

지방자치단체의 재량권 확대와 행정서비스 공동생산의 상관성에 관한 연구

- 미국 캘리포니아 지방도시를 중심으로 -

Does a Charter City Increase the Number of
Co-produced Public Service?

- The Case of California Municipalities in the United States -

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Abstract

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This study analyzes the California charter city's behavior for co-production, defined as public service provision with volunteers. Generally, the cities in California of the United States consist of two types; charter and general law cities. Although being expected that a charter city would produce more public services by the co-production manner, the findings in this study reveal that they have less numbers of co-produced public services than general law cities. It implies that a city which has more financial constraints will use the co-production to reduce product costs. In addition, this finding give a lesson to Korean local governments. It is possible that there would be less co-produced services when the discretionary power increases to local governments.

Keywords: co-production, public service delivery, local government service, local governance, Poisson regression

I. Introduction

What is a desirable role of a local government? The most important role is providing public services and goods - such as fire fighter and police, parks and recreation, libraries and so on - as reflecting their residents' needs in a stable manner. If local governments fail to do it, they may lose their residents and hence, demographically become an empty city or have financial deficits. This inevitable consequence has been suggested by many scholars and initiated by Tiebout (1956). Not only for financial concerns, but also for managerial concerns, is preparing stable service provision important because all cities

have economical and geographical constraints and limitations to satisfy every single resident's need by providing customized services. Thus, many managerial technic of local governments have been developed. Co-production is one of these ways for local government to achieve the goal—meet their residents' needs with cost efficient ways in terms of public service management in local governments (Brandson, 2016; Osborne, Radnor, & Strokosch, 2016). By providing public services with other sectors such as non-profit organizations, other public organizations, and residents, local governments can improve efficiency of service production or reduce costs when they have fiscal difficulties (Donahue and Nye, 2004; Savas and Savas, 2000)

The concept of co-production was suggested by Ostrom and Ostrom (1977). The authors argue that co-production has a form of collaborative provisions of public services and raises services' quantity and/or quality because service users are involved in a service producing process. Co-production, therefore, has been evaluated as an efficient and effective way in providing public services and goods (Ostrom & Ostrom, 1977). Ostrom's concept of co-production, collective actions in managing public goods in a community, has been expended its definition in terms of governments' managements. As aforementioned, local governments who have fiscal difficulties have to reduce costs, so applying a market mechanism in public service provision has been considered as an alternative in order to increase government efficiency. There are several ways of cost-efficient public service providing such as privatization, contracting out with other sectors and other governments, and using volunteers. This study adopts a narrow definition of co-production as focusing only on voluntarily provided services with local governments' residents. In other words, co-production in this study is defined as single or combined types of public services productions with volunteers and local governments. For example, a fire service can be provided by public workers and volunteers who are retired, and library service can be run only by volunteers.

Meanwhile, there are different institutional types in local governments in California, the United States. One of the two institutional types is a charter city. California state law articulates that any California city can choose its governing way by deciding to become a charter city or a general law city. Once a city becomes a charter city, it has flexibility in governing their affairs. For example, a city can have a major who has discretion in governing public affairs instead of council members, because the city can also establish its own rule to elect a mayor (David, 1979). Thus, being a charter city means having

autonomy in governing their cities with their residents' choices and being in outside of States controlling in some parts. A general law city, however, has some legal restrictions under the States' law. Under the general law system, a city is governed by a city council member, a city clerk, a city treasurer, a police chief, a fire chief, and any subordinate official or employees as required by the state law instead of an elected major or manager.

In the different institution, I expect that a city may have different behaviors in providing public services and goods. When comparing two different types of cities, it is expected that a charter city has more discretion power to decide a way of service provisions than a general law city is, so the charter city is more likely to produce public services with volunteers than a general law city. Therefore, the research question in this study is that whether a different type of city institution—a charter or a general law—affects the choice of a local government's service provision. More specifically, I want to explore that whether two different city types have different numbers of public services provided by volunteers.

