

**Governance in the Gullies:
Democratic Responsiveness and Leadership in Delhi's Slums***

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Abstract

We use detailed ethnographic evidence to design and interpret a broad representative survey of 800 households in Delhi's slums, examining the processes by which residents gain access to formal government and develop their own, informal, modes of leadership. While ethnically homogeneous slums transplant rural institutions to the city, newer and ethnically diverse slums depend on informal leaders who gain their authority through political connections, education and network entrepreneurship. Education and political affiliation are more important than seniority in determining a leader's influence. Informal leaders are accessible to all slum dwellers, but formal government figures are most accessed by the wealthy and the well-connected.

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I. Introduction

For the first time ever, the majority of the world's population lives in cities (World Bank 1999, Wratten 1995). Migrants to the burgeoning slums of the developing world face the difficult challenge of securing access to vital services and protecting their lives and livelihoods. Even while the scale, heterogeneity and relative anonymity of cities may limit the effectiveness of traditional institutions, the urban environment facilitates the development of new strategies for the poor to survive and advance.

Unlike rural areas, cities concentrate the avatars of political power—the offices, headquarters and assemblies—in close proximity to their constituents (Jha 1999). As a result, urban social networks may encompass not just local elites, as in rural settings (see e.g. Platteau 1995), but regional and national decision-makers as well. These additional opportunities for interaction between urban residents and policymakers underpin the familiar critique that an ‘urban bias’ exists in development policy. Though such a bias may exist, it is important to identify *which* urban residents are being over-represented in political discourse. If it is in fact the poorest migrants that gain from improved access to decision-makers and services by moving to the city, then urbanization, rather than being a strain on resources that is to be discouraged, may in fact provide a means to better governance and poverty alleviation. Unfortunately, due to an arguably strong ‘rural bias’ in development *data* and *inquiry*, little quantitative evidence is available either on the strategies of network formation or on the actual political networks of the urban poor.

In this study, we use both qualitative and quantitative evidence to uncover the strategies developed by the poor of Delhi to access government and services. A central focus of the study is not only to identify the determinants of access to governance networks by slum dwellers, but also

to trace the role of informal slum leaders (pradhans) as intermediaries between the formal government and the urban poor. The qualitative evidence draws on interviews and observations carried out in four different slums on intra-community dispute resolution, risk management procedures, and the processes by which leaders gain legitimacy and exert authority. We find that length of tenure, political status, environmental hazards, and migrants' distance from their home districts all loom large as the drivers of the problems that communities and their leaders invoke. Links to political parties, a proven track record, and claims to a democratic mandate are the primary sources of legitimacy, even when leaders have acquired power through traditional means.

Our broader quantitative survey, informed by themes that emerged from the qualitative research, was administered to a representative sample of households and community leaders from 30 randomly-selected recognized slums. It reveals that slum leaders play a central role as intermediaries with the formal authorities. Pradhans are more likely to speak on the slums' behalf in the newest slums, while facilitating direct access to politicians among residents of ethnic enclaves. Education and political affiliation are more important than seniority in determining the pradhan's influence, which is strongest in the newest slums and in ethnic enclaves. In contrast, direct access to formal government is the preserve of the wealthy and well-connected.

Section II discusses the scholarly and social context of the study and the methodology. Section III presents qualitative evidence on the governance mechanisms at work within four different slums, while Section IV presents the quantitative analysis of these issues. Section V concludes.

II. Methodology

The quantitative analysis of survey data has the advantage of making generalizable statements about large populations, but it is disadvantaged by an unwieldy apparatus that tends to limit what it reveals to hypotheses that circulate within academic or policy circles. Survey modules are often borrowed wholesale from previous questionnaires originally designed to address a different set of issues, then propagated over the Internet. These are of limited use for studying understudied populations, such as slum dwellers, or novel topics, such as slum leadership. Many econometricians also tend to analyze data collected by others from unfamiliar settings. Informed by potentially dated secondary literatures, these run the risk of overlooking the current reality of the subjects under study. Innovations in the literature thus can be more the result of a speculative moment in an air-conditioned office rather than the active exploration and dismissal of alternative hypotheses in the field.

