

Local Government Infrastructure – and the False Promise of Privatization

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Abstract

Public infrastructure is largely managed in America by state and local governments, which also provide most of the financing. In fact, local government has more fiscal responsibility in the U.S. than do local governments in any other nation in the developed world, says Cornell professor Mildred Warner. One popular answer to more effective use of funds has been to bring market and business principles to such services, and in particular to privatize them. But Warner, based on her own comprehensive empirical studies, says the experiment in privatization at the state and local level has not been satisfactory. State and local governments thus need substantially more federal financial support. She provides guidelines as to how and when privatization can be valuable and when it will fail.

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Local Government Infrastructure – and the False Promise of Privatization

Introduction

Local public services create the physical and social infrastructure for sustainable economic development. Water and sewer systems, roads and bridges, solid waste management and human services are critical elements of the physical and social infrastructure that make communities desirable places to live and attractive to economic development. Local government leaders, whether Republican, Democrat or Independent, are pragmatic managers focused on providing quality services in an efficient and equitable manner.ⁱ

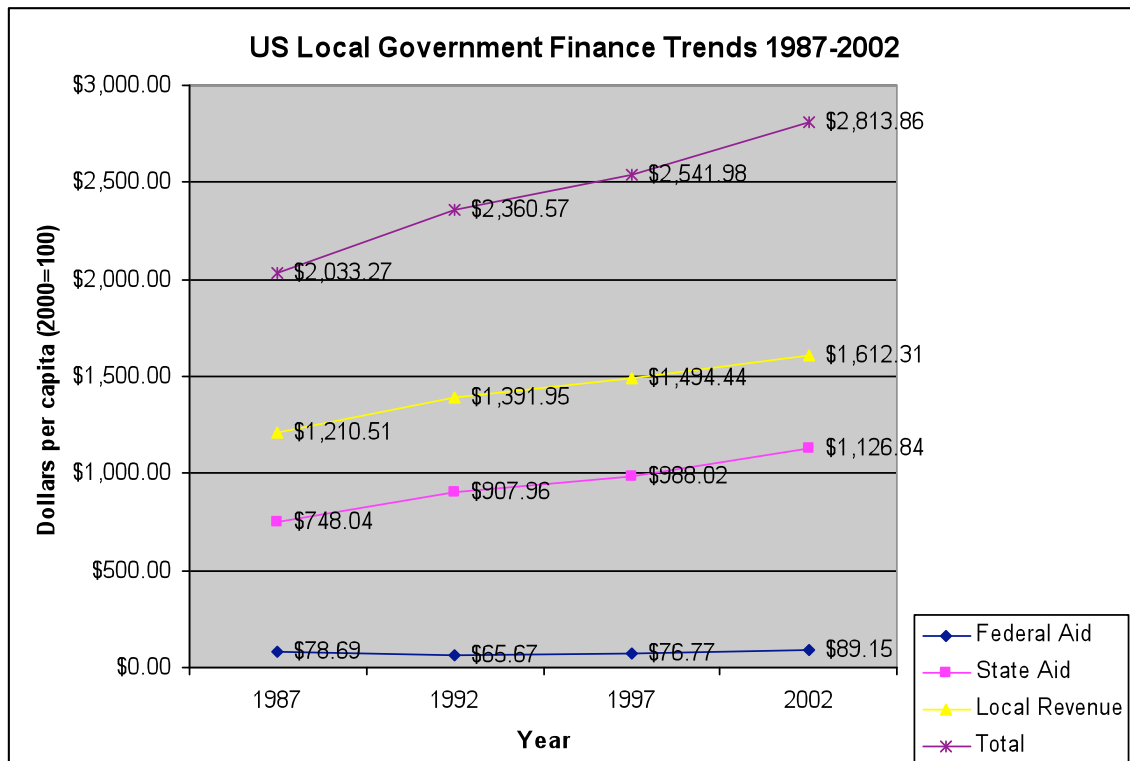
In this chapter I will discuss the infrastructure crisis facing local governments and the need for increased federal investment. I will present actual trends in local government service delivery and show empirical results of the effects of privatization over the last decade. I will conclude with recommendations for policy.

Infrastructure in Crisis

The basic public services provided by local government are critical to sustain public health, promote economic development and ensure quality of life. Police, fire, safety, roads and bridges, water and sewer systems, recreation and library services, services for the elderly and children, are all services citizens demand from local governments. A recent report card by the American Association of Civil Engineers rates the nations' water and wastewater infrastructure as poor 'D-', the lowest rating given to any infrastructure measured.ⁱⁱ The EPA and Congressional Budget Office estimate America needs \$10-11 billion per year for the next 20 years to replace aging water facilities and meet clean water act standards, and \$15-20 billion per year to replace waste water systems and meet increasing demand.ⁱⁱⁱ The AACE report card does not rate transportation infrastructure much better. Roads (D), bridges (C) and transit (D+) are all mediocre to poor. Although transit ridership is up, Federal investment is down. Over a quarter of the nation's bridges are structurally unsound or functionally obsolete. Parks (C-) and solid waste facilities (C+) rank slightly better but face needed improvements in maintenance. Recycling still only accounts for 25% of the waste stream. What is most disturbing about the AACE infrastructure report card is that all the ratings are down from 2000. The infrastructure investment crisis is becoming worse, largely as a result of declines in federal investment.

Local governments can not bear the full burden of replacement and maintenance costs. Already US local governments have a higher degree of fiscal autonomy than local governments elsewhere in the world. According to the US Census of Local Government, locally raised revenue accounts for 57% of local government expenditure (in 2002, the most recent year for which data are available). See figure 1. State aid accounts for about 40% of local expenditure and Federal aid for less than 3 percent. With rising real costs of local government services (19 % over the last decade) and major reinvestment requirements in infrastructure, an increased Federal investment role is needed. Federal aid peaked in 1977 and has been dropping with devolution since that time.^{iv} Now is the time to reverse that trend. Local governments, with their more limited array of revenue raising instruments (property tax, sales tax and user fees) do not have the wherewithal to raise the funds for the infrastructure investments required for the 21st century.

Figure 1: US Local Government Finance Trends 1987-2002



Source: US Census of Government Finance Files 1992-2002. Dollars per capita, deflated 2000=100. Analysis based on county areas (all local government units within a county), N=3100.

Is Privatization the Answer?

