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Dance of Dollars: State Funding Effects on Local Health Department Expenditures

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Abstract

Objective: We examined changes in total local health department (LHD) expenditures in the state of Washington following introduction of a new state funding program to support core public health services and infrastructure.

Methods: We used a pre-post design regression model to evaluate changes in LHD expenditures one, two, and six years into the new state program. To address potential endogeneity in the model, we repeated all three analyses using two-stage least squares regression.

Results: In the base case, overall spending among LHDs significantly increased with receipt of the new state funds in the first years of the program (2008 and 2009). However, those increases were not sustained over the longer term (2013). In sub-population analyses, total LHD spending increased more among larger LHDs.

Conclusions: Between 2006 and 2013, new state investments in core public health functions increased Washington State LHD expenditures in the short term, but those increases did not persist over time. For public health financial modernization *efforts* to translate into public health infrastructure modernization *successes*, the way new investments are structured may be as important as the amount of funding added.

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Introduction

Funding for local health departments (LHDs) in the United States has been characterized as both “patchwork” and “inadequate.”¹ LHDs cobble together funding from a wide variety of uncoordinated and sometimes competing revenue sources.^{1,2} The result often falls short of what is needed. The National Academy of Medicine (NAM) has estimated that the annual gap between what is currently spent on public health in the U.S. and the amount needed to provide a minimum package of foundational public health services in all localities is \$24 billion.¹ Similar shortfalls—as well as substantial inequities in the availability of resources—have been documented at the state level.^{3,4}

Public health experts have called upon federal and, in some cases, state policymakers to rectify documented shortfalls in funding for local public health—particularly for foundational services and capabilities.^{4–6} In most cases, these recent proposals envision the introduction of new federal or state funds that would provide grants to support health departments development and maintenance of foundational capabilities and services.^{4,5} The goal of these intergovernmental public health grants would be to increase total LHD spending by at least the amount of the award.^{7,8}

Inter-governmental transfers are, however, inherently fungible. Consequently, economic theory and research suggest that recipient local governments may use newly available grant income to replace at least a portion of existing investments from so-called “own source” revenue streams. Own source revenues are sources of revenue at the disposal of local government, such as property taxes, sales taxes, and charges for various services (e.g., licensure fees). A local government might thus use the opportunity presented by a new state grant for public health infrastructure to reallocate some of its tax spending from the health department to other local priorities (e.g., increasing spending on education or tax incentives to attract/retain business). The predicted magnitude of this substitution effect varies, but estimates typically range between 0.3 and 0.7; in other words, for every new state or federal dollar received, total LHD spending would increase by \$.30 and \$.70 respectively.^{8–13}

Substitution dynamics at the local level have the potential to jeopardize new federal and state efforts to ensure that every community is served by a public health agency capable of delivering foundational services. Yet, to date, the effect of newly introduced federal or state funding on LHD spending has not been examined. The current study begins to address this important evidentiary gap. Using a unique data set from Washington State, this study examines what happened to total LHD spending when that state introduced new funding specifically intended to increase spending on—and development of capacity around—core public health services and infrastructure. At a minimum, the results may inform public health financial modernization efforts underway in states like Washington. More generally, the findings begin to illuminate whether, and to what extent, new revenues translate into increases in spending.

Methods

Setting/Population

Washington State's public health system is similar to that of other states. It is de-centralized, which means LHDs are primarily led by employees of local governments; each LHD is, in turn, overseen by a local board of health, which selects and oversees the professional leadership of the local public health agency, adopts local ordinances and resolutions, and approves budgets.^{14,15} LHDs in Washington State are funded largely through local state, federal government sources; in 2014, local government contributions accounted for approximately 15% of revenues; local licenses and fees, 30%; federal grants (direct and indirect), 28%; state grants and funding sources, 22%; and other sources, 5% (data not shown)

The principal data used in this study come from the Public Health Activities and Services Tracking (PHAST) project (see <http://phastdata.org/about>). These data, which represent cleaned and compiled annual financial data from Washington State's Budget, Accounting, and Reporting System, have been used by the PHAST team in various studies.^{16–19} The portion of the PHAST data set used here included revenues and expenditures reported annually between 1998 and 2014 by LHDs operating in Washington State (35 LHDs). Additional county-level and LHD structural-level variables were taken from the Area Health Resource Files, Bureau of Labor Statistics Current Population Survey, American Community Survey, and Census Bureau Small Area Health Insurance and Income/Poverty Estimates.