By administering specialized surveys, economists have attempted to overcome such shortcomings. This epistemological tradition dates at least as far back as Epstein (1962), followed by Bardhan and Rudra (1978), Bliss and Stern (1982) and many others. Our paper goes a step further by employing the “participatory econometrics” approach (Rao 1997, Rao 2002), integrating participatory appraisals, focus group discussions, in-depth interviews and participant observation with quantitative data from representative surveys. The survey instruments emerge from the qualitative investigation, drawing on insights from the field to define topics of interest and identify appropriate methods of measurement.

Participatory econometrics uses qualitative insights to generate hypotheses whose generalizability can be tested through a broader analysis of quantitative data. Qualitative insights allow for a greater emphasis on the study of process and contextual issues that complement the

advantages of quantitative methods in measuring outcomes. The method differs from other mixed approaches by giving an econometric analysis a central role in the exercise and viewing respondents as contributors to the analytical work. Researchers from both qualitative and quantitative traditions are involved in every step of the process, from mixed method data collection to mixed method analysis. Thus, participatory econometrics seeks to integrate econometric and qualitative techniques with the spirit of participatory development (Chambers 1997).

The qualitative work gathered for this study focused on four slums. They were selected along two dimensions: the proximity of the residents' states of origin, and the age of the settlements. Thus, most of the residents of two slums hailed from the nearby states of Uttar Pradesh and Rajasthan, while those of the other two came from distant West Bengal and Tamil Nadu. Furthermore, two newly-settled slum sites were chosen to provide contrast with two long-established settlements. Over the course of three weeks, eleven specialists from both economics and sociology conducted approximately one hundred field discussions, consisting of neighborhood focus groups and interviews of slum dwellers, community leaders and government officials.

At the end of the three-week research period, a review workshop with the entire team was organized in which a questionnaire was systematically constructed on the basis of the qualitative findings. Though the questionnaire covered a wide variety of issues ranging from basic household information and social networks to marriage practices, the questions were tailored to address specific questions that arose during the course of the qualitative fieldwork. At the end of the questionnaire workshop, the same team went back to conduct three more weeks of interviews in the four slums, during which period the survey instrument was also pre-tested and modified.

In the seventh week, the final survey was administered to a clustered random sample of 802 households drawn from 30 slums in Delhiⁱ. The four selected for ethnographic study were augmented with 26 slums selected at random from the Delhi government's newest city-wide slum register.ⁱⁱ The qualitative data were transcribed and entered into a QSR-Nudist database, and the quantitative data were entered into a computerized database. In this way, lessons from and constant dialogue with the qualitative findings enabled broader and more representative claims to be made on the basis of the quantitative data.

Literature and Context

The scholarly literature on slums and their leadership structures has several characteristics that render it problematic for policy purposes. The first is that, by virtue of contributions from extraordinarily rich ethnographic accounts, we know more about specific aspects of life in specific slums than the general dynamics of the internal and external governance processes that underpin their creation and maintenance. From the United States (Waldinger 1996, Venkatesh 2000) to Mexico (Lomnitz 1977, Selby, Murphy and Lorenzen 1990, Chant 1991) to Guatemala (Roberts 1995) to Brazil (Pearlman 1976, Scheper-Hughes 1992) to Indonesia (Jellenik 1991) to India (Roy 2002) to Egypt (Singerman 1996)ⁱⁱⁱ, the most prominent and highest quality research on urban poverty has been largely ethnographic.

Part of the reason for the quantitative shortfall is that collecting data on slum dwellers is a difficult exercise: residents move frequently and often include illegal immigrants who endeavor to live and work in the shadow of the law. Aggregate demographic trends, urbanization rates, and migration patterns are relatively well known (e.g., Misra and Misra 1998, National Research Council 2003), but detailed household level data on survival and mobility strategies in poor

urban communities remain limited. Indeed, much of what the development community ‘knows’ about the coping strategies of the poor (e.g., Besley 1995) comes from large household surveys carried out on *rural* populations.^{iv}

Cities tend to be more complex than rural settings. Slum dwellers have access to a much broader range of potential contacts, transcending caste and identity and encompassing both traditional leaders and tiers of formal government. These contacts may provide alternative channels, with informal provision of services substituting for or complementing formal government, or they may interact in more intricate ways, with informal leaders facilitating access to formal leadership. Policy based upon studies of the poor in rural settings neglect the differences in organization and enforcement among urban communities and the range of extra-community networks that the urban context affords the poor. Without considering the urban context, such studies will be incomplete and misleading.