Over the last two decades there has been a revolution in public management promoting increased use of contracting, competition and benchmarking. Osborne and Gabler's famous 1992 book, *Reinventing Government*, advocated for process improvement – to bring market discipline inside government while maintaining a strong focus on citizen satisfaction.^v This book was widely read by local government leaders and gained broad support for its efficiency and market based approaches.^{vi} Many scholars and reform advocates assumed that privatization or contracting out services would enhance efficiency, choice and attract additional private capital to public infrastructure projects. However, the actual experience of local governments using privatization challenges those theoretical propositions.

Since 1982 the International City County Management Association has tracked how local governments deliver these services.^{vii} What the data show is that despite strong support for the ideals of reinventing government, local government managers are pragmatic. They have experimented with privatization and contracting out and not found them to be panaceas. Privatization works in some services and in some places but not in others. Over the last decade we see service delivery trends are basically flat. Direct public delivery has remained the most common and stable form of service delivery, at over 60% of all services. There was some growth in privatization between 1992 and 1997 – evidence of the efforts by local managers to

experiment with privatization reforms. However, privatization rates fell back again in 2002. Inter-municipal cooperation, the primary alternative to privatization, also fell.^{viii} See Table 1.

Table 1: Trends in Local Government Service Delivery

Trends in Local Government Service Delivery	1992	1997	2002
Direct Public Delivery	60%	62%	59%
For Profit Privatization	12%	16%	14%
Inter-municipal Cooperation	15%	13%	10%

Author Analysis: Average provision by delivery mode, averaged across all municipalities surveyed. Columns do not sum to 100 as only the top three service delivery alternatives are considered. Analysis based on Generalized Estimation Model results which account for uneven sample size across ICMA Alternative Service Delivery surveys 1992 N=1444, 1997 N=1460, 2002 N=1133 U.S. municipalities.

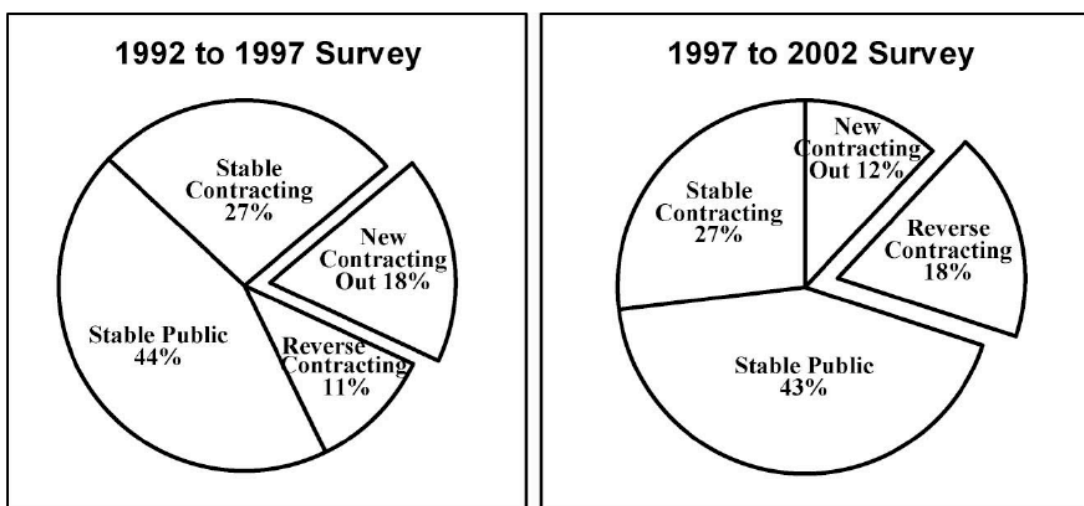
The relatively flat privatization trend belies a dynamic of experimentation that is occurring across municipalities and across services. Governments contract out and then reverse contract – bringing previously privatized services back in house. No survey asks directly about changes in service delivery over time. However, by pairing the ICMA surveys we can track these changes in service delivery patterns as approximately 40% of the respondents are the same for any two surveys.^{ix} This dynamic analysis shows that most service delivery is stable. Services are provided in the same manner over time. In figure 2, we see that direct public delivery is the most common form of service delivery and the most stable – accounting for 44% of all services in each of the two year paired samples. Twenty seven percent of services are provided through stable contracts (either to for profits, non profits or other governments).^x In fact the first ICMA survey from 1982 shows privatization levels roughly the same as 1992.

There is a longstanding tradition of US local government contracting for service delivery. Many of our human services appeared first in the non-profit sector and were later supported via government contracts as demand overwhelmed capacity in the voluntary sector. Private for profit deliverers historically were common in street cleaning, transit, water systems in small rural communities and in waste collection. But contracting is not static. Local governments both contract out and contract back in. Contracting out is well understood. Local governments use it to provide new services, to meet new environmental or technical requirements for which they do not have internal capacity, and to save money. Contracting back in occurs when governments realize they can provide higher quality or lower cost service in house, or when technical requirements or service quality goals require internal control to ensure a failsafe delivery system.

In the 1990s, local governments experimented with more contracting as a response to the reinventing government adage to “steer, not row” and to introduce more competition and flexibility into local government service delivery systems. The ICMA data, because of the consistent survey design over the years, enables us to track these dynamics in service delivery. What is interesting is that in the 1992-1997 period new contracting out was 18% of all service delivery and contracting back in only 11%. By the 1997-2002 period, these ratios reversed and

new contracting out dropped to 12% while contracting back in rose to 18%. These data show a pragmatic process of local governments experimenting with privatization.^{xi} See Figure 2.

Figure 2: Dynamics in Local Government Service Delivery



Author analysis based on data from the International City/ County Management Association, Profile of Alternative Service Delivery Approaches, Survey Data 1992, 1997, 2002 Washington, DC. Paired samples, 1992-1997= 628 municipalities, 1997-2002=480 U.S. municipalities

Reprinted with permission from: Hefetz, Amir and Mildred E. Warner. 2007. "Beyond the Market vs. Planning Dichotomy: Understanding Privatisation and its Reverse in US Cities," *Local Government Studies*, 33(4):p 557.

