

Comparative analysis of service delivery models across mid-sized cities

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Abstract

In recent times, there has been a growing discourse on how cities of different population sizes deliver public services. This study presents a comparative analysis of public service delivery models used in mid-sized cities, focusing on how institutional, fiscal, and governance conditions shape model selection and performance outcomes. Using a systematic review of 29 peer-reviewed studies published between 2015 and 2026, the research examines five dominant service delivery approaches: direct municipal provision, outsourcing, public-private partnerships, inter-municipal cooperation, and citizen co-production.

Rather than advancing a single optimal model, the study argues that multiple service delivery approaches can produce positive outcomes, with effectiveness contingent on the specific institutional and fiscal context of each city. The analysis evaluates the advantages, limitations, and institutional requirements associated with each model while considering the distinctive governance conditions of mid-sized cities, including limited fiscal capacity and administrative resources. The study also highlights the growing role of digital governance in reshaping municipal service systems. Overall, the evidence suggests that service delivery choice is a problem of contextual alignment rather than model selection. Hybrid service delivery arrangements are most effective for improving efficiency, accountability, and responsiveness in mid-sized urban environments.

Keywords: Public service delivery; Mid-sized cities; Service delivery models; Urban governance; Digital governance

1. Introduction

Over the past decade, scholars and policymakers have paid growing attention to how mid-sized cities organize and deliver public services. Fiscal constraints, shifting governance approaches, and rising citizen expectations have all intensified this focus. Mid-sized cities occupy a unique institutional space: they are large enough to require structured service systems but often lack the financial and administrative capacity of major metropolitan governments. Although no single definition exists, the term commonly refers to cities with populations between 100,000 and one million residents. The focus is analytically important because these municipalities face governance conditions that differ from both small local governments and large cities. Their position pushes them to pursue efficiency and innovation in ways that differ from larger urban centers (Searle et al., 2026).

As a result, local governments have experimented with multiple delivery arrangements, including direct in-house provision, contracting out, public-private partnerships (PPPs), inter-municipal cooperation, and citizen co-production (Petkovšek et al., 2021). These approaches reflect broader shifts in public administration theory. In particular, the move from New Public Management toward New Public Governance has emphasized collaboration, network-based service provision, and stronger citizen participation in the delivery of public services (Sorrentino et al., 2018). The development

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of these models has also been shaped by austerity policies, decentralization reforms, and the rapid expansion of digital technologies that influence how cities design and deliver services (Kim & Warner, 2016).

Research across different national contexts shows a clear link between governance structures, service delivery choices, and urban performance outcomes. In the United States, many local governments responded to fiscal pressure after the global recession by adopting hybrid service arrangements rather than relying solely on privatization or in-house delivery (Kim & Warner, 2016). Studies of Spanish municipalities show that decisions to contract out social services are influenced not only by efficiency concerns but also by institutional and political conditions (Chow et al., 2024). At the same time, the rise of smart city initiatives has added a digital dimension to these discussions. Comparative work on American and Chinese cities demonstrates how digital infrastructure can reshape access to public services and influence performance outcomes (Hu & Zheng, 2021). Citizen co-production has also gained prominence, particularly in mid-sized cities. Participatory budgeting platforms and mobile e-participation tools have shown potential to improve service responsiveness and strengthen public legitimacy (Allen et al., 2020). Together, these developments highlight the complexity of service delivery decisions and the importance of comparative analysis for advancing both theory and practice.

Although research on local public service delivery has expanded, important gaps remain in understanding how mid-sized cities compare across different service delivery models and what factors explain performance differences. Several studies examine specific delivery mechanisms such as outsourcing (Andersson et al., 2019), public–private partnerships (Liu et al., 2024), digital governance (Manoharan et al., 2023), and citizen co-production (Uster et al., 2025). However, these analyses often treat each model in isolation. This study addresses these gaps by systematically reviewing the service delivery models employed in mid-sized cities and evaluating the conditions under which these models produce effective outcomes.

This study systematically reviews and compares the main public service delivery models used in mid-sized cities. The goal is to identify patterns of adoption, evaluate performance outcomes, and understand the contextual factors that influence how these models function in practice. Through this analysis, the study seeks to clarify how different approaches shape service delivery effectiveness in mid-sized urban environments.