Independent Variable

In 2007, the Washington State Legislature passed Engrossed Second Substitute House Bill (E2SSHB) 5930. The law included \$20,000,000 in new state appropriations—available in \$10,000,000 tranches for each of the state's fiscal years 2008 and 2009—for LHDs. LHDs, in turn, were required to use those new state 5930 dollars to support “core public health functions of statewide significance,” as defined by an expert panel with representation from LHDs, community service providers, and other stakeholder groups.^{20,21}

The 5930 program presents a unique opportunity to examine the effects of new state funding on LHD expenditures. First, there is a clear onset date for the funding, and it is both preceded and followed by multiple years of data for each LHD. Second, the state operates on a biennial budget, so the amount of funding an LHD would receive was typically determined in the fiscal year prior to its availability and then fixed for the next two fiscal years. An LHD would know in fiscal year 2007 how much 5930 funding it would receive from the state in fiscal years 2008 and 2009. Third, 5930 dollars were distributed according to a statutorily determined formula, and elements in that formula may be used as instruments in sensitivity analyses. Fourth, the authorizing legislation specified that recipient jurisdictions “shall not supplant existing local funding with such state-incented resources.”²² In essence, this means that the state 5930 program includes a built-in structural bias against the kinds of substitution effects predicted by standard economic theory. Finally, funding was maintained

(albeit at reduced levels) as a separate line item through 2013, so it is possible to examine both short- and long-term responses in LHD spending.

Accordingly, the primary independent variable was the amount of per capita revenue that an LHD received through the state 5930 funding mechanism in a given year.

Dependent Variable

Previous studies of inter-governmental grants and their effects on recipient expenditures have typically defined the outcome of interest in terms of either per capita “own source” revenues or spending.²³ To ensure comparability between the results of this research and previous reported findings, the outcome of interest in this analysis was defined as total per capita expenditures by an LHD in a given year.

Control Variables

The analytic model used in this study controls for a parsimonious set of community characteristics and LHD financial circumstances that theory or previous research indicates may affect LHD access to funding and responses to changes in funding.^{24–28} Supplemental Digital Content 1 provides additional details about the definitions and sources of all control variables included in this analysis.

Analysis

Following work by Leduc and Wilson, who examined state government spending responses to a large increase in federal highway grants under the 2009 American Recovery and Reinvestment Act, this study used a pre-post design that controlled for LHD-specific fixed effects.²⁹ All dollar variables were inflated to constant 2016 dollars using the Consumer Price Index for Medical Care. The baseline year, which remained fixed across ordinary least squares (OLS) regression models, was 2006, as it represented the last full year before the Washington State legislature enacted Engrossed Second Substitute House Bill (E2SHB) 5930.

To examine the immediate impact of the 5930 funding on LHD expenditures, change in per capita LHD spending between 2006 and 2008 was regressed on the corresponding changes in 5930 funding and a set of pre-specified control variables over the same period (Supplemental Digital Content 2 provides the detailed econometric specification). The same regression was repeated to compare changes between 2006 and 2009. Examining changes in per capita LHD spending separately for each of the first two years that 5930 funding was available allowed for the possibility of temporal lags in the local response to newly available state revenues.

To evaluate whether these initial responses in LHD expenditures persisted over time, the change in per capita LHD expenditures between 2006 and 2013 was regressed on the corresponding changes in 5930 funding and the same set of controls. In state fiscal year 2014, the 5930 program ceased to exist as a stand-alone source of state funding, so 2013 represented the last year in which 5930 funds were separately captured in the PHAST data.