To understand better why local governments bring previously contracted work back in house, I conducted a series of interviews with local governments in 2001, and then worked with ICMA to add a question to the 2002 survey asking local governments why they reverse privatize.^{xiii} The primary reason cited by over 73% of governments was problems with service quality. The next most common reason was lack of cost savings cited by 51% of responding governments and 36% reported that internal government efficiency had improved. Problems with contract specification and monitoring were listed as problems by less than 20 percent of governments. These results suggest it is poor contractor performance, not politics, which leads to strong political support to bring service delivery back in house. See Table 2.

Table 2: Reasons for Bringing Contracts Back in House

Service quality was not satisfactory	72.7%
The cost savings were insufficient	51.0%
Local government efficiency improved	35.9%
There were problems monitoring the contract	20.4%
There was strong political support to bring back the service delivery	21.6%
There were problems with the contract specifications	15.1%

ICMA Survey of Alternative Service Delivery 2002, N=245 U.S. Municipalities who answered the question, "Why did you bring services back in house within the last five years?"

Reprinted with permission from Warner, M.E. and Amir Hefetz 2004. "Pragmatism over Politics: Alternative Service Delivery in Local Government, 1992-2002," pp 8-16 in *The Municipal Year Book 2004*. Washington, DC: International City County Management Association), p. 15.

Critics of local governments' failure to privatize more have argued that bureaucratic and labor resistance explains low rates of privatization.^{xiii} The ICMA survey data tell a different story of pragmatic managers seeking high quality and cost savings and finding that privatization does not always deliver. A recent report by Deloitte and Touche on 25 Fortune 500 private sector firms shows similar concerns with contracting.^{xiv} Many private sector firms have also brought work back in house and the reasons driving it are the need to maintain internal knowledge and capacity regarding the service, ensure failsafe delivery, and control costs. Contracting out is not the panacea it was once thought to be.

These managerial reflections are borne out in more quantitative research. Recently a colleague and I conducted a meta analysis of every published study of privatization in water distribution and solid waste collection.^{xv} These are the two services with the widest experience with privatization across the US and the world. Some of the earliest experiments began in the late 1960s and early 1970s. Much scholarly attention has been given to these services and so a robust empirical record is available. Most studies find no difference in costs between private delivery and public delivery. Where lower costs with private delivery were found, they tended to be the earlier studies, suggesting erosion in any efficiency gains over time. See Table 3.

Table 3: Privatization and Cost Savings: Meta Analysis of Empirical Studies 1965-2006

	Private Delivery Cheaper / More efficient	Public Delivery Cheaper / More efficient	No Cost / Efficiency Difference Between Public or Private Delivery
Water Distribution	3 studies	4 studies	10 studies
Solid Waste Collection	6 studies	1 studies	11 studies

N = 35 econometric studies of costs in water and waste delivery 1965 – 2006. Additional detail on studies reviewed found in Bel and Warner (2008).

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What Explains the Lack of Cost Savings Under Privatization?

Lack of Competition

Theoretically, the gains from privatization should be a result of competition, creating market pressures for efficiency. However theory also predicts that private owners will seek to maximize profit at the expense of quality if careful monitoring is not conducted. One explanation for the lack of cost savings in water privatization may stem from the careful quality control/inspection system that ensures safe drinking water. Thus, the only cost savings would have to come from process improvements. In waste collection, where improvements in truck

routing, recycling and vertical integration of the collection to disposal system have created process improvements, there have been real efficiency gains. However, consolidation in the waste sector threatens those gains as competition erodes and price increases are forced upon local governments.^{xvi}

I conducted a survey with the ICMA in 2007 to find out just how much competition US local governments find in their local markets for the 67 basic local services ICMA tracks. Managers rated competitiveness in their local market for each service by five levels: 0 for no competition (government provision only), 1 for one alternative private provider, 2 for two alternative providers, 3 for three alternative providers, or 4 for four or more alternative providers. Across all services the average number of suppliers for municipalities was less than one, suggesting very little competition in general.

We can see from Table 4 that waste collection has more competition than water distribution and treatment. This makes sense. Water distribution is a network service and as such is a natural monopoly. Privatization merely substitutes a private monopoly for a public one. This is the case for many local government infrastructure services. In the case of network infrastructure or any infrastructure with fixed assets, public monopoly or government regulation is a more effective approach to ensuring efficient service delivery than privatization or deregulation - a point further described in Woodrow Clark's chapter on agile energy systems. There are advantages to public monopolies in the case of network services. A recent review of privatization of water distribution and waste collection in the US and Spain found that privatization was higher and more stable in Spain because Spain uses a hybrid public/private firm model (similar to a State Owned Enterprise) to achieve private sector flexibility in labor regulation and still maintain public control over investment and pricing decisions.^{xvii}

Table 4: Number of Alternative Suppliers for Water and Waste Services

Service	Average # Suppliers
residential waste collection	2.59
commercial waste collection	2.85
waste disposal	1.69
water distribution	0.79
water treatment	0.88
sewage collection/treatment	0.67

N=164 U.S. municipalities

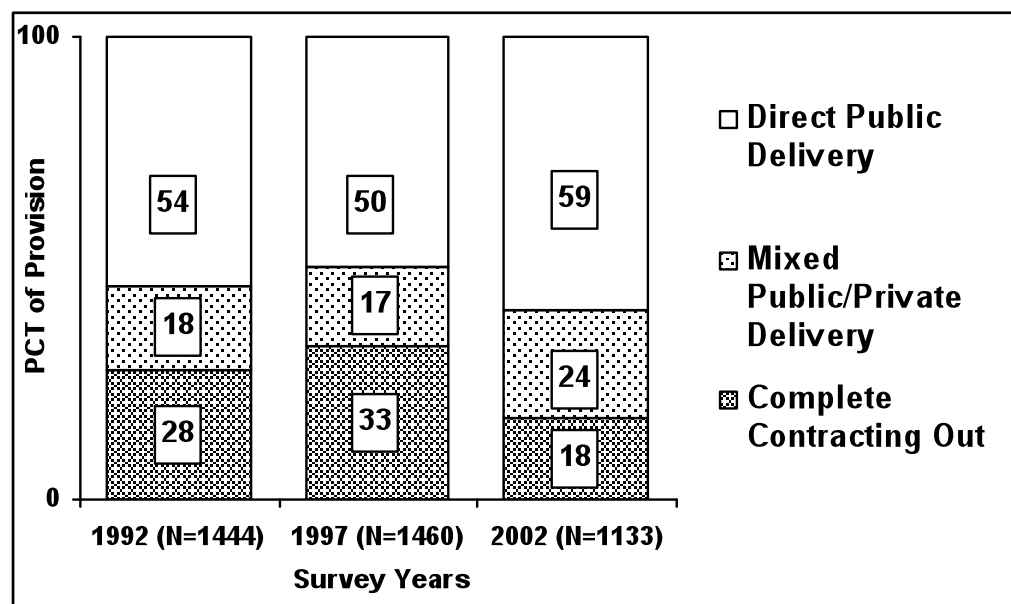
Unpublished survey conducted by author in collaboration with ICMA, 2007.

