Governance of hutong parking problems in Beijing: Analysis from a perspective of policy tools

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Abstract. When managing the parking issue in Beijing's Old City, finding a fair balance between space planning and parking demand is the most difficult challenge. Numerous policy studies on parking in Beijing's hutongs have been conducted, with a massive number of studies aiming to develop parking devices utilizing new technologies and methods, proposing parking plans from a holistic perspective, etc. However, there is currently a scarcity of research focusing on a mix of policy tools. This paper investigates the challenging parking situation in Beijing's hutongs, drawing on the classification proposed by Hood. Specifically, we collected 54 relevant articles from the official websites of Dongcheng and Xicheng Districts. Furthermore, we carefully read the document, extracted the keywords that indicate the four types of instruments, and classified all the policy texts into four categories based on Hood's classification. Next, we correspond these keywords to the policy documents. Finally, we categorized the policy documents according to keywords hits in titles and counted the articles in each category in two urban areas. In conjunction with the above, this paper tries to determine which combination of policy tools can successfully improve the hutong parking problem during the implementation phase.

Keywords: Public Administration and Public Policy, Policy Tools Portfolio, Political Sciences.

1. Introduction

In the Chinese capital, a good parking environment is essential for the smooth functioning of the urban transportation system as well as the development of the city's economic infrastructure. It is critical to emphasize that the Hutong in Beijing is a historical relic rich in historical and cultural importance. Along with being out of step with contemporary architectural and public service needs, the Hutong's volume and greening rates are both lower than the required index, posing a barrier to the city's urban modernization development efforts. As the resident population has grown in recent years, the amount of available parking space has fallen well short of satisfying the surrounding neighborhood's needs. In the current situation, according to the Beijing Municipal Transportation Bureau, Dongcheng District has a total parking demand of 134,000 but only 78,000 parking spots, resulting in up to 56,000 parking gaps, indicating an urgent need for parking. Additionally, there are numerous worries about the current parking governance framework, including hutong civil unrest and parking disorder. From the policy aspect, due to the lack of awareness of the parking situation in the courtyard, the government still lacks relevant supporting policies, resulting in the hutong parking problem remains to this day.

The current study's principal objective is to use new technologies and approaches to the design of parking devices and take a broader view of parking planning. The results of these investigations had a substantial impact on the parking situation in the surrounding area. When it comes to analyzing policy approaches, current research on the parking problem, on the other hand, is lacking. Western countries are known for doing more in-depth evaluations of policy instruments when compared to their Chinese counterparts. Historically, policy tools have been the primary focus of research since the 1990s. Recently, research has begun to focus a more significant emphasis on the hybrid application of various tools in policy implementation and program administration, dubbed policy tool combination.

By utilizing the theoretical framework described above, we hope to conduct a comparative study of parking problems in the hutongs of Dongcheng and Xicheng districts. We also hope to conduct an extensive analysis of relevant policy documents to encourage further research into the subject matter of this paper. More specifically, the research question for this study is: What combination of policy mechanisms is now being employed in the Dongcheng and Xicheng districts' present parking policies, and how did this come to be?

The remainder of this article is structured as follows. Section 2 introduces Michael Howlett's theory of policy instruments, while Section 3 goes deeper into policy instruments' theoretical foundations. Section 4...
summarizes comparative research findings on the use of policy tools in China's Dongcheng and Xicheng districts.