II. Theoretical Arguments

1. Co-production and participation in local governance

It has been more than two decades that co-production has received strong attentions in public management. Several reasons addresses for improvement of co-production; 1) utilizing skills and knowledge of residents in public service production, 2) using social networks in a community, 3) resolving a expecting financial crisis such as cutting budgets in a local government, and 4) expecting an opportunity to generate synergies between local governments and civil society (Brudney and England, 1983; Ostrom, 1996; Pestroff 2009; Sicilia et. al., 2016).

As many studies explore co-production such a long time, various definitions and concepts are found for co-production. Sicilia et. al. (2016) categorize them along with the word of "*co-production*". The first interpretation of co-production focuses on 'co-' side. This group discusses about actors of public service provision. For example, Pestroff et. al. (2006) explore the main role of a third party such as co-governance, co-management, and co-production. The others focus on the types of participants such as non-profit

organizations, non-governmental partners, and volunteers (Alford, 2014; Bovaird, 2007). The other group, who are interested in ‘-production’, explores the phase of participation such as planning, delivering, monitoring, and evaluation of services (Bovaird, 2005; Bovaird and Loeffler, 2012). Although various definitions and concepts for co-production, every study agrees that the key factor of co-production is participation (Sicilia et. al., 2016). In these days, local governments encounter complex issues in their governance. As increase autonomy in local governments in the new era of public administration when local governments play a role of coordinators of complex inter-organizational relationship and various policy-making processes (Hartley, 2005; Osborne, 2010), local governments, moreover, should deal with multiple problems at the same time. In this context, co-production can be one of strategies to handle the problems. By encouraging residents in public service provision, local governments can provide services with cost-efficient manners, and the consumers would have better understand and satisfaction on the public services (Osborne et. al., 2013; Alford 2014).

A charter city in California has more discretionary power, so the residents in the city experience more opportunities to engage in political and administrative processes (Scheufele, Nisbet, Brossard, & Nisbet, 2004). Thus, I argue that a charter city would have more co-produced public service than a general law city. In addition, social capital theories explain that participation increases public awareness and leads strong bonding to public affairs. Therefore, the local government, which provide more participatory opportunities in administrative processes would engage their residents as a volunteers in public service provision.

2. Public service provision choice

In the field of studying local governments’ public service provision, there are three different theoretical arguments to reveal the reasons why local governments try to co-produce public services. First, the most generally accepted theory is a transaction cost theory. The decision maker in a city wants to save costs in service provision, so the decision is made to the way of minimizing the cost in service production and delivering services. Therefore, a certain service needed to be reduced its transaction costs in delivering is more likely to be contracted out or co-produced (Ferris and Graddy, 1991). Moreover, the services in where nonspecific asset investments are easily measured as service outcomes are more likely to success in market-oriented managements (Brown and

Potoski, 2004). All works with the transaction theory seem to their research models with market mechanisms. However, some scholars argue that the market logic in public service provisions may yield the problems of irresponsibility, diminish professionalism, mask service reductions, or lead shedding undertaken for political reasons (Warren et al., 1984).

The second theory for public service provision is related to a leader of a local government. This is called as the theory of bureaucratic entrepreneurship or an ambition theory. Scholars with this theory insist that city managers who are motivated to advance their careers will play more inter-local service delivery as means of capturing economic efficiency (LeRoux and Pandey, 2011). In the arguments, it is believed that inter-local service projects help to build city managers' personal career achievements. Thus, cities managed by city managers who have career-enhancement ambitions are more likely to sell services to other local governments.

The last and recent theory for public service provision choice is a distance theory among local governments. The managerial decisions of local governments can be affected by political networks and similarities. Based on social networks arguments, authors assume that actors with similar characteristics will be more likely to form network ties than actors with different characteristics. The similar characteristics within a network can be redefined as homophily, and this character empirically affects local governments' behavior. For example, local governments whose constituents are similar politically, in terms of partisanship and voting behavior, are more likely to collaborate with one another in regional planning efforts than those whose constituents are politically diverse (Gerver et al., 2013). According to this scholar, the cities which have similar system will have identical behaviors to produce public services.