Need to Manage Markets.

Local governments respond to this lack of competition by carefully managing the market for local services. They realize they can not contract out and walk away. Instead they must stay in the market to benchmark costs and promote competition – even if it is a competition of two - government and one alternative private provider. Mixed market delivery – where government contracts out a portion of the service and provides another portion in house – is a means to maintain competition in the local market and is becoming more common among US local government managers.

We see in Figure 3, that after contracting out peaked in 1997, what grew was mixed public/private delivery. Governments have realized that complete contracting out is risky. Contracting is a tool that must be carefully managed. To use markets for public services, government must be part of that market. Regression analyses for the 1992-2002 period show that mixed delivery is driven by concerns with cost savings, competition, monitoring and citizen engagement in the service delivery process.^{xviii}

Figure 3: Local Government Service Delivery Trends



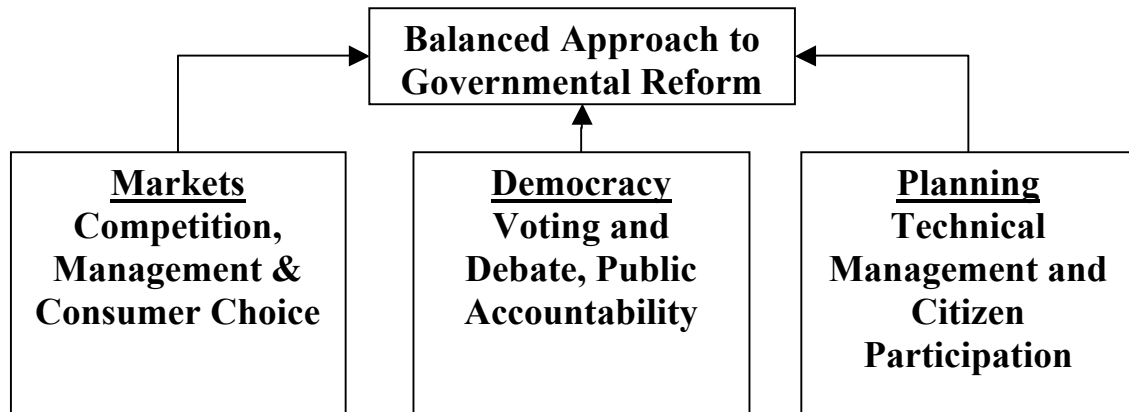
Percent of provision averaged across all responding governments. Provision is percent of total number of services provided on average. Provision Rates: 66%, 61%, 53% for 1992, 1997, 2002 respectively. Author analysis based on data from the International City/County Management Association, Profile of Alternative Service Delivery Approaches, US Municipalities, 1992, 1997, 2002, Washington DC.

Reprinted with permission from Mildred E. Warner and Amir Hefetz 8. "Managing Markets for Public Service: The Role of Mixed Public/Private Delivery of City Services," *Public Administration Review*, 68(1)(2008) page 151.

Increased Attention to Citizen Participation

The decades of experimentation with new public management have taught us many lessons. First, there is more space for market delivery than we originally realized. A focus on management and consumer choice can improve service delivery and citizen satisfaction. Second, public bureaucracies can improve service delivery. This can be done through internal process improvements, new labor-management collaborations, and new forms of citizen engagement in the service delivery process. This involves planning, technical management and citizen participation. Third, there are real limits to competition and serious risks with market delivery. A balanced approach to governmental reform is emerging that links the benefits of markets, with the benefits of technical planning but balances these with concern for democracy and public engagement.^{xix} See figure 4.

Figure 4: Balanced Approach to Government Reform



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One problem with the reinventing government reforms is they confused the citizen with the consumer. Consumers want choice, quality and low prices; but citizens want more than the anonymity of a market process. In a democracy we need citizen engagement in designing those service choices. This is more than an efficiency discussion; it also involves values. Many local government reformers who pushed the business model too far, got unelected by citizens frustrated with loss of local control, local employment and community identity in local service delivery. Citizens take pride in having their own fire department, library and police force even if it may be cheaper to consolidate or privatize. Democracy is about choice - political choice, not market choice. It has to reflect public values. What local government officials have discovered is that citizens care deeply about the quality of their local services and their involvement in those decisions. Mere market choice is not enough.

Specific Infrastructure Examples Water Distribution and Treatment

Water will be the major resource constraint of the 21st century. Clean water is critical to human health and economic development. While the US has sufficient fresh water, supply is not well matched with demand. Urban and agricultural water demand in the arid South and West already exceeds water supply. With increasing population and changing weather patterns due to climate change, water problems will become even more severe. When we couple this with higher drinking water quality standards and the aging urban water infrastructure, we are faced with a serious crisis.

Cities will need new investment to rebuild, renew and extend their water systems. Ironically most US community water systems are up for renewal at the same time. This is because these systems were established as part of three waves of federal investment – in the late 1880s-early 1990s, pure steel with a lifespan of approximately 100 years; in the 1930s, mixed metal piping with a lifespan of roughly 70 years; and in the post World War II era, plastics with a

lifespan of around 30 years.^{xx} While the earlier periods of system development were marked by significant federal investment, this time, the political will for such investment is missing and local governments are being encouraged to pursue private investment through public private partnerships. But the demand for funds - estimated by EPA to range from \$250-300 billion over the next twenty years,^{xxi} will require more than legislation to lift the cap on private bond activity proposed by Congress in 2007.