The above-outlined analyses assumed that state 5930 allocations to LHDs were not correlated with changes in LHD spending or revenues from local government sources over the same time period. The 5930 funding was primarily allocated according to a statutorily defined formula, which included a per capita amount that was calculated based on historical jurisdiction census information. A strict exogeneity assumption—meaning that the 5930 allocations were independent of spending or revenues from government sources—was therefore reasonable. Nonetheless, a small proportion of the funding was distributed according to base thresholds designed to ensure that no LHD received less than \$100,000. It is possible that those base level funding amounts were determined according to political processes that introduced endogeneity into the relationship between 5930 funding and local responses to it: for example, state legislators representing smaller jurisdictions might only have agreed to support the 5930 funds if their jurisdictions received a base amount that was substantially larger than would have been available through a straight per capita allocation formula.³⁰ To address this possibility, baseline analyses for all three time comparisons of interest were rerun using two-stage least squares (2SLS) regression models employing the use of an instrumental variable (IV). The IV was derived from the aforementioned 5930 funding formula: specifically, the proportion of the total state population residing in an LHD’s jurisdiction in the year used to determine 5930 appropriations (2006 for 5930 allocations in 2008 and 2009 period; 2010 for 5930 allocations in 2012 and 2013). Local per capita LHD expenditures are unlikely to be shaped by a jurisdiction’s *relative share* of the state population—and this is particularly true when the measure of state population residing in the jurisdiction is collected two to three years prior to funding allocations. The data collection lag thus further supports the case for exogeneity between the IV and local LHD spending decisions. Separate OLS regression models were also run for the “base” and “formula” funding recipients in each of the three time periods of interest.

All data analyses were conducted in Stata version 14 (StataCorp LP, College Station, TX), with significance at $P < .05$.

Results

Descriptive Results

Table 1 presents pooled descriptive statistics for LHDs in Washington State in 2006 and 2013, as well as the average change over that time period. Adjusted to 2016 U.S. dollars, average LHD expenditures per capita contrasted sharply between 2006 and 2013 (\$72.89 vs. \$48.97). However, considerable heterogeneity persisted across LHDs in both years, with average per capita expenditures ranging from \$26.63 to \$204.67 in 2006, and from \$16.59 to \$120.29 in 2013.

Sequential cuts to 5930 program funding in the 2010/2011 and 2012/2013 Washington State budgets reduced mean per capita 5930 revenues from \$6.10 (S.D. \$10.97) for LHDs in 2008 to \$3.35 (S.D. \$5.89) in 2013 (data not shown). Nonetheless, 5930 funding represented one of the few revenue sources available to LHDs for which the net per capita change over the study period was uniformly positive. Revenues from other state sources, such as Washington State Department of Health (DOH) funding, contracted by approximately \$4.00-\$5.00 per capita on average.

Base Pre-Post Analysis

Early diagnostic analyses indicated that Wahkiakum County experienced uniquely extreme decreases in per capita LHD expenditures over the study period. To prevent bias in the results, Wahkiakum County was excluded from all analyses.

Table 2 presents OLS regression results from each of the three time periods of interest. The coefficients associated with 5930 funding in the first two years of the program were statistically significant (2008: 0.694 [SE: 0.04]; 2009: 0.689 [SE: 0.07]), and indicated that, for each additional dollar in 5930 funding that LHDs received in 2008 and 2009, net per capita spending increase by approximately \$0.69. By 2013, the coefficient associated with 5930 funding was smaller and no longer statistically significant (2013: 0.162 [SE: 0.46]).

