

Subnational policy entrepreneurs in action: a systematic quantitative review

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Abstract

There is a prominent literature explaining how policy entrepreneurs, as active agents, promote policy changes. However, most existing studies focus on policy entrepreneurship at the national level, with limited attention paid to the vibrant dynamics of numerous local government innovations typically driven by entrepreneurial individuals. This systematic review seeks to take stock of the empirical literature on subnational policy entrepreneurship, in order to consolidate scholarly knowledge, identify generalizable patterns, and inform future research. Following a well-established review protocol, we collected 64 articles through a thorough literature search, with 122 sets of individual entrepreneurs reported in the sample, and coded all cases based on individual-level attributes and processual characteristics. Remarkable diversity is noted in terms of (1) the policy sector; (2) forms of entrepreneurship; (3) policy change outcomes; (4) level of jurisdiction; and (5) key characteristics of the individual entrepreneurs. We find salient patterns in the entrepreneural motivations and strategies used.

Keywords: policy innovation; local; policy entrepreneur; policy entrepreneurship; systematic review

Introduction

The public policy literature has witnessed a renewed scholarly interest in policy entrepreneurship in the past decade. We have long known that policy entrepreneurs play a critical role in affecting policy change by identifying and promoting new policy ideas and solutions (Kingdon 2013). Despite the lack of necessary resources to accomplish such goals independently, they employ unconventional strategies to shape policy outcomes with an expectation of future returns (Cohen 2021). A sizable literature across national context has documented how innovation-minded individuals, collectives, or corporate entrepreneurs exhibit a salient suite of attributes and drive innovative policy programs amidst various constraints, by

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employing an arsenal of strategies, such as coalition building, issue framing, networking, and leading by example (Roberts and King 1991; Mintrom and Norman 2009; Meijerink and Huitema 2010; Cairney 2021; Mintrom and Luetjens 2017). It is also widely recognized that policy entrepreneurs are not confined to a specific sector, but rather come from a variety of background, including individual citizens (Callaghan and Sylvester 2021), civil society (Prateek et al. 2022; Chung 2021), academia (Wicaksono 2020; Knaggård 2015), think tanks (Fatonie 2022), governmental organizations (Frisch Aviram et al. 2020a; Arnold 2015, 2020b), and even the private sector (He and Ma 2020; He et al. 2025).

In recent years, several important systematic reviews have sought to consolidate the policy entrepreneurship literature, which has been dominated by case studies (Frisch Aviram et al. 2020a, 2020b; Faling et al. 2019; Edri-Peer et al. 2023). A notable finding from these "stock-taking" works is that most of the policy entrepreneur cases, as the literature seems to suggest, occur at the national level. For instance, Frisch Aviram et al. (2020a) found that 68.5% of all studies in the field report policy entrepreneurship cases at the national or transnational levels, while barely a quarter of them document entrepreneurial activities at the subnational level. A similar patten is noted by Faling et al. (2019), as only 26% of cross-boundary policy entrepreneurship cases in their systematic review are associated with a subnational focus. In their systematic review exclusively focusing on the developing world, Frisch Aviram et al. (2020b) found that barely 19.2% of studies in this field describe subnational policy entrepreneurship. These findings appear to underrepresent the voluminous literature documenting numerous local government innovations in both developing countries and the developed world that were typically driven by entrepreneurial reformers (Oborn et al. 2011; Walker 2006; Teets & Noesselt 2020).

An exciting strand of recent literature pays attention to street-level bureaucrats acting as change agents in the policy process. Denoted as street-level policy entrepreneurs, these individuals creatively exercise professional knowledge, frontline know-how, and discretionary power to promote local policy change, distinguishing themselves from "general" policy entrepreneurs as well as most rank-and-file street-level bureaucrats (Arnold 2015; Lavee and Cohen 2019; Cohen and Golan-Nadir 2020; Edri-Peer et al. 2023). Another notable development of literature concerns the way in which local policy entrepreneurs are often found to hold bigger ambitions, scaling up their innovations to wider jurisdictions, a state or province, or even a nation (Lu et al. 2020; Mintrom and Thomas 2018; Tang et al. 2020; Petridou and Mintrom 2021; He et al. 2025).

This present systematic review explicitly focuses on policy entrepreneurship at the subnational level for three reasons. First, it is widely recognized in the literature that contextual factors significantly influence the resources and opportunities available to policy entrepreneurs in their pursuit of reform ambition (Frisch Aviram et al. 2020). We maintain that the level of government represents a crucial dimension of the social context in which policy entrepreneurship is embedded (Mintrom and Norman 2009). Previous studies suggested that subnational context can influence the motivations and strategies of policy entrepreneurs, setting them apart from their national counterparts. Notably, solving social problems appears to be a key motivation for this category of entrepreneurial individuals (Frisch Aviram et al. 2018). Compared to change agents at the national level, subnational policy entrepreneurs tend to focus on local issues, while their close links with the community often fosters stronger empathy to grassroots problems and grievances (Lavee and Cohen 2019; Aviv et al. 2021). As Edri-Peer et al. (2023) observed, such "unselfish motivations" to policy entrepreneurship differ somewhat from the common image of policy entrepreneurship as self-serving and self-interested (p. 368). Therefore, we posit considerably different patterns of motivations underpinning subnational policy entrepreneurs vis-à-vis their national peers.

Second, we postulate that subnational policy entrepreneurs play a more intricate role in the policy process than national level change agents. On the one hand, they advocate for their jurisdictional interests and try to address local problems. On the other hand, many of them, particularly local administrative personnel in unitary systems, are also responsible for implementing national policies, which may sometimes contradict local interests and conditions (Matland 1995). As a result, subnational policy entrepreneurs often find themselves caught between various levels of mandates. Such complex structures in principal-agent relationship further complicate their ability to navigate the policy landscape effectively. Unlike nationallevel change agents, who typically operate within a more unified framework of authority and have broader mandates, subnational policy entrepreneurs must contend with a fragmented governance structure where local realities can starkly contrast with national priorities.

Finally, due to their limited authority, subnational policy entrepreneurs, particularly those in lower-level positions, face significant resource constraints that hinder their ability to effect meaningful change (Cohen 2021; Tang et al. 2020). These constraints often manifest as inadequate funding, insufficient staffing, and limited access to decision-making processes, leaving them without the necessary authority or justification to engage in comprehensive policy design (Frisch-Aviram et al. 2018). Consequently, subnational policy entrepreneurs must adopt a range of innovative strategies to navigate these challenges and accumulate the resources required for their initiatives. These adaptive strategies reflect a proactive approach to overcoming limitations, and they further distinguish the motivations and behaviors of subnational policy entrepreneurs from those operating at the national level, who may have greater access to resources and authority to implement change (Petridou and Mintrom 2021).