It is into the space created by these three characteristics that the current study steps. We seek to further understand how collective action problems are addressed within the slums, and the strategies that slum dwellers call upon to tap the resources of the state and markets within India’s capital. Delhi is hardly ‘representative’ of cities in the developing world or even in India. Yet as a focus of multiple tiers of government and the opportunities that these present for the poor, Delhi provides an intriguing venue for studying democratic responsiveness in poor urban communities. Though the particular mechanisms may differ due to Delhi’s institutional distinctiveness, we believe much can be learned about the underlying economic and social strategies that are readily generalizable.

Delhi

According to the Slum Area Act of 1956, “slums” are defined as those regions where buildings are unfit for human habitation for reasons such as dilapidation, overcrowding, and a lack of ventilation, light, and sanitary facilities. The emergence of slum housing in Delhi gained impetus in the years immediately following India’s independence in 1947. The partition of British India generated a wave of refugees into the city, doubling the population to 1.43 million between 1941 and 1948. The subsequent half-century saw a rise in the estimated population to 12.5 million by the year 2000 (Misra, et.al 1998).

Even while Delhi’s total population rose six-fold between 1951 and 1992, the slum population rose by more than twenty times; 259,000 Delhi households lived in “slum” dwellings in 1992 (Sridharan 1995). Delhi’s slum population is largely concentrated in the North—in and around the old walled city—as well as in high employment areas south of the administrative center (Sridharan 1995). This arm’s length arrangement has implied relatively large transportation costs for slum dwellers in accessing the back doors and metal detectors of formal authority.

Institutional factors have also limited democratic responsiveness. As the seat of the federal government, the formal institutions of local representation in Delhi have long been subsumed by national imperatives. Until relatively recently, barring a few experiments at devolution, authority for most municipal issues was vested in the lieutenant governor and others appointed by the federal government. This rendered decision making largely unaccountable to slum dwellers.

Not surprisingly then, from the period of the very first Five Year Plan of 1951, the Indian government has seen the emergence of slums as a problem rather than a solution to the dearth of

low-income housing. As a result, it has emphasized slum clearance and resettlement over a policy of community improvements (Sridharan 1995). Despite some controversy, these policies have been aggressively pursued throughout the last half-century, most notoriously during the ‘Emergency’ of 1976-77.

In 1993, however, a constitutional amendment provided the legal framework for establishing legislative bodies for each of India’s metropolitan areas, and the devolution of power from appointed to elected representatives (Sivaramakrishnan 1996). The granting of statehood to Delhi has led to a situation unique in India, a metropolis with its own legislature. The further devolution of real powers to the municipal corporations has also heightened the political importance of the slums. In their election literature, all MPs for Delhi highlight their efforts on behalf of slum-dwellers^v.

At present, the ‘city-state’ of Delhi is represented by a cabinet and chief minister selected according to their party’s representation in a seventy-strong legislative assembly. There are also three municipal corporations and seven Delhi MPs in the Lok Sabha, the lower house of Parliament. In the year of our survey, the Bharatiya Janata Party (BJP) ruled in the centre, with all of Delhi’s parliamentary seats, while the Congress party controlled the state legislature.

