Exploring the Relationship between Privatization in Public Service Delivery and Coproduction: Evidence from U.S. Local Governments

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Jeffrey L. Brudney: In loving memory of our beloved friend, coauthor, and mentor. Thank you for paving the way, for pushing the field forward, for setting an example of excellence and kindness, and for cultivating generations of scholars. We deeply miss you.

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Abstract

Since the New Public Management Movement, privatization has become a popular approach for delivering public services. However, few studies empirically assess the relationship between privatization of public service delivery and citizen participation in coproduction. Taking advantage of a national survey of U.S. local government chief administrators, this study aims to contribute to the literature by exploring the link between these two important mechanisms of public service provision. Our findings indicate that local governments are more likely to involve citizens in coproduction when a larger proportion of service delivery is privatized. Regarding various types of coproduction, privatization in public service delivery is positively associated with the likelihood of citizen involvement in co-planning, co-design, and co-assessment, but not in co-delivery. Finally, compared to for-profit service providers, involving nonprofit organizations in public service delivery is likely to create more opportunities for citizens to be involved in the coproduction of public services.

Introduction

Since the advent of the New Public Management Movement, privatization has become a prevalent approach for governments at all levels to deliver public services around the world (Hefetz and Warner 2004; Jing and Chen 2012; Osborne and Gaebler 1992). Privatization of public service delivery is particularly appealing as local governments seek solutions for mounting fiscal pressure. Because of its importance for public management, ample studies examine the cost-effectiveness, performance, and efficiency of privatization, or different forms of privatization such as contracting, public-private partnerships, and divestment initiatives (Fernandez 2009; Amirkhanyan 2008; Bel, Fageda and Warner 2010). However, few studies have been conducted to understand the relationship between privatization and citizen coproduction of public services (Brudney 1987; McMullin 2021). Amirkhanyan and Lambright's (2017) recent book, *Citizen Participation in The Age of Contracting: When Service Delivery Trumps Democracy*, provides a detailed examination of this topic based on interviews with public and nonprofit managers. Yet to appear in the literature, though, is a large sample(s), nationally based examination of how privatization in public service delivery is associated with local government efforts in involving citizens in the coproduction of public services. As privatization and coproduction are often separately associated with New Public Management and New Public Governance (Pestoff, Brandsen, and Vershuere 2012; Thomas 2013), scholars tend to treat them as incompatible public governance tools and overlook their constant interplay in everyday public management practices.

Taking advantage of two waves of a nationwide International City/County Management Association (ICMA) Alternative Service Delivery (ASD) survey administered to city and county

governments in the United States in 2012 and 2017, The present study aims to fill this gap in our knowledge by addressing the following questions: Does privatization in public service delivery promote or hinder different types of coproduction? How are these dynamics different when private organizations with different strategic orientations are involved in these alternative service delivery mechanisms, namely for-profit and nonprofit organizations in our study context? We follow Nabatchi et al. (2017) to define coproduction as "an umbrella concept that captures a wide variety that can occur in any phase of the public service cycle and in which state actors and lay actors work together to produce benefits" (p.769). In particular, we focus on four types of coproduction based on the phases of a public service cycle: co-planning, co-design, co-delivery, and co-assessment. For privatization in public service delivery, we refer to those alternative service provision mechanisms that involve private and nonprofit organizations in the delivery of public services that are mainly funded by public tax dollars (Bel, Hebdon, and Warner 2018; Kim 2018).

This article makes important contributions to the theory and practice of public management and governance. First, despite coproduction's origin in the 1980s when the public choice approach of studying public administration emerges (Parks et al. 1981), privatization in public service delivery is regarded as a signature strategy of the New Public Management model (Alford 2009) while coproduction is often associated to the New Public Governance model (Pestoff, Brandsen and Verschuere 2013; Osborne, Radnor and Strokkosch 2016; Sorrentino, Sicilia and Howlett 2018). However, in reality, these two dominant models of public management often exist simultaneously (Amirkhanyan and Lambright 2017). By empirically assessing the relationship

between privatization in public service delivery and coproduction, our findings shed light on the interplay between two of the most influential public management frameworks.

Second, we contribute to public management scholarship by building a theoretical framework regarding different causal pathways through which privatization in public service delivery may constrain or enhance coproduction. While the existing literature often associates privatization and coproduction with different public management paradigms, the conceptual distinction between the two concepts is not clear (Brudney 1987). Especially with the recent explosion of the study on coproduction, everything nongovernmental seems to be treated the same and coproduction becomes an umbrella term describing all these alternative service provision mechanisms (Cheng 2019). By conceptualizing and measuring these two concepts in distinct ways, we contribute to the conceptual clarity of these key public management concepts. By conceptualizing and measuring coproduction in multiple phases or stages of the service cycle, we are also able to offer a more nuanced understanding of how privatization in public service delivery is associated with different types of coproduction.

Finally, by disaggregating for-profit organizations and nonprofit organizations from the privatization index, we show whether privatization strategies embedded with different sectoral values have distinct impacts on local governments' involvement of citizens in coproduction. These findings help establish the organizational conditions and system contexts supporting coproduction (Benjamin and Brudney 2018; Gazley and Cheng 2019). It also helps advance the literature on sector comparisons in the context of privatization and contracting out (Andrews and Entwistle 2010; Witesman and Fernandez 2013).

The article begins with a literature review of the relationship between privatization in public service delivery and coproduction. We derive two competing arguments and a comprehensive theoretical framework based on the review. We then turn to the description of the data, the measurement of the independent and dependent variables, and the methodology employed in this study. After reporting the findings, we conclude with a discussion of the implications of the study for future research and management practice in local governments.

