

“Desired Outcomes, Unexpected Processes: Two Stories of Sanitation Maintenance in Erode Tenements, India”

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Abstract: This article addresses a central question in the literature on collective action and infrastructure maintenance: what variables contribute to the successful maintenance of public services at the community level? This research compares two tenements¹ within the same municipality in India, one which successfully maintains its sanitation infrastructure and the other which does not. The findings point to often ignored variables like location of sanitation infrastructure, bundling of public services and citizen-bureaucrat linkages that contribute to successful sanitation maintenance.

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¹ Tenements, as public housing units are called in India, are 3-4 story flats constructed by the state for housing re-located slum dwellers.

1. Introduction: The Research Puzzle

This research started during a visit to Erode district² in the state of Tamil Nadu in South India in 2007. While visiting tenements in Erode, I was struck by a contrast: within the same municipality, the septic tanks³ of one tenement, Poompuhar Nagar (PN) were extremely well-maintained. Any clogging of the septic tank was promptly attended to by the residents and the municipality. In contrast, the septic tanks of the neighboring tenement, Sathya Nagar (SN) were in a neglected condition, choked beyond capacity with sewage and unusable.

This raised the question: within the same municipality, why are residents of some tenements more willing to contribute towards septic tank maintenance than others? Why is the same municipality more willing to extend maintenance support to the residents of one tenement compared to the other? In short, within the same municipality, what institutional arrangements and incentive structures make PN more successful in septic tank maintenance than SN?⁴

² The hierarchy of sub-national administrative units is as follows: a state is composed of districts, and the districts are made up of urban and rural local bodies.

³ Septic tanks are decentralized, on-site sewage treatment systems, common in areas that are not connected to sewerage pipes. Septic tanks vary in size from small ones individually serving households to larger ones shared by a community; the Erode tenement septic tanks belong to the latter category.

⁴ This research is based on three months of field work: one week in February 2007, five weeks in summer 2007 and six weeks in December-January 2008. In all, I interviewed 52 people, including tenement residents, the bureaucracy (municipal sweepers, sanitary supervisor, bill collector and Executive Officer) and the elected council (Ward Councilors of SN and PN, and the Municipal Chairman of the urban local body), four Tamil Nadu Slum Clearance Board (TNSCB) officials in Erode who implement the tenement policies, two TNSCB officials in Chennai who make the tenement policies, District Collector of Erode and two local journalists who have been tracking Erode's tenement maintenance over the past twenty years.

During my summer 2007 field research, I visited all five tenements in Erode district. Most of my time in summer was spent in SN and PN, conversing and interacting with the tenement residents to understand the challenges they faced with septic tank maintenance and how they did/did not succeed in resolving these maintenance problems. All my interviews and conversations with the tenement residents were conducted within the tenements.

My December-January field research was also primarily spent within the tenements, but I got a different perspective on the septic tank maintenance challenges from the urban local body (ULB). Whereas in summer, I spent time talking directly to the tenement residents, in my December-January trip, I spent three weeks shadowing the ULB bill collector and sanitary supervisor as they made their rounds of the tenements to collect property taxes. Accompanying these front-line bureaucrats every morning three days a week was helpful in observing the interactions between the residents and the ULB and understanding the challenges faced by the ULB in septic tank maintenance.

Figure 1: Choked septic tank in the poor performer, SN



Figure 2: Children playing around the septic tank in the good performer, PN



1.1 Significance of research

The Erode question falls within a larger theoretical body of work on collective action and community management of public services.

In the mid-1980s, state provision of public services was discredited by the international donor community as inefficient and unresponsive to the needs of the people. Dissatisfaction with the state in service delivery and maintenance was also situated within a larger ideological debate on the role of the state. Anti-planning critics like Escobar were sharply critical of the state being too technocratic in its planning approach and called for a more empowered planning paradigm, where the users are involved in the decision making process. In response to these anti-planning attacks, the international donor organizations shifted to alternative institutional arrangements like community management of public services, where users are involved in the decision-making, provision and maintenance of services. The theoretical frameworks for alternative institutional arrangements for service delivery gained more currency with the works of Ostrom (1996) and

Evans (1996), who coined the word “co-production,” i.e. the joint production of services by the public sector and users of the service.