III. Qualitative Evidence

The comparative advantage of qualitative approaches is their capacity to shed light on issues pertaining to history, context, and process (Rao and Woolcock 2003). In this study, we sought to gain a greater understanding of the social mechanisms underpinning migration decisions; the specific strategies used to integrate into the city, manage collective action problems and relations with formal authorities; and how these changed over time and place. Where the quantitative

survey provides more general—and generalizable—insights on the demographic and political characteristics of Delhi slum dwellers, the qualitative evidence—by virtue of the large differences between the slums selected—enabled us to explore in greater depth the strategies chosen by slum dwellers to survive and advance.^{vi}

The scale and intensity of poverty in slums, and the fragility of the public services available to respond to it, bring forth an extraordinary range of coping strategies on the part of residents. Community leaders, front-line service staff, elected politicians, and slum residents themselves are the key players in this drama. The qualitative evidence from the four slums—Lakshmi, Rajiv, Madanpuri and Pooriyaganj^{vii}—reveals that the institutions of governance that have emerged in Delhi’s slums span a spectrum between traditional village institutions transplanted and adapted to the urban environment, and novel leadership structures. In the newest (and thus most precarious) slums, such as Madanpuri, the leaders themselves are being forced to adapt, assuming new identities and finding common ground among disparate and often disorganized sub-groups.

The Adaptation of Traditional Structures

The governance structures within the Rajiv colony^{viii}, near the walled city of Delhi, owe much to the traditional caste and gram panchayats that have their roots in rural India. Despite being a well-established slum that houses between 15,000 and 20,000 households, the Rajiv colony has little slum-wide “government” per se. Instead, each of its constituent communities—the Rajasthanis, Dholakwalas (traditional drummakers) and Bengalis—govern themselves, bound together by communal ties and a shared sense of solidarity in the face of pervasive risks, distinctive (usually low) social status, and (in the case of the Bengalis) illegal political status.

The leadership of the Rajasthani and Dholakwala communities mimics that of the village panchayat. The pradhan and a group of between 4 to 15 other elders meet to adjudicate on property and marital disputes. While in the Rajasthani basti, membership in the panchayat derives exclusively from seniority within the community, in the Dholakwala caste, five chaudhuris inherit their position and appoint the other members. Punishments can include sizeable fines and, in the case of inter-caste marriage, even ostracism from the community.

While the authority of the pradhan and panchayat on marital disputes is largely unquestioned in these communities, the pradhan's role as a guarantor of property rights within the slum has receded. As the slum has become better-established and prices for properties have risen, individual slum dwellers are devising their own means to buy and sell slum property, bypassing the pradhan and relying instead on witnesses. As one respondent describes:

In the beginning, people used to give Rs. 100 or Rs. 200 to the pradhan of the basti at the time of possession. I also paid some amount of Rs. 200 to the pradhan for my land. However, this basti, the 'Dholakwala Basti', is now very famous. Things have changed because if now you pay Rs. 5000, you will not get a place for your jhuggi. Land has become costly. ...

We bring the pad and other affidavits from court and selling and purchasing takes place before at least eight to ten people who sign on the papers that this jhuggi has been sold to whomever. There is no need of the pradhan; we only need witnesses at the time of transaction. If we call the pradhan, we have to pay some amount to him; that's why we try to avoid getting him involved. We also check the ration card and identity card of the owner of the jhuggi—these are the most essential documents to own a jhuggi.

Unlike the traditional institutions devised by the Rajasthanis and Dholakwalas, Bengali migrants in the slum, a number of them Muslims, have been less successful at organizing themselves. Some accept the authority of the Rajasthani pradhan, while others seek to deal, individually, with

the formal government. Unlike in the other communities, disputes are resolved by the police and other authorities.

Modern Leadership and Political Affiliations

Pradhans clearly understood that one of their primary responsibilities was improving access to services and helping constituents manage risk. In their discussions with us they made much of their accomplishments, the ways in which they sought to both secure the loyalty of actual or potential constituents and establish their credibility and legitimacy.^{ix} Most fascinating was the claim to a democratic mandate even by those who, to hear their constituents tell it, had acquired their power largely through coercion. Other leaders were selected through a consultative process through which residents “agree on some person as the most knowledgeable here, who can talk to other people on our behalf.”^x

Radha and Ganeshan, the rival pradhans of Lakshmi colony, provide two useful examples of the roles that pradhans play and the means by which they derive legitimacy. Established in the late 1970s, not long after the Emergency, Lakshmi colony, near central Delhi, is well-endowed with public amenities. The site had been officially allocated for a school, but the founder, Radha, who had once worked as a domestic servant for prominent members of India’s national independence movement, received assurances from leaders of the Congress party that the new settlement would be undisturbed. That these political links with the Congress had served the slum well over the years is suggested both by the degree to which slum dwellers had invested in their housing and in the level of public services. The residents of Lakshmi colony had enjoyed access to the municipal water supply for 17 years and each house had access to electricity.