Unpacking the Relationship between Privatization in Public Service Delivery and Coproduction

Privatization in public service delivery and coproduction are often separately regarded as key public management tools and strategies in the New Public Management and New Public Governance regimes. New Public Management emphasizes efficiency and quasi-market service provision mechanisms – treating citizens as consumers of public services. Privatization in public service delivery is a key feature of New Public Management as it increases competition and presents more choices of service providers for citizen consumers to choose from. New Public Governance, on the other hand, focuses on citizen participation, democratic governance, and social equity – treating citizens as a partner with the government in coproducing public services (Osborne 2006; Pestoff 2018; Thomas 2013). Scholars also advocate for a transformation of governance that goes beyond privatization and New Public Management to coproduction and New Public Service (Cooper, Bryer, and Meek 2006; Denhardt and Denhardt 2000). What is missing or taken for granted in the existing literature is that privatization in public service delivery has been prevalent in the U.S. and around the world. Public managers cannot skip these

institutional arrangements to jump directly to a different form of governance. While privatization in public service delivery and coproduction represent different public management ideals, they have deep connections in practice. It is essential to develop a better theoretical and conceptual understanding of how these two strategies are differentiated and connected.

Here in this section, we draw on existing research and literature to build a theoretical model of the relationship between privatization in public service delivery and coproduction. In particular, we summarize four pathways through which privatization in public service delivery and coproduction might go hand-in-hand or substitute each other.

How Privatization in Public Service Delivery Might Constrain Coproduction

COMPETING PUBLIC VALUES. Consistent with the dominant narratives in the existing literature, especially the sharp contrast between New Public Management and New Public Governance, privatization in public service delivery might present competing public values as local governments involve citizens in coproduction. The core values emphasized in privatization are efficiency and competition. However, coproduction emphasizes the core values of participation, partnerships, and a full range of democratic values (Bryson et al. 2014). The evolving trend of marketization and professionalization in privatization decreases significantly the capacity of private and nonprofit organizations to engage and organize citizens (Eikenberry and Kluver 2004; Skocpol 2003). As Theda Skocpol suggests in her provocative 2003 book Diminished Democracy: From Membership to Management in American Civic Life, although the number of membership associations in the U.S. continues to grow, the membership of these associations has dramatically declined. The professionalization of American membership

associations has greatly diminished the civic participation and engagement of their members (Skocpol 2003). Morgan and England (1988) also consider the erosion of citizenship and community as the main threat posed by the privatization movement. Similarly, Brudney (1987) argues that while "privatization seeks cost savings and efficiency in government through decreased public involvement in the provision and production of services" (p. 20), coproduction serves as a complement and companion to government initiatives.

CONTRACTING OUT PARTICIPATION. Local governments may view privatization as a substitute for citizen participation (Amirkhanyan and Lambright 2018). Since private organizations, especially community and nonprofit organizations, are involved in privatization, local governments may assume that this organizational involvement is the same as or equivalent to, direct citizen participation; therefore, withdraw their existing citizen participation initiatives. Besides, because of the involvement of multiple stakeholders and organizations in privatization, the transaction costs of organizing effective citizen participation may be too high for local governments to overcome. The public accountability challenges of privatization may also diminish public trust toward government, thus creating adverse incentives for citizens to participate in coproducing public services (Beerman 2001). Levin (2022) documents a rapidly growing trend of local governments outsourcing elements of their public participation functions to external consultants and organizations.

How Privatization in Public Service Delivery Might Enhance Coproduction
OPPORTUNITIES FOR PARTICIPATION. Privatization may present the right scale and institutional structure so that citizens have more opportunities to participate in coproducing

public services. Vincent Ostrom and Elinor Ostrom and their colleagues at the Indiana University Workshop in Political Theory and Policy Analysis pioneered the idea of coproduction while advocating for a better understanding of the complexity of public service provision systems in U.S. local governments (Parks and Ostrom 1981). This connection did not occur accidentally or by chance. By involving private organizations in public service delivery, citizens may find it easier to participate in coproducing public services as the scale of these organizations is typically smaller than local governments. Besides, nonprofit and community-based organizations have been recognized as the intermediaries of civic participation (Berry, 2005; LeRoux, 2007). By involving these organizations in public service delivery through privatization, citizens may also find more opportunities to participate in the coproduction of public services.

NEED FOR ACCOUNTABILITY. Because of the complexity and multiple organizations involved in privatization, governments may find it difficult to monitor the performance of public services provided through privatization. Especially as traditional government functions shift into the 'gray zone' of quangos (UK) or government-sponsored enterprises (USA) which are "not accountable to their stakeholders in the traditional ways that either government, through elections, or private businesses, through markets, are accountable" (André, 2010, p273), privatization may significantly compromise public accountability. Likewise in the for-profit sector, companies are accountable for their 'bottom line' while in the public accountability is "generally more stringent, particularly with regard to process and general policy" (Mulgan, 2000 p, 87). In terms of public service delivery through nonprofit organizations, Salamon (1987) lists philanthropic particularism and philanthropic paternalism as two significant limitations of the

nonprofit sector in ensuring responsiveness to the general community need and public accountability.

As the party that is ultimately held accountable for these contracts (citizens often cannot distinguish whether it is government or private entities which provide the services), governments may rely on citizens to obtain feedback about these privatized services (Brown, Potoski, and Van Slyke 2006). In other words, privatization may incentivize governments to design or mandate different mechanisms for citizens to participate in coproducing public services and to facilitate improved evaluation and control of those public services provided by contracting out or other privatization mechanisms. In the context of government-nonprofit contracting relationship, LeRoux (2009) indeed find that government funding plays a significant role in promoting citizen participation in administrative decision-making.