It contributes to both academic research and public administration practice. From a scholarly perspective, it addresses a clear gap in the comparative urban governance literature by treating mid-sized cities as a distinct unit of analysis. Much of the existing research concentrates on large metropolitan areas, leaving mid-sized cities underexamined despite their growing policy relevance. By focusing on this category of cities, the study extends theoretical perspectives such as transaction cost economics, new public governance, and co-production theory to a context that has received limited empirical attention (Petkovšek et al., 2021).

It concentrates on comparative analysis of delivery approaches such as outsourcing, public–private partnerships, in-house provision, co-production, and digitally enabled service delivery. It does not examine rural local governments, megacities, or highly specialized sectoral service studies that fall outside the broader framework of urban public administration. By maintaining this focus, the study aims to produce a coherent and comparable body of evidence on how mid-sized cities organize and manage public service delivery

2. Methodology

2.1. Research Design

This study adopts a systematic review design to analyze and compare public service delivery models across mid-sized cities. This approach allows for a rigorous and transparent synthesis of existing empirical and theoretical research. The comparative analytical approach examines key public service delivery models and evaluates their advantages, limitations, and institutional requirements in the context of mid-sized city governance.

The literature on service delivery models spans several disciplines, including public administration, urban planning, and governance studies. A systematic review, therefore, provides an effective framework for integrating these perspectives, identifying consistent patterns, and reconciling divergent findings.

2.2. Data Sources and Search Strategy / Data Collection

The literature search drew on several major academic databases: Google Scholar, ResearchGate, Scopus, and Web of Science. Additional searches were conducted in specialized journals such as the *Journal of Urban Affairs*, *Public*

Administration Review, Government Information Quarterly, Public Management Review, and Lex Localis – Journal of Local Self-Government. These journals regularly publish empirical and theoretical work on local service delivery.

To ensure comprehensive coverage, the reference lists of identified studies were also reviewed manually. This backward citation approach helps identify relevant sources that database searches may overlook and is widely used in systematic reviews.

The search strategy used structured combinations of keywords and Boolean operators to balance precision and breadth. Core search terms included *public service delivery, mid-sized cities, local government, service delivery models, and urban governance*. These were combined with related terms such as *outsourcing, privatization, public-private partnerships, co-production, digital governance, e-government, inter-municipal cooperation, and comparative analysis*. Boolean operators (AND, OR) were used to refine results, while phrase searches ensured contextual accuracy for compound terms such as *service delivery models* and *mid-sized cities*. Searches were conducted in English and were limited to peer-reviewed publications. After screening, 29 sources met the inclusion criteria.

2.3. Inclusion and Exclusion Criteria

Studies were included based on criteria designed to ensure relevance, currency, and scholarly rigor. Eligible sources were published between 2015 and 2026 so that the review reflects contemporary governance conditions, post-austerity policy environments, and the influence of digital transformation on service delivery.

Each study also had to address at least one of the following areas: a specific public service delivery model, a comparative evaluation of delivery approaches, or empirical or theoretical insights into service provision within local or urban government. Studies focused solely on large metropolitan areas or rural local governments were excluded unless they included analysis relevant to mid-sized cities. Opinion pieces, editorials, dissertations, and non-peer-reviewed grey literature were also excluded. Sources that did not engage substantively with governance, institutional dynamics, or performance outcomes in service delivery were omitted to maintain analytical focus across the review.

2.4. Data Analysis

The data were analyzed by identifying key themes and comparing findings across the studies. This approach made it possible to combine results from different types of research. Information from each study was grouped into themes based on the study's objectives. Special attention was given to how common features of mid-sized cities, such as population size, financial capacity, and governance structure, influence the outcomes of different service delivery approaches.

2.5. Limitations of the Study

This study has several limitations that should be acknowledged. First, the analysis relies primarily on existing literature rather than primary empirical data, which means the conclusions are based on the synthesis of prior studies rather than direct observation of municipal service delivery practices. Second, while the study adopts a comparative perspective across different service delivery models, it does not examine specific city-level cases in depth. As a result, contextual variations across national governance systems and local institutional environments may influence how these models operate in practice. Finally, the definition of mid-sized cities used in this study, while consistent with common population thresholds in the literature, may not capture all functional differences among municipalities across regions. Future research could address these limitations through longitudinal empirical studies and comparative case analyses of mid-sized cities in different governance contexts.