3. Determinants of co-production

Building upon the arguments from previous studies, the more concrete research model can be structured. Generally, local governments' choices are two options: in-house and contracting outs (Boyne, 1998). This choice is related to supply, demand, and institutions (Joassart-Marcelli and Musso, 2005).

The supply sides are operationalized by population and revenues because high population and revenues mean greater cities' capacities to provide public services due to economies of scale and the advantages of increased competition (Benton and Menzel, 1992; Greene, 1996). A demand side consists of socioeconomic variables as a proxy of

residents' preference on their public services. For example, the more Hispanics and elder populated cities, the more numbers of public services, so these cities may have more concerns on cost-effective managements. Another important variable in demand sides is expenditures in the previous year. Expenditures of cities are highly demanding on previous year's patterns. It is commonly supposed that a city cannot change their expenditure dramatically without any external impact, so public services demand is considered to be changed incrementally. For the institutional side, the institutional status such as charters or general laws is mainly considered. In California, generally, charter cities have more freedom and discretion in governing their municipalities than general law cities, so this institutional difference may have different choices of local public service provisions. Another potential variable of the institutional side is a political position of a city. Executive turnover can have effected on city policies, programs, and communities including contracting or issuing debts (McCabe et al., 2008). Due to the difficulties of finding voting data with a city level, this study will could not include political characteristics of mayor or city managers as a control variable in an empirical model.

When controlling these variables, it is expected that there are more co-produced services and goods in charter cities than in general law cities. Since charter cities have strong discretion and fewer limitations in their decision-making process, they would have fewer barriers such as state government's approvals to establish their own way to provide public services and goods. Hence, they may be able to generate more diverse ways of service provision than general law cities do. This can be shown with numbers of co-produced services. Therefore, I hypothesize that charter cities have more services provided by volunteers than general law cities do.

H_a Charter cities are more likely to provide services with volunteers than general law cities.

H_o There is no difference in the number of voluntarily provided services between charter cities and general law cities.

III. Quantitative Analysis

1. Data

The response variable in this analysis is the aggregated number of public service with

city volunteers. A city in California is required to submit its annual revenue and expenditure to the state government every year. These inputs from California cities and municipalities are open to the public as an annual report, provided by the California State Controller's Office. In the report, a city or a municipality specifies how each service is provided with the item of provider codes. There are 8 different codes for service providing; (A) *Paid City Employees*; (B) *City Volunteers*; (C) *Contract with An-other City*; (D) *Contract with a County*; (E) *Contract with Private Sector*; (F) *Contract with Other Public Agencies*; (G) *Without Contract with Another City*; and (H) *Without Contract with a County*. By aggregating the number of public services that provided by city volunteers, the number of co-produced public services were collected at the city level. As expected, a counted number of co-produced public service was right skewed as shown in Figure 1.

An independent variable in this analysis is a dummy variable; coded 1 if a city has a charter and coded 0 otherwise. These data are also obtained from the California State Controller's annual report in 2013.

The other control variables such as demography and socioeconomic variables are collected from American Community Survey (ACS) 5-year estimates in the U.S. Census Bureau at the city level. Moreover, other finance data of cities are obtained from the California State Controller's annual report for the year of 2012.

Some variables are re-scaled to make coefficients be comprehended and intuited for readers. For example, if a unit for expenditure is a dollar, then the coefficient will be very small, which makes a reader may understand that there is no effect. Since the unit of a response variable is the count data varied from 0 to 5, there is a possibility to have small values of the coefficients for population, expenditure, and revenue. Thus, the re-scaling for the control variables are necessary. The formulas for the re-scaling are summarized in Appendix. The descriptive statistics for these variables are shown in Table1, which summarizes the data used in an analysis.

〈Table 1〉 Descriptive Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Co-production	471	0.894	0.999	0	5
Charter	471	0.253	0.435	0	1
Total Population (in 10000)	471	6.227	19.250	0.006	380.450
White (in 10000)	471	2.335	5.806	0.001	109.052
Hispanic (in 10000)	471	2.403	9.053	0.001	184.006
Median Household Income (in \$10,000 of 2012)	471	6.788	3.367	2.104	25.000
Expenditure (in \$1 Million of 2012)	471	129.319	777.005	0.555	14,504.07
Revenue (in \$1 Million of 2012)	471	93.346	704.746	0.309	13,169.39
% Expenditure for employment	471	0.397	0.152	0.040	0.830

Note: All the monetary values are expressed in 2012 dollars.