But in co-production and community management of public services, policy makers cannot assume that the state and citizens will share maintenance responsibilities, and that user groups will, cheerfully, take on these responsibilities. In practice, sharing of responsibilities is not an easy task. It raises the questions of: who is responsible for apportioning different tasks to different actors, who monitors these tasks, and what institutional incentives motivate each of the relevant actors to do their part? This research is an attempt to answer these practical questions by focusing on sanitation maintenance in the Erode tenements.

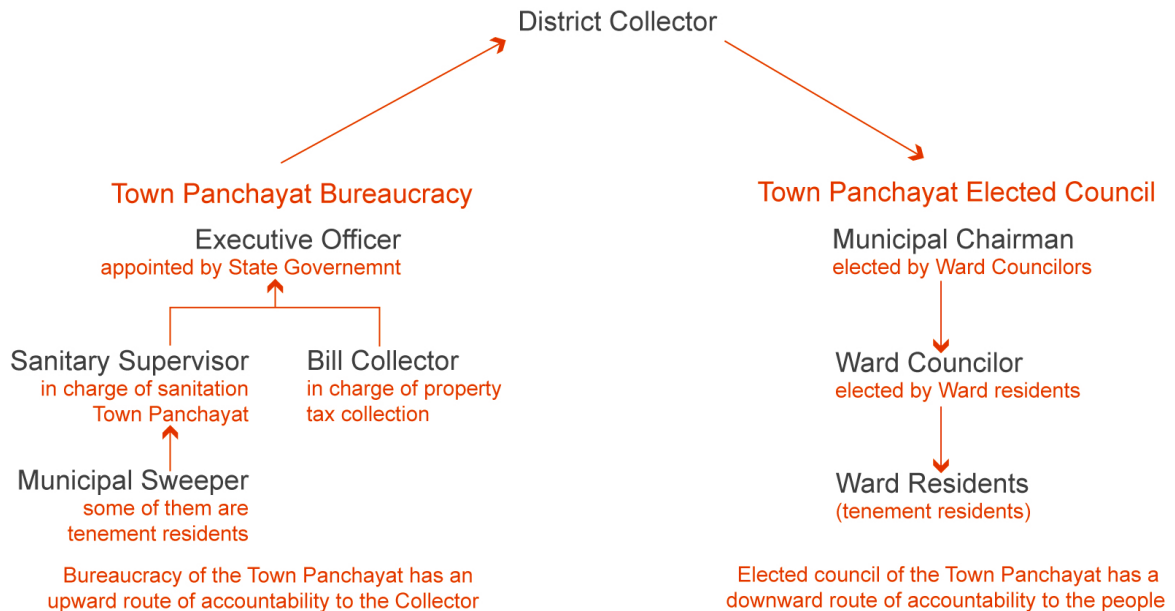
The literature on collective action and community management of public services has identified variables that will incentivize the different actors to take on their service responsibilities. This research finds that PN succeeded in achieving the desired outcome of good sanitation maintenance, but this desired outcome was not due to the variables that are commonly cited in the literature. Instead, PN was successful in sanitation maintenance due to variables that are often overlooked in the literature. This research points to the variables that do matter for sanitation maintenance, and more broadly, to better collective action in urban service delivery.

1.2 Institutional Actors and Context

The institutional actors involved in septic tank maintenance are the Tamil Nadu Slum Clearance Board (TNSCB), the urban local body (ULB) of B.P.Agraharam in which both PN and SN are located and the tenement residents. The ULB of B.P.Agraharam is divided into the bureaucracy and the elected council. Within the bureaucracy, the municipal sweepers do the actual septic tank maintenance works in the tenements and they are supervised by the sanitary

supervisors, who in turn report to the Executive Officer (EO). The elected council is composed of Ward Councilors, who are directly elected by the citizens.