3. Key findings

3.1. Typological Landscape of Public Service Delivery Models in Mid-Sized Cities

Public service delivery in mid-sized cities varies based on local institutional and resource conditions. Rather than relying on a single approach, cities often use a mix of models. This section highlights the main service delivery types identified in the literature and explains how they operate in practice.

3.1.1. Overview of Dominant Model Types

Public service delivery in mid-sized cities generally follows five broad models identified across the comparative literature: direct municipal provision, outsourcing or contracting-out, public-private partnerships (PPPs), inter-municipal cooperation, and co-production. These models rarely operate in isolation. Many mid-sized cities rely on

hybrid arrangements that combine several approaches depending on the service sector, fiscal conditions, and local political priorities (Petkovšek et al., 2021).

This diversity reflects a wider shift in how local governments organize public services. Traditional municipal administration relied heavily on hierarchical, bureaucratic structures in which the city government directly produced most services. Over time, governance systems have moved toward more networked arrangements that distribute responsibility across public institutions, private providers, and civic actors (Sorrentino et al., 2018). Understanding these models is essential for comparative analysis. The delivery model chosen by a city influences service cost, quality, accountability structures, and the administrative capacity required to manage service systems effectively.

3.1.2. In-House Provision and Its Continued Relevance

Despite several decades of reform promoting market-based solutions, direct municipal provision remains a widely used service delivery model in mid-sized cities. Governments often retain in-house provision when services involve specialized infrastructure, strong political sensitivity, or tasks that are difficult to specify and monitor through contracts.

After the global financial crisis, many municipalities in the United States and Europe reconsidered earlier outsourcing decisions and brought certain services back under municipal control. This process, often referred to as *remunicipalization*, reflected practical concerns about contract oversight, service quality, and the administrative complexity of managing external providers (Kim & Warner, 2016). The shift was largely pragmatic rather than ideological.

In-house provision remains especially common in areas such as social services, emergency management, and community development. These sectors often require flexible service delivery and strong relationships between providers and residents. The continued relevance of direct provision challenges the assumption that privatization represents a universal path toward efficiency. Instead, it highlights the importance of evaluating service delivery choices within their institutional and operational context (Lamothe & Lamothe, 2025).

3.1.3. Outsourcing and Contracting-Out

Outsourcing is the most widely documented alternative to direct municipal provision in the literature on mid-sized cities. Under this model, service production is transferred to private firms or nonprofit organizations through formal contractual agreements. Municipal governments remain responsible for oversight while external providers deliver the service.

This model has been applied to many local government functions, including waste management, facility maintenance, information technology services, social care, and public transportation (Andersson et al., 2019). The theoretical foundation for outsourcing largely stems from transaction cost economics, which argues that competition among private providers can reduce production costs and shift certain financial risks away from the public sector.

In practice, the outcomes of outsourcing vary widely. The effectiveness of the model depends heavily on contract design, the competitiveness of the supplier market, and the municipality's ability to monitor performance (Chow et al., 2024). Mid-sized cities often face particular challenges in this area because they may lack specialized procurement expertise or sufficient administrative capacity to oversee complex contracts over long periods.

3.1.4. Public–Private Partnerships and Inter-Municipal Cooperation

Public–private partnerships represent a more integrated form of collaboration between government and the private sector. Unlike short-term outsourcing contracts, PPPs typically involve long-term agreements in which both parties share financial, operational, and technical responsibilities. These arrangements are most common in capital-intensive sectors such as water treatment systems, public transportation networks, energy infrastructure, and urban redevelopment projects (Liu et al., 2024).

PPPs rely on detailed contractual frameworks that specify performance standards, financing arrangements, and risk allocation. Because these agreements often extend over decades, they require strong governance structures and long-term planning capacity.

Inter-municipal cooperation offers a different path to achieving efficiency. Instead of relying on private partners, neighboring local governments pool resources and coordinate service delivery. This model allows municipalities to achieve economies of scale while maintaining public control over services. It has gained particular prominence in

Europe, where smaller and mid-sized municipalities often face fiscal pressures that make independent service provision costly or inefficient (Bel & Elston, 2024). Both approaches reflect the reality that many mid-sized cities must rely on partnerships to sustain effective service systems.