The correlation matrix and scatter plots of these variables are shown in Table 5 and Figure 6 in Appendix as well.

2. Regression Model

As aforementioned, due to the feature of the response variable, several options for statistical models are suggested such as Poisson, Negative Binomial Regression, Hurdle Models, and Random-effects Count Models. In this study, Poisson and Negative Binomial regressions are implemented and compared to find a better fit to the data set.

The regression model is structured as shown in the following equation. The factors that can affect public service provision are included in the model as discussed in the previous session.

Regression equation:

$$E(Y) = cop_i = \beta_0 + \beta_1 cht_i + \beta_2 pop_i + \beta_3 wht_i + \beta_4 hisp_i + \beta_5 mhh_i + \beta_6 xdt_i + \beta_7 rev_i + \beta_8 emp_i + \epsilon_i$$

Where:

cop_i = Coproduction: numbers of services provided with volunteers in the i^{th} city

cht_i = Charter city; = 1 if a municipality is a charter city; = 0 otherwise

pop_i = city population

$whit_i$ = White population

his_i = *Hispanic population*

mh_i = *Median household income*

xd_i = *Total expenditure*

rev_i = *Total functional revenue*

emp_i = *City employees salary & benefit as percentage of total expenditures*

To find out the best model for a statistical analysis, Ordinary Least Squares (OLS), Poisson, and Negative Binomial methods are implemented respectively. The estimates of each model are summarized in Table 2. While the coefficient of the main independent variable—charter city or not—for OLS is -0.257, the coefficients of Negative Binomial and Poisson are -0.285 respectively. It is consistently statistically significant in all regression models at the 5% level.

The OLS and Poisson coefficients are not directly comparable, and they have very different meanings. For example, the coefficient of charter implies that if a city has a charter, the expected number of co-production (services provided by volunteers) falls by 0.26, when compared to a general law city when holding other factors fixed. Meanwhile, the Poisson coefficient of charter implies that, other factors being equal, the expected number of co-production in a charter city is estimated be about 25% ($\approx 100 \times \exp(-0.285) - 1$) less than for a general law city with the constraints of same values for the other explanatory variables.

Because of the feature of a dependent variable, the model should be selected between Poisson and Negative binomial regressions. There are several reasons to prefer the Poisson regression to Negative Binomial regression in this case. 1) The mean and variance of the dependent variable are almost the same value. As known, one of characteristics for the Poisson distribution is the same mean and variance in its probability distribution as annotated by λ . Table 1 shows that the mean of co-production is 0.894, and its variance is 0.98 (=0.992) thus, the better model for the data is a Poisson model rather than a Negative Binomial model. 2) On comparing the values of AIC and BIC in Table 2, the Poisson regression model has smaller values than the Negative Binomial regression. This indicates that the Poisson model minimizes the Kullbak-Leibler distance between the model and true values in data (Burnham and Anderson, 2002). Moreover, the BIC value of Poisson is smaller than Negative Binomial. Therefore, by the comparison of AIG and BIC, the Poisson regression model is proffered to the Negative Binomial regression model. 3) The last evidence is a residual deviance. While the residual deviance of Poisson is

1143.752, the one of Negative Binomial is 1143.719. Two values are too close each other to argue that one is better than another although Negative Binomial holds dominant position with respect to the residual deviance. In sum, considering all these criteria for model selection, I claim that the Poisson regression is the best among three different models. Thus, the estimates from the analysis will be discussed based on the result of a Poisson model.