This current study seeks to enrich theoretical knowledge on policy entrepreneurship by shifting analytical attention away from the national level to the subnational canvas, where enormous policy dynamism is documented in the literature. In particular, many case studies have revealed some motivations of local policy entrepreneurs that are seldom shown by their counterparts at the national level, such as empathy for local residents (e.g. He 2018; Aviv et al. 2021), completing tasks assigned by the national government (e.g. Rocle and Salles 2018; Goyal et al. 2020), and seeking solutions to local problems (e.g. Arnold 2015, 2020b; Lavee and Cohen 2019). Furthermore, several important reviews have suggested that national and subnational policy entrepreneurs tend to present different patterns in their adoption of entrepreneurial strategies (Frisch Aviram et al. 2020a; Faling et al. 2019; Meijerink and Huitema, 2010; Edri-Peer et al. 2023). Despite these new insights, however, there is no systematic review exclusively focused on policy entrepreneurs at the subnational level, potentially hampering the consolidation of scholarly knowledge. Most importantly, some studies have elucidated that policy entrepreneurship stems from both endogenous characteristics of individuals and exogenous contexts (Frisch Aviram et al. 2020a; Mintrom 2019), but how these variables interact to affect policy entrepreneurship at the subnational level remains unclear.

Although policy entrepreneurship encompasses diverse actors from different sectors, government officials often play a central role in local innovations. Possessing legitimate authority and administrative resources, it is easier for them to influence the policy process and make a change as compared to other stakeholders (Feiock and Carr 2001; Teske and Schneider 1994; Schneider and Teske 1992). Therefore, this study puts an emphasis on local government officials exercising policy entrepreneurship. Using the terms "subnational policy entrepreneur" and "local policy entrepreneur" interchangeably, our systematic review aims to answer three questions: (1) What are the key characteristics of local policy entrepreneurs? (2) What are the common motivations and strategies associated with local policy entrepreneurs and exogenous contextual factors influence their motivations and entrepreneurial strategies?

Policy entrepreneurship and local policy innovation

Embedded in the Multiple Streams Framework, the policy entrepreneurship literature has traditionally focused on the stage of agenda setting. Policy entrepreneurs are considered pivotal in conjoining three streams – problem, policy, and politics – and ultimately bringing them to the window of opportunity (Kingdon 2013). This conception has been broadened in recent years. Scholars argue that these parallel streams persist and continue to flow beyond agenda setting (Zahariadis 2018; Goyal et al. 2020; Fowler 2022). Policy entrepreneurs are found to be active throughout the policy process, formulating novel policy designs, facilitating their implementation, and even promoting their evaluation (Mintrom and Norman 2009; Cohen 2021; Mintrom and Luetjens 2017). This expanded conception of policy entrepreneurs underscores the enduring significance of human agency throughout various stages of the policy process.

The potential of *local* policy entrepreneurs to engage in policy innovation arises from several significant factors. First, local governments have their own policy agendas and venues for policy formulation, providing policy entrepreneurs with legitimate jurisdictions in which to enact initial policy change, particularly in federal systems. The policy autonomy and administrative discretion bestowed on local governments grant them unique opportunities to start local pilot tests (Meijerink and Huitema 2010; Edri-Peer et al. 2023; Frisch Aviram et al. 2018). In an attempt to solve local governance problems, many of these small-scale pilots embrace unconventional ideas, often in the absence of explicit national policy guidelines (He 2018; Aukes et al. 2018). Furthermore, despite the localized nature of these pilots, ambitious local policy actors may act entrepreneurially to scale up such local government-led initiatives to a wider realm, provided there are favorable political conditions (Mintrom and Luetjens 2017; Gassner and Gofen 2018). Needless to say, promoting nationwide scaling up and inter-regional policy diffusion beyond one's legitimate jurisdiction requires even strong entrepreneurial spirit and skills (Arnold 2020b; He et al. 2025; Hong et al. 2024).

Second, local governments' and lower-level officials' intimate familiarity with the field enables them to identify pressing social needs with a high level of acuity. Their close connections with the community facilitate the building of trust with citizens, as well as empathy with grassroots grievances. Working on the frontline, they typically understand what their citizens need most, while the professional training or specialized knowledge possessed by local technocrats grant them considerable authority in regard to identifying policy gaps and proposing new solutions (Arnold 2015; Cohen 2021; Erdi-Peer et al. 2023).

Third, vitally, as subnational agents of the national government, local policy entrepreneurs are tasked with implementing many national policies. Given the complexities of local circumstances, they are often granted substantial discretion to make adaptations during policy implementation, which creates an "opportunity structure" conducive to policy entrepreneurship. In other words, policy entrepreneurs remain essential for the successful implementation of national policies on the ground and they "continue to employ strategies to manipulate how policy implementers interpret policies" (Fowler 2022, p. 4). They convert ambiguous directives into concrete work plans and steer the implementation on the frontline. These responsibilities enable local policy entrepreneurs to play a critical role in catalyzing policy change (Arnold 2015; Petchey et al. 2008; Petridou and Mintrom 2021; Frisch Aviram et al. 2018).

The distinctive attributes of local policy entrepreneurs have attracted increasing scholarly attention in recent decades. Previous studies have examined the entrepreneurial activities of local officials across various levels and contexts (e.g., Petchey et al. 2008; He 2018; Arnold 2015, 2020b; Lavee and Cohen 2019; Frisch Aviram et al. 2018; Aviv et al. 2021). Limited to one or two cases within a specific region, however, most of these studies rely on qualitative methods, so we know little about generalizable patterns of local policy entrepreneurship. This study employs the methodology of a systematic review to fill the research gap identified above.

Research design

Apart from grasping the research landscape, a systematic review can also be used to synthesize either quantitative or qualitative data from previous studies (Grant and Booth 2009). In order to explore more details about local policy entrepreneurship, this systematic review adopts a qualitative approach combining systematic and transparent data collection and an open inductive process to analyze literature data (Petticrew and Roberts 2006; Gough et al. 2012). Such a strategy allows us to bring together a large number of case studies from different disciplines into a holistic theoretical overview (Faling et al. 2019). The well-accepted Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol (Moher et al. 2009) is followed to ensure the reliability, transparency, and replicability of this study. In

order to construct a meaningful scholarly dialog with important literature on policy entrepreneurship, we closely reference five recent similar reviews (Frisch Aviram et al. 2020a, 2020b; Faling et al. 2019; Edri-Peer et al. 2023; Meijerink and Huitema 2010).

Following Faling et al. (2019), we use Web of Science and Scopus as the two databases to collect relevant studies published before November 2023. Title, keywords, and abstract were used as search domains. The extensive literature on policy entrepreneurship spans across multiple disciplines and approaches (e.g., political science, public administration, policy sciences, area studies, etc.). Therefore, we took an inclusive approach to sampling. Furthermore, the concept of policy entrepreneurs encompasses a broad range of local actors, including street-level bureaucrats, public managers, mid-level officials, legislators, and governmental experts. Thus, we employed a broad search string consisting of all these possible terms to discern the level and role of individual agency. We also included several interchangeable concepts associated with policy entrepreneurship, such as institutional entrepreneurship and public entrepreneurship at national and international levels were excluded. Diagrammed in Figure 1 below, the search protocols described above yielded a sample of 8,835 results.

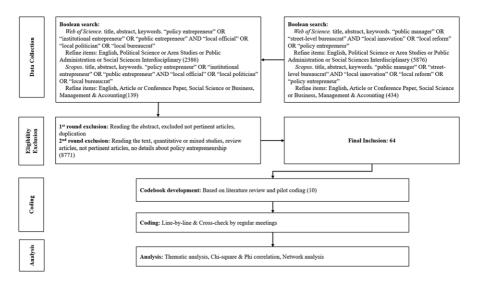


Figure 1. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses flow diagram. *Source*: authors.