3.1.5. Co-Production as a Structural Model

Co-production refers to the active involvement of citizens, community groups, or service users in the design, delivery, or evaluation of public services. In recent years, this approach has evolved from a supplementary engagement strategy into a recognized service delivery model within urban governance research (Cheng et al., 2023).

Mid-sized cities have adopted a variety of institutional mechanisms to support co-production. Examples include participatory budgeting programs, neighborhood service committees, and digital platforms that allow residents to report service issues or contribute ideas for policy improvement (Manes-Rossi et al., 2023). These mechanisms integrate citizen input directly into service management processes.

Co-production is particularly common in areas such as social care, environmental management, urban planning, and community safety. In these sectors, local knowledge and trust between residents and service providers can improve responsiveness and problem-solving capacity. Rather than replacing formal delivery systems, co-production often complements them. It functions as a governance layer that strengthens legitimacy and responsiveness regardless of whether services are produced by public agencies or external partners (Uster et al., 2025).

3.2. Performance and Efficiency Outcomes Associated with Alternative Delivery Models

Performance outcomes across service delivery models are not uniform and can vary depending on context and how performance is defined. Different models emphasize different priorities, such as cost, quality, or accountability. This section explores how these variations are reflected in the literature, particularly in relation to mid-sized cities.

3.2.1. Conceptualizing Performance in a Comparative Context

Assessing performance across service delivery models is inherently complex because performance has multiple dimensions. Efficiency, effectiveness, equity, responsiveness, and citizen satisfaction are all valid indicators. Yet comparative research often concentrates on cost efficiency and measurable output indicators, especially in studies of outsourcing and PPPs (Elías et al., 2023).

This narrow focus creates a clear tension. A delivery model that performs well on cost measures may still perform poorly in service quality, equity, or democratic accountability. The tension is particularly visible in mid-sized cities, where fiscal constraints coexist with strong community expectations for accessible and responsive services.

A meaningful comparison therefore requires a broader evaluation framework. Performance should be assessed not only through unit costs but also through citizen satisfaction, service accessibility, compliance with contractual standards, and long-term fiscal sustainability. These dimensions provide a more complete understanding of how delivery models function in practice.

3.2.2. Outsourcing Performance: Mixed and Context-Dependent Evidence

Evidence on outsourcing performance remains mixed and highly dependent on context. Studies of Spanish municipalities show that efficiency outcomes in solid waste collection vary widely across delivery modes. Under certain fiscal and geographic conditions, concession arrangements and inter-municipal cooperation outperform both fully public and fully private systems (Elías et al., 2023).

Contracting-out in social services has produced efficiency gains in some settings. These gains tend to occur where contract design is strong and monitoring systems are effective. However, the benefits decline when political interference disrupts procurement processes or when institutional capacity limits effective oversight (Chow et al., 2024).

Another consistent finding concerns transaction costs. Competitive contracting can reduce production costs, but the process also generates additional expenses. Procurement procedures, contract negotiation, monitoring, and dispute resolution all require administrative resources. In mid-sized cities that lack specialized procurement capacity, these costs can offset expected savings (Andersson et al., 2019). As a result, the net efficiency impact of outsourcing depends heavily on the administrative environment in which it operates.

3.2.3. PPP Performance: Strengths in Infrastructure, Limitations in Soft Services

Public-private partnerships tend to perform more consistently in capital-intensive infrastructure sectors. Private partners often contribute financing capacity and specialized technical expertise, which can improve project delivery and generate value relative to purely public provision (Liu et al., 2024).

One commonly cited advantage is the innovation incentive built into performance-based contracts. Private partners may introduce more efficient construction methods, improved maintenance systems, or streamlined operational processes. These gains, however, depend on careful contract design and a competitive infrastructure market.

Evidence supporting PPPs in softer service sectors remains limited. Services such as social care, educational support, and community development involve complex human relationships and ethical considerations. These qualities are difficult to specify in formal performance contracts and difficult to monitor objectively (Monteduro & Dragoni, 2020).

Long-term fiscal commitments also create risk for mid-sized cities. PPP contracts often involve future payment obligations and contingent liabilities. For municipalities with limited borrowing capacity and small fiscal reserves, these obligations can restrict financial flexibility over time.

3.2.4. Inter-Municipal Cooperation and Scale Economy Outcomes

Inter-municipal cooperation frequently produces efficiency gains in services that benefit from economies of scale. Waste management, water supply, administrative services, and digital infrastructure are common examples (Bel & Elston, 2024).