Synthesis and Sector Dynamics in the Privatization – Coproduction Relationship

Based on the above discussions of possible pathways through which privatization in public service delivery may constrain or enhance coproduction, it ought to be sufficient to say that coproduction is not simply a replacement for privatization in public service delivery. There are complex and interdependent interactions between these important public management concepts. Although we are not able to test each of these causal mechanisms and there are likely other mechanisms in place, we are able to observe the covariance between the level of privatization in public service delivery in a locality and the extent to which local governments involve citizens in coproducing public services. In other words, we can test whether the aggregated effects of the paths or mechanisms through which privatization promotes or hinders coproduction are stronger,

weaker, and balanced. Figure 1 summarizes the pathways discussed above. The upper box of the pathways tends to decrease the level of citizen coproduction of public services while the lower box tends to increase the level of coproduction. Based on Figure 1, we generate two competing hypotheses regarding the relationship between privatization in public service delivery and coproduction.

H1: There is a negative association between the level of privatization in public service delivery and the level of coproduction implemented by local governments.

H2: There is a positive association between the level of privatization in public service delivery and the level of coproduction implemented by local governments.

[Figure 1 Here]

Besides the aggregate level of privatization in public service delivery and its relationship with coproduction, the above discussions often point to sector dynamics embedded in this relationship. Following Herranz (2007)'s pioneering work in theorizing multisectoral networks based on competing institutional logics and strategic value orientation, we propose that privatization in public service delivery via nonprofit organizations is more likely to fall under the community-based logic, which emphasizes citizen engagement and participation. Privatization via for-profit organizations, on the hand, would represent market-based logic, which prioritizes efficiency, competition, and profitability. Based on our discussions above about different mechanisms through which privatization would constrain or enhance coproduction, we expect

that privatization strategies with nonprofit organizations are more likely to enhance coproduction, as compared to privatization strategies with for-profit organizations.

H3: Compared to for-profit service providers, involving nonprofit organizations in public service delivery has a stronger positive association with the level of coproduction implemented by local governments.

Data and Methods

We explore the relationship between privatization in public service delivery and coproduction by integrating data from multiple data sources, including the 2012 and 2017 ICMA Alternative Service Delivery (ASD) Surveys and the 2012 American Community Survey. The ICMA ASD survey was launched in 1982, and it has been conducted every five years since with samples of chief administrative officers of U.S. local governments. Although a recent study questions the robustness of earlier ICMA ASD surveys conducted in 2002 and 2007 (Lamothe, Lamothe, and Bell 2018), the ASD is one of the most widely used and recognized sources of data to understand different forms of local government service provision, therefore providing a high degree of external validity. ICMA data has been employed widely to understand government restructuring (Warner and Hebdon 2001), public service outsourcing (Girth et al. 2012), and the use of volunteers in public service delivery (Nesbit and Brudney 2013) among other important topics. Besides, following the suggestion of Lamothe, Lamothe, and Bell (2018, p. 622), we use both the 2012 and 2017 ICMA ASD surveys to mitigate any problems in data reliability.

The 2012 ICMA survey was administered to 7,515 municipal governments and all county governments in the United States, generating a response rate of 21% (2,184 local government administration responded to the survey). The 2017 ICMA survey was distributed to 13,777 chief administrative officers of municipal governments with more than 2,500 residents and all county governments in the U.S., generating a response rate of 17% (2,343 local governments responded to the survey). More than 10 categories of questions about the motivations, barriers, and implementation of public service delivery were asked in both waves of the ICMA survey, including more than seventy service-by-service questions about specific service delivery mechanisms for each service (for example, animal control, street repair, fire suppression, etc.). We pair responses from the 2012 and 2017 ICMA surveys to establish the time sequence of our independent and dependent variables as the questions on coproduction were newly added to the 2017 ICMA survey. We integrate data from the 2012 American Community Survey to match corresponding geographic units of the ICMA survey (place, county, or county subdivision).

After pairing and merging the 2012 and 2017 ICMA surveys, 673 U.S. local governments responded to both waves of the survey. In our analysis, we eliminated local governments with no service delivery reported in either wave of the surveys to enhance validity (c.f. Lamothe, Lamothe, and Bella, 2018), as these (non)responses raise caution about these particular records (it is highly unlikely that a local government does not engage in any form of public service delivery). Besides, we eliminated one local government (the City of Cupertino, California), which reported a larger number of privatized services than the total number of services provided by the local government. Finally, we have to drop two local governments in the dataset as we cannot access complete socioeconomic information or the voting data (Ashland City, Wisconsin,

and City of Petersburg, Alaska). Because of the missing data, we excluded these local governments from the dataset. After these data cleaning procedures, 650 local governments remain in the final sample for the analysis, comprising 534 municipalities and 116 county governments for the 2012 and 2017 waves of ICMA ASD surveys. We choose not to merge these data with the earlier waves of the ICMA survey because of the survey design changes and the significant loss of observations that would ensue in the sample. We believe a five-year span allows us to establish the pre-conditions of alternative service delivery mechanisms.

Variables and Data

Following the recent typology of various types of coproduction (Nabatchi, Sancino, and Sicilia 2017; Brudney, Cheng, and Meijs, 2022), we use four questions in the 2017 ICMA ASD survey to measure different types of coproduction - Does your local government involve individual citizens, groups of citizens, or citizens as a whole (i.e., the entire community) in:

- Planning services (i.e. decisions on service policies and funding)

- Designing services (i.e. decisions on how services will be arranged or organized)

- Delivering services (i.e. using citizens' labor/expertise to help deliver services)

- Assessing services (i.e. seeking citizens' online ratings or other reviews of services)

We construct multiple dependent variables to measure coproduction. First, we create separate dummy variables based on these four questions to understand whether local governments involve citizens in the *planning, design, delivery, or assessment* of public service provision. These dummy variables capture the qualitative difference of whether local governments involve citizens in various types of coproduction in their public service provision systems. They also

help us understand whether privatization in public service delivery may influence various types of coproduction in different ways. Nabatchi et al. (2017, p.771) provide detailed examples regarding how different types of coproduction in phrases of the service cycle manifest themselves in public management practices.