We performed two rounds of eligibility assessment to filter out irrelevant studies. In the first round, titles and abstracts of the entire collection were reviewed, with a focus on their relevance to this study concerning case studies on local policy entrepreneurs. According to Robert Yin (2014), a "case" in social sciences can be defined as the basic unit for analysis, encompassing individual, events, or programs. He also stressed that the tentative definition of case is determined by the research

questions (Yin 2014). Because one of the major objectives of this review is to integrate qualitative evidence about the process of policy change driven by local policy entrepreneurs, we define that a case to be included must meet at least two criteria: (1) it should be an event with a relatively intact storyline; and (2) the role of individual or collective policy entrepreneurs in policy change should be identifiable. Quantitative studies were excluded. We define local policy entrepreneurs as comprising four main groups of actors: local legislators, executive officials, career civil servants, and other personnel in public agencies (e.g. government-affiliated experts, auditors, etc.). This inclusive conception is intended to capture the variety of entrepreneurialism in the subnational sphere. In the second round, we thoroughly read the full texts of the studies to identify any inclusion bias¹. Ultimately, 64 articles were included in this systematic review.

We used a directed approach to classify the large quantity of qualitative data into an efficient number of quantitative categories that represent similar meanings (Hsieh and Shannon 2005). Content coding strictly followed a codebook that synthesizes key attributes and dimensions characterizing policy entrepreneurship in previous reviews (e.g., Frisch Aviram et al. 2020a; Faling et al. 2019; Mintrom and Norman 2009; Meijerink and Huitema 2010), as well as important literature on policy entrepreneurship (e.g., Arnold 2015, 2020b; Zahariadis and Exdaklos 2016; Cohen and Golan-Nadir 2020). The initial codebook was tested through pilot coding of 10 randomly selected studies. This pilot run allowed us to refine the codebook (see Appendix 1). The final codebook comprises five sections. Section 1 captures the bibliographic items of the study, such as the title, author(s), journal, and year of publication. Section 2 seeks to gauge the contextual factors surrounding policy entrepreneurship, including the country and level of government involved. The nature, duration, and outcome of each innovation case are also captured to the extent that the textual information in the study is sufficient for us to do so. Section 3 records the profile of the policy entrepreneurs in terms of gender, status, administrative position, and personal experiences. Entrepreneurial motivations and the actual strategies used are identified in Sections 4 and 5, respectively. While multiple policy actors were reported to actively participate in a reform, we only identified the key policy entrepreneurs involved.²

Using the codebook as a guide, we coded 64 articles in the sample. As the primary coder, the first author meticulously read the texts line by line. Regular meetings were held with the corresponding author to discuss any issues arising from the coding exercise. The corresponding author, as the secondary coder, verified the results, and both authors discussed the appropriateness of the codes where discrepancies emerged. The codes supported both descriptive purpose and multivariate analysis.

¹Inclusion bias here refers to a situation where articles survived the first-round screening but did not match the inclusion criteria. For example, some articles may be included in the intermediary sample because they contain keywords "policy entrepreneurship," "local reform," or "case study" in title or abstract. However, case studies in such articles may contain insufficient qualitative details to allow quantitative coding and subsequent data analysis.

²Such identification was based on the analytical portrayal presented in the respective cases. In virtually all articles, authors explicitly characterize specific individuals as policy entrepreneurs, illustrating their distinctive traits and strategies. Multiple policy entrepreneurs were reported in 20 out of 98 cases in our sample. All these individuals were coded separately.

We used hierarchical cluster analysis (HCA) to map out the specific patterns of strategy combinations among the policy entrepreneurs. This technique enables researchers to generate a hierarchy of clusters by identifying unique and similar values from observations, which is not sensitive to initial conditions and less sensitive to outliers and cluster shapes (Sharif and Chandra 2022; Androniceanu and Georgescu 2023). Notably, HCA as a clustering method has been employed by Arnold (2021) to explore the patterns of policy entrepreneurship. In order to understand the relationships between motivation and strategy combinations and other components of policy entrepreneurship, we performed a chi-square test to calculate the phi-coefficient, which allowed us to assess the strength and direction of associations. Python and SPSS 29 were used to perform the HCA and correlation analysis, respectively.

Results

Bibliographic profile

The 64 articles in the sample came from 40 academic journals, with 60% published in public administration and policy journals. Journals in the fields of political science, area studies, interdisciplinary studies, and sociology hosted the rest of the sample. The pool of eligible articles consists of 98 case studies on local policy entrepreneurship. More than half of these cases (56%) were observed in developed countries. Approximately one-third (34%) of the cases were based in China. The cases in the sample encompassed eight policy sectors. Social welfare and services (30%), environment policy (28%), economic policy and development (14%), and administrative reforms (10%) were the popular sectors in which local policy entrepreneurship is often observed. The distribution of cases across these substantive policy sectors largely resembles that reported in Frisch Aviram et al.'s (2020b) systematic review in the developing world.

Key characteristics of the cases are summarized in Table 1. We considered: (1) the form of entrepreneurship; (2) the nature of policy change; (3) the level of government involved; (4) the duration of the policy change; and (5) the policy change outcome, as reported in the article. The conventional conception of policy entrepreneurs as heroic individuals has been expanded in recent literature to include collective policy entrepreneurs who rely on "solidarity, cooperation, and effective interaction" to achieve the shared goals (Tang et al. 2020). Compared to individual entrepreneurship, collective efforts in promoting policy change offer distinct advantages. Actors from different arenas can leverage strategies, skills, and resources from their respective fields, enabling collective entrepreneurship to influence reform through diverse approaches (Meijerink and Huitema 2010; Arnold 2015, 2020b; He et al. 2025). Furthermore, solidarity and cooperation within collective entrepreneurship allow individuals to effectively handle the overwhelming pressure associated with policy innovation, potentially smoothing out any resistance (Tang et al. 2020; Aviv et al. 2021). Our results note the prominence of collective efforts in driving local innovations, as close to 60% of the cases in the sample manifest collective policy entrepreneurship, with multiple individuals involved.

| Table 1. | Snapshot | of local | policy | entrepreneurship | cases |
|----------|----------|----------|--------|------------------|-------|
|----------|----------|----------|--------|------------------|-------|

| | Freq (%) |
|---|----------|
| Form of entrepreneurship | |
| Individual entrepreneurship | 39 (40%) |
| Collective entrepreneurship | 59 (60%) |
| Nature of policy change | |
| Promote national/international policy | 3 (3%) |
| Local implementation of higher-level policy | 31 (32%) |
| Local initiatives | 64 (65%) |
| Administrative level of policy change | |
| Provincial/state | 20 (20%) |
| Municipal | 43 (44%) |
| County/ (sub-municipal) district | 13 (13%) |
| Township and community level | 22 (22%) |
| Duration of policy change | |
| <3 years | 20 (20%) |
| 3–5 years | 30 (31%) |
| 6–9 years | 17 (17%) |
| \geq 10 years | 16 (16%) |
| Not reported | 15 (15%) |
| Outcomes | |
| Successful | 76 (78%) |
| Unsuccessful | 20 (20%) |
| Not reported | 2 (2%) |
| Total | 98 |

Source: authors.