2. Theory of Policy Instrument Research

It is vital to understand how the government tackles and resolves policy issues when undertaking public policy research. A policy tool is the mechanism or methods by which the government approaches and resolves these issues. The way people think about public policy is fundamental to public policy research. Academics have proposed a variety of analytical frameworks for categorizing policy instruments over the years. Similarly, Etzioni and Vedung classify policy instruments based on how government authority is exerted. Etzioni believes that government authority can be separated into required power, compensation authority, and regulating Authority. According to Etzioni's research, Vedung classified policy instruments into regulation, economic tools, and information. Schneider and Ingram place a more significant focus on governments' ability to affect actors' behavior, listing five primary policy tools as the most effective: Authority, incentives, competence, symbols, and learning. Doern and Phidd (1983) classified policy tools into five categories based on legal coercion: private behavior, exhortation, expense, regulation, and public ownership. Following the Hood model of participatory democracy, Michael Howlett constructs a continuum of substantive policy tools centered in direct engagement by government authority can be separated into required power, compensation authority, and regulating Authority. According to Etzioni's research, Vedung classified policy instruments into regulation, economic tools, and information. Schneider and Ingram place a more significant focus on governments' ability to affect actors' behavior, listing five primary policy tools as the most effective: Authority, incentives, competence, symbols, and learning. Doern and Phidd (1983) classified policy tools into five categories based on legal coercion: private behavior, exhortation, expense, regulation, and public ownership. Following the Hood model of participatory democracy, Michael Howlett constructs a continuum of substantive policy tools centered in direct engagement by the federal government after splitting policy tools into substantive and procedural tools.

Hood (1983) classified policies into four categories: nodal places of authority, financial, organizational, and financial and organizational instruments. It is vital to highlight that each policy instrument fulfills the NATO analytical framework's "Detector" and "Effecto" roles, and that the government interacts with the outside environment in a number of ways depending on the policy tool and its detectors and effectors (Table 1).

<table>
<thead>
<tr>
<th>Principle use</th>
<th>Governing resource</th>
<th>Organizatio n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodality</td>
<td>Authority</td>
<td>Treasure</td>
</tr>
<tr>
<td>Licenses</td>
<td>User charges</td>
<td>Public enterprise</td>
</tr>
<tr>
<td>Effectors</td>
<td>Advice</td>
<td>Bureaucratic</td>
</tr>
<tr>
<td>Advice Training</td>
<td>Regulati on</td>
<td>Administra tion</td>
</tr>
<tr>
<td>Advice Training</td>
<td>Certificatio n</td>
<td>Public enterprise</td>
</tr>
<tr>
<td>Detectors</td>
<td>Reportin g</td>
<td>Polling</td>
</tr>
<tr>
<td>Reportin g Registrati on</td>
<td>Census</td>
<td>Police</td>
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<tr>
<td>Taking Consulta nts</td>
<td>Taxes</td>
<td>Public enterprise</td>
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<tr>
<td>Taking Consul ta nts</td>
<td>Expendit ures</td>
<td>Public enterprise</td>
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</table>


3. Methodology

Textual analysis is used to support the arguments stated in this study. It is an approach that combines quantitative and qualitative text analysis tools to aid with information retrieval. It depicts the process of value conflict and decision-making that occurs during the policy-making process through textual discourse. Text analysis is an important research method in policy analysis because it allows scholars to assess policy documents in their original form. It is possible to determine the relevance of policy decisions based on their appearance in policy documents using statistical distributions of binding terms in policy papers. As a result, critical phrases like "policy priorities research" become apparent.

The keyword "hutong parking" is utilized in this study, and policy documents from the "Beijing Xicheng District People's Government Portal" (http://www.bjxch.gov.cn) and the "Dongcheng District People's Government" (http://www.bjdc.gov.cn) are reviewed for information. The hutong parking policies of Dongcheng and Xicheng districts were also compiled using the two sections on "public affairs" and "policy documents" included in the sample collection. It also includes links to policies on the Xicheng District Government's website in the sections...
"Interaction", "Media Focus", "Xicheng News", "Street News", and "Credit Xicheng", as well as policies on the Dongcheng District Government's website in the sections "Interaction", "News", and "Special Column". Furthermore, the policy language will be compared to the study data, establishing the actual relevance of parking in Hutong. This analysis also considers significant national macro-planning guidelines for hutong parking, such as the Beijing Municipal Regulations on Motor Vehicle Parking, which incorporate parking fees into the administration of non-tax income received by the government. In addition, a slew of policies that were previously included as superfluous appendices has been removed from the report. In this paper, policies were collected up to April 2021, and 54 samples of Hutong parking-related policies of Dongcheng District and Xicheng District governments were finally obtained after collection and collation. Two representative policy documents were selected in each of the samples regarding Hood's four policy tools classification, and a total of eight representative policy documents are listed, as shown in Table 2.