According to Table 1, co-planning and co-assessment are the most prevalent types of coproduction implemented by local governments, with 46.92% and 40.77% of local governments in our sample engaging citizens in these two types of coproduction. Co-delivery and co-design are less common, with 29.38% and 30.92 % of local governments implementing these types of coproduction respectively.

[Table 1 here]

Second, we construct a summative scale of coproduction based on the four responses to different types of coproduction. Because the four items assessing coproduction are binary, we calculate the tetrachoric correlations among the items and use this correlation matrix to perform exploratory factor analysis to identify the dimensionality of the underlying coproduction construct. The result strongly suggests that the four items load on one primary dimension, and this is consistent with the findings of a similar sample of public administrators (Brudney, Cheng, and Meijs, 2022). To facilitate a more straightforward interpretation of the findings, we use the summative scale of coproduction rather than a latent trait model transformation which is mainly used for binary responses (Muthén, 1983).

Key independent variables

The key independent variable in this study, *privatization of public service delivery*, is constructed based on the responses of public managers in 2012 concerning how services are delivered for 76 public services, ranging from utilities to social services. We calculate the privatization index using the following formula:

Privatization Index = (Number of services delivered via for-profits, nonprofits, volunteers, subsidies, or franchises) / (Number of services provided by local governments)

To operationalize sector dynamics in privatization in public service delivery, we further construct two additional independent variables: the proportion of public services delivered by nonprofit organizations and the proportion of public services delivered by for-profit organizations.

Local governments on average provide 39 categories of public services to their citizens (76 categories of services in total in the 2012 ICMA ASD survey). 20% of the services provided by local governments are delivered via privatized service production mechanisms. Regarding specific privatized service delivery mechanisms, contracting with for-profit organizations is the most prevalent, accounting for 13.15% percent of the total public services provided by local governments. Delivery of services by nonprofits amounts to 4.46%. Local governments seldom use volunteers, subsidies, and franchises for their public service delivery, with 2.12%, 0.52%, and 1.27%, respectively. These descriptive statistics further speak to the sector comparison between for-profit and nonprofit organizations as other privatization strategies are much less common in our study context.

Control Variables

Drawing on the literature on coproduction and public service provision (Bovaird et al., 2015; Brudney et al. 2019; Gazley et al. 2020), we include a rich set of variables to control for a community's socio-economic characteristics (population, median household income, residents' education level, homeownership rate, proportion senior citizens, and proportion white), the form of local government, political ideology (proportion residents voted for the Democratic presidential candidates), and the regions of the U.S. All control variables come from the 2012 ICMA survey, the 2012 American Community Survey, and the MIT Election Data to establish the necessary time lag for our dependent variables in 2017. We also use the variance inflation factor (VIF) to test the multicollinearity among our independent and control variables. The mean VIF is 2.14, which suggests that multicollinearity is of limited concern for the subsequent statistical analysis. Due to space constraints, we will not discuss these control variables in detail. Table 1 presents descriptive statistics for all variables included in the statistical analysis.

Statistical Analysis

To explore the relationship between privatization in public service delivery and coproduction, we use Poisson regression to model the number of coproduction types implemented by local governments. We decide to not use the latent trait model to produce the factor score for our coproduction variables mainly because the interpretation of results is less intuitive compared to the number of coproduction types implemented. We use logistic regression to model whether local governments engage citizens in those four specific types of coproduction respectively. As

these dependent variables are binary, logistic regression is appropriate. Clustered standard errors at the county level are used in all statistical models.

Findings

The multivariate analysis of the relationship between privatization in public service delivery and coproduction is presented in Table 2, with the Poisson regression on the number of coproduction types implemented and the logistic regression for whether local governments involve citizens in the four types of coproduction respectively. As the raw coefficients of logistic regression are not easy to be intuitively interpreted, Table 3 presents the factor change in odds for one unit increase in the privatization index and the factor change in odds for one standard deviation of the privatization index for all of our Poisson and logistic regression models. Because of space limitations and our main goal in discussing the relationship between privatization in public service delivery and coproduction, the coefficients of the control variables will not be discussed here.

[Table 2 here]

[Table 3 here]

First, we go to the summative scale of the coproduction construct, or the number of coproduction types implemented by local governments. We observe a consistently positive association between the privatization index and coproduction ($p < 0.05$). H2 is thus supported by our analysis. One standard deviation increase of the privatization index or the proportion of public services delivered via privatization strategies, the difference in the logs of expected counts of

coproduction types would be expected to increase by 0.526 unit, while holding the other variables in the model constant. In other words, when a local government has 17.7% more of its public services delivered via privatization strategies, the expected count of coproduction types implemented by the local government increases by a factor of 1.105.

Although privatization in public service delivery is consistently positively associated with the number of coproduction types implemented by local governments, its relationship with different types of coproduction does differ. For co-planning, co-design, and co-assessment, the increase in the proportion of services produced via privatized service delivery mechanism is associated with a higher likelihood of local governments involving citizens in these types of coproduction respectively (p < 0.05). Substantively, one standard deviation increase in the proportion of services produced via privatized service delivery mechanisms (0.177) increases the odds of citizen involvement in co-planning by a factor of 1.228, co-design by a factor of 1.245, and co-assessment by a factor of 1.228. However, we do not observe an association between the privatization index and co-delivery, indicating that the increase in the proportion of services produced via privatized service delivery mechanisms does not increase or decrease the likelihood of local governments involving citizens in service delivery.