In two-thirds of the cases, policy entrepreneurs work to champion policy change within their respective jurisdictions. We observe 31 cases (32%) in which policy entrepreneurs creatively implement higher-level policies and eventually introduce innovative solutions to their respective jurisdictions.³ Exworthy and Powell (2004) argue that significant policy change on the ground is likely to occur only when "big" national windows match "little" local windows. This process of coupling the two types of policy windows provides local policy entrepreneurs in multilevel governance structures with ample opportunities to undertake innovations through top-down implementation. In other words, policy implementation also presents fertile soil for many types of entrepreneurial individuals at the middle or even lower echelons of the hierarchy to maneuver.

Our review notes that local policy entrepreneurship occurs in various layers of subnational authorities, with the municipal level being the principal avenue (44%). Approximately 34% of the policy change cases were pursued at the district (submunicipal) or community levels. Around 22% of the cases took place at the level of province or state.⁴ As many empirical studies document the chronological outline of

³In this study, we coded a case as "creative implementation" if there was a higher-level policy explicitly mentioned in the article. Innovations promoted in the absence of clear upper-level policies were technically considered as local initiatives. Therefore, the two categories are mutually exclusive.

⁴Here, we were certainly cognizant of the varying administrative structures and customs in different countries. For instance, "district" typically refers to sub-municipal level jurisdiction in some systems but may be the intermediary level between national and municipal authorities in others. In this study, we adopt the former convention in order to avoid unnecessary confusion.

policy entrepreneurship cases, we were able to gauge their duration. The results indicate that 31% of the cases took three to five years to yield change outcomes, while 33% of them lasted for six years or longer, mirroring the sustained efforts required on the part of local policy entrepreneurs.

The existing policy entrepreneurship literature suffers from significant "survivor bias," in that most empirical studies document successful cases of policy change, whereas little is known about the role of policy entrepreneurs in failed cases or in cases where the status quo is defended (Zahariadis 2018; Petridou and Mintrom 2021). As a result, limited variance in the "dependent variable" further hinders empirical generalization. Yet, our review managed to identify both successful and unsuccessful cases of local policy change. We find that, while most cases (78%) present positive outcomes and achieve the desired change, one-fifth of them (20%) are eventually unsuccessful, even in the presence of policy entrepreneurs. Our further analysis suggests that continued policy entrepreneurship is a key factor leading to successful policy change outcomes. For example, Arnold (2015, 2020b) compares two cases of policy innovations in state-level wetland governance in the United States. In State H, where the innovation yielded success, policy entrepreneurs proactively selected competent successors to steer the subsequent reform process before leaving their positions. In contrast, the successor was incapable of sustaining the policy coalition forged by this entrepreneurial predecessor, resulting in the ultimate termination of the innovation. In other circumstances, the radical design of policy innovation constituted a key reason for discontinued policy entrepreneurship. For example, Zhu (2018) examines the entrepreneurial role of a controversial Chinese reformer, who serves executive roles in multiple localities. Inspired by the (then) flourishing new public management movement, the reformer championed the privatization of essential public services in his city, which triggered massive controversies regarding the appropriateness of such "load-shedding" reforms. These reforms were subsequently abandoned after the policy entrepreneur left his post. Detailed information regarding the outcome of each case and the identification of policy entrepreneurs' personal background and motivation is exhibited in Appendix 2.

Profile of local policy entrepreneurs

We identified 122 sets of subnational policy entrepreneurs in the cases. Table 2 summarizes the key characteristics of these individuals. Out of the 84 cases in which the gender of key individuals was identifiable, 62 entrepreneurs were men and 22 were women. This imbalance did not come as a surprise, considering the widespread existence of gender inequity in administrative systems worldwide. Particularly in Asian countries, men tend to hold dominant positions in government agencies, granting them more opportunities to become policy entrepreneurs.

When categorizing the administrative status of different individuals, we exercised utmost caution, given the vast differences in administrative norms and personnel rules across countries. In this review, the term "local legislators" refers to elected representatives who serve in subnational legislative bodies. Executive officials are typically chiefs and deputy chiefs of the government (e.g., the mayor, governor, or

| Table 2. | Personal | background | of local | policy | entrepreneurs |
|----------|----------|------------|----------|--------|---------------|
|----------|----------|------------|----------|--------|---------------|

| | Freq (%) |
|-------------------------------|----------|
| Status | |
| Local legislators | 2 (2%) |
| Executive officials | 54 (44%) |
| Career civil servants | 57 (47%) |
| Other personnel | 9 (7%) |
| Total | 122 |
| Gender* | |
| Male | 62 (51%) |
| Female | 22 (18%) |
| Unidentifiable | 38 (31%) |
| Total | 122 |
| Qualification and experience | |
| Frontline experience | 55 (45%) |
| Cross-sectoral experience | 46 (38%) |
| Professional qualifications** | 61 (50%) |

Source: authors.

Note: *In most cases of collective policy entrepreneurship, gender is unidentifiable. **We code professional qualifications of policy entrepreneurs based on whether they have a postgraduate degree or professional certificate in an area.

party secretary in communist systems, etc.) or functional departments (e.g., the Education Bureau, the Department of Finance, etc.), or statutory agencies (e.g., the local housing authority, tourism board, etc.). In our operational definition, career civil servants do not take departmental or agency-level leadership positions, but rather typically work in the middle or lower strata of their respective organizations. As expected, they constitute the largest group of local policy entrepreneurs (47%) in the sample. This is very close to the proportion of local executive entrepreneurs, which stands at 44%. We noted a smaller percentage of entrepreneurial roles played by "other personnel" (7%) in the cases. These individuals include researchers in government-affiliated institutes, government auditors, and so forth.

Work experience and professional qualifications constitute endogenous and exogenous personal attributes of public sector professionals (Toh et al. 1996). We classify work experience into frontline experience and cross-sectoral experience. The former category typically refers to experience of working at the grassroots level of the bureaucracy. For example, despite their high positions in the local bureaucracy, some entrepreneurial executive leaders had worked as trainees (Mackenzie 2004), medical practitioners (Oborn et al. 2011; He et al. 2025), or street-level bureaucrats (Zhang 2016; Leo and Andres 2008; He 2018; Mintrom et al. 2014). These frontline experiences gave them valuable grassroots know-how and nurtured their close emotional attachment to the community. Cross-sectoral experience is another valuable asset for subnational policy entrepreneurs, because they often entail boundary-spanning efforts that in turn require personal networks and multi-sectoral knowledge (e.g., Oborn et al. 2011). Prior experience in other policy domains and even in the private sectors can help policy entrepreneurs better appreciate the positions and interests of other stakeholders and is often crucial for inter-agency collaboration (Petridou and Mintrom 2021).

We also considered the professional qualifications held by policy entrepreneurs, which not only give them powerful skillsets with which to diagnose the social problem at hand and devise appropriate solutions but also allow them to claim authority and expertise in a specific domain. Here, qualifications are assessed based on whether the entrepreneur holds a professional degree (e.g., Master of Public Administration, Master of Business Administration, etc.) or acquired professional certificates (e.g., as a lawyer, certified accountant, medical doctor, registered engineer, etc.). The results indicate that nearly two-thirds of policy entrepreneurs (45%) at the subnational avenue have frontline experience, and half (50%) hold professional qualifications. More than one-third of them (38%) have work experience in other sectors. Notably, 87% of the policy entrepreneurs in the sample have more than one type of experience. Such experiences certainly help increase the social acuity and operational capacity of local policy entrepreneurs.