Figure 3: Administrative Structure of B.P.Agraharam ULB



This research is framed within two important institutional changes in Tamil Nadu: 1) in 1990, the TNSCB, the state agency which had so far been responsible for maintenance of tenements (including tenement septic tanks), decided to focus all its energies on tenement construction and to hand over maintenance of tenement services to the ULB in which the tenement is located and the tenement residents, and 2) in 1992, the 74th Constitutional Amendment Act was passed in India which devolved responsibilities of provision and maintenance of services (including, but not limited to, water supply and sanitation) to the ULBs. Since 1992, the ULB of B.P.Agraharam and the tenement residents have been responsible for the maintenance of the tenement septic tanks. SN, the poor performer, was constructed in 1988, before these institutional changes were implemented. PN, the good performer in septic tank maintenance, was constructed after, in 1998.

1.2 Conventional explanations and counter-intuitive research findings

This research is situated within the literature on collective action and community management of public services. I outline below some common explanatory variables in these literatures for the desired outcome of good maintenance of public services, and show how my findings in the field were counter-intuitive to these conventional explanations.

Asset ownership: A dominant explanation for good maintenance is the positive incentive of ownership on maintenance. There is consensus in the empirical research that owners are more motivated to maintain their assets than renters because owners benefit from investing in maintenance through increase in asset values (Hoff and Sen 2000; Galster 1987) and their lower mobility motivates them to invest in their property and community (diPasquale and Glaeser 1998, Wegelin-Schuringa et al. 1997). In compliance with this idea, when the TNSCB devolved tenement maintenance responsibilities to the ULB and tenement residents, it changed its tenement property rights policy from renting to lease-to-purchase, where tenement residents pay a monthly mortgage for a period of 20 years, at the end of which they will be granted ownership of the unit. The surprise finding during my field research was that PN has a higher percentage of renters (49.4 percent) compared to SN (28.4 percent). In the tenements, the occupier of the tenement unit is responsible for maintenance, so it is surprising that PN, where almost half the units are occupied by renters, has good maintenance compared to SN. So, even though the change in tenement policy to lease-to-purchase was predicated on the ownership-as-incentive assumption, the findings in PN turn this assumption on its head.

Embedded politician in community: Empirical research on service delivery to the poor has shown that when the local elected representatives (in this case, the Ward Councillors), live within the same neighbourhood as their constituents, they will be more responsive to the demands of the neighbourhood. This is because, when elected representatives are embedded in

the communities, “their daily interactions with local people in the community can provide them with information on different issues [concerning the project and the community]” and the “local community could put them under much social pressure or even social ostracism” if they don’t perform (Lam 1996, 1046). The surprise finding from my field research is that SN, in which elected representatives have always been tenement residents and have been embedded in the community, performs worse in septic tank maintenance than PN, where all previous elected representatives have lived outside the tenements.

Political patronage: Empirical research also points to the importance of political patronage for successful service provision and maintenance to the urban poor. Political patronage is found to be more effective in giving the urban poor a voice in demanding services from the state than does using bureaucratic channels because “politicians pay careful attention to slum dwellers so they can be assured source of votes” (Jha et al. 2005, 21). Harris, in his study on Indian cities, also finds that party politics is the most common channel for the urban poor in expressing their preferences for urban services (Harris 2005). Surprisingly, here, though the poor performer, SN, accesses the municipality through its local politicians, PN has successfully established vertical linkages with the ULB, not through the route of political patronage, but through the bureaucratic channel.

Thus, surprisingly, the tenement with a higher percentage of renters, without any elected representatives living within its premises, and which has established vertical linkages with the state through the bureaucracy rather than political patronage is more successful in maintaining its septic tanks. In summary, if the conventional variables of asset ownership, embedded politician in community and political patronage do not explain the good maintenance of PN septic tanks, what does?