Instrumental Variables (IV) Analysis

Early testing indicated that the proportion of the total state population residing in an LHD's jurisdiction in the year used to determine 5930 (i.e. the proposed instrumental variable) was a poor instrument when revenue and expenditures were expressed in per capita terms. However, those same tests indicated a strong relationship between the instrumental variable (IV) and log-transformed versions of the independent and dependent variables of interest. To ensure comparability between the base analysis and IV analysis results, the former was rerun using log-transformed inputs and outcomes.

Results from endogeneity tests were consistently statistically insignificant, which suggested that 5930 funding was, in fact, exogenous.

Sub-Population Analysis

Table 3 presents OLS results separately for LHDs that received the guaranteed base funding amount ("base") and those that had sufficient population size to qualify for application of the 5930 funding formula. Despite small sample sizes, some differences did emerge—particularly in the second full year of the program. In 2009, each additional dollar of 5930 funding received by formula funding recipients (larger LHDs) was associated with a statistically significant increase of \$1.23 in total per capita expenditures. By contrast, among base funding recipients (smaller LHDs), each additional dollar of 5930 funding increased total per capita expenditures by \$0.78.

By 2013, point estimates for the effects of 5930 funding had decreased in both groups: each additional dollar of 5930 funding increased total per capita expenditures by \$0.951 among formula-funded LHDs and \$0.35 among base-funded LHDs (smaller LHDs). However, the standard errors associated with these estimates were large—or, in the case of the base-funded LHDs, inestimable—so neither result was statistically significant.

Discussion

Funding for public health continues to be inadequate in many jurisdictions, and policymakers and public health practitioners have called for additional investments to address gaps between current spending levels and the level of spending necessary to support foundational public health capabilities.^{1,5,31} However, previous research and economic

theory suggest that a potentially significant portion of any funding increase will ultimately be lost to substitution effects—thus limiting the benefit of new funding and the extent to which gaps in current public health investments are ultimately closed.^{8,9,12} Using revenue and expenditure data collected between 2006 and 2013 from LHDs operating in Washington, this study examined how the introduction of new state funding designed to support critical public health infrastructure affected LHD expenditures.

In the first years of the 5930 program (2008 and 2009), overall spending among LHDs significantly increased with receipt of the new state funds. However, those increases were not strictly proportional: for example, in 2009, each new dollar of 5930 funding per capita only increased total LHD per capita expenditures by \$0.69. The new 5930 dollars seemingly replaced some spending from other sources—a potential substitution effect that would align with previous studies of intergovernmental grants.^{7–9,12,13} Sub-population analyses, by contrast, suggest a slightly more complex dynamic—at least in the second year of the program. While some displacement of existing spending by 5930 funds is evident among smaller, base-funded LHDs, the 5930 funds significantly increased total per capita spending among formula-funded, larger LHDs. Moreover, the magnitude of that per capita spending increase exceeded one dollar, suggesting that 5930 funding increased revenues from other sources as well.

The observed bifurcation in short-term spending effects due to 5930 funding may reflect differences in the relative costs that larger and smaller LHDs face to produce public health services.³² In other words, the marginal costs associated with producing a given set of public health services are greater for smaller LHDs. The 5930 program funds may not have been sufficient to offset those costs and induce new net spending among base-funded, smaller LHDs. By contrast, larger, formula-funded LHDs may have been better positioned to use new 5930 revenues to expand spending on services.

Previous researchers have suggested that studies of inter-governmental grants are susceptible to statistical confounding due to endogeneity.^{12,30} This study took advantage of the formula-based mechanism by which most 5930 funding was allocated to define an instrumental variable that could be used to explicitly evaluate the likelihood that observed effects were due to endogeneity. Results from that IV analysis suggest that observed findings cannot be explained in terms of failure to control for endogenous spending preferences among LHDs and the voters they serve.^{29,30}

By 2013, 5930 funding was not associated with a significant increase in LHD per capita spending overall or in the two sub-populations examined—though point estimates continue to suggest that larger LHDs were better able to maintain some increases in spending over time. Consistent with previous research of intergovernmental grant programs, these results may indicate observed short-term effects are transitory at best.³³ Alternatively, these findings may reflect strategic decisions that state and local HDs adopted in response to economic effects of the Great Recession. Anecdotal evidence supports this interpretation: according to Washington State Department of Health staff, when the state was forced to cut funding in the midst of the 2008–2009 Recession period, LHDs explicitly asked that any cuts target more categorical (as opposed to flexible) funding sources. What looks like

substitution effects associated with 5930 funding may represent a strategic choice driven by the relatively greater value LHDs assigned to the new, more flexible 5930 dollars.