Motivations

In Agendas, Alternatives, and Public Policies, Kingdon (2013) identifies several types of entrepreneurial motivations, including career advancement, the desire to promote their values, and an interest in catalyzing policymaking. In recent years, there is a growing literature seeking to provide a more nuanced characterization of motivations for middle- and street-level bureaucrat policy entrepreneurs. Their motivations for engaging in entrepreneurial actions include sympathy for the disadvantaged situations of their clients (Lavee and Cohen 2019) and seeking solutions for local problems (Teets et al. 2017; Feiock and Carr 2001). These studies also indicate that local policy entrepreneurs are often driven by a mixture of motivations. Our result reveals that 94% of the policy entrepreneurs hold more than one entrepreneurial motivation, highlighting the significance of mixtures of motivations.

Table 3 further reports key findings regarding motivations and their combinations. Several observations are evident. First, the most salient motivations appear to be interest *in* or commitment *to* a specific policy area and the desire to seek solutions for local problems, with 86% and 80% of entrepreneurs manifesting these gustoes, respectively. This result echoes with Edri-Peer et al. (2023) that low-level policy entrepreneurs are generally motivated by the desire to promote and improve local interests. In some cases, even when advocating for initiatives to enhance international collaboration, these reformers may still seize such opportunities to promote the interests of their own localities (e.g. Mintrom and Luetjens 2017).

Second, career incentives and completing tasks assigned by superiors also represent salient motivations of local policy entrepreneurs. Our results suggest that approximately 30% and 34% of the policy entrepreneurs in the sample have shown such motivations respectively. We are certainly aware of possible bias due to challenges in identifying the latent motivations of policy entrepreneurs. Most qualitative studies heavily rely on in-depth interviews for data collection, and it is common for policy entrepreneurs to rarely cite career incentives as the principal motivation behind them. In another systematic review focused on street-level bureaucrat policy entrepreneurs, a similarly low percentage (26%) is noted with

| Table 3 | Motivation | frequency |
|---------|------------|-----------|
|---------|------------|-----------|

| Motivations | Freq (%) |
|--------------------------------------|-----------|
| Interest/commitment in a policy area | 105 (86%) |
| Seeking solutions for local problems | 97 (80%) |
| Career incentives | 42 (34%) |
| Completing tasks | 37 (30%) |
| Earning resources | 24 (20%) |
| Empathy | 23 (19%) |

Source: authors.

regard to self-interest as the key motivation (Edri-Peer et al. 2023). Another possible explanation for the relatively low emphasis on career incentives is the presence of a glass ceiling for career advancement in local bureaucracy. As most street-level and middle-level officials are typically aware of the terminal position they could possibly attain, many choose not to actively participate in the race for promotion (Teets et al. 2017; Folke and Rickne 2016). As a result, career incentives may play a less significant role for local policy entrepreneurs, but this result should be interpreted with caution concerning executive leaders, as Schneider and Teske (1993) have demonstrated that career incentives remain an intrinsic factor leading these senior officials to undertake entrepreneurial innovations.

Third, the results highlight the intention to earn resources and empathy as crucial motivations of local policy entrepreneurs, with approximately 20% and 19% of them manifesting such motivations, respectively. The intention to earn resources has a relatively low presence than expected. Previous studies suggest that resource constraints are a significant characteristic facing local policy entrepreneurs, particularly those at the street level (Lipsky 2010; Cohen 2021). The discrepancy between resource constraints and the relatively low presence of the motivation to earn resources may be explained by the intrinsic nature of resources – particularly financial ones—as a means to achieve policy goals. Despite the critical importance of resources, local policy entrepreneurs may view earning resources as a means to achieve their goals, rather than as an end in itself. The presence of empathy as a motivation appears to be associated with certain policy areas. In poverty alleviation and social welfare in particular, local policy entrepreneurs frequently interact with marginalized groups, thus evoking sympathy and compassion among them (Lavee and Cohen 2019; Aviv et al. 2021; Cai et al. 2022).

The chi-square test and phi-coefficient analyses yield additional insights into the factors associated with entrepreneurial motivations, as reported in Table 4. We find significant correlations between administrative status and specific entrepreneurial motivations. Specifically, career incentives appear to be a dominant motivation for senior-level entrepreneurs (phi = 0.345, p < 0.001). Yet, these senior entrepreneurs exhibit negative associations with other motivations, such as earning resources (phi = -0.289, p < 0.001), completing tasks (phi = -0.410, p < 0.001), and empathy (phi = -0.454, p < 0.001). This could be attributed to their positions as keen participants in the leadership tournament, compared to other groups of entrepreneurial individuals. This distinction in motivations is further supported by

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| | | Career incen- tives | Earning resources | Completing tasks | Seeking solutions for local problems | Interest/commitment in a policy area | Empathy |
|--------------------|-----------------------|------------------------|-------------------|---------------------|--------------------------------------|--------------------------------------|-----------|
| Rank | Senior level | 0.345*** | -0.289** | -0.410*** | 0.061 | 0.071 | -0.454*** |
| | | - | - | - | - | - | - |
| | Middle level | -0.189* | 0.291** | 0.249** | -0.141 | -0.189* | 0.068 |
| | | - | - | - | - | - | - |
| | Low level | -0.217* | 0.025 | 0.229* | 0.089 | 0.133 | 0.500*** |
| | | - | 25% | - | - | - | - |
| Status | Local legislators | 0.178 | -0.064 | -0.085 | 0.066 | 0.052 | -0.064 |
| | | 50% | 50% | 50% | 50% | 50% | 50% |
| | Executive officials | 0.374*** | -0.267** | -0.398*** | 0.035 | 0.018 | -0.392*** |
| | | - | - | - | - | - | - |
| | Career civil servants | -0.298*** | 0.157+ | 0.454*** | -0.054 | -0.050 | 0.487*** |
| | | - | - | - | - | - | - |
| | Other personnel | -0.204+ | 0.255* | -0.050 | -0.012 | 0.023 | -0.140 |
| | | 25% | 25% | 25% | 25% | 25% | 25% |
| Qualifications and | Frontline experience | -0.045 | -0.156 | 0.354*** | 0.107 | 0.074 | 0.474*** |
| experience | | - | - | - | - | 25% | - |
| | Cross-sectoral | -0.095 | -0.162+ | -0.106 | 0.047 | 0.043 | -0.146 |
| | experience | - | - | - | - | - | - |
| | Professional | -0.339*** | -0.052 | -0.126 | -0.011 | 0.017 | -0.008 |
| | qualifications | - | - | - | - | - | - |

Table 4. Phi-coefficient for entrepreneurial motivations and other variables

Source: authors. Note: *, **, and *** denote significance at 0.05, 0.01, and 0.001, respectively. As a result of the exploratory nature of this review, we also mark statistical significance at 0.10 as +.

the negative association between career incentives and middle- and low-level entrepreneurs (phi = -0.173, p < 0.1 and phi = -0.212, p < 0.05, respectively). As discussed above, rank-and-file bureaucrats often face career advancement barriers, while senior-level bureaucrats tend to have greater chances of overcoming these barriers by mobilizing resources and demonstrating political performance. In contrast, middle-level entrepreneurs tend to exhibit a stronger preference for seeking resources, such as finances and reputation, through catalyzing policy innovation (phi = 0.341, p < 0.001). It is not surprising that they also display a strong intention to fulfill tasks assigned by administrative supervisors (phi = 0.223, p < 0.05). Furthermore, they are less likely to be motivated by interest or commitment in a particular policy area (phi = -0.189, p < 0.01). Similarly, lowlevel entrepreneurs demonstrate a strong motivation to connect policy innovation with implementation (phi = 0.217, p < 0.05). For entrepreneurial officials at the street level, aligning their innovative ideas with policy implementation proves to be an effective strategy for overcoming obstacles such as resource constraints (Lavee and Cohen 2019). Moreover, low-level policy entrepreneurs tend to exhibit a particularly strong association with empathy (phi = 0.500, p < 0.001), underscoring the unique motivation mix rooted in their proximity to citizens.