Two years prior to our study, however, the slum had organized its own unofficial elections and Ganeshan had won. One aspect of his electoral appeal had been his social contacts with the Electricity Board (DESU). Acting as an intermediary between the slum dwellers and electricity officials, Ganeshan accepted contributions from members of the settlement in order to preserve the slum's electricity supply. At the time of our study, however, the electricity had been turned off. The perceptions of slum dwellers about their ability to deal with formal government officials directly are revealing, both of the pradhan's critical role as an intermediary and their own knowledge of and interactions with government figures. One claims:

Now, if you go to any M.L.A. [to talk about the electricity problem], he says "go and talk to your pradhan." If you go to DESU—[name], the Chief Engineer—they say "talk to (the pradhan)." We have complained to the Chief Minister, but even there we have not got any reply.

Despite the elections, Radha continued to maintain significant stature within the slum, and for many, continued to perform the role of a pradhan, facilitating access to formal authorities. This may have been due to her ties with the Congress party. As one respondent remarked:

Someone in my husband's office told him that a jhuggi (shack) was on sale here. He purchased it for 700 rupees and we moved in. Since then we have stayed here and, god-willing, we will stay here forever, but we hear that there are moves to evict us. Today my husband and (Radha) will go and see the M.L.A. Of course we can't expect any help from him because he is from the Congress and the Congress lost this election.

Some respondents noted that the electricity to their slum was turned off the day after the B.J.P. took power. With the new government, Radha's ties to the Congress party begin to look more like a liability. Apart from the two rival pradhans, two new

community leaders were vying for influence in the slum, one a Hindu preacher, another a Muslim. Despite religion, their political affiliations were much less clear. As the preacher declared, “I have nothing to do with Congress, B.J.P. Anyone who serves us, I will owe my loyalty to him.”

For everyday slum dwellers, however, the management of collective action problems ends up being something for which they themselves must ultimately assume responsibility: the risks are simply too high and numerous, and the formal safety nets too frail. Residents can articulate the qualities they look for in a community leader, but in the end the efficacy of these leaders is largely a function of the length of tenure of the slum, the proximity of the home community, residents’ political status, and the severity of occupational and environmental hazards. In the most desperate of circumstances, any semblance of cooperation can break down, leading residents to gain pleasure only at the demise or misfortune of their neighbors.

Leadership in the newest slums

The newest bastis, like those in Madanpuri colony on the outskirts of the city, face the gravest challenges in organizing collective action and securing property. This is reflected in the near-constant risk of demolition by the state, the fragility of housing materials, the absence of sanitation facilities and electricity, the lack of any enforcement of property rights, and endemic criminal activity. Respondents here reported that there were no informal or formal associations. A number claimed that community leadership was lacking, and that political parties had neither a contact point nor an incentive to engage with them. At the time of our survey, however, leadership structures were already beginning to form.

Within the newest slums, the close proximity, fragility, and flammable nature of jhuggis put them at grave risk. In contrast to more established colonies, such as Pooriyaganj, where an NGO provides public latrines at a nominal charge, sanitation facilities are completely absent in Madanpuri. As such, disease and illness are constant companions. By undermining the size and predictability of earnings, periods of illness also induce future vulnerability by causing drops in nutritional intake. Though several informants reported the presence of savings groups or other informal social mechanisms for addressing credit constraints, none reported mechanisms for insurance against health or other shocks.

The risk of fire looms large, threatening to wipe out hard-won material gains (and lives) in an instant. On this front, making dwellings “pucca” presents perhaps the most tangible mechanism for reducing the risk of fire, enabling dwellings to be constructed of less flammable substances. However, the lack of property rights that are secure from either state demolition or from local criminals appears to reduce incentives to invest in housing.