Like previous studies of the effects of intergovernmental revenues on recipient spending, this analysis examined whether there was evidence for short- and long-term substitution effects, but it did not evaluate the underlying dynamics among revenue streams. This is an important area for future research. Theory suggests that 5930 funding failed to maintain increases LHD per capita spending (at least, in all base analyses) because the new state revenues seemingly displaced local contributions to LHD operations. However, it is also possible that, over time, the state relied on 5930 dollars to offset decreases in its support to LHDs through other mechanisms. In that case, state policymakers intent on increasing local public health expenditures may need to consider maintenance of effort requirements for themselves (e.g., in the form of guaranteed aggregate state funding levels), as well as their local counterparts.

Limitations

This study has limitations to note. First, the small sample size limited statistical power in the main analyses, as well as opportunities for robust comparisons across potentially meaningful LHD sub-populations. Despite these limitations, some effects proved sizeable enough to attain statistical significance, and others were qualitatively dissimilar enough to suggest potentially rich areas for future research. Second, this study focused on a single funding program introduced in one state, and that state is somewhat unique in terms of the long-term, county-level, comparable financial data available to researchers and practitioners through PHAST. Nonetheless, Washington is similar to many other states with respect to how its local public health system is organized and financed, and the 5930 program was specifically directed towards augmenting their LHDs' performance of core public health functions.^{15,18} The results are thus likely to prove informative to many federal, state, and local policymakers—particularly those interested in identifying financing mechanisms that better support local public health infrastructure. To the extent that other state and local health departments would struggle to replicate these analyses, this research also underscores both the value of, and need for, a uniform chart of accounts for public health departments at all levels—one that delineates “boundaries, linkages and financial flows between state, local, and federal programs.”^{1,34} Finally, like overall LHD expenditures per capita, 5930 funding decreased over the study period, such that per LHD funding available in 2013 was ~60% of that received in 2008 and 2009. Future research will be needed to better understand whether LHD spending responds differently over time when newly introduced sources of funds remain relatively stable.

Conclusion

Many LHDs continue to lack access to sufficient funding to support their delivery of foundational public health capabilities.^{1,5,31} Remedying these gaps will require dedicated new investments in public health infrastructure from federal, state, and local governments. This study found that, between 2006 and 2013, new state of Washington investments in core public health functions increased LHD expenditures in the short term, but those increases did not persist over time. These results suggest further research is needed to understand

how interactions across funding streams affect aggregate spending. They also suggest that for public health financial modernization *efforts* to translate into public health infrastructure modernization *successes*, the manner in which new investments are structured may be as important as the amount of funding added.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Implications for Policy and Practice

- Increases in Washington State funding for local public health infrastructure may not lead to proportionate increases in short-term LHD expenditures-- particularly among LHDs serving smaller populations. Instead, a portion of the state's investment may displace some spending from other sources.
- Increases in Washington State LHD expenditures following new state funding for public health infrastructure may not be durable (i.e., their effects may not persist over a median -term time horizon, such as 5 years).
- How new intergovernmental grants are structured may be as important as the size of the grant. Federal and state policymakers seeking to boost local spending on foundational public health infrastructure and services may consider including recipient maintenance of effort or matching requirements as part of grants to LHDs.