By pooling resources across neighboring jurisdictions, municipalities spread fixed costs across a larger population base. This arrangement allows mid-sized cities to access technologies and service capabilities that would otherwise exceed their individual budgets.

Several studies also highlight the effectiveness of hybrid arrangements that combine inter-municipal cooperation with elements of private contracting. These structures often produce stronger efficiency outcomes than either approach alone. The evidence suggests that treating public cooperation and private outsourcing as mutually exclusive options oversimplifies how service systems actually operate (Bel & Elston, 2024).

Governance design remains critical. Cooperative arrangements function best when decision rules, cost-sharing mechanisms, and exit procedures are clearly defined. Without these structures, disputes between municipalities can disrupt service delivery and undermine potential efficiency gains.

3.2.5. Co-Production Performance: Quality, Responsiveness, and Equity

Co-production tends to perform well in areas where market-oriented models struggle. Research consistently links co-production to improvements in service responsiveness, citizen satisfaction, and local problem resolution.

The strongest outcomes appear when participation is institutionalized. In these systems, citizen input is integrated into routine service management rather than limited to occasional consultation. Structured co-production can produce faster response times, more accurate assessments of community needs, and higher participation among underserved populations (Uster et al., 2025).

Evidence from participatory budgeting initiatives in mid-sized European cities illustrates these effects. When residents directly influence spending priorities, resource allocation aligns more closely with community needs. This alignment improves perceptions of fairness and strengthens trust in local institutions (Manes-Rossi et al., 2023).

The effectiveness of co-production, however, depends on the depth and inclusiveness of participation. Superficial engagement rarely produces meaningful service improvements. In some cases, poorly designed participation processes may even widen inequalities if better-resourced groups dominate decision-making forums.

3.3. Institutional, Political, and Fiscal Factors Influencing Model Selection

Service delivery choices in mid-sized cities are influenced by more than technical considerations. Institutional capacity, political structures, and fiscal conditions all shape how decisions are made and which models are adopted. This section explores these influences in greater detail.

3.3.1. *Institutional Capacity as a Primary Determinant*

Institutional capacity strongly shapes the service delivery choices available to mid-sized cities. Capacity includes administrative expertise, procurement competence, and the organizational systems needed to design, manage, and evaluate service arrangements. Cities with stronger managerial professionalism are more likely to implement outsourcing and PPP models successfully because these arrangements require advanced contract management and oversight (Wei et al., 2022).

Municipalities with limited administrative capacity often rely on in-house provision, a choice frequently driven by practical constraints rather than policy preference (Lamothe & Lamothe, 2025). Market-based arrangements create transaction costs related to procurement, monitoring, and contract enforcement, and these costs can exceed the administrative resources available in weaker institutional environments (Andersson et al., 2019). Institutional capacity, therefore, determines which delivery models are realistically feasible. It does not simply influence outcomes after a model is chosen, but shapes the range of viable options from the outset (Wei et al., 2022). Expanding this range requires deliberate investment in administrative systems, as professional training, procurement reform, and intergovernmental technical support help mid-sized cities manage more complex service arrangements with greater confidence (Wang et al., 2023).

3.3.2. *Political Structure and Electoral Incentives*

Political institutions also influence delivery model selection. Governance structures determine who holds decision-making authority and how policy change occurs within local government systems.

Strong mayoral systems often create conditions for more decisive reform. When executive authority is concentrated in a directly elected mayor, leaders can pursue outsourcing or other market-oriented strategies with fewer institutional veto points. This concentration of authority can limit resistance from bureaucratic actors or organized labor groups that might otherwise block reform (Wei et al., 2022).

Council-manager systems typically produce a different pattern. Professional administrators play a central role in service design and operational decisions, which often leads to more incremental adjustments rather than large structural changes. Reform in these systems tends to emphasize administrative efficiency and technical evaluation.

Electoral rules further shape policy choices. Proportional representation systems frequently produce coalition governments with diverse priorities. As a result, cities operating under these rules often adopt hybrid service arrangements that combine market mechanisms with public oversight and employment protections (Kim & Warner, 2016). Political ideology may influence public debate, but institutional structure tends to exert a stronger and more consistent influence on actual service delivery decisions.