Next, we turn to the sector dynamics in the privatization-coproduction relationship. Table 4 and Table 5 present the results of the proportion of services delivered by nonprofit organizations and for-profit organizations and their relationship with the level of coproduction. Consistent with our expectations, we observe a statistically significant positive association between the proportion of services delivered by nonprofit organizations and the number of coproduction stages

implemented (p<0.05). In terms of the proportion of services delivered by for-profit

organizations, while the coefficient is positive, it is not statistically significant at the 0.05 level.

In addition, the effective size for the proportion of services delivered by nonprofits is larger than

the proportion of services delivered by for-profits (1.209 vs. 0.504). These findings suggest that,

in general, there is a stronger positive association between privatization in public service delivery

and coproduction when nonprofit organizations are more involved in those privatization

strategies. H3 is thus supported by our analysis. In terms of the specific types of coproduction,

co-planning is positively associated with both the proportion of services delivered by nonprofit

and for-profit organizations. Co-design and co-delivery seem not to be influenced by both

strategies. Co-assessment is only positively associated with the proportion of services delivered

by nonprofit organizations.

[Table 4 here]

[Table 5 here]

Discussions

Overall, our findings suggest that privatization in public service delivery has a positive

association with coproduction. This pattern is consistent across co-planning, co-design, and co-

assessment. However, privatization in public service delivery is not associated with citizen

involvement in the co-delivery of public services. In this section, we offer discussions about the

implications of these findings on public management scholarship and practices, and how they

move the conversation of privatization and coproduction forward.

First, the findings of this study challenge the assumption that under the New Public Management model, citizens' roles in coproduction are likely to be diminished (Osborne 2006). Or coproduction is mainly a feature associated with the New Public Governance model – a distinct departure from the New Public Management Model (Alford 2009; Thomas 2013; Sorrentino et al 2018). Instead, this positive association between privatization in public service delivery and coproduction suggests that coproduction is indeed at the intersection or "crossroads of public administration regimes" (Pestoff 2018, p.27). Different models of public management are likely to offer various barriers and opportunities for coproduction and coproduction to occur in public governance systems featuring contracting out and other forms of privatization in public service delivery. Drawing information from a sample of local governments in the United States, our findings confirm existing cross-country studies that New Public Governance is a necessity for coproduction (McMullin 2021). As advocates for coproduction push for a transformation of governance or public policy reform to facilitate the coproduction of services (Osborne et al. 2016), it is equally important to recognize and leverage the opportunities embedded in the existing models of public management to promote citizen coproduction of public services.

Our findings are indeed different from Amirkanyan and Lambright (2018), who make the argument that service delivery trumps citizenship and democracy. Our study points to a more optimistic relationship between privatization in public service delivery and coproduction. These differences in findings suggest that the scope of analysis may matter in determining the relationship between privatization and citizen participation. The findings of Amirkanyan and Lambright (2018) are based on extensive interviews with public managers and private organization managers in six counties in the Northeastern region of the United States, while ours

draw information from a large sample of local government across the U.S. Besides, they limit their sample for analysis to human and social services to facilitate more in-depth understanding and better comparability. By contrast, this study presents an examination across different public service subsectors. Although both approaches have value, the takeaway is that the scope of analysis does seem to matter for how we understand the relationship between privatization and citizen participation. We also need more empirical studies to examine the aggregated impact of different pathways on the relationship between privatization and coproduction and dig deeper into how these different theoretical pathways work in practice to shape the relationship between privatization and coproduction.

Second, our findings on the relationship between different types of coproduction and privatization in public service delivery deserve some further discussion. Contrary to existing studies of coproduction that typically regard co-delivery of public service as the most dominant and direct form of coproduction (Brudey and England 1983; Nabatchi et al. 2017; Parks et al. 1981), we find that public administrators in U.S. local governments report that co-delivery is the least popular form of coproduction. We also fail to find an association between co-delivery and privatization in public service delivery. So why is this the case? Although we do not have additional qualitative evidence to fully support this claim, one possible reason is that as service delivery is privatized via contracting out to private organizations, local governments also "contract out" coproduction with private organizations. In other words, when services are delivered by private organizations, coproduction happens between service providers in those private organizations and users. Therefore, public administrators no longer regard involving citizens in service delivery as a function of local governments. This is consistent with findings of

previous research that when governments contract for service production, a proportion of service delivery management is also contracted out to private organizations (Brown and Potoski 2006). As service delivery is privatized via contracting, subsidies, or franchises, local governments also have more incentives to involve citizens in the planning, design, and assessment of public service provision, therefore achieving legitimacy and holding those private organizations accountable. It is worthwhile for future research to take a more comprehensive understanding of how coproduction may take place both at the local government-service user interface and non-governmental service provider-service user interface (Bovaird 2007; McMullin 2021).

Third, the findings of this study are consistent with existing research which argues for sector differences in privatization and contracting out (Witesman and Fernandez 2013). The strategic orientations of the organizations involved in privatization seem to be a key factor in understanding the consequences of different forms of privatization. We advance the sectoral comparison in privatization by linking it to coproduction. Our findings suggest that compared to for-profit service providers, involving nonprofit organizations in public service delivery is likely to create more opportunities for citizens to be involved in the coproduction of public services. However, there is no evidence that involving for-profit organizations would discourage or constrain coproduction (the coefficients in those models are positive and not statistically significant).