There is a strong ideological debate over privatization of public water systems with groups such as the Reason Foundation and the Water Partnership Council claiming benefits and groups such as Food and Water Watch and Alliance for Democracy claiming problems with quality, costs and access.^{xxii} A statistical review of ownership across water systems in the US found no evidence that private systems or public private partnerships perform better than public systems in quality compliance.^{xxiii} Most private water systems are in rural communities and there is special concern about finance, staffing and quality in those systems. Urban privatization efforts have met with mixed success – high profile failures and successes. But longitudinal analysis of studies of water system ownership and costs find no savings with private delivery.^{xxiv}

The cost of capital to private investors is not cheaper. Municipal bonds provide lower interest rates and make more sense for long term investments. The problem is such bonds require public approval and many local governments face major infrastructure reinvestment costs but are at their debt ceiling. Private capital allows local governments to avoid public accountability in debt load approval, but it costs more in the long run. A better approach would be to provide more Federal investment capital (which was provided in each of the earlier waves of infrastructure investment), and raise local government debt ceilings for long term infrastructure projects such as water systems.

Competition is practically nonexistent. According to data from Public Works Financing, of all privatization contract renewals of water/wastewater in the U.S. between 1998 and 2001, 75 percent were renewed by renegotiation (without competition), 16 percent were renewed by competition (10 percent retained by the incumbent and six percent won by another company) and eight percent were deprivatized (returned to public production).^{xxv} Privatization without competition explains the limited experimentation with privatization in water and the high rates of reversals or contracting back in. We see in Table 5 that water delivery remains overwhelmingly public – from two thirds to three quarters of all municipalities. Privatization is less than 7 percent. The major alternative to direct public delivery is inter-municipal contracting which is over a quarter of all responding governments. Inter-municipal contracting allows scale economies but keeps the service public and thus avoids the risks of privatization. However, risks of accountability can still occur as service delivery is one step removed from the locality.^{xxvi} See Table 5.

Table 5: Alternative Forms of Service Delivery: Water and Waste

	Water Distribution	Water Treatment	Sewage Collection and Treatment	Residential Waste Collection	Commercial Waste Collection	Waste Disposal
Pure Public Delivery						
1992	74.6%	66.6%	56.7%	46.7%	23.3%	31.5%
1997	74.6%	69.8%	59.3%	36.8%	23.2%	30.0%
2002	75.9%	71.4%	60.8%	44.5%	33.3%	32.7%
For Profit Contract						
1992	4.9%	4.1%	4.6%	37.1%	53.5%	32.1%
1997	7.3%	5.1%	7.9%	48.8%	60.1%	40.4%
2002	7.2%	6.3%	8.3%	39.4%	43.1%	38.1%
Inter-Municipal Cooperation						
1992	15.6%	26.1%	32.6%	2.2%	2.1%	27.2%
1997	14.9%	22.1%	27.2%	3.1%	3.4%	20.5%
2002	14.1%	17.9%	25.7%	3.5%	3.9%	18.1%

Author Analysis: ICMA Alternative Service Delivery Surveys 1992-2002.

Solid Waste Management

Waste management is the area with the widest experimentation with privatization among US local governments. We see in Table 5 that close to half of all municipalities now use private haulers for solid waste collection. Solid waste is a network infrastructure but more flexible (routes on roads, rather than a fixed delivery infrastructure) and thus more prone to competition. My 2007 survey of local governments found on average municipalities faced markets with two to three alternative suppliers in waste collection. These were among the highest levels of competition found for any of the 67 services ICMA measures. Even with this level of competition, however, there are problems with competition in the solid waste sector. The industry is now dominated by three major private providers - Waste Management Inc., Allied Waste Industries and Republic Services, but in any particular local market one provider typically dominates.

The level of contracting is both higher and more stable in solid waste than in water, and the level of contract reversals is lower. See Table 6. This shows waste collection is a better candidate for privatization than water distribution, though still not without problems as our analysis of cost savings showed.^{xxvii}

Table 6: Contract Reversals in Water and Waste

SERVICE	Stable Public	Stable Contract	New Contract	Reverse Contract
Residential Waste Collection	38.1%	44.7%	5.8%	11.5%
Commercial Waste Collection	24.8%	55.0%	9.3%	10.9%
Waste Disposal	25.0%	54.3%	9.1%	11.6%
Water Distribution	61.7%	11.2%	8.1%	19.0%
Water Treatment	59.4%	15.2%	8.2%	17.2%
Sewage Collection and Treatment	49.7%	27.0%	8.4%	14.1%

ICMA surveys 1997-2002, U.S. municipalities. Author Analysis N=480

Waste collection has higher levels of privatization than water distribution, and is more likely to find cost savings, although these erode over time. In both water and waste, empirical analysis shows that competition is typically *for* the market – for the initial contract. Competition *in* the market is difficult to maintain. For example, rural governments are least likely to use privatization due to lack of alternative market suppliers. Suburbs enjoy the widest array of alternative service providers and have the highest rates of privatization. But even for suburbs, privatization rates do not exceed 20%.^{xxviii} Local governments need the flexibility to choose the service delivery approach most appropriate to their needs.

The debate should not be over public or private delivery of local government services. The debate should be over cost and quality of that service delivery. The above analysis has shown that US local governments are willing to experiment with privatization, but they do so pragmatically giving attention to market structure (the level of competition), government market management (either through mixed market/public delivery or regulations and incentives), and citizen concerns (customer satisfaction and concerns for public participation in the service process).

Policy Recommendations

In this chapter I have argued that we need to focus on rebuilding public infrastructure. Water and waste have been my examples because other chapters are covering transportation and energy infrastructure. A common theme throughout is the need for increased federal investment. Private investment alone will not meet the need. Private capital is too costly, private delivery has *not* proven to be less costly; and the public is demanding more government capacity to deliver quality, failsafe public services. To achieve this we must address not only the capital requirements, but also look carefully at the implications for market regulation, and the staffing requirements inside government.

Reinvesting in Public Infrastructure

EPA estimates we need \$30-35 billion per year over the next twenty years to rebuild and replace aging water and wastewater infrastructure.^{xxix} Local governments, caught between rising service needs and citizen demands for lower taxes, can not bear the entire burden. Federal investment is required, as it was in each of the earlier periods of development and renewal. Our health and our economic prosperity depend on it. So too, does our national security.

