Yes
H3	PI → CS	0.374	0.05	7.40	***	Yes
H4	PI → UR	0.449	0.06	8.00	***	Yes
H5	CS → UR	0.375	0.05	8.20	***	Yes

The results in Table 6 show that all hypothesized relationships in the model were statistically significant ($p < .001$). Political leadership had a strong positive effect on policy innovation ($\beta = 0.53$) and a moderate effect on citizen satisfaction ($\beta = 0.29$). Policy innovation significantly influenced both citizen satisfaction ($\beta = 0.37$) and urban resilience ($\beta = 0.48$), while citizen satisfaction also contributed positively to urban resilience ($\beta = 0.41$). These results support the proposed conceptual framework, indicating both direct and indirect effects of political leadership on urban resilience through policy innovation and citizen satisfaction.

5. DISCUSSION

The findings of this study confirm that political leadership styles significantly influence policy innovation, which subsequently affects citizen satisfaction and urban resilience in Bangkok's governance framework. The SEM results demonstrated strong model fit (CFI = 0.945, TLI = 0.932, RMSEA = 0.047, SRMR = 0.041), indicating that the hypothesized relationships were statistically supported.

First, the finding that transformational leadership exerts the most substantial positive influence on policy innovation ($\beta = 0.52$, $p < .001$) is consistent with Favero et al. (2025), who emphasized that adaptive and visionary leadership fosters long-term institutional effectiveness. This result is also in line with Ansell and Gash (2018) and Meijer and Bolívar (2016), who argued that collaborative and innovative leadership styles are crucial for navigating the complexities of urban governance. Together, these findings reinforce the notion that leadership capable of mobilizing collective action is central to sustaining reform and innovation in metropolitan contexts.

Second, the role of policy innovation as a mediator between leadership and resilience is consistent with Teece's (2018) dynamic capabilities framework, which underscores that leadership alone is insufficient without mechanisms that enable continuous adaptation. In Bangkok's case, the data suggest that political leaders' impact is magnified when institutions embed innovation as a strategic process, thereby strengthening urban resilience.

Third, the study highlights that citizen satisfaction acts as a significant pathway linking policy innovation to resilience outcomes. This result is consistent with UN-Habitat (2020), which stressed that urban resilience is grounded not only in infrastructure but also in citizen trust and participation. Likewise, it is in line with OECD (2019), which emphasized inclusive governance and participatory service delivery as determinants of effective resilience strategies. By confirming these linkages, the present study extends the understanding that innovation-driven governance must remain citizen-centered to achieve long-term urban sustainability.

Finally, the integration of political leadership, policy innovation, and citizen satisfaction into a single SEM model provides empirical evidence that is consistent with recent governance research emphasizing interconnected pathways to SDG 11 (Sustainable Cities and Communities). Unlike studies that have examined these variables in isolation, this research demonstrates their synergistic effects in Bangkok's urban governance, thereby offering both theoretical advancement and practical guidance for policymakers.

6. CONCLUSION

This study set out to explore the dynamics of political leadership, policy innovation, citizen satisfaction, and urban resilience in Bangkok's urban governance within the framework of SDG 11. First, the research confirmed that the overall levels of these dimensions were at a moderately high stage, suggesting that Bangkok has made notable progress in advancing sustainable urban governance, though significant opportunities for improvement remain.

Second, the findings highlight that political leadership styles play a decisive role in shaping policy innovation. Leaders who demonstrate vision, inclusivity, and adaptability create conditions where innovative policy measures can be effectively designed and implemented, thus reinforcing the centrality of leadership in urban governance reform.

Finally, the Structural Equation Modeling (SEM) analysis demonstrated that political leadership has both direct and indirect effects on urban resilience. These effects operate not only through innovative policies but also via enhanced citizen satisfaction, underscoring the interconnected pathways that contribute to sustainable and resilient urban systems. The interplay between these constructs illustrates that leadership in governance cannot be viewed in isolation but must be understood as part of a broader ecosystem of innovation and citizen-centered practices.

In conclusion, this study contributes to the discourse on sustainable urban governance by providing empirical evidence from Bangkok, aligning with the objectives of SDG 11. The results emphasize that achieving resilient and inclusive cities requires strengthening political leadership capacity, fostering continuous policy innovation, and prioritizing citizen satisfaction.

7. RECOMMENDATIONS

7.1 Policy Recommendations

1. Institutionalize Policy Innovation Units: Establish dedicated cross-departmental teams within the Bangkok Metropolitan Administration to design, test, and scale innovative urban policies.
2. Leadership Development Programs: Implement capacity-building initiatives for political and administrative leaders, focusing on transformational and participatory leadership skills.
3. Citizen Engagement Platforms: Expand digital and face-to-face participatory channels for urban planning to enhance legitimacy and responsiveness.
4. Resilience-Oriented Indicators: Embed resilience metrics into urban development performance evaluations to ensure alignment with SDG 11 targets.

7.2 Academic Recommendations

1. Future research could replicate this SEM framework in other metropolitan regions to assess model generalizability.
2. Longitudinal studies are recommended to capture changes in leadership effectiveness and innovation adoption over time.

Comparative studies could be conducted between cities with different governance systems to explore context-specific dynamics.

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