3.3.3. *Procurement Politics and Domestic Favoritism*

Procurement politics can significantly affect both model selection and performance. Preferences for local suppliers, politically connected contractors, or domestically owned firms may distort competitive procurement processes and weaken the efficiency gains that outsourcing is expected to produce (Keulemans & Van de Walle, 2017).

Public support for local preference policies often reflects broader economic and social goals, as residents may prioritize local employment, regional economic development, or community identity even when these priorities raise service costs. Service delivery decisions, therefore, operate within a political economy that extends beyond narrow efficiency calculations, encompassing competing values and stakeholder interests that elected officials must balance alongside fiscal and performance objectives (Kim & Warner, 2016).

These dynamics are particularly visible in mid-sized cities, where local business networks and labor organizations frequently maintain close relationships with municipal leaders and can meaningfully influence contracting decisions (Wei et al., 2022). Safeguards such as transparent bidding procedures, open tendering rules, and independent oversight bodies are therefore critical for maintaining fair competition and protecting public value in contracted service arrangements (Andersson et al., 2019).

3.3.4. *Fiscal Stress and Austerity-Driven Model Diversification*

Fiscal pressure is one of the most consistent drivers of delivery model change in mid-sized cities. During periods of budget constraint, municipalities often explore alternative service arrangements in an effort to maintain service levels while controlling costs.

The austerity period following the 2008 financial crisis illustrates this pattern. Many local governments experimented with outsourcing as a strategy to reduce operating expenses without visibly cutting services (Kim & Warner, 2016). The long-term trajectory of these reforms has been uneven. Some cities later returned services to public management after contract costs increased, service quality declined, or political opposition intensified.

Inter-municipal cooperation has emerged as a widely used response to fiscal constraints. By sharing infrastructure and administrative resources across neighboring jurisdictions, mid-sized cities can capture scale efficiencies while maintaining public oversight of service systems (Bel & Elston, 2024).

Fiscal capacity also affects the pace of digital transformation. Cities with stronger revenue bases are better positioned to finance the initial infrastructure required for e-government systems and digital service platforms. These investments can generate long-term efficiency gains, but they require upfront capital that fiscally constrained municipalities may struggle to mobilize (Manoharan et al., 2023).

3.3.5. Collaborative Governance Networks as Structural Context

Service delivery in mid-sized cities increasingly occurs through collaborative governance networks. These arrangements involve partnerships among public agencies, private organizations, and civil society groups that jointly participate in service planning and implementation.

Collaborative networks expand institutional capacity by pooling expertise and resources across organizations. They are particularly valuable in policy areas where no single actor has the technical knowledge, financial resources, or community legitimacy needed to deliver services alone (Wang et al., 2023).

The effectiveness of these networks depends on institutional design. Successful arrangements define roles clearly, establish accountability mechanisms, and include procedures for resolving disputes. Without these structures, coordination problems can undermine service outcomes.

This governance model reflects a broader shift in how local governments approach service provision. Instead of acting solely as direct providers, municipalities increasingly function as coordinators of complex service ecosystems. Managing these systems requires skills in network governance, inter-organizational coordination, and relational contracting. These competencies differ from those associated with traditional bureaucratic service provision but are becoming essential for contemporary urban governance (Yi & Qiu, 2025).

3.4. Digital Transformation and Its Reshaping of Public Service Delivery

Digital transformation is increasingly shaping how public services are delivered in mid-sized cities. It introduces new tools and systems while also requiring changes in how services are organized and managed. This section explores how digital technologies are influencing service delivery practices and outcomes.

3.4.1. Digital Governance Maturity Across Mid-Sized Cities

Digital transformation in municipal service delivery spans a continuum, from basic digitization of paper processes to fully integrated, data-driven service ecosystems. Mid-sized cities typically occupy an intermediate position: they have moved beyond rudimentary e-government but lack the data infrastructure, interoperability systems, and organizational agility of leading digital cities (Manoharan et al., 2023). This position presents both opportunities and challenges. Unlike large metropolitan governments, mid-sized cities are less encumbered by legacy system complexity. Yet they often lack the financial and human capital to implement advanced digital solutions without external support or intergovernmental collaboration. Managing digital transformation—including technology procurement, data governance, cybersecurity, and citizen privacy—has itself become a core municipal service challenge.