State and local governments have a role to play, but so too, does Congress. First, we need to dramatically increase federal programmatic funding for infrastructure. The recent proposal for a National Infrastructure Bank^{xxx} for regional projects, could also be an appropriate model for increasing investment in local infrastructure. The American Association of Civil Engineers sums it up well “If the nation fails to meet the investment needs of the next 20 years, it risks reversing the public health, environmental, and economic gains of the past three decades....Clean and safe water is no less a national priority than are national defense, an adequate system of interstate highways, and a safe and efficient aviation system. Many other highly important infrastructure programs enjoy sustainable, long-term sources of federal backing,

often through the use of dedicated trust funds; under current policy, water and wastewater infrastructure do not.^{xxxix}

Unfortunately, Congress had been moving away from programmatic infrastructure investments. Over the last two decades Federal appropriations for water and wastewater have fallen and infrastructure revolving loan funds—such as the Clean Water State Revolving Fund and the Safe Drinking Water State Revolving Fund—have been created to devolve responsibility for water and wastewater management to the state and local level. As programmatic federal infrastructure funding has dropped, Congress has increasingly used earmarks to meet constituent demand.^{xxxii} Earmarks are neither fair nor efficient. A recent study using EPA data from 1992-2004 showed earmarks cluster in districts of more senior congressmen, in wealthier states, and are less likely to lead to completed projects.^{xxxiii} We need to return to a system of programmatic funding based on critical review of need and cost. We also need more investment.

Second, we need new forms of financial accounting. Life-cycle cost analysis principles should be used to evaluate the total costs of projects. We need to establish a federal, multi-year capital budget for infrastructure. This would serve as a mechanism to help reduce the conflict between short-term and long-term needs. Major inefficiencies in the planning, design and construction process for long-term investments occur because the current federal budget process does not differentiate between expenditures for current consumption and long-term investment. A capital budget system would help to increase public awareness of the problems and needs facing this country's physical infrastructure, and would help Congress to focus on programs devoted to long-term growth and productivity.^{xxxiv}

Regulating the Market

There is a role for private markets in the delivery of public goods. The last two decades of experimentation have tested that potential, but also have shown its limits. Privatization has proven to be unstable, and has not delivered the promised cost savings. Lack of competition is one primary reason for the failure to find cost savings. But promotion of competition is not the only solution. The United Kingdom tried this with compulsory competitive tendering (1988-1998) and more recently with a contestability policy. But results show even in the British policy environment, cost differences between public and private delivery are slight.^{xxxv} Savings erode over time. The real challenge is to promote process improvement. This requires an internal focus within government and careful attention to market management.

US local governments have been more skilled at market management. We see increased emphasis on mixed delivery – where public providers and private providers compete in the same service area. This gives public sector a benchmark on cost and quality, creates a minimal level of competition (public vs private), and ensures public scrutiny of the service delivery process. Given the lack of competition and the trends toward consolidation in many public services, anti-trust policy also must be an important part of public policy.

Managing markets to promote competition is not the only alternative. The natural monopoly status of much public infrastructure makes regulating monopoly as important as efforts to introduce competition. The publicly regulated utility model, despite its flaws, has proven to be more stable and flexible than the adventures with deregulation in the energy sector.^{xxxvi} In Europe, where privatization rates are both higher and more stable, monopoly

provision is common, but not with a pure private firm. Rather hybrid organizations that involve private incentives and flexibility, but public control, are more common.^{xxxvii} The US still gives primary emphasis to competition. But the cost and instability of that approach invites new thinking about ways to harness the stability of monopoly production, but ensure that it meets the public good.

An area of increasing importance for market regulation will be the international arena. The General Agreement on Trade in Services (currently under discussion) will make a much wider array of local government services subject to international competition. The goal is to increase competition, broaden access to foreign capital for investment and promote innovation. However, in order for local governments to make effective use of international investment, they must have clear authority to negotiate contracts, an open and public adjudication procedure to resolve disputes, and the ability to make legislation that reflects local preference. The current free trade agreements articulate governance protocols that do not meet these criteria.^{xxxviii} Modeled after the governance protocols in NAFTA, they give more power to foreign investors than to local governments, substitute private tribunals for the public courts system, and limit public legislative authority. Subsidies, local residency requirements and other local controls on service delivery may be challenged as non tariff barriers to trade.^{xxxix} Decisions made at the local level can be challenged, not in the public courts system, but in private arbitration tribunals to which local governments and their citizens have no access. This can be corrected via the ongoing negotiations over the GATS. The Trade Promotion Act of 2002 challenged the superior rights given to foreign investors and required they be limited to those enjoyed by domestic investors, but these provisions were not followed in recent negotiations on CAFTA. US local government groups are concerned about preemption of local government authority to undertake basic planning functions and set standards for acceptable risk. The Intergovernmental Advisory Council (IGPAC) has asked the US Trade Representative protect US courts and support transparency, and abide by principles of federalism that allow all levels of government to regulate.^{xl}

Using markets for public services requires a government role – as a market participant and as a regulator. Competition alone is not enough. Careful attention to anti-trust policy, monopoly regulation and market oversight is required. This involves a role for national government – in anti-trust and free trade policy, and local governments in local legislation and contract management. Care should be taken not to preempt local government authority in this regard.

Rebuilding the Public Workforce

Citizens are frustrated at the loss of capacity in government. With baby boomer retirements and the effort to shrink staff to save money, much of the expertise in government is declining. There is a public sector labor crisis on the horizon. This problem is more severe at the federal level than at the local level. Paul Light estimates that at the Federal level the “shadow” contracting workforce of government is eight times larger than the core public service workforce itself.^{xli} This loss of capacity causes even core functions, such as accountability and oversight to be contracted out – leading to a crisis of accountability and of public confidence.

Young people do not choose public sector employment as a first choice because of the perceived rigidities in public employment systems. A major policy effort to address the staffing crisis needs to be mounted. Even the private sector is becoming concerned as it recognizes the need for adequate public staff to effectively manage the public infrastructure that is critical to a strong economy. A promising example is the Federal Partnership for Public Service which brings private sector leaders together with the public sector to design new financial management systems, new hiring practices, and create a new ethic for public service.^{xlii} Similar efforts should be developed at the state and local levels. Recruiting the next generation of public workers will be critical if the public sector is to effectively compete for talent as we move into a period of national labor shortage.

Ensuring Accountability

New models of public-private partnerships are appealing, however, they still need to develop robust measures for public transparency and accountability. As we experiment with new forms of public private partnership, many PPPs operate outside the limits of public accountability or financial scrutiny. This can no longer be tolerated. Partnerships are the wave of the future, but they must be brought under increased public scrutiny. The public demands accountability. PPPs can not be used to skirt public accountability rules and financial oversight.