〈Table 2〉 Model Comparison

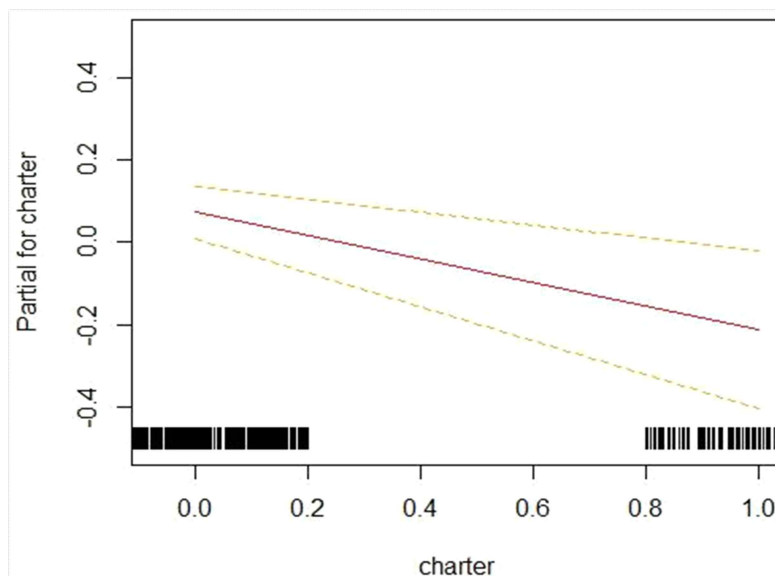
	Dependent variable:		
	Co-production		
	OLS (1)	Negative Binominal (2)	Poisson (3)
Charter	-0.257*** (0.110)	-0.285*** (0.129)	-0.285*** (0.128)
Total Population (in 10000)	-0.068* (0.037)	-0.086* (0.044)	-0.085* (0.044)
White (in 10000)	0.050 (0.047)	0.060 (0.054)	0.060 (0.054)
Hispanic (in 10000)	0.065 (0.042)	0.070 (0.051)	0.070 (0.051)
Median Household Income (in \$10,000 in 2012)	-0.056*** (0.014)	-0.080*** (0.019)	-0.080*** (0.019)
Expenditure (in \$1 Million in 2012)	0.003** (0.002)	0.005** (0.002)	0.004** (0.002)
Revenue (in \$1 Million in 2012)	-0.003*** (0.001)	-0.004*** (0.002)	-0.004*** (0.002)
% Expenditure for employment	1.444*** (0.293)	1.641*** (0.326)	1.637*** (0.324)
Constant	0.781*** (0.152)	-0.182 (0.184)	-0.181 (0.183)
Observations	471	471	471
Log Likelihood		-572.86	-571.88
BIC	1343.21	1205.27	1199.15
Akaike Inf. Crit.		1,163.72	1,161.75
Residual Std. Error		0.959(df = 462)	
F Statistic		5.993(df = 8; 462)	

Note: Standard errors in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

3. Poisson Regression Results

The estimated coefficients of a Poisson regression are shown in Table 3. The first column presents the estimates from the Poisson regression analysis. The second column in Table 3 shows the estimates of the robust model. The third column illustrates the marginal effects of each variables in the model. In comparison between a Poisson and robust Poisson models, the robust model has smaller coefficients variances for the parameter estimates (Cameron and Trivedi, 2010).

For interpretation of the main independent variable, charter is statistically significant at the 5% level. The `dydx` option in STATA computes the discrepancy of expected co-produced public services between charter and non-charter cities while holding other variables at their means. As seen in Table 3 in the third column, the difference between a charter city and a general law city is 0.24, which is statistically significant. This difference is depicted in Figure 2. As shown, the results of a Poisson analysis shows that a charter city had 0.24 less co-production of public services than a general law city when holding other variables at their means.



Note: The solid line is the predicted numbers of co-production for charter and non-charter cities. The dotted lines are confidence intervals for the prediction. The black marks at the bottom of the graph show observations of charter and non-charter cities.

〈Figure 1〉 The Predicted Difference of Co-production between Charter and Non-charter Cities

Moreover, the predicted number of co-production for a charter city with the mean values of other variables is 0.67, and the one of co-production with holding other variables at their means for a general law city is 0.89. This results indicate that general law cities provides public services with their residents around 25% more than charter cities on average.