Table 2. Summary of policy texts.

<table>
<thead>
<tr>
<th>Policy tools</th>
<th>Iconic words in the text</th>
<th>Dongcheng District policy text</th>
<th>Xicheng District policy text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nodality</td>
<td>Community, resident, initiatives, events, lectures, popularization, etc.</td>
<td>2013.3.27 Erjiao community holds winter vacation youth painting and essay exhibition</td>
<td>2019.4.26 Lecture on the &quot;Way&quot; and &quot;Art&quot; of community consultation and deliberation in the street</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2014.4.29 Dongcheng District many initiatives to regulate the parking order of back streets and alleys</td>
<td>2019.5.22 Motor vehicle parking ordinance awareness campaign in our district</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2011.7.7 Dongcheng District actively promotes single-parking and single-movement pilot</td>
<td>2016.4.5 Notice of the People's Government of Xicheng District of Beijing on the issuance of the thirteenth phase work plan for reducing traffic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2014.7.5 Notice of the People's Government of Xicheng District of Beijing on the issuance of standard procedures and implementation for the renovation and conversion of cottages in old cities in Dongcheng District</td>
<td>2017.11.13 &quot;Notice of the People's Government of Xicheng District of Beijing on the issuance of measures for the management of neighborhood public space in Xicheng District of Beijing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2018.11.6 City transport commission 6 to inspect electronic road parking charges in our region</td>
<td>2019.1.2 Xicheng District management committee enhances management of electronic on-street parking fees</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2020.7.30 Public Information on the 2020 Departmental Accounts of the East Urban Management Committee</td>
<td>2019.10.30 Three models to crack staggered parking</td>
</tr>
<tr>
<td>Authority</td>
<td>Properties, businesses, professional teams, companies, etc.</td>
<td>2016.6.22 Property management for all cottage areas in East 4 West, following nearly two years of pilot exploration</td>
<td>2016.4.5 Notice of the People's Government of Xicheng District of Beijing on the issuance of the thirteenth phase work plan for</td>
</tr>
</tbody>
</table>

Table 2. Summary of policy texts.
4. Findings

This section will examine the four policy tools and their application in existing policies by the governments of East and West urban regions, comparing the similarities and differences in their application.

4.1 Nodality

Eight policy documents use Nodality in the East and West urban areas, with 62.5% in the Dongcheng District and 37.5% in the Xicheng District.

Suggestions. For example, in 2017, the Dongcheng District Women's Federation issued a "Initiative Letter" urging residents to cooperate with the district government's implementation of the "Three-Year Action Plan for the Improvement and Enhancement of the Environment in Hundred Streets and Thousand Lanes in Dongcheng District", actively participate in environmental improvement, beginning with themselves, and refrain from parking vehicles indiscriminately or establishing private grates. The initiative encourages locals to be community builders' managers and maintainers.

Training. Training is the implementation of policy guidance and assistance for hutong parking issues. In order to successfully educate residents about the new policy, public events and lectures will be required to achieve this goal successfully. Teenagers and parents in the Erjiao community were drawn to a youth art display organized by the Dongcheng District, which was a polite way of drawing their attention to the urgent need to improve parking circumstances. On the other hand, the Xicheng District also promotes a sense of community among its citizens through various street-level lecturing events.

4.2 Authority

Twenty-five policy documents were applied to Authority in the two urban areas, 68% in the East and 32% in the West.