2. *Research methodology*

2.1 *Case studies*

Within the state of Tamil Nadu, I selected Erode district because it has the highest density of tenements. The TNSCB has constructed five tenements in Erode district since 1971.

Table 1: General Characteristics of Tenements in Erode District⁵

Name of Tenement	Year of Construction	Name of Urban Local Body in which Tenement is Located	Number of Tenement Units	Are the Tenements' Septic Tanks Well-Maintained?
Perumpallam Odai	1986-87	Erode Municipality	312	No
Sathya Nagar (SN)	1987-88	B.P.Agraharam	648	No
Narayanavalasu	1991-95	Veerapachatram	256	Yes
Bhavani Road Phase II	1998-00	Periasemur	468	Yes
Poompuhar Nagar (PN)	1997-98	B.P.Agraharam	180	Yes

Of the five tenements in Erode district, SN and PN were selected as case studies to keep constant the ULB in which the tenements are located (i.e. B.P.Agraharam). SN has the reputation as being the “most notorious and worst maintained”⁶ tenement in the district and it provides a useful foil to PN, which is the most well-maintained tenement in the district.

⁵ On comparing SN and PN, an obvious variable that could explain PN’s successful performance in septic tank maintenance is tenement size (following Olson’s argument on the positive correlation between small group size and effective collective action [Olson, 1977]). But group size is not an explanatory variable in this research for two reasons: 1) Not all small tenements have well-maintained septic tanks. For instance, the tenement, Bhavani Road Phase 2, has well-maintained septic tanks, though it is much larger in size than Perumpallam Odai tenement, and 2) Tenements are divided into blocks and each tenement block shares services, like public taps and septic tank chambers. The better performance of PN in septic tank maintenance over SN was because of the better organization of residents at the block level, and not at the overall tenement scale. A SN block is made up of 30 units, whereas a PN block has 24 units. So, though both tenements have blocks of more or less the same size, the PN residents are more successful at organizing themselves at the block level and maintaining public services (like public taps and septic tank chambers) at the block scale.

⁶ Personal Interview, Assistant Engineer, TNSCB, January 2008.

2.2 Indicators of septic tank maintenance

A typical Erode tenement consists of blocks, which are a group of units clustered together to share certain services, like public taps.

Both SN and PN have the same septic tank system, which works as follows:

Sewage from individual toilets is conveyed through the drainage system to septic tank inspection chambers. These chambers are located one per block in both SN and PN. From these inspection chambers, the sewage flows to the main septic tanks. The sludge from the septic tanks has to be removed around once in three years.

On talking to the tenement residents, I found that the most frequently cited maintenance problem with the septic tank is the clogging of septic tank chambers. Other common problems were leakage of the drainage pipes on the building, clogging of underground septic tank, damage/breakage of underground septic tanks and also clogging of the main septic tank. *So I decided to use the condition of five common repairs as indicators of septic tank maintenance. These were: leaking drainage pipes on buildings, clogged underground drainage pipes, damaged underground drainage pipes, clogged septic tank chambers and clogged main septic tank.*

3. Good performance explained

How did PN succeed in achieving good septic tank maintenance? PN has different channels of maintenance for different septic tank maintenance tasks, depending on the frequency and level of technical complexity of the task.

Table 2: Nature of maintenance task and channel through which maintenance is done