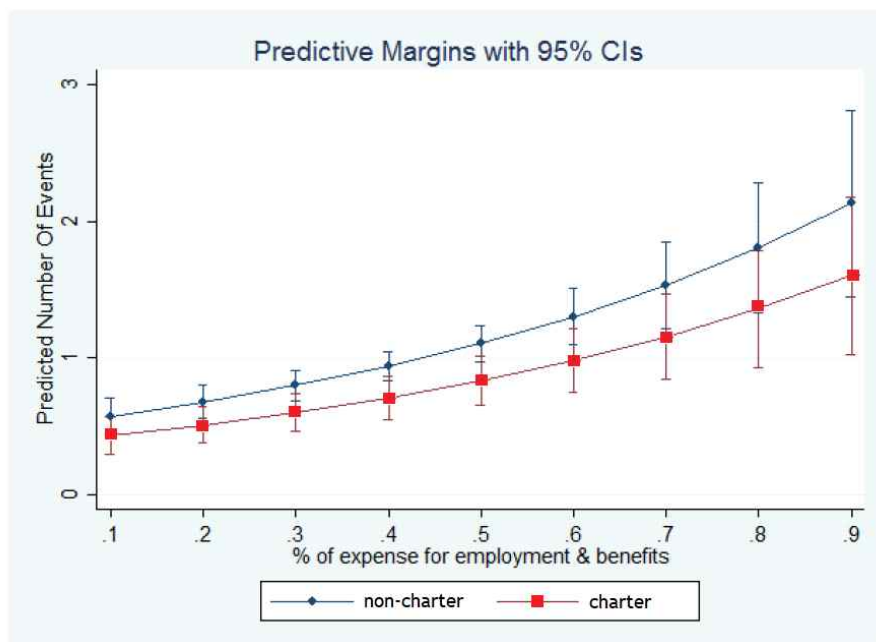
〈Table 3〉 Poisson Regression Results

	Dependent variable:		
	Poisson	Co-production	
		Poisson VCE Robust	Predict dydx
	(1)	(2)	(3)
Charter	-0.285*** (0.128)	-0.285*** (0.115)	-0.238*** (0.099)
Total Population (in 10000)	-0.085* (0.044)	-0.086* (0.056)	-0.076* (0.039)
White (in 10000)	0.060 (0.054)	0.060 (0.066)	0.053 (0.048)
Hispanic (in 10000)	0.065 (0.051)	0.070 (0.060)	0.062 (0.046)
Median Household Income (in \$10,000 in 2012)	-0.080*** (0.019)	-0.080*** (0.018)	-0.072*** (0.018)
Expenditure (in \$1 Million in 2012)	0.004** (0.002)	0.005** (0.002)	0.004** (0.002)
Revenue (in \$1 Million in 2012)	-0.004* (0.002)	-0.004** (0.002)	-0.004** (0.002)
% Expenditure for employment	1.637*** (0.324)	1.637*** (0.305)	1.464*** (0.298)
Constant	-0.181 (0.183)	-0.182 (0.180)	
Observations	471	471	471
χ^2	53.66	53.66	

Note: Standard errors in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In the Poisson model, other statistically significant variables are population, median household income, expenditure, revenue, and the percentage of expenditure for employment and their benefits. As expected, as a city has high expenditure, less revenue, and more expenses for employment and benefits, it is more like to produce public services