This review also finds correlations between entrepreneurial motivations and individual experiences. Local policy entrepreneurs with frontline experiences are more likely to exhibit empathy, even if they currently hold senior positions (phi = 0.474, p < 0.001). Holding professional qualifications appears to produce a negative impact on policy entrepreneurs' career incentives (phi = -0.339, p < 0.001), possibly because many of them are technocrats working in middle- and low-level positions within the government and tend to hold moderate political ambitions. Finally, we find that two high-frequency motivations – seeking solutions for local problems and having an interest in a specific policy area – are not significantly associated with the individual-level factors mentioned above. This result implies that these twin motivations are common among local policy entrepreneurs, regardless of their hierarchical positions or individual experiences.

Entrepreneurial strategies

The actual behaviors of policy entrepreneurs bridge the gap between their intentions and contextual factors, ultimately leading to policy change outcomes (Zahariadis and Exadaktylos 2016; Mintrom and Norman 2009). Building on the systematic review by Frisch Aviram et al. (2020a) and other works (Faling et al. 2019; Lavee and Cohen 2019; Zahariadis and Exadaktylos 2016), this study synthesizes seven types of entrepreneurial strategies: problem framing, venue shopping, policy learning, teamwork strategies, leading by example, anchor work, and the use of procedural policy tools. Promoting policy innovations requires entrepreneurs to navigate complex contexts, necessitating not only multiple skills but also effective strategies to address the challenges at hand. The astute combination of different strategies is crucial for successful policy entrepreneurship. Our analysis of individual entrepreneurial actions regarding strategy mixes yields several crucial findings (see Table 5 below).

| Strategy | Freq (%) | Phi-coefficient with successful policy change (by case) | | |
|--------------------------------|-----------|---|--|--|
| Teamwork strategies | 103 (84%) | 0.252* (25%) | | |
| Anchor work | 105 (86%) | 0.318** (25%) | | |
| Using procedural policy tools | 94 (77%) | 0.101 (25%) | | |
| Spotlighting | 63 (52%) | 0.144 (-) | | |
| Learning from external sources | 60 (49%) | -0.030 (-) | | |
| Vertical venue shopping | 58 (48%) | -0.033 (-) | | |
| Leading by example | 40 (33%) | 0.039 (-) | | |
| Disconnecting | 28 (23%) | 0.123 (-) | | |
| Learning from internal sources | 40 (33%) | 0.058 (33%) | | |
| Horizontal venue shopping | 12 (10%) | 0.047 (25%) | | |
| Incorporating | 9 (7%) | 0.170 (25%) | | |

Table 5. Strategy frequency

Source: authors.

Note: *, **, and ***denote significance at 0.05, 0.01, and 0.001, respectively.

First, teamwork strategies stay at the center of the strategy mix, reflected in their high frequency of adoption by entrepreneurs (84%). Previous studies have highlighted the lack of resources as a defining characteristic of policy entrepreneurs, particularly those in middle and lower positions, who often need to build teams to mitigate resource constraints (Lavee and Cohen 2019; Tang et al. 2020; Arnold 2020b). Even chief executives in local governments need to rely on the expertise and entrepreneurship of others to develop policy solutions and steer implementation (Goyal et al. 2020; Gong 2022; Oborn et al. 2011). As Mintrom (2019) underscores, the gathering of political intelligence and development of strategies often happen in team settings. Teamwork strategies thus provide a solid foundation for other entrepreneurial actions, such as policy learning and anchor work, thereby explaining their central role in the strategy mix.

Problem framing represents a highly useful strategy for policy entrepreneurs looking to strengthen legitimacy and earn resources (Mintrom and Norman 2009; Frisch Aviram et al. 2018). While most previous studies treat problem framing as a broad concept that can describe all activities related to coupling problem streams, there is a multitude of framing skills, such as highlighting the failures of current policies (Baumgartner and Jones 1993), presenting scientific evidence (Arnold 2015), and linking the benefits of proposed policies to the interests of other stakeholders (He 2018; Capano and Galanti 2021). Drawing on applied behavioral science, Aukes et al. (2018) developed a five-fold typology of problem-framing activities based on Dewulf and Bouwen (2012), including accommodating, disconnecting, incorporating, spotlighting, and reconnecting.⁵ However, this

⁵Incorporating refers to activities that include other narratives in the problem definition; accommodating involves adjusting the problem definition to align with other narratives; disconnecting challenges other narratives to underscore the importance of the problem definition; spotlighting highlights the differences and merits of the problem definition; reconnecting links the problem definition with other narratives.

typology appears to be too complex to apply in public policy research. In particular, the boundary between accommodating and incorporating, as well as that between spotlighting and reconnecting, are often too blurry to identify in real cases. Therefore, we consider three essential framing skills: incorporating, disconnecting, and spotlighting. Compared to disconnecting and incorporating, spotlighting has a much higher frequency of use in the sample (52% compared to 23% and 7%, respectively). This result suggests that highlighting the merits of a policy proposal and connecting it with the interests of other policy actors appear to be common strategies in local policy entrepreneurship.

Defined as the transfer of decision-making authority to a new policy arena where there are fewer opponents, venue shopping is frequently noted by previous studies as a crucial entrepreneurial strategy used to gain support from key policy actors (Faling et al. 2019; He and Ma 2020; He et al. 2025). This study adapts the categorization of venue shopping strategies put forth by Faling et al. (2019) to distinguish vertical venue shopping from horizontal venue shopping. This distinction allows us to identify the nuances in which local policy entrepreneurs maneuver within complex networks to amass political capital and resources. Vertical venue shopping entails transferring proposals to other policy domains for support. Such strategies policy entrepreneurs with important tools for building coalitions and earning resources. As shown in Table 5, vertical venue shopping is frequently employed by about 48% of entrepreneurs when promoting policy change. Clearly, maneuvering within the hierarchy is pivotal for local policy entrepreneurs, given their relatively low position in the administrative system.