Table 1:

Descriptive Statistics, 2013 vs. 2006—Washington State Counties

	2006 Mean (SE)	2006 Range	2013 Mean (SE)	2013 Range	2013 vs. 2006 Difference Mean (SE)	2013 vs. 2006 Difference Range
Population Density	136.06 (215.08)	3.25 – 867.91	145.48 (230.02)	3.17 – 936.82	9.42 (15.81)	-0.08 – 68.91
County Population	182,022 (338,293)	2,245 – 1,822,967	199,086 (377,576)	2,248 – 2,045,874	17,064 (40,140)	-881 – 222,907
Residents Living in Poverty, %	0.14 (0.04)	0.08 – 0.22	0.16 (0.03)	0.10 – 0.26	0.02 (0.02)	-0.03 – 0.07
Median Household Income, Logged	11.01 (0.16)	10.77 – 11.38	10.89 (0.15)	10.58 – 11.28	-0.11 (0.06)	-0.24 – 0.03
Residents Unemployed, %	0.06 (0.01)	0.04 – 0.09	0.09 (0.02)	0.05 – 0.12	0.02 (0.01)	-0.01 – 0.05
Operating Margin, %	0 (0.12)	-0.39 – 0.29	0.03 (0.13)	-0.25 – 0.46	0.03 (0.18)	-0.54 – 0.46
Revenue Diversification Index (HHI7)	0.92 (0.04)	0.79 – 0.98	0.85 (0.06)	0.71 – 0.94	-0.07 (0.07)	-0.24 – 0.12
Expenditures, Total*	\$72.89 (40.89)	\$26.63 – \$204.67	\$48.97 (30.02)	\$16.59 – \$120.29	-\$23.92 (17.44)	-\$100.42 – \$8.71
Revenues, Total*	\$73.07 (41.82)	\$29.33 – \$205.38	\$52.36 (38.24)	\$16.59 – \$187.36	-\$20.71 (21.09)	-\$85.22 – \$39.26
5930 Revenue*	\$0.00 (0.00)	\$0.00	\$3.35 (5.89)	\$0.52 – \$29.49	\$3.35 (5.89)	\$0.52 – \$29.49
Other State Flexible Revenue*	\$7.21 (4.42)	\$2.15 – \$23.11	\$3.25 (4.06)	\$1.31 – \$25.17	-\$3.96 (2.43)	-\$12.28 – \$2.06
State Department of Health Revenue*	\$5.94 (6.13)	\$1.22 – \$35.95	\$0.95 (1.21)	\$0.00 – \$4.40	-\$4.99 (6.04)	-\$35.50 – -\$0.72
State Other Revenue*	\$3.02 (3.92)	\$0.00 – \$17.75	\$6.09 (13.29)	\$0.38 – \$78.02	\$3.08 (11.47)	-\$12.11 – \$60.26
Local Government Revenue*	\$16.74 (16.31)	\$0.01 – \$79.62	\$7.83 (8.01)	\$0.00 – \$35.25	-\$8.91 (10.80)	-\$54.62 – \$6.45
Local License and Fee Revenue*	\$15.96 (10.89)	\$1.77 – \$51.75	\$12.59 (9.23)	\$0.89 – \$43.82	-\$3.37 (8.39)	-\$32.19 – \$20.69
Local Miscellaneous Revenue*	\$2.60 (6.30)	-\$0.60 – \$37.24	\$1.47 (3.31)	-\$5.02 – \$12.84	-\$1.14 (5.61)	-\$26.01 – \$12.00
Federal Department of Health Revenue*	\$13.54 (11.93)	\$5.00 – \$68.82	\$2.54 (3.26)	\$0.00 – \$18.28	-\$11.00 (12.46)	-\$67.41 – \$6.53
Federal Medicaid Revenue*	\$5.31 (4.47)	\$0.00 – \$20.69	\$3.30 (3.39)	\$0.17 – \$15.04	-\$2.00 (5.76)	-\$17.30 – \$13.48
Federal Other Revenue*	\$2.76 (4.23)	\$0.00 – \$20.10	\$10.98 (8.31)	\$1.99 – \$38.05	\$8.23 (8.10)	-\$4.64 – \$31.37