Maintenance task	Frequency	Level of technical complexity	How is maintenance task financed?		Channel for demanding maintenance/repair
			How much, per time?	Financed by whom?	
Leaking drainage pipes on buildings	~3 times/year	Low: requires buying of cement seal and caulking the leak	Rs.100	Residents	Residents do it themselves
Clogged underground drainage pipes	~8 times/year	Medium: requires pipes to be dug up and unclogged	–	–	By the municipal sweeper, under the order of the sanitary supervisor
Damaged underground drainage pipes	~2 times/year	Medium: requires pipes to be dug up and replaced	Rs.3000	By ULB, through property taxes	Residents apply pressure on the EO through sanitary supervisor. On approval from EO, the sanitary supervisor asks his municipal sweepers to do the repair work.
Clogged septic tank chambers	~12 times/year	Low, but it is a dirty task which will only be done illegally by the Dalit municipal sweepers	Rs.300	By residents, through an "informal tax" to the municipal sweepers ¹ .	Residents pay the municipal sweepers each time they want the septic tank chamber unclogged.
Clogged septic tank	~1 in 2 years	High: cannot be done manually and requires de-sludging vacuum trucks ² .	Rs.22,000	By ULB, through property taxes	Residents apply pressure on EO through sanitary supervisor. If the EO does not respond to the de-sludging demand, women residents stage protests outside the ULB office.

1. For the transaction between the PN residents and the municipal sweepers, I borrow Prud'homme's term of "informal tax" because this is a better description of this transaction than the more pejorative term "bribe" (Prud'homme 1992). Prud'homme defines informal taxation as "the nonformal means utilized to finance the provision of public goods and services," to capture the messy and myriad ways in which citizens in developing countries pay for their services. This runs the gamut from extortions to more voluntary contributions, gifts and donations. The transaction between the PN residents and the municipal sweepers fits this description well: since the cleaning of septic tank chambers is a dirty job and it is the most frequently occurring septic tank maintenance task, PN residents collectively, and informally, mobilize a fixed amount for the municipal sweeper to do this work.

As evident from the table above, depending on the nature of the task, PN residents have a system of formal and informal contracts with different kinds of street-level bureaucrats: they do the maintenance work themselves, they pressurize the sanitary supervisor to get the work done through the ULB in exchange for the property taxes paid, or they pay an “informal tax” to the municipal sweeper to get it done. But such a system of shared responsibilities is not easy to achieve. I outline below the three variables that contributed to PN’s successful sharing of maintenance responsibilities with the ULB.

3.1 Design of septic tanks: Location matters

One of the most common repairs to the tenement septic tank system is unclogging of the septic tank chambers. In PN, the septic tank chambers are located at the center of the tenement block. Residents of the block make a concerted effort to get the chamber unclogged and have the area cleaned of the dirty pools of water at their front door-steps. One woman resident at PN voiced her concern that if the chambers overflowed, something had to be done immediately, otherwise “how will we enter our homes, how will our children play?” In SN, on the other hand, the septic tank inspection chambers are located not near the front doorstep of the tenements, but instead in the back alley between tenement blocks. Since the chambers are not in the direct vision or circulation path of the residents, they are less inclined than those in PN to get cleaned.

Figure 4: Location of septic tank chambers in PN



Figure 5: Location of septic tank chambers in SN



Besides the visual and circulation sores caused by overflowing septic tank chambers, PN residents are also more proactive in keeping the chambers clean because of their proximity to their water supply. In one PN block (see Figure 4), the septic tank chamber was adjacent to the public tap. During the monsoon season, the wastewater from the septic tank chamber overflowed onto the ground. Due to the slough of dirty water surrounding the public tap, the residents could not get to the public tap to collect water, and they got the septic tank chamber cleaned within the day by paying the municipal sweeper. So, PN residents can access their water supply only if they keep their septic tank chambers clean and this is a strong incentive for septic tank maintenance.

In SN, as evident from the cross section in Figure 5, the septic tank chambers and open drainage channels are at a safe distance from the public taps. Thus, residents do not have to clean the septic tank chambers in order to access their water supply and have less of a motivation to keep the septic tank chambers clean.

Figure 6: Location of drainage pipes in PN



Figure 7: Location of drainage pipes in SN



Besides the location of the septic tank chambers, another important spatial factor is the location of drainage pipes on buildings. In SN, the drainage pipes are located in the back alleys and if they crack or are damaged, the sewage from the toilets falls onto the ground. But since tenement residents never use the back alleys, they can ignore the mess. However, in PN, the drainage pipes are located in the stairwell that residents use to access their units. If the pipes are leaking or damaged, residents have to tend to them immediately, otherwise they will have dirty sewage falling on them from the broken pipes as they are accessing their units.