Anchor work and using procedural policy tools both have a high frequency of adoption (86% and 77%, respectively). Anchor work, as defined by Frisch Aviram et al. (2018), refers to activities aiming to secure policies through regulation, rule-making, and actual implementation. Policy entrepreneurs can consolidate the progress of policy change through formal institutionalization. They can also anchor the shift through informal practices, such as persuading peer bureaucrats or lower-level officials to use new policy instruments in their daily work without modifying existing regulations (Arnold 2015, 2020b), similar to the strategy of "scaling up change processes" in Mintrom (2019). Both approaches to anchor work have been observed in previous studies. For example, Lu et al. (2020) found that a middle-rank official championing an urban greening proposal in Shanghai made constant efforts to enhance the amendment of local regulations on urban planning. Arnold (2015, 2020b) also illustrated how local officials in the United States innovated evaluation metrics for environmental protection and persuaded frontline implementers to use these tools to expand the influence of their innovations.

Previous studies have also noted that policy entrepreneurs strategically use bureaucratic procedures to influence decision-making and implementation (Meijerink and Huitema 2010; Zahariadis and Exadaktylos 2016). Here, we use the concept of "procedural policy tools," adapted from Bali et al. (2021), to describe such strategies. Unsurprisingly, both anchor work and using procedural tools are crucial for consolidating the progress of policy change. Institutionalization and the full-scale implementation of policy change are undoubtedly the ultimate goal pursued by policy entrepreneurs. Procedural tools, such as authority, treasure, and organization, are often used to enhance the anchor work of policy entrepreneurs. For example, entrepreneurial officials often establish provisional organizations, such as steering groups and task forces, to facilitate bureaucratic coordination at both the strategic and operational levels (Oborn et al. 2011; Gong 2022). Policy entrepreneurs also take advantage of opportunities to present their proposals to senior leaders during sharing sessions or high-level conferences, thereby seeking political endorsement for their initiatives (He 2018).

Policy learning and leading by example are the last two types of entrepreneurial behaviors observed in the strategy mix. To address problems in a specific professional domain, policy entrepreneurs often need to acquire knowledge and build narratives and policy solutions in an informed manner. Therefore, policy learning as "the updating of beliefs" concerning policy based on lived or witnessed experiences, analysis, or social interaction (Dunlop and Radaelli 2013), is pivotal for entrepreneurs aiming to effectively engage in policy innovation. They may learn from different sources. External sources include those outside the government, such as advice from external experts, third-party research, and peer experience from pioneering regions (Lavee and Cohen 2019; Ye and Wu 2022; Capano and Galanti 2021). Internal sources include channels within the bureaucratic system, such as track records from previous policies, top-down guidelines, learning from peer bureaucrats, and bottom-up feedback from subordinates (Lu et al. 2020). Our results indicate that external sources appear to play a bigger role in the sample, as a higher percentage of local policy entrepreneurs learn from the outside (49%), rather than the inside (33%).

Leading by example denotes taking actions to prove the workability of a policy, particularly through pilots or demonstration projects (Mintrom and Norman 2009). Through such strategies, policy entrepreneurs increase the likelihood of convincing other policy actors to participate in the innovation, as the benefits of the policy become tangible and observable. Additionally, setting up pilots offers policy entrepreneurs a crucial tool with which to identify shortcomings in the current policy proposal, thus helping improve the policy design. In our sample, more than half of the cases (55%) that adopted this strategy were based in China, reflecting the country's long tradition of experimentalist governance interwoven with local policy dynamism (Teets and Noesselt 2020).

A significant finding from this study is the strong correlation between successful policy change and two prominent strategies, namely, anchor work (phi = 0.318, p < 0.01) and teamwork (phi = 252, p < 0.05). The statistical significance of anchor work highlights the pivotal role of institutionalization and scaling up in local policy entrepreneurship. Because the continuation of policy innovations is often threatened by job turnover of key individual officials, such a strategy presents the key to secure continued use of innovative practices. Furthermore, local policy entrepreneurs who pursue innovations collectively were found to have a greater chance of policy change. Individual entrepreneurship seems to have much less chance of success given their lack of authorities and resources at the subnational arena.

Characterizing strategy mixes

The theoretical interest of this study goes beyond merely describing the strategies employed by local policy entrepreneurs. We maintain that their divergence in skills and positions may lead to divergent entrepreneurial behaviors (Arnold 2020a; Mintrom 2019). However, within similar contexts, such as the same stage of policy process, their adoption of strategies may still present certain commonalities, yielding some "bigger patterns" of strategy mixes (Goyal et al. 2020; Arnold 2021). When seeking the "bigger patterns" of subnational policy entrepreneurship, HCA is employed as a useful technique to explore the similarities (Arnold 2021). Our systematic review utilizes the simple linkage algorithm that can generate a set of clusters at each level (Graham and Hell 1985), or for each threshold value which produces a new partition (Murtagh and Contreras 2012). In this study, the HCA initially considers each policy entrepreneur as a single unit and successively merged pairs of clusters based on the cooccurrence of strategies in each unit as a continuous variable, which indicates the common "tool kit" of policy entrepreneurs. The distance between the strategies is measured by the reciprocal of their cooccurrence. Here, we are predominantly interested in the "tool kits" for executive officials and career civil servants for two reasons. First, they are the two largest workforces in subnational governments. Second, the comparison between these two groups of local policy entrepreneurs allows us to further explore the influence of bureaucratic positions on policy entrepreneurship within a relatively large sample size.

A dendrogram is a common way to present HCA results (Arnold 2021; Sharif and Chandra 2023). Figs. 2 and 3 below present the strategy combinations of career civil servants and executive officials at different hierarchies, respectively. This study intentionally sets a threshold of 0.1 in distance to distinguish the central cluster and peripheral strategies. Specifically, one strategy within the central cluster co-occurs with another one from the same cluster at least ten times, which is a reasonable threshold to define "frequent adoption" by policy entrepreneurs in our sample. Two

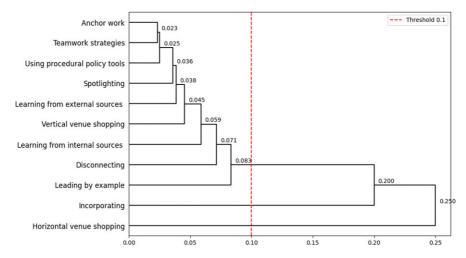


Figure 2. Hierarchical analysis of career servants' strategy mix. *Source*: authors.

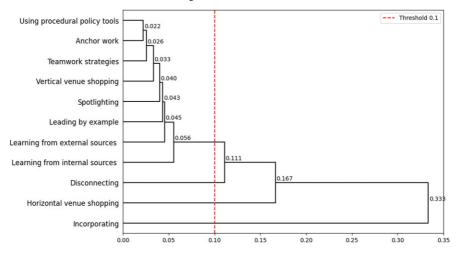


Figure 3. Hierarchical analysis of executive officials' strategy mix. *Source*: authors.

central clusters of strategies emerge from career civil servants and executive officials respectively. For career civil servants, their central cluster encompasses eight specific strategies, including "anchor work," "teamwork strategies," "using procedural tools," "spotlighting," "learning from external sources," "vertical venue shopping," "learning from internal sources," and "disconnecting." In comparison, "using procedural tools," "anchor work," "teamwork strategies," "vertical venue shopping," "spotlighting," "leading by example," "learning from external sources," and "learning from internal sources" agglomerate into the central cluster of executive officials.