Theft is indeed a widespread problem, one that residents contend with primarily through their own vigilance.^{xi} A constant theme in the least established slums was the predatory role played by the police, who, far from responding promptly to crimes and impartially enforcing the law, were routinely cited for, at best, their indifference to the plight of slum dwellers, and, at worst, their active complicity in extortion, harassment, and unlawful detention.^{xii} Several Bangladeshi residents, most of whom were illegal immigrants, reported being forced to pay money to avoid being jailed and beaten; others spoke of being locked away until their neighbors paid for their release.

In the newest, most heterogeneous slums, novel leadership structures are both most necessary and most difficult to develop. Yet, the case of Manoj Kumar, the emerging pradhan of

Madanpuri basti, illustrates three devices that are potentially valuable for engendering collective action in these slums. Their homes demolished only months prior to our survey, the residents of Madanpuri basti continued to fear the return of government bulldozers. Without having held formal elections and with too diverse a migrant population to benefit from traditional institutions, the slum lacked an obvious source of governance and leadership. As a result, several contenders had emerged to play the role of pradhan. Of these Manoj Kumar had gained ascendancy during the period of our study. Three of his actions may hint at why.

First, as an early resident of the slum, he established a temple, a focus of community activity. This temple was one of the few structures that survived the demolition. Second was his role as a network entrepreneur. Though hailing from Uttar Pradesh, Manoj Kumar broke with custom and married a Bengali speaker, bridging two linguistic constituencies within the slum. Third, Manoj Kumar emphasizes that his education played an important role, as he volunteered to file applications for ration cards for the illiterate and acted as an intermediary between slum dwellers, officials, and politicians. When discussing the other self-nominated leaders of the slum, Manoj Kumar is dismissive, citing his ties with political figures and officialdom.^{xiii} As for his own legitimacy, Manoj Kumar acknowledges his lack of a formal democratic mandate:

I have received a lot of love and respect from my people and I have earned a lot through honest means. I might not be an elected member of the Municipal Council, but I am respected like one. My wants are always respected because my demands are legitimate. I'm against corruption.

Though as noted above, some respondents from the slum seemed unaware that a pradhan existed at all, those that knew him appeared content to delegate their dealings with officials to Manoj Kumar.^{xiv}

IV. Integrating Qualitative and Quantitative Evidence

The qualitative module highlighted a number of issues to pursue in the quantitative component. A key theme emphasized the importance of the *pradhan* in acting both as a facilitator of interaction between slum dwellers and formal government authorities and an intermediary between them. Yet, as the discussion above reveals, both the role played by the *pradhan* and the mechanisms through which *pradhans* gain authority tended to differ according to the duration of establishment and the ethnic heterogeneity of the slum. In established slums like Lakshmi colony, the *pradhan*'s role appeared to be more of a facilitator, helping individuals to contact external figures like the electricity board. In newer slums, like Madanpuri, slum dwellers were content to delegate responsibility for dealing with the external authorities to their educated leader, Manoj Kumar.

Furthermore the qualitative evidence suggested that while in ethnically homogeneous settlements, like the Rajasthani and Dholakwalla bastis, leadership institutions were transplants from traditional village panchayat systems, heterogeneous slums required the development of novel leadership structures. The method through which the *pradhan* derived authority—whether through existing political affiliations as in the case of Radha, or through shared identity and education as in the case of Manoj Kumar—differed according to the age and ethnic provenance of the slum. For the quantitative work, these findings suggest that there should be important differences in the *pradhan*'s role according to the heterogeneity and age of the slum.

A further source of heterogeneity lies in the extent of governance networks among slum dwellers lies in the differing incentives and roles of the external authorities themselves. The qualitative evidence suggested that slums as a whole take on political patronage as a defensive device, donning names like 'the Immortal Rajiv colony' in honor of particular political leaders.

The association of a slum’s pradhan with a particular political party—as in the Congress Party in the case of Radha—and the conditionality of services based on political affiliation suggests that pradhans play a central role in the quid pro quo between slum dwellers and elected politicians, where blocks of votes and manpower at rallies are exchanged for services and protection.