Regulation. Regulation, i.e., the ability to exert control over how parking concerns are addressed at all levels of government. First of all, the provisions of the parking program. Dongcheng District began actively promoting single-parking and single-rowing in hutongs in 2010, and in 2011 produced a single-parking and single-rowing strategy to guide the district's single-parking and single-rowing efforts. In 2014, Dongcheng District made regulations for parking norms in hutongs of varying widths, implemented in 2015. Single parking was introduced in Xicheng District in 2016, to create hutongs that do not require parking in the near future. The second step is to address any existing parking issues that may occur. For example, the Xicheng District on the flow of people, parking surrounding the National Theatre, and other severe parking issues have been addressed and resolved. Finally, regarding parking concerns, Dongcheng District needs hutong traffic management to be a top priority, ensuring that personnel, material, and financial resources are allocated to this endeavor.

User fees. According to western legislation, Hood has included user fees into its policy instruments. The Dongcheng District government developed the Implementation Plan for Encouraging Social Forces to Develop Shared Parking Facilities in Dongcheng District, established the Dongcheng District Shared Parking Resource Workbench, and drafted the Dongcheng District Tripartite Agreement on Shared Parking, which effectively utilized shared parking resources. In the excavation of parking locations, Xicheng District in the "Beijing Xicheng District People's Government on the issuance of the Beijing Xicheng District neighborhood public space management measures" to encourage the use of land to be built and other places to set up temporary parking measures, encourage government agencies, corporate units of the parking lot open to the community, encourage units and individuals to use underground space resources to develop and build public parking. Permits. The government issues permit to regulate the establishment and change of hutong parking facilities. According to their detailed policy texts, Dongcheng District and Xicheng District have the highest number of permits for community self-governance. For example, the Dongcheng District trialed residential parking permits in Erjiao Hutong to alleviate traffic congestion caused by foreign vehicles and permitted the installation of extra mobile flower boxes in the Hutong to improve parking management in the Hutong. Additionally, the Dongcheng District encourages community parking autonomy and will investigate the feasibility of a shared management model. For its part, the Xicheng District has been looking at the possibility of using a combination of regulated parking and credit points in order to alleviate parking concerns.
4.3 Treasure

Ten policy documents apply to Treasure in Dongcheng District and Xicheng District, with Dongcheng District accounting for 70% and Xicheng District accounting for 30%.

Grants. In the case of parking policies, grants are government subsidies and assistance in putting them into effect. The subsidy policy in the Dongcheng District was implemented very late, and there was nothing in the way of the subsidy policy prior to 2018, except for the subsidy policy for parking lot charging facilities, which was implemented in 2017. This can be seen in “Parking occupies 60% of public space, where is the difficulty of ‘no parking in hutongs’”. Subsidies for enterprises were only established in the Dongcheng District until 2020, and then only in broad terms. In section 2020.7.30 of the policy, the "Dongcheng District Urban Management Committee 2020 Departmental Accounts Public Information" began to incorporate for the first time a specified number of subsidies for shared parking. Loans. Loans for hutong parking concerns are not specified directly in the applicable policies. Financial and taxation expenditure. Financial and taxation expenditures, i.e., taxation and other expenditures on parking problems management. The Beijing Motor Vehicle Parking Regulations mandated that road parking fees be included in the management of non-tax government revenue. Since 2018, Dongcheng and Xicheng districts have successively shifted the nature of parking fees from operating fees to government non-tax revenue through the "Municipal Transportation Commission Six Inspections of Electronic Road Parking Fees in Our District" and "Xicheng District Urban Management Committee Strengthening the Management of Electronic Roadside Parking Fees", respectively, which will incorporate road parking charges into the management of government non-tax revenue.

4.4 Organization

Ten policy documents use Organization in Dongcheng District and Xicheng District, of which Dongcheng District accounts for 70%, and Xicheng District accounts for 30%.