Finally, our findings point to the importance of going back to the root of the concept of coproduction and critically assessing its deep connections with different public administration regimes. The concept of coproduction was developed before the introduction of the New Public

Governance framework (Brudney 2020). When the Ostroms and their colleagues first developed the notion of coproduction (Parks et al. 1981), the main goal is to explain why we need to move from the traditional model of public administration to a public management model featuring private production of public services (Ostrom and Ostrom 1971). Their key distinction is that the production and provision of public services can be separated, and it creates unique values through coproduction of public services when the production of public services can be privatized. As the study of coproduction reemerges in the public management scholarship in the 2000s, the public choice tradition that motivated the study of coproduction is largely overlooked by the subsequent scholarship. As we celebrate the concept of coproduction, governance networks, polycentricity and link them to New Public Governance, we need to go back to the original ideas of the Ostroms and critically examine the institutional arrangement that may either limit or promote coproduction. Coproduction of public services points to the nature of public service provision. No matter how these services are delivered, either through government agencies alone, the market, or governance networks, citizens and service users play important roles in jointly producing public services. It is an empirical question about which institutional arrangement of public service delivery facilitates coproduction more, and we need to cross the divide of rigid walls of different paradigms of public management (Cheng 2020; Ostrom 1996).

Limitations and Future Research Opportunities

As in any study, ours is subject to limitations. First, although we try to take advantage of the time lag between privatization and coproduction, the questions about coproduction began in the 2017 ICMA ASD survey and are not available for earlier surveys. Therefore, we are not able to capture the variations of coproduction over time. We are only able to offer correlations in this

study. As ICMA further advances its survey of alternative service delivery in the future, and other types of information become available, follow-up studies should be conducted to understand the sources of variation in coproduction over time. In addition, while the binary nature of our coproduction measure makes it easier for public managers to respond to and assess how their local governments involve citizens in coproduction, it compromises our ability in assessing and differentiating various levels and approaches in service user involvement (Mazzei et al. 2020). Some forms of coproduction captured in the ICMA survey may be tokenistic as suggested by Arnstein (1969) while some may be more meaningful. Future studies could zoom in on a few localities or service subsectors to better assess the levels of various forms of coproduction.

Second, the information and data regarding the modalities of service delivery used by local governments in this study emanate from the perspectives of local government managers. Although these public managers are in a position to assess the landscape of service delivery and citizen participation in their localities, their perspectives may be in contradiction with the assessment of private organizations and citizens involved in privatization. Future studies should be conducted to compare the responses of public managers, citizens, and private organizations involved in these processes. Studies illustrate how comparative analysis can be conducted to understand the relationship between government and private organizations in qualitative (Amirkhanyan and Lambright 2018) as well as quantitative research (Gazley and Brudney 2007).

Third, we are only able to address citizen participation in the form of coproduction in this study. Other forms of citizen participation, such as voting, citizen juries, and deliberative democracy

(Bingham, Nabatchi, and O'Leary 2005), are not examined. Future studies could be conducted to understand how privatization and other alternative service delivery mechanisms may be correlated to different forms of citizen participation. More in-depth case studies and experimental studies could be conducted to understand the mechanisms underlying this relationship. The present study can offer only an aggregate assessment concerning how different forms of privatization may work simultaneously to influence citizen participation through coproduction.

Finally, despite the national focus of this study, our data only come from U.S. local governments. The dynamics of how privatization interplays with coproduction may vary across geographical, cultural, and political contexts. The next step is to apply the research strategy and insights from this study to other different geographical and political contexts. For example, what is the relationship between privatization and coproduction in China or other developing countries where the institutional environment for privatization significantly differs from the U.S. (Jing and Chen 2012)? Our U.S.-centered experiences need to be balanced with a comparative understanding of how different public management models interact with each other in other contexts.

Conclusion

As public management scholarship and practices shift from the New Public Management model to the New Public Governance model, the discussion centers around the essential role of citizens in public service provision and the operation of government. Previous literature often positions these two as rivalry frameworks without recognizing their complex interplays. By exploring the

relationship between privatization in public service delivery and coproduction, two of the most popular concepts associated with either framework, we provide one of the first systematic analyses to link these two dominant public management models. Our results suggest that privatization of public service delivery and coproduction can go hand-in-hand. However, not all types of coproduction are equal in this regard. When a local government has a higher level of privatization in its public service delivery, they are more likely to involve citizens in co-planning, co-design, and co-assessment. However, there is no association between privatization in public service delivery and co-delivery. Compared to for-profit service providers, involving nonprofit organizations in public service delivery is likely to create more opportunities for citizens to be involved in the coproduction of public services.

This study points to an emerging area of research that links the institutional arrangement of public service provision to coproduction. It also proposes further theoretical and empirical research for connecting different models and paradigms of public management. As governments shift their role from steering to serving (Denhardt and Denhardt 2000; Osborne 2018), the study offers an important assessment of how existing management practices may influence the transformation of the role of the local governments. Our findings challenge the popular belief that privatization creates obstacles for local governments to involve their citizens in coproduction. By strategically engaging private organizations in public service delivery, governments may be able to achieve the goal of citizen participation in public service provision at the same time.