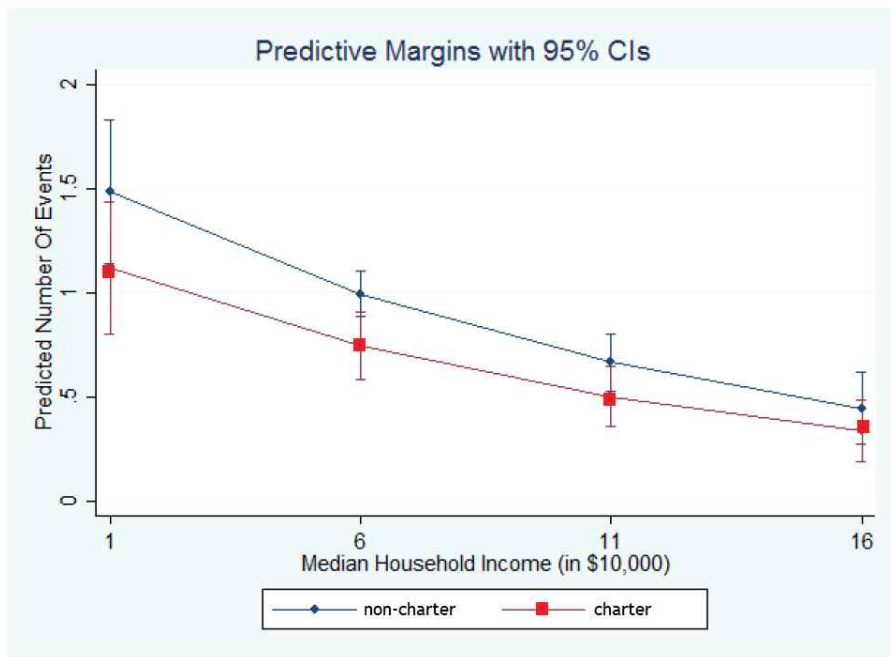
with volunteers. For example, if a city increases its expense by \$1 billion, then its marginal effects on co-production is 4, which means the city increases its co-produced services by 4 when they expense \$1 billion more when other variables have their mean values. Moreover, if a city increases its expenditure for employment and benefits by 1%, then the city increases co-produced services by 1.5 when holding other values at their means. This verbal expression is hard to illustrate its marginal effects of the percentage of expenditure for employment. Figure 3 shows how the expected number of co-production increases along with the different level of percentage for expense for employments. As a city expenses more for employment salary and benefits such as pension, the expected co-production raises and its rate also increases. Moreover, the gap of co-production between charter and non-charter cities increase as spending more cities' employments



〈Figure 2〉 Predicted Margins of Co-production by % expense for employment

The unexpected findings for the estimates in the model are population and median household income. The negative direction of both coefficients indicates that the more populated and rich city is less likely to co-produce services with volunteers. Specifically, holding other variables with their mean, having more 1000000 people in a city decreases

the expected number of co-produced service by 7.6, and the increase in household income by \$10,000 in a city decreases the expected number of co-produced services by 0.072 when holding other variables at their means. The predicted line of co-production in both types of cities along with median household income are depicted in Figure 4. The predicted number of co-production falls as the median household income increases. However, the differences of expected co-production by population is not statistically significant ($z=0.06$).



〈Figure 3〉 Predicted Margins of Co-production by Median Household Income

IV. Conclusion

The empirical findings reveal that there is a negative relationship between a charter city and co-production. Although it is an opposite result of the hypothesis, but consistent with the previous study (Joassart-Marcelli and Musso, 2005). Theoretically, the managerial characteristic between co-production and contracting out is not substantially different in terms of a way for cost cutting in local governance. If a city has financial constraints, then it is more likely to provide services with a cost-efficient way. A possible explanation for

this negative relationship between charter cities and less numbers of co-production is that a charter city is more sensitive to residents in terms of political purpose, so its management strategy is not cost-efficient but politically sensitive such as seeking voters' preference (Cheufele, Nisbet, Brossard, & Nisbet, 2004; Joassart-Marcelli and Musso, 2005). However, the study does not verify it with empirical evidences, so the test for this logic will be expected to be done in the future studies.

Inversely, the finding the negative association between a charter city and co-production can be a contribution to the field of local management. When looking at the estimates of revenue, expenditure, and the percent of expenditure for employment salary and benefits, the estimates indicate that a city behaves cost-efficiently not politically. Moreover, the negative direction of the median household income can be understood as the richer city may have enough resources to provide services with its own financial resources. Consequently, the number of co-production for a rich city may fall. Moreover, when controlling the local finance data, a city or a local government which has more discretion for financial management reduces the co-production for public service provision. This finding can give a lesson to Korean local governments that they may not manage their budgets cost-efficiently. In this case, therefore, there should be a system that encourage city leaders to promote co-production so that they can improve the levels of cost-efficiency in their financial management and democracy by engaging their residents in public service provision.