The physical location of the septic tank system makes the potential repairers the direct recipients of the costs of disrepair. Bearing such costs motivates PN residents to take responsibility in septic tank maintenance.

3.2 *The water connection*

The septic tanks present a standard collective action problem. Once they were well-maintained, anyone could use them – whether or not the user had contributed to their maintenance. PN residents, however, linked the maintenance of the non-excludable service, the well-maintained septic tanks, to an excludable service, the use of public taps. If the resident of a tenement block does not contribute towards septic tank maintenance, the residents of that block will not allow the non-contributing resident to use the public tap for water. PN's successful strategy of linking septic tank maintenance to public taps raises two questions: 1) how did the PN residents succeed in enforcing and monitoring this rule in septic tank maintenance, and 2) since linking septic tank maintenance to use of public taps is a clever way of preventing free-ridership in septic tank maintenance, why did the SN residents not adopt a similar strategy for the maintenance of their septic tanks?

Social learning

The answer to the first question lies in PN's organized citizenry. The successful sanctioning of non-contributing residents requires an organized citizenry, which, besides enforcing septic tank maintenance, can also bargain and negotiate more effectively with the ULB to have their service demands met. When the TNSCB devolved maintenance of tenement services to the ULB and tenement residents, it initiated the formation of "welfare associations" amongst the tenement residents to take care of tenement maintenance. As soon as residents moved into SN and PN, the TNSCB held elections in the tenements for these welfare associations. In SN and PN, the welfare associations were disbanded within a month of formation due to internal fighting amongst the members. SN has not had an organized citizen group since the aborted welfare association initiative. Though PN also failed in sustaining the welfare associations, it is surprising that the same group of residents succeeded in organizing themselves in monitoring and enforcing septic tank maintenance. This research finds that PN residents succeeded in organizing themselves for septic tank maintenance through a contracted process of social learning.

Social learning is defined as "a form of tacit and informal learning... [where] practice and learning are construed as correlative processes, so that one process necessarily implies the other. In this scheme... [decisions] are embedded in a learning process that flows from the attempt to change reality through practice" (Friedmann 1987, 182). According to the social learning paradigm, group behaviour is changed through social practice. It is a cumulative process where groups respond to changing social contexts through new forms of political strategy and tactics, and this, in turn, leads to new norms and changes in group behaviour. In the history of PN's organizing, the residents faced two external threats, which provided the "changing social context" for social learning. The first is that within six months of moving into the tenement,

rowdies started entering PN in the evening and harassing the women. Thirteen tenement families got together and formed an informal “security group” to address this social concern. The men from these thirteen families used to sleep at the tenement entrance during the night to keep the rowdies out. When the threat to security passed, the group was disbanded. The second social concern that the PN residents faced was lack of water supply. TNSCB provided SN with water supply since it was constructed in 1988 before the decentralization initiative. In contrast, PN was constructed post-decentralization, when provision of water supply had become the ULB’s responsibility. The cash-strapped ULB did not provide water services to PN for nearly six years. The women from the families of the informal security group got together to demand water from the ULB. When the ULB property tax collectors came to collect property taxes, PN residents refused to pay taxes unless their water demands were met. The core group of women staged a number of protests outside the ULB office to have their water demands met. Through the process of maintaining security and demanding for water services, the PN residents organized themselves as an effective pressure group and it is this organized citizenry that has positive spill-over effects in taking over the monitoring of septic tank maintenance.

Social learning led to an organized citizenry that could not only monitor septic tank maintenance, but could also effectively negotiate with the ULB. Since PN’s Ward Councilors lived outside the tenement and have not been accessible to them, residents could not rely on the Ward Councilors to convey their service demands to the ULB. Instead, they had no recourse but to organize themselves to negotiate directly with the ULB bureaucracy for water services, and later, for septic tank maintenance support. Also, the process of demanding water services through the property tax collectors helped the PN residents establish relationships with the front-line officials of the bureaucracy. The residents continued to access the ULB through these front-line

officials even when demanding support for septic tank maintenance. I return to this citizen-bureaucrat relationship in the next section.