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Figure 1. The Relationship between Privatization in Public Service Delivery and Coproduction
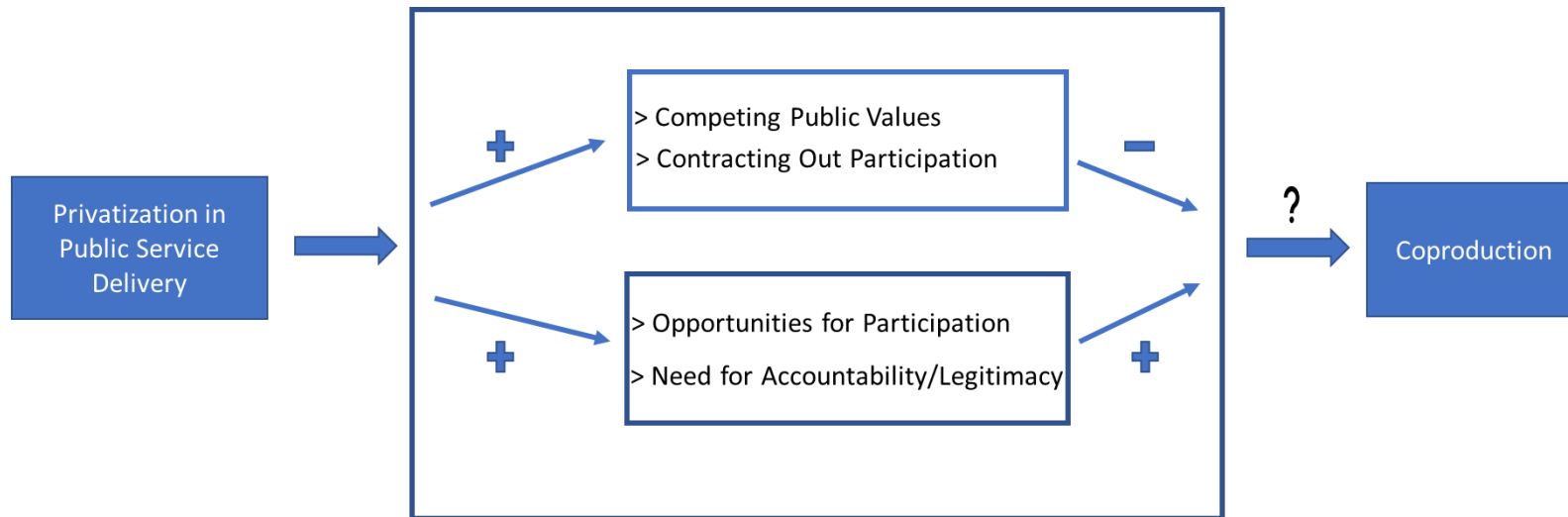
Table 1. Descriptive Statistics

Variable Name (Binary)	Percentage of Total	Mean	SD	Min.	Max.
Co-planning (2017)	46.92			0	1
Co-design (2017)	30.92			0	1
Co-delivery (2017)	29.38			0	1
Co-assessment (2017)	40.77			0	1
Professional Form of Government	52.31			0	1
Northeast	16.46			0	1
Northcentral	35.85			0	1
South	28.92			0	1
West	18.77			0	1
Variable Name (Continuous)	**Number of Observations**	**Mean**	**SD**	**Min.**	**Max.**
Number of Coproduction Stages Implemented (2017)	650	1.48	1.568	-0.815	1.297
Proportion privatized public services	650	0.200	0.177	0	1
Proportion services delivered by nonprofit organizations	650	0.045	0.066	0	0.364
Proportion services delivered by for-profit organizations	650	0.132	0.134	0	1
Log median household income	650	10.89	0.379	10.01	12.08
Proportion college degree or higher	650	0.592	0.143	0.234	0.956
Proportion white residents	650	0.834	0.157	0.034	0.999
Proportion senior citizens (65+)	650	0.225	0.068	0.083	0.625
Log population	650	9.224	1.267	5.710	14.748
Homeownership rate	650	0.686	0.133	0.191	0.981
Proportion voted for democrats	650	0.469	0.145	0.097	0.897

Notes: Except for variables marked as 2017, all other variables are based on 2012 data.

Table 2. Privatization in Public Service Delivery and Various Types of Coproduction

	Number of Coproduction Stages Implemented	Co-planning	Co-design	Co-delivery	Co-assessment
Privatization index	0.526*	1.157*	1.234**	-0.00201	1.157*
	(0.207)	(0.456)	(0.463)	(0.499)	(0.479)
Professional form of government	-0.00725	-0.174	-0.143	0.134	0.157
	(0.0892)	(0.172)	(0.180)	(0.183)	(0.173)
Log median household income	-0.327	-0.886	-0.533	-0.599	-0.164
	(0.243)	(0.478)	(0.514)	(0.519)	(0.475)
Proportion college degree	0.936*	1.775	1.924	0.756	1.772
	(0.461)	(0.933)	(1.060)	(1.017)	(0.976)
Proportion white	0.218	0.787	0.207	0.377	0.103
	(0.366)	(0.701)	(0.716)	(0.804)	(0.782)
Proportion senior	-0.955	-2.210	-0.704	-1.934	-1.496
	(0.714)	(1.343)	(1.382)	(1.500)	(1.444)
Homeownership rate	0.0730	0.757	-0.0900	0.331	-0.706
	(0.466)	(0.933)	(0.978)	(1.005)	(0.923)
Log population	0.0603	0.0417	0.0746	0.127	0.175*
	(0.0327)	(0.0726)	(0.0745)	(0.0718)	(0.0716)
Proportion voted for democrats	0.366	0.749	0.763	0.368	0.514
	(0.373)	(0.733)	(0.773)	(0.748)	(0.774)
Northeast	-0.0870	-0.377	-0.0726	0.0799	-0.132
	(0.132)	(0.248)	(0.296)	(0.266)	(0.260)
West	0.0132	-0.131	0.233	-0.119	0.140
	(0.136)	(0.279)	(0.313)	(0.295)	(0.289)
South	0.00859	-0.104	0.00102	0.0539	0.150
	(0.124)	(0.263)	(0.314)	(0.281)	(0.280)
Constant	2.555	7.112	2.624	3.661	-1.111
	(2.323)	(4.536)	(5.000)	(4.984)	(4.558)
N (observations)	650	650	650	650	650

Note: Significance levels indicated by *$p<.05$, **$p<.01$; two-tailed tests. Clustered standard errors at the county level in parentheses.
All dependent variables are in 2017. All independent variables are in 2012.