Section-based administration. Section-based administration entails decentralizing local governments and empowering them to implement appropriate solutions to specific challenges at all levels. Since Dongcheng and Xicheng districts are Beijing's historic urban neighborhoods, and the hutong parking problem is quite severe, the governments of these two districts must seek targeted remedies. For instance, the Dongcheng District leverages the qualities of its own demolished buildings to transform stagnant land into parking lots, so swiftly resolving the issue of parking tension. On the other side, the Xicheng District has used its occupied land to construct several three-dimensional parking structures to create a slow-moving system within the hutongs. Public enterprises. Public enterprises are the most extreme type of providing, as they include some degree of public ownership and are managed by the government to varying degrees. Most hutong-related public firms are property-related, like Jingcheng Jiaye Property Company, which oversees 6.4 million square meters of hutong properties and approximately 300 hutongs. Dongcheng District added properties into hutongs in 2016 to help maintain the hutongs' traffic order. Organizational construction. Organizational, i.e., other hutong parking policy provisions. For example, Dongcheng District has established displays exposing illegal parking in the "District Urban Management Committee Comprehensive Improvement of Traffic Problems in the Area Around Minsheng Financial Center", and the Xicheng District Government has successfully promoted the improvement of the hutong parking problem by utilizing the parking resources of units near schools and hospitals and forming professional parking management teams. Considering the preceding, it is evident that both the Dongcheng and Xicheng districts use the four policy tools identified by Hood. In quantitative terms, Authority is the most widely used policy tool in both the East Side and West Side, i.e., both urban governments use their official Authority most often to control the direction and content of parking governance directly. This stems from the fact that China is a country that relies heavily on the power of the government, which has the most power and makes all kinds of policies while encouraging the participation of social forces. Therefore, Authority is most often used in the process of parking governance. In contrast, the Dongcheng District government uses all four policy tools more than the Xicheng District government. In addition to being government-led, some social forces are also involved in the management of the hutong parking problem. For example, Dongcheng District has used the professionalism of corporate entities in the market to introduce property management to hutongs. Compared to the Dongcheng District, the Xicheng District is more comfortable using social forces, introducing non-public enterprise property companies, new exploration, the use of schools and hospitals, and other parking resources to fill the parking gap further. Finally, in terms of policy time, Dongcheng District has been exploring parking solutions since 2010, while Xicheng District was officially put into the management of hutong parking only in 2016. However, thanks to the rich experience of the successes and failures of the Dongcheng District, governance in the Xicheng District has also been in full swing in recent years with outstanding success. Overall, the hutong parking problem has been effectively addressed in the Dongcheng and Xicheng Districts due to the extensive use of a combination of the four policy tools. However, the subsidy policy and the participation of community residents in the Dongcheng and Xicheng Districts should receive more attention than Authority and Organization. The Dongcheng District's policy on hutong parking has been in development for 11 years since Authority started it in 2010. Initially, the policy focused on measures such as the development and mandatory implementation of regulations and creating more parking facilities. Since 2018, the Dongcheng District government has been trying to explore a new model of shared parking. This work progressed considerably in the following years, taking more care of the interests of enterprises and including
shared parking subsidies in the departmental accounts starting in 2020. Over the years, the use of policy tools related to hutong parking problems in Dongcheng District has become more abundant, and various policies are being gradually improved.

The Xicheng District's policy on hutong parking started relatively late, in 2014, and there were only a few relevant policies at the beginning involving the construction of a three-dimensional parking building in one Hutong. Since 2016, the government has gradually introduced richer policies, such as establishing hutong parking regulations, tapping into shared parking resources, establishing parking demonstration zones, coordinating enterprises and institutions for parking resource sharing, and so on.

In 2019, Xicheng District began to include employee and community subsidies in its policy and shifted the nature of on-street parking fees from operating fees to government non-tax revenue. In addition, the Xicheng District Government has also paid more attention to residents' participation, such as conducting several publicity activities and seminars throughout 2019 to popularize the new policy and civilized parking awareness among residents and establishing the "Xicheng Home" WeChat public number in 2021 to facilitate residents' contact.

To sum up, Dongcheng District and Xicheng District, like two old urban areas of Beijing, have policies on hutong parking that have learned from each other and developed together. In the subsequent development, if Dongcheng District and Xicheng District can use various policy tools more comprehensively and dovetail with Beijing's policy direction, the hutong parking problem can be more effectively managed.

References