We must recall why civil service reforms were brought into government in the first place – to limit nepotism and cronyism, to ensure stability of service delivery despite political transition, and to ensure adherence to accountability rules. Under contracting, these same problems of cronyism and collusion emerge, and yet the legal protections and remedies are unclear. Private contractors operate outside government accountability rules: principles of open government need not apply, unless explicitly stipulated in the contract.^{xliii} As we move into more hybrid systems, we must develop accountability rules that preserve the basic values and public oversight required for effective democratic government.

Reinvesting for the Future

Local government services provide the infrastructure necessary for economic development and community well being. Water, wastewater and solid waste are three infrastructures that have received primary attention in this chapter because they are the services with the widest research base and they effectively illustrate the challenges that must be addressed. Similar investment is required in the human services (child care, health care, schools, etc.) that form the social infrastructure for our communities.

Public infrastructure needs public investment. Private investment and expertise can complement public delivery but not replace it. Among local government managers the issue is not privatization; it is how best to meet the demand for high quality local government services in a cost efficient manner. Privatization is just one tool, and empirical experience of US local government officials over the last two decades shows its limits. Competition is hard to create and maintain, cost savings (if any) from privatization erode over time, and service quality often suffers. This is why managers in both the public and private sectors are looking more critically at the purported benefits of contracting out. Citizens, too, are becoming more suspect of management or market gimmicks. They want real efficiencies and continued service quality.

Local governments are pragmatic. They experiment with contracting out and with public delivery in a process of continuous improvement and testing to find the mix of delivery options that best meets their communities' needs. They must be allowed to continue that experimentation. The privatization reversals seen at the local government level in the last decade reflect a pragmatic search for what works best in each service and each location. This is not a return to old government bureaucracy. Rather, this represents the emergence of new hybrid systems, which combine government and market but do so in a way that ensures efficiency, accountability and public access.

The US has some of the most accountable, autonomous and efficient local governments in the world. What they need is a new federal partnership - one that recognizes the infrastructure investment requirements can not be handled by local tax payers alone. This requires financial accounting and investment to address long term needs, government regulation of service markets, and the public service employment and accountability to ensure high service quality in a failsafe local government infrastructure system.

Endnotes

ⁱ Mildred E. Warner and Amir Hefetz, "Pragmatism over Politics: Alternative Service Delivery in Local Government, 1992-2002," pp 8-16 in *The Municipal Year Book 2004*. (Washington, DC: International City County Management Association, 2004).

ⁱⁱ ASCE, Infrastructure Report Card, (Washington, DC: American Society of Civil Engineers 2005), <http://www.asce.org/reportcard/>

ⁱⁱⁱ EPA, EPA Clean Water and Drinking Water Infrastructure Gap Analysis. (Washington, DC: US Environmental Protection Agency (EPA) 2003). Congressional Budget Office, Future Investment in Drinking Water and Wastewater Infrastructure, (Washington, DC, CBO, November 2002).

^{iv} Mildred E. Warner "State Policy Under Devolution: Redistribution and Centralization," *National Tax Journal* Vol LIV(3)(2001):541-556, shows the importance of a state role. Mildred E. Warner and James E. Pratt, "Spatial Diversity in Local Government Revenue Effort Under Decentralization: A Neural Network Approach," *Environment and Planning C: Government and Policy*, 23(5)(2005.):657-677, shows rising inequality as a result of devolution, especially among rural and core metro communities as compared to suburbs.

^v David E. Osborne and Ted Gaebler. *Reinventing Government: How the Entrepreneurial Spirit Is Transforming the Public Sector*. (Reading, MA: Addison-Wesley, 1992).

^{vi} Barry M. Feldman, "Reinventing Local Government: Beyond Rhetoric to Action." *The Municipal Year Book 1999*. (Washington DC: ICMA, 1999).

^{vii} The ICMA collects data every five years on all alternative government service delivery including contracts to for profit firms (privatization), other governments (cooperation), non-profit firms and franchises. The major alternatives are direct public delivery, privatization and inter-municipal cooperation. The sample frame includes all cities over 10,000 population and counties over 25,000 and an additional sample of one in eight smaller municipalities. The survey covers 67 local services in 7 broad areas (public works, public safety, public utilities, health and human services, parks and recreation, culture and arts, and support functions). The ICMA survey is administered to city managers and also asks a battery of questions regarding ideology, politics, fiscal stress, monitoring and contract specification and citizen participation. Roughly a third of all governments contacted respond (31% for 1992, 32% for 1997 and 24% for 2002). Cities (which include villages, towns and townships) vastly outnumber counties.

^{viii} Mildred E. Warner. "Civic Government or Market-Based Governance? The Limits of Privatization for Rural Local Governments," *Agriculture and Human Values* (1)(2009).

^{ix} Of the roughly 1,200 to 1,400 responding governments in any given survey year, only about 40% of the sample is the same across any two surveys. By pairing the surveys we yielded a sample size of 628 in the 1992-1997 paired sample, and 480 the 1997-2002 paired sample.

^x Amir Hefetz and Mildred E. Warner. "Beyond the Market vs. Planning Dichotomy: Understanding Privatisation and its Reverse in US Cities," *Local Government Studies*, 33(4)(2007):p 555-572. An earlier analysis of reverse privatization is found in Amir Hefetz and Mildred E. Warner. "Privatization and Its Reverse: Explaining the Dynamics of the Government Contracting Process" *Journal of Public Administration, Research and Theory*. 14(2)(2004):171-190. Only one survey (of counties and towns in New York State) directly measured reverse privatization. It is found in Mildred E. Warner and Robert Hebdon. "Local Government Restructuring: Privatization and Its Alternatives," *Journal of Policy Analysis and Management* 20(2)(2001): 315-336.

^{xi} Amir Hefetz and Mildred E. Warner. 2007. *ibid.*

^{xii} Mildred E. Warner, with Mike Ballard and Amir Hefetz. “Contracting Back In – When Privatization Fails,” chapter 4 pp 30-36 in *The Municipal Year Book 2003*. (Washington, DC: International City County Management Association, 2003). And Mildred E. Warner and Amir Hefetz (2004) *op cit.*

^{xiii} E. S. Savas. *Privatization: The Key to Better Government*. (Chatham, N.J.: Chatham House Publishers, 1987).