HHI: Herfindahl-Hirschman Index

* All Expenditures and Revenues expressed in per capita terms

Introduction of State 5930 Grant Funding—Estimated Short and Long-Term Changes in LHD Per Capita Spending—OLS Results, Washington State LHD jurisdictions, 2006–2013

Table 2:

	2006 vs. 2008 (SE)	2006 vs. 2009 (SE)	2006 vs. 2013 (SE)
Difference, Per Capita State 5930 Revenues	0.694 (0.04) ***	0.689 (0.07) ***	0.162 (0.46)
Difference, Per Capita Revenues—All Other Sources	0.908 (0.03) ***	0.942 (0.03) ***	0.546 (0.20) ***
Difference, % in Poverty	-9.922 (29.57)	27.136 (26.93)	65.615 (79.25)
Difference, Median Household Income (Log)	-4.290 (9.32)	3.265 (10.13)	32.996 (25.79)
Difference, % Unemployed	21.834 (44.09)	-6.617 (18.43)	95.785 (150.17)
Difference, Operating Margin	-50.694 (4.66) ***	-46.424 (4.46) ***	-40.944 (10.08) ***
Difference, HHI7	-1.630 (10.58)	-12.025 (8.66)	-12.641 (14.76)
Constant	-0.053 (0.59)	0.658 (0.85)	-9.477 (4.44) **
Observations	34	34	34
R-squared	0.962	0.972	0.610

HHI: Herfindahl–Hirschman Index

[†] Robust standard errors in parentheses HHI: Herfindahl–Hirschman Index

*** p<0.01

** p<0.05

* p<0.1

Table 3: Introduction of State 5930 Grant Funding—Estimated Short and Long-Term Changes in LHD Per Capita Spending by Subpopulation—Base vs. Formula Funding Recipient OLS Results, Washington State, 2006–2013

	2006 vs. 2008 (SE)		2006 vs. 2009 (SE)		2006 vs. 2013 (SE)	
	Formula	Base	Formula	Base	Formula	Base
Difference, Per Capita State 5930 Revenues	0.820 (0.04)*	0.769 (0.00)	1.243 (0.08)***	0.779 (0.00)	0.951 (0.69)	0.347 (0.00)
Difference, Per Capita Revenues—All Other Sources	0.948 (0.08)***	0.937 (0.00)	0.994 (0.01)***	0.904 (0.00)	0.982 (0.02)***	0.785 (0.00)
Difference, % in Poverty	2.241 (20.37)	-67.186 (0.00)	15.254 (11.71)	-104.432 (0.00)	19.571 (14.28)	-108.506 (0.00)
Difference, Median Household Income (Log)	-1.205 (6.45)	-40.770 (0.00)	4.156 (2.54)	-62.480 (0.00)	8.988 (4.70)*	267.776 (0.00)
Difference, % Unemployed,	17.978 (35.85)	120.177 (0.00)	-7.324 (5.08)	-213.948 (0.00)	-8.278 (35.68)	-1,147.180 (0.00)
Difference, Operating Margin	-39.120 (4.06)***	-61.554 (0.00)	-36.973 (3.03)***	-65.945 (0.00)	-31.369 (1.56)***	-84.009 (0.00)
Difference, HHI7	2.640 (8.01)	45.483 (0.00)	-1.147 (4.27)	-52.931 (0.00)	5.411 (6.82)	2.871 (0.00)
Constant	-0.065 (0.76)	-0.976 (0.00)	0.033 (0.30)	1.157 (0.00)	1.184 (1.39)	23.575 (0.00)
Observations	26	8	26	8	26	8
R-squared	0.967	1.000	0.996	1.000	0.989	1.000

HHI: Herfindahl–Hirschman Index

[†] Robust standard errors in parentheses HHI: Herfindahl–Hirschman Index

*** p<0.01

** p<0.05

* p<0.1