Another important implication should be mentioned from this finding. One of purpose of a charter is collaboration between a government and its residents. However, the empirical analysis indicates that there is an adverse effect of the current charter system. If a charter city tries to less likely collaborate with residents and uneconomically manages its governance then the charter system should be modified toward the way of accomplishing its purpose. This interpretation may be overinterpreted the findings. However, at least there is the valuable meaning of providing the legitimate reason of studying a charter system with respect to collaboration governance.

Some limitations exist in this study. The empirical models in this study does not fully address the endogeneity in the main independent variable. To show the unobservable characteristics of two different types of cities, The mean differences for each variables between charter cities and non-charter cities are shown in Table 4 of Appendix. One of possible factor that exists in unobservable features is a political factor. The variable of

council-manager/strong major is excluded due to the statistically insignificant and most of charter cities have strong major system, so some statistical strategies are needed in model specification with political factors. The other way to control this endogeneity could be including a voting rate of the major if a city is a strong major system. For this, more in-depth theoretical and statistical discourse about the topic should be required in the future study.

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Appendix

- Rescaling the variables in the analysis

$$White_i = \frac{white\ population_i}{10000}$$

$$Hispanic_i = \frac{hispanic\ population_i}{10000}$$

$$Medianhousehold\ incom_i = \frac{median\ household\ income_i}{10000}$$

$$Expenditur_i = \frac{expenditure_i}{1000000}$$

$$Revenue_i = \frac{revenue_i}{1000000}$$

〈Table 4〉 Mean differences of each variables between charter and non-charter cities

	Non-charter city	Charter city
Co-production	0.953	0.773
Population	3.67	13.80
White population	1.49	4.48
Hispanic population	1.40	5.37
Median Household Income	6.67	6.26
Expenditure	42.40	386.00
Revenue	23.10	301.00

〈Table 5〉 Correlation Matrix

	cop	charter	tot_pop	pop_wht	pop_hip	nhh_inc	tot_exp	nfuc_rev	per_emp
cop	1								
charter	-0.070	1							
tot_pop	-0.051	0.229	1						
pop_wht	-0.056	0.252	0.970	1					
pop_hip	-0.043	0.191	0.974	0.907	1				
nhh_inc	-0.168	-0.092	-0.037	0.014	-0.083	1			
tot_exp	-0.035	0.193	0.929	0.924	0.876	-0.023	1		
nfuc_rev	-0.034	0.172	0.910	0.904	0.862	-0.025	0.997	1	
per_emp	0.198	0.085	0.026	0.030	0.013	0.058	0.007	-0.0001	1

〈국문초록〉

**지방자치단체의 재량권 확대와 행정서비스 공동생산의 상관성에 관한
연구: 미국 캘리포니아 지방도시를 중심으로**

이 연구는 미국 캘리포니아주의 도시운영 시스템과 주민공동생산방식(co-production)으로 공급된 공공서비스 수의 상관관계를 실증 분석하였다. 미국 캘리포니아 자치단체 중 차터시티(charter city)는 운영이 비차터시티(general law city)에 비해 자유롭고, 주민의 의견수렴을 도시운영의 기본으로 하기에 자원봉사자들과 함께 제공하는 주민공동생산(co-production)방식의 공공서비스가 더 많을 것이라 한다. 그러나 분석결과, 차터시티가 비차터시티보다 시민공동생산 서비스의 수가 더 적은 것으로 나타났다. 이는 예산 제약이 많은 비차터시티가 알뜰한 재정 운영을 위해, 자원봉사자를 더 많이 쓰게 된다는 주장을 뒷받침한다. 이 결과는 우리나라 자치단체의 재량권이 확대될 경우 시민공동생산방식의 공공서비스가 확대되지 않을 가능성이 있다는 시사점을 안겨준다.

주제어: 공동생산, 공공서비스 공급, 지방자치단체 공공서비스, 로컬 거버넌스, 포아송 회귀분석