Geography of water availability on septic tank maintenance

If linking septic tank maintenance to use of public taps is such a successful strategy for eliminating free-ridership in septic tank maintenance, why did the SN residents not resort to a similar strategy? The answer lies in the particular geography of SN. SN is in a geographical location with acute water scarcity. Due to the tenement's location away from the main B.P.Agraharam water trunk pipe, there is low pressure in the water pipes by the time they reach SN. So the SN public taps have unreliable municipal water supply. Whereas PN residents received water in the public taps for two hours daily, SN residents sometimes had to go for an entire week with no water in the taps. Due to the unreliable water supply, SN residents were less dependent on their block public taps and this reduced the effectiveness of using the public taps as a sanctioning tool for contribution to septic tank maintenance.

Also, in 2007, the SN residents found that a main water line supplying water to the neighboring ULB, which passed along the boundary of SN, started leaking. The residents installed a tap at this point of leakage, so they now get water 24/7 from this tap. SN residents entirely depend on this public tap for their water needs. During my visits to SN, it was a common sight to see women residents, in their sari blouses and petticoats, bending under the gushing water and bathing themselves and their children. Thus, the SN residents creatively solved their water problem by installing a public tap at the leaking water line, but this creative solution to address the challenge of water eliminated the potential of using access to water as the sanctioning tool to solve their other challenge of septic tank maintenance.

3.3 Bureaucrat-citizen link

The successful maintenance of PN septic tanks is due to the clear allocation of septic tank maintenance tasks between the tenement residents and the ULB bureaucracy. The ULB finances maintenance of septic tanks through property taxes. PN residents refuse to pay property taxes if the ULB has not responded to specific maintenance tasks, like clogged and damaged underground drainage pipes. PN residents never refuse to pay property taxes for other maintenance tasks, like leaking drainage pipes on buildings and clogged septic tank chambers, because they have other channels to redress these repairs. Since SN does not have this clearly delineated separation of septic tank maintenance tasks, this raises the question: how did PN succeed in this fair division of maintenance responsibilities between themselves and the ULB?

When residents moved into PN, the tenements were not serviced with water supply, the TNSCB had no role in septic tank maintenance, and the Ward Councilor lived outside the tenements. As a result, PN residents had to demand water supply from the ULB bureaucracy. Residents organized themselves to take over technically simple and frequent septic tank maintenance tasks like leaking drainage pipes on buildings. For more complex tasks like clogged septic tank chambers, they started paying an “informal tax” to the municipal sweepers. When the ULB bill collector came to PN to collect property taxes, the residents agreed to pay taxes only if the ULB took over some of the technically complex septic tank maintenance tasks like clogged and damaged underground drainage pipes.

Thus, PN residents’ relationship with the ULB bureaucracy is similar to a commercial transaction because the residents have a fixed and clearly defined system of formal and informal taxes in exchange for specific septic tank maintenance tasks done through particular ULB channels. This practice of clearly defined channels for different septic tank maintenance tasks is

not unique to PN; in fact, all three tenements in Erode district constructed after the decentralization policy follow this practice.

This practice is noticeably missing from the two Erode tenements (including SN) which were constructed before decentralization. SN residents had their septic tank systems maintained, free of charge, by the TNSCB till 1990, and they have always had a Ward Councilor living within the tenement. SN residents continue to access the ULB through the Ward Councilor, and their patron-client relationship with the ULB is strikingly different from that of PN.