^{xiv} “Calling a Change in the Outsourcing Market,” (New York: Deloitte Consulting, 2005).

http://www.deloitte.com/dtt/cda/doc/content/us_outsourcing_callingachange.pdf

^{xv} A brief summary is published in Germà Bel and Mildred E. Warner. “Challenging Issues in Local Privatization,” *Environment and Planning C: Government and Policy*, 26(1)(2008): 104-109, editorial overview to a special issue on local government contracting. A full description of the reviewed studies is published in Germà Bel and Mildred E. Warner, “Does privatization of solid waste and water services reduce costs? A review of empirical studies,” *Resources, Conservation & Recycling*, (2008):

^{xvi} Elbert Dijkgraaf and Raymond.H.J.M. Gradus. “Collusion in the Dutch waste collection market,” *Local Government Studies*. 33 (2007): 573-88.

^{xvii} Mildred E. Warner and Germà Bel. “Competition or Monopoly? Comparing US and Spanish Privatization,” *Public Administration: An International Quarterly*, 86(3)(2008): 723-736.

^{xviii} Mildred E. Warner and Amir Hefetz. “Managing Markets for Public Service: The Role of Mixed Public/Private Delivery of City Services,” *Public Administration Review*, 68(1)(2008): 150-161.

^{xix} Mildred E. Warner. “Reversing Privatization, Rebalancing Government Reform: Markets, Deliberation and Planning,” *Policy and Society* (2008).

^{xx} Stephen Gasteyer. “Matching Rhetoric and Empirical Evidence: Private Sector Participation in Water and Sanitation and Community Impacts in the US,” Paper Presented at American Collegiate Society of Planners conference, (Milwaukee, WI, 2008).

^{xxi} EPA. EPA Clean Water and Drinking Water Infrastructure Gap Analysis. (Washington, DC: US Environmental Protection Agency 2003).

^{xxii} Food and Water Watch. “Faulty Pipes: Why Public Funding (not Privatization) is the Answer for U.S. Water Systems.” (Washington, DC: Food and Water Watch, 2006).

<http://www.fwwatch.org/publications/reports/faulty-pipes>. Johnson, Robin and Adrian Moore. “Opening the Floodgates: Why Water Privatization Will Continue.” (Los Angeles, The Reason Public Policy Institute, 2001). <http://www.reason.org/pbrief17.html>.

^{xxiii} Gasteyer, 2008, *op cit.*

^{xxiv} Bel and Warner, 2008 *op cit.*

^{xxv} Adrian T. Moore, “Don’t Believe the Hype: Successful Water Privatization is the Norm,” *Privatization Watch*, 28(2) (2004):6 & 13.

^{xxvi} Mildred E. Warner. “Inter-municipal Cooperation in the U.S.: A Regional Governance Solution?” *Urban Public Economics Review/Revista de Economía Pública Urbana*, 7(2006): 132-151.

^{xxvii} Bel and Warner, (2008) *op cit.*

^{xxviii} A number of studies address these rural-suburban-urban differences and find consistent results. The most recent is Mildred E. Warner. "Market-Based Governance and the Challenge for Rural Governments: U.S. Trends" *Social Policy and Administration: An International Journal of Policy and Research* 40(6)(2006):612-631. Others include: Mildred E. Warner, and Amir Hefetz. "Rural-Urban Differences in Privatization: Limits to the Competitive State," *Environment and Planning C: Government and Policy*, 21(5)(2003): 703-718; Mildred E. Warner and Amir Hefetz. "The Uneven Distribution of Market Solutions for Public Goods," *Journal of Urban Affairs*, 24(4)(2002): 445-459.; and Yolanda K. Kodrzycki, "Privatization of Local Public Services: Lessons for New England." *New England Economic Review* (May/June 1994), 31-46.

^{xxix} EPA (2003) op cit.

^{xxx} The National Infrastructure Bank Act of 2007 was cosponsored by Senators Dodd and Hagel. This bipartisan proposal is modeled after the Federal Deposit Insurance Company and would evaluate Federal investment in infrastructure projects based on type of system, project location, cost, usage, and environmental and economic benefits.

<http://www.logisticsmgmt.com/article/CA6541261.html>

^{xxxii} AACE (2005) p 60 op cit.

^{xxxiii} C. Copeland. Water Infrastructure Project Earmarks in EPA Appropriations: Trends and Policy Implications. CRS Report for Congress RL 2201. Washington, DC: Library of Congress Congressional Research Service, 2004).

^{xxxiiii} Stephen Gasteyer and Claudia Rangel. "Beyond Bridges to Nowhere: Earmarks, Water Infrastructure and the Decline of Meritocracy in the US," (Paper presented at the Rural Sociological Society meetings, Manchester, NH July 2008).

^{xxxv} AACE (2005) p 61 op cit.

^{xxxvi} S. Szymanski and S. Wilkins. "Cheap rubbish? Competitive tendering and contracting out in refuse collection." *Fiscal Studies*, 14(3) (1993): 109-30.

^{xxxvii} Woodrow W. Clark and Ted K. Bradshaw. *Agile Energy Systems: Global Lessons from the California Energy Crisis*. (Oxford, Elsevier, 2004).

^{xxxviii} Warner and Bel (2008) op cit.

^{xxxix} Jennifer Gerbasi and Mildred E. Warner. "Privatization, Public Goods and the Ironic Challenge of Free Trade Agreements," *Administration and Society*, 39(2)(2007):127-149.

^{xl} William Schweke and Robert Stumberg. "The Emerging Constitution: Why Local Governments Could Be Left Out." *Public Management (US)*, 82 (1) (2000). 4-11.

^{xli} Intergovernmental Policy Advisory Committee (IGPAC). Advisory Committee Report to the President, the Congress and the United States Trade Representative on the US-Columbia Trade Promotion Agreement, Sept 15, 2006.

^{xlii} Paul Light. *The True Size of Government*, (Washington, DC Brookings Institution Press, 1999).

^{xliii} More information on the Federal Partnership for Public Service can be found at

(<http://www.ourpublicservice.org>)

^{xliiii} Ellen Dannin, "Red Tape or Accountability: Privatization, Public-ization, and Public Values." *Cornell Journal of Law and Public Policy*, Vol. 15, (2006).