Table 3. Raw Coefficients and Factor Change in Odds for the Privatization Index

Dependent Variable	Raw Coefficient	Factor Change in Odds for unit increase in Privatization Index	Factor Change in Odds for SD increase in Privatization Index	SD of Privatization Index
Number of Coproduction Stages Implemented	0.526[*] (0.207)	1.692	1.105	0.177
Co-planning	1.157[*] (0.456)	3.182	1.228	0.177
Co-design	1.234[**] (0.463)	3.436	1.245	0.177
Co-delivery	-0.00201 (0.499)	0.998	1	0.177
Co-assessment	1.157[*] (0.479)	3.181	1.228	0.177

Note: Significance levels indicated by *p<.05, **p<.01; two-tailed tests. All coefficients and factor change in odds are reported for the privatization index. SD refers to standard deviation.

Table 4. Proportion Services Delivered by Nonprofit Organizations and Various Types of Coproduction

	Number of Coproduction Stages Implemented	Co-planning	Co-design	Co-delivery	Co-assessment
Proportion Services Delivered by Nonprofits	1.209*	2.532*	2.041	0.356	3.738**
	(0.535)	(1.258)	(1.263)	(1.389)	(1.307)
Professional form of government	0.00519	-0.148	-0.117	0.135	0.191
	(0.0889)	(0.171)	(0.178)	(0.183)	(0.173)
Log median household income	-0.259	-0.748	-0.387	-0.597	-0.0185
	(0.240)	(0.470)	(0.514)	(0.514)	(0.473)
Proportion college degree	0.875	1.655	1.799	0.751	1.648
	(0.464)	(0.934)	(1.067)	(1.014)	(0.987)
Proportion white	0.193	0.743	0.170	0.369	0.0299
	(0.370)	(0.703)	(0.723)	(0.805)	(0.793)
Proportion senior	-0.969	-2.267	-0.722	-1.946	-1.605
	(0.714)	(1.340)	(1.383)	(1.501)	(1.429)
Homeownership rate	0.0521	0.710	-0.159	0.345	-0.711
	(0.470)	(0.938)	(0.988)	(1.008)	(0.931)
Log population	0.0487	0.0183	0.0557	0.123	0.140*
	(0.0324)	(0.0736)	(0.0742)	(0.0728)	(0.0708)
Proportion voted for democrats	0.396	0.840	0.873	0.353	0.553
	(0.372)	(0.724)	(0.764)	(0.750)	(0.765)
Northeast	-0.0820	-0.369	-0.0714	0.0841	-0.107
	(0.132)	(0.247)	(0.298)	(0.266)	(0.259)
West	0.0191	-0.116	0.245	-0.118	0.158
	(0.137)	(0.280)	(0.316)	(0.295)	(0.292)
South	0.0188	-0.0845	0.0263	0.0525	0.168
	(0.125)	(0.263)	(0.315)	(0.282)	(0.283)
Constant	2.031	6.031	1.450	3.665	-2.198
	(2.307)	(4.480)	(4.996)	(4.948)	(4.551)
N (observations)	650	650	650	650	650

Note: Significance levels indicated by *$p<.05$, **$p<.01$; two-tailed tests. Clustered standard errors at the county level in parentheses.
All dependent variables are in 2017. All independent variables are in 2012.

Table 5. Proportion Services Delivered by For-profit Organizations and Various Types of Coproduction

	Number of Coproduction Stages Implemented	Co-planning	Co-design	Co-delivery	Co-assessment
Proportion Services Delivered by For-profits	0.504	1.263[*]	1.116	-0.326	1.308
	(0.279)	(0.613)	(0.640)	(0.649)	(0.667)
Professional form of government	-0.00593	-0.173	-0.139	0.137	0.157
	(0.0897)	(0.173)	(0.180)	(0.183)	(0.174)
Log median household income	-0.329	-0.907	-0.533	-0.561	-0.196
	(0.244)	(0.479)	(0.513)	(0.521)	(0.477)
Proportion college degree	0.934[*]	1.782	1.913	0.732	1.785
	(0.461)	(0.935)	(1.059)	(1.020)	(0.979)
Proportion white	0.228	0.804	0.227	0.375	0.124
	(0.365)	(0.702)	(0.715)	(0.806)	(0.776)
Proportion senior	-0.913	-2.108	-0.608	-1.948	-1.398
	(0.718)	(1.348)	(1.376)	(1.501)	(1.446)
Homeownership rate	0.0658	0.753	-0.110	0.292	-0.694
	(0.465)	(0.930)	(0.971)	(1.006)	(0.921)
Log population	0.0645	0.0515	0.0835	0.124	0.184[*]
	(0.0331)	(0.0728)	(0.0749)	(0.0716)	(0.0719)
Proportion voted for democrats	0.396	0.789	0.835	0.409	0.554
	(0.371)	(0.734)	(0.770)	(0.744)	(0.773)
Northeast	-0.0997	-0.403	-0.103	0.0806	-0.161
	(0.131)	(0.248)	(0.293)	(0.265)	(0.259)
West	0.0157	-0.129	0.236	-0.116	0.141
	(0.135)	(0.279)	(0.309)	(0.295)	(0.289)
South	0.0177	-0.0874	0.0216	0.0571	0.167
	(0.125)	(0.263)	(0.311)	(0.282)	(0.280)
Constant	2.560	1.263[*]	1.116	-0.326	1.308
	(2.320)	(0.613)	(0.640)	(0.649)	(0.667)
N (observations)	650	650	650	650	650

Note: Significance levels indicated by *p<.05, **p<.01; two-tailed tests. Clustered standard errors at the county level in parentheses.
All dependent variables are in 2017. All independent variables are in 2012.