3.4.2. Smart City Frameworks and Service Reconfiguration

Smart city strategies provide mid-sized cities with a framework for integrating digital technologies across multiple service areas. Comparative studies reveal different national emphases. American cities focus on infrastructure-driven systems, leveraging sensor networks, predictive analytics, and data-informed resource allocation. Chinese cities adopt centralized, government-led platforms with wide service integration and aggressive deployment timelines (Hu & Zheng, 2021). European cities, in contrast, emphasize citizen-centered approaches that prioritize participation tools, open data platforms, and co-design of services (Bruno & Fontana, 2021).

Evidence from Italy and Spain underscores that successful digital service transformation requires more than technology investment. Organizational redesign, interdepartmental coordination, and clear theories of change linking digital capacity to measurable citizen outcomes are essential. Co-designed initiatives yield higher adoption rates and citizen satisfaction than top-down deployments, demonstrating the value of integrating residents into the planning and implementation of digital services (Ariza-Álvarez et al., 2021).

3.4.3. Smart City Portals and Integrated Service Access

Unified digital service portals have become a central innovation in citizen-facing municipal service delivery. By consolidating licensing, payments, reporting, complaints, and information access into a single interface, portals reduce transaction costs for residents and administrative burdens for municipalities (Peters et al., 2018). Portal effectiveness depends less on technical complexity than on the quality of integration, clarity of navigation, and alignment of back-office processes with front-end digital services. Portals that lack corresponding internal reforms can frustrate users and erode trust.

Accessibility is critical. Features such as multilingual interfaces, mobile optimization, and accommodations for citizens with limited digital literacy determine whether digitalization expands or restricts equitable service access. Effective portal design links technical infrastructure to real improvements in service experience.

3.4.4. Document Management Digitalization and Administrative Efficiency

Digitalizing document management is a foundational step in municipal transformation. Moving from paper to digital records reduces processing time, improves retrieval accuracy, and creates auditable documentation that supports accountability and transparency (Szedmák et al., 2025). Efficiency gains are maximized when document digitalization is paired with staff training, standardized workflows, and integration with citizen-facing systems, creating seamless end-to-end digital processes.

Isolated digitalization of documents without broader administrative reform often replicates existing inefficiencies in electronic form. Evidence shows that mid-sized municipalities that approach document digitalization as part of a comprehensive modernization strategy achieve larger, more durable operational improvements than those treating it as a standalone IT project (Manoharan et al. (2023).

3.4.5. Information Technology and Municipal Service Efficiency

Beyond portals and document systems, broader IT adoption drives measurable efficiency gains in municipal service delivery. Enterprise resource planning systems, geographic information systems, predictive maintenance platforms, and integrated citizen management tools enhance resource allocation, infrastructure maintenance, and service scheduling. These improvements reduce per-unit costs and improve responsiveness (Hilhorst et al., 2022).

Efficiency returns from IT investments are not automatic. Gains depend on staff training, organizational change management, and robust data governance frameworks that ensure information accuracy, timeliness, and integrity. Cities that treat digital transformation solely as a procurement exercise consistently underperform compared to those that invest in human capacity alongside technology (Hughes & Peterson, 2018). Successful digital transformation requires aligning technological infrastructure with organizational capability and service delivery objectives.

3.5. Comparative Characteristics of Public Service Delivery Models

A comparative reading of the literature reveals that no single public service delivery model consistently outperforms others across all governance contexts. Instead, the effectiveness of each model is shaped by institutional capacity, fiscal resources, and the complexity of the services being delivered. Traditional public provision offers strong accountability and administrative control but can place significant pressure on municipal finances. Outsourcing and public-private partnerships may enhance efficiency and access to specialized expertise, yet they require robust contract management and regulatory oversight. Inter-municipal cooperation allows mid-sized cities to achieve economies of scale, particularly in technically demanding services, while co-production models emphasize citizen engagement and local knowledge. Digital governance approaches further expand the range of service delivery possibilities by improving transparency, coordination, and service accessibility. Taken together, these comparisons, as shown in the table below, suggest that mid-sized city governments benefit most from hybrid service delivery arrangements that combine multiple governance mechanisms rather than relying on a single institutional model.