Role of the street level bureaucrat

In PN, the critical state actors who worked with the residents in sharing of septic tank maintenance responsibilities were the street level bureaucrats. “Street level bureaucrat” is a term coined by Lipsky (1984) to describe low-cadre bureaucrats, who are on the ground, have direct contact with citizens and are responsible for the implementation of policies. For underground drainage pipes, the sanitary supervisor is the critical state actor. The other critical state actor in PN’s success story is the municipal sweeper. The residents-municipal sweeper relationship has some elements of a market transaction because residents have market-like expectations from the municipal sweepers on their deliverables in exchange for the “informal taxes” paid. If the municipal sweepers’ work of unclogging the septic tank chambers is unsatisfactory, residents will stop paying them in the future.

As pointed out earlier, PN residents were engaging in a social learning process as they demanded water services from the ULB and divided septic tank maintenance tasks between themselves and the ULB. Such social learning processes are characterized by “double loop” forms of learning. The double loop form of learning is not a linear problem-solving approach. Instead, it “involves a major reorganization that will allow an organization to adjust itself to new circumstances in its environment” (Argyris and Schon 1978, quoted in Friedmann 1987, 215). As

PN residents established vertical linkages with the street level bureaucrats and deliberated with the bureaucrats in setting clear responsibilities for themselves and the ULB in exchange for the property taxes paid, the actors (both tenement residents and street level bureaucrats) were undergoing a double-loop learning process, where they were adjusting themselves to others' expectations and setting new maintenance norms acceptable to both residents and the ULB. Such a double-loop form of learning requires a flexible bureaucracy, one that is more agile in adjusting to new circumstances than the classic rule-bound Weberian bureaucracy. In the best, non-corrupt circumstances, street level bureaucrats are ideal actors in such a social learning process because they can exercise discretion in their work and respond more effectively to the demands of citizens. In PN, the residents negotiated with the street sweeper to clean out the clogged septic tank chambers for a tip [put this first in the table and power point]. They negotiated with the sanitary supervisor to get their underground drainage pipes unclogged. And they negotiated with the sanitary supervisor to get their underground drainage pipes repaired – the most expensive job – by threatening not to pay their property taxes. The relationships formed in the first period of getting the water allowed the group to organize in this second period of keeping the sewage system maintained. From the findings in the Erode cases, this research points to the need of carving out a space for street level bureaucracy within the literature on community management of public services. Though the theory of discretion has been well conceptualized by Lipsky in his pioneering work on street level bureaucrats, the Erode research argues for advancing Lipsky's research in two ways. First, whereas for Lipsky, discretion for street level bureaucrats is always a good thing, this research cautions that discretion can work either in the citizens' interests or against them, and the important task for future research is to outline the conditions under which appropriate discretion can take place. Second, Lipsky's work centered on the relationship between street level bureaucrats and their managers (managerial supervision and worker

compliance); this research points to re-orienting the focus to the relationship between street level bureaucrats and citizens.

Conclusion

In summary, three variables contributed to successful septic tank maintenance in the PN tenements.

Design of septic tanks: Location matters – The spatial layout of sanitation infrastructure has not been addressed in any of the community management of public services literature. As seen in the Erode research, the design can make the non-contributors pay the costs of non-contribution.

The water connection - This finding raises the important question of whether low-priority services, like sanitation, have to be provided a la carte or bundled. Bundling low-priority services, like sanitation, with a high-priority one, like water supply or electricity, can be a more effective strategy for ULBs to enforce payments for service provision and maintenance, rather than providing these services a la carte. Also, as evident from the Erode case, the bundling of water supply with sanitation was possible in PN, but not for the geographical context of SN. Thus, these alternative forms of service delivery have to be situated within particular local contexts, so that the right bundle of services can be selected which can work most effectively for a particular place.

Bureaucrat-citizen link – This research touches the tip of the iceberg in pointing to the critical role played by street level bureaucrats in engaging with citizens in a social learning process for sustainable maintenance of public services. Within the framework of Lipsky's theory of discretion for street level bureaucrats, this research calls for future work on outlining the

conditions under which street level bureaucrats exercise appropriate discretion in their interactions with citizens.

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