Two key findings emerge from this clustering of strategies of local policy entrepreneurs. First, "anchor work," "teamwork strategies," and "using procedural policy tools" share the closet distance with each other (from 0.023 to 0.025 for career civil servants and 0.022 to 0.026, respectively) within the clusters of both groups, forming the strategy foundation of local policy entrepreneurs. Anchor work is crucial for policy entrepreneurs because it helps secure the desired policy change. While anchor work can be conducted through both formal and informal approaches as mentioned above, both approaches practically rely on the proper use of procedural policy tools within the bureaucracy. As Meijerink and Huitema (2010) commented: "[p]olicy entrepreneurs operate within a particular institutional setting but many also try to change that setting." (p. 21). Although executive officials and career civil servants are bound by procedures and rules of policymaking, they also gain sufficient knowledge about the processes as insiders. Such knowledge enables them to utilize procedural tools to increase success of substantial change of anchor work (Zahariadis and Exadaktylos 2016). This explains why local policy entrepreneurs across different countries are often found to use various types of procedural policy tools, such as information, organization, and treasure, to institutionalize their innovations, scale them up, or secure their sustained implementation (Zapata and Campos 2019; Mintrom and Luetjens 2017; Brown and Cohen 2019; Frisch Aviram et al. 2018; Durose 2011; Aviv et al. 2021; Pautz et al. 2021).

In addition, given the limited capacity of individuals, teamwork plays a pivotal role in the adoption of anchor work strategies. The HCA demonstrates that compared to executive officials, local career bureaucrats are more likely to align anchor work with teamwork strategies, as anchor work has shorter distance with teamwork strategies in the clustering of career civil servants (0.023 compared to 0.026 in the cluster of executive officials). This result may be explained by the fundamental differences between career civil servants and executive officials in local policy entrepreneurship. As Teske and Schneider (1994) explained, compared to executive officials, career civil servants lack sufficient power, making it difficult for them to promote significant policy change independently. Therefore, establishing coalitions becomes an entrepreneurial necessity.

Second, as "anchor work," "teamwork strategies," and "using procedural policy tools" form similar nuts of strategy mixes for local policy entrepreneurs, the clusters at the higher hierarchies emerge as different shells for executive officials and career civil servants. Specifically, career civil servants are more likely to combine strategies in the core cluster with "spotlighting," "disconnecting," and "learning from external sources" (distance in 0.036, 0.071, and 0.038, respectively) compared to executive officials (distance in 0.040, 0.111 and 0.045, respectively). On the contrary, "vertical venue shopping," "leading by example," and "learning from internal sources" have shorter distances with the core strategy mixes within the clustering of executive officials (0.033, 0.043, and 0.056 vs. 0.045, 0.083, and 0.059). Such differences further present distinctive features between career civil servants and executive officials when acting as policy entrepreneurs.

Conclusion

This systematic review explores the characteristics of policy entrepreneurship at the subnational level - an area that has received limited scholarly attention. By synthesizing qualitative evidence from 64 published articles in the English literature, we examine the distinctive motivations and strategies of local policy entrepreneurs across a wide range of political systems. An immediate observation arising from this review is the significant presence of career civil servants in the sample as policy entrepreneurs. Despite the lack of resources, they work enthusiastically – typically in a collective form – to drive policy change. They seem to be motivated by a genuine desire to improve local interests while completing administrative tasks assigned by superiors, reflecting the distinctive environment in which local policy entrepreneurs operate. Unlike national policy actors, they often reside and work in the same area for extended periods, allowing them to establish social networks and develop emotional ties to the community (Lavee and Cohen 2019; He 2018). This attachment often fosters a genuine desire to make positive changes in their jurisdictions – a motivation that is observed less frequently at higher levels of policy entrepreneurship (e.g., Hammond 2013; Torres and Fowler 2023).

Additionally, local policy entrepreneurs appear to be motivated by a strong desire to fulfill tasks assigned by higher-level authorities, as they act as important implementers of national policies, thus coupling the motivations between serving local interests and fulfilling responsibilities as policy implementers. As we observe active human agency exercised by local policy entrepreneurs in both bottom-up initiatives and top-down implementation, this study reinforces the recent literature: there is significant room for entrepreneurial maneuvers at the implementation stage of policy development (Frisch Aviram et al. 2018; Goyal et al. 2020). Subnational actors – executive officials, technocrats, and so on – play critical roles in driving such policy changes. Aside from executive officials and career civil servants in the sample, there is a very small percentage of technical experts in the local government playing policy entrepreneur roles. Therefore, many of the key maneuvers needed to earn political support and resources are within the bureaucratic system, as the high percentage of vertical venue shopping in the strategy mix suggests.

We find that contextual factors influence local policy entrepreneurs' choice of strategies. The centrality of anchor work and teamwork strategies within the strategy mix suggests the common approach used by local policy actors who are typically constrained by both authority and available resources in affecting policy innovations. These two strategies were also significantly associated with the likelihood of successful policy change. Furthermore, the smart use of procedural tools represents another useful strategy for them in regard to overcoming resource constraints. In addition, policy learning appears to be another popular strategy employed by local policy entrepreneurs vis-à-vis their national-level peers. This finding echoes recent observations on street-level policy entrepreneurship, which is also associated with frequent policy learning (Lavee and Cohen 2019; Arnold 2021; Edri-Peer et al. 2023). Policy entrepreneurs at the subnational level may have more opportunities (e.g., field visits, professional forums, peer networking, etc.) and stronger incentives (e.g., inter-regional competitions, solving longstanding local problems, managing crises, etc.) for the cross-jurisdictional learning of "best practices" and innovative ideas elsewhere.

Despite these differences, we find considerable similarities in motivations and strategies between local policy entrepreneurs and their national-level counterparts. Previous studies have shown that some officials within the national government systems engage in policy entrepreneurship due to their commitment to a policy area (e.g., Howard 2001; Jabotinsky and Cohen 2020; Hammond 2013). Our review also indicates that personal interest is one of the most important reasons leading local officials to undertake policy innovations. Furthermore, our systematic review suggests that policy entrepreneurs in similar administrative positions may use similar strategies, regardless of whether they are located at the national or subnational levels. For example, career civil servants working in national governments often need to perform vertical venue shopping strategies to earn political capital from senior decision-makers (Torres and Fowler 2023; Howard 2001), which is highly similar to the tactics adopted by their subnational peers, as revealed in this review. We propose the concept of "entrepreneurial isomorphism" to explain this convergence, by which policy entrepreneurs with similar identities at different levels of governance adopt similar strategies. Further exploration of the factors leading to entrepreneurial isomorphism requires in-depth study in the future.

This study concludes with critical caveats. While the systematic review itself examines subnational policy entrepreneurship in a value-free fashion, it must be acknowledged that the phenomenon itself is not necessarily progressive in nature. For instance, change agents who perceive that the proposed initiatives do not align with their interests may employ entrepreneurial strategies to block necessary reforms (Arnold 2015, 2020b). Moreover, corruption may be disguised in the form of entrepreneurial innovations, particularly in developing countries with relatively weak rule of law. As Gong (2006) insightfully underlined, unchecked discretionary power may lead local officials to pursue personal interests when undertaking policy innovations. Hence, the normative aspects of policy entrepreneurship may represent another crucial avenue for future research.

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Data availability statement. The study is built on a dataset compiled by the authors through a systematic review of literature. Raw data are available in MS Excel format in JPP Dataverse repository (https://doi.org/10.7910/DVN/V9HXLZ).

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