Table 1 Comparative Characteristics of Public Service Delivery Models

Service Delivery Model	Key Advantages	Key Limitations	Institutional Requirements	Relevance for Mid-Sized Cities	Key Sources
Public Provision	Strong accountability; direct control	High fiscal burden	Strong administrative capacity	Suitable where municipal capacity is high	Kim & Warner (2016); Lamothe & Lamothe (2025)
Outsourcing	Potential cost savings; operational efficiency	Monitoring challenges	Contract management capacity	Useful when specialized expertise is lacking	Andersson et al. (2019); Chow et al. (2024); Wei et al. (2022)
Public-Private Partnerships	Access to private investment and innovation	Risk of complex contracts	Legal and regulatory capacity	Effective for infrastructure projects	Liu et al. (2024); Monteduro & Dragoni (2020)
Inter-Municipal Cooperation	Economies of scale	Coordination challenges	Intergovernmental collaboration	Particularly relevant for mid-sized cities with limited resources	Bel & Elston (2024); Petkovšek et al. (2021)
Co-Production	Increased citizen engagement	Requires sustained participation	Community trust and institutional openness	Enhances service responsiveness	Uster et al. (2025); Manes-Rossi et al. (2023); Cheng et al. (2023)
Digital Service Delivery	Efficiency and transparency	Digital divide risks	Technological infrastructure	Increasingly essential for modern urban governance	Hilhorst et al. (2022); Szedmák et al. (2025); Manoharan et al. (2023); Peters et al. (2018)

4. Summary of Findings

The table below summarizes the key studies that inform the analysis of this study and highlights their relevance to understanding public service delivery arrangements in mid-sized cities.

Table 2 Summary of Findings

Author(s)	Focus of Study	Key Findings
Kim & Warner (2016)	Public service delivery reforms and alternative governance arrangements	Demonstrate that local governments increasingly adopt mixed delivery models combining public provision, contracting, and partnerships to improve efficiency and responsiveness.
Petkovšek et al. (2021)	Governance and institutional arrangements in local public service delivery	Argue that institutional capacity and administrative context shape the success of different service delivery mechanisms.
Monteduro & Dragoni (2020)	Public-private partnerships and collaborative governance	Show that collaborative arrangements can enhance service quality when supported by clear institutional frameworks and accountability mechanisms.
Bruno & Fontana (2021)	Digital transformation in public administration	Highlight how digital tools can improve efficiency, transparency, and citizen engagement in public services.

Hu & Zheng (2021)	Intergovernmental cooperation and service provision	Find that inter-municipal cooperation can reduce costs and improve service capacity, particularly for municipalities with limited resources.
Hughes & Peterson (2018)	Public management and service delivery innovation	Emphasize the importance of managerial flexibility and institutional learning in public service provision.
Bel & Elston (2024)	Public service contracting and remunicipalization trends	Identify conditions under which outsourcing improves efficiency and when governments revert to public provision.
Lamothe & Lamothe (2025)	Collaborative governance and co-production in local services	Show that citizen participation and co-production can enhance service outcomes when properly institutionalized.
Yi & Qiu (2025)	Urban governance and service innovation	Demonstrate that governance innovation improves service responsiveness in cities facing fiscal and demographic pressures.

Recommendation

Digital transformation should be embedded in comprehensive organizational reform rather than treated as a standalone IT project. Evidence shows efficiency gains from portals, document management systems, and smart city platforms depend on parallel investments in staff capacity, process standardization, and back-office integration. Policymakers should implement phased digital governance frameworks aligned with administrative capacity and fiscal resources, explicitly addressing digital equity to ensure broader access and avoid marginalizing vulnerable populations.

5. Conclusion

The comparative analysis of public service delivery in mid-sized cities demonstrates that effective governance does not arise from adherence to a single ideological model or the simple application of lessons from metropolitan or rural contexts. Mid-sized cities occupy a distinct institutional space that requires adaptive, capacity-aware, and fiscally grounded approaches to service delivery. Success depends on aligning local administrative capabilities with performance opportunities offered by outsourcing, inter-municipal cooperation, PPPs, co-production, and digital transformation.

As fiscal pressures grow and citizen expectations rise, mid-sized city governments must navigate these complexities with evidence-based judgment to secure service quality and institutional legitimacy. The findings highlight the need for longitudinal, cross-national research that moves beyond advocating specific models to examining the conditions under which different delivery arrangements consistently generate public value in mid-sized urban environments. This knowledge is essential for designing service delivery strategies that are both contextually grounded and responsive to evolving urban challenges.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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