Of the other external authorities, bureaucrats and police featured prominently in the qualitative module. For obtaining the delivery of services such as electricity and water, pradhans such as Ganesan seem to act as crucial intermediaries between slum dwellers and bureaucrats, their role perhaps magnified by the lack of incentives bureaucrats face in dealing with the poor. In contrast, police officers appear to play differing roles, enforcing property rights for the unorganized Bengalis of the Rajiv colony, but being themselves responsible for expropriation in Madanpuri. The role of the pradhan thus lies in shielding slum dwellers from unwanted police attention in less organized slums and providing a substitute for formal police enforcement in their more established counterparts.

To test whether in fact the relationships uncovered in the qualitative module held for Delhi as a whole, we used the representative sample from the quantitative module to evaluate the extent to which slum dwellers knew and had interacted with external authority figures was influenced by their own characteristics and social networks, and the role played by their pradhan in providing access to different formal authorities. The dependent variables we examine are whether a respondent “knows and has interacted with” bureaucrats, elected politicians, policeman and pradhans themselves. Thus, we analyzed linear probability regressions of the following form:

$$P(\text{governance network}_i) = \alpha + X_{1i} B_i + X_{2c} \Gamma_c + \text{contacts}_i K_i + \text{pradhan}_i \Pi_i + \varepsilon_i \quad (1)$$

where X_{1i} is a set of household head characteristics (asset wealth, age, years of residence, education, sex, household size, caste and religious identity) and X_{2c} is a set of basti controls (age, population), $contacts_i$ is a vector of the initial contacts of the household head prior to migration to Delhi (immediate relations, fellow villagers, other contacts), $pradhan_i$ is a set of pradhan's characteristics (shared identity with the household head, education, political affiliation, duration of residence in the slum). The errors are assumed to be arbitrarily correlated within slum clusters, and robust to heteroskedasticity.

Further, we sought to identify which the pradhan's characteristics were more important and whether these differed according to the age of the slum and in enclaves containing many individuals from the same village. This involved including interaction terms between $pradhan_i$ and the age of the slum on one hand, and whether migrants to the slum possessed village contacts prior to arrival.

The basic regression specified above suffers from the drawback that both contacts and wealth^{xv} may be endogenous to the slum dweller's decision to gain access to formal government. It could be that access to formal government authorities may be parlayed into wealth and or enhanced social standing, biasing the correlation between wealth and governance networks upwards. Alternatively, since acquisition of governance networks can be costly—in terms of gifts, bribes, time etc.—yet may pay dividends in the future, it may be that such networks are themselves a form of savings. If individuals save a fixed proportion of their wealth, then such savings may displace assets and within-slum social networks. Thus we might expect a weaker correlation between material assets and governance networks in a simple regression.

We adopt two strategies to identify the effect that these variables have upon political access. We use a migrant's initial contacts prior to their arrival in Delhi as a proxy for the

migrant's current contacts. These contacts are determined prior to the decision to become acquainted with a political figure in the city, and are also likely to have path dependencies. Hence they represent the lower bound of current contacts available to an individual choosing to gain access to their political representatives.

To address the potential endogeneity of wealth, we adapt a strategy used by Munshi (2003), exploiting our knowledge of households' year of migration and district of origin to incorporate the extensive Indian climate data set, gathered by the World Bank. This dataset extends from 1955 to 1987, providing detailed information on prices and crop yields for virtually all districts of India. These crops (wheat and maize) have been in widespread production around India over the last 40 years. Wheat was the central crop in India's Green Revolution, while maize is traditionally considered an inferior good. The shifts in production levels between these crops provide useful indicators of the economic situation in the migrant's home district.

We take five year averages of crop revenue (the product of local agricultural prices and the district crop yield) preceding the individual's departure from their home district. To construct our instrument set, we find the deviations in revenue from this average in the year of the individual's departure. Unlike rainfall, the use of crop revenue deviations provides an instrument that is unaffected by the widespread adoption of water storage and irrigation technologies. Yet, since such deviations are largely the result of exogenous weather shocks, a fall in revenue is likely to increase the "push" factors for out-migration. Such push factors are also far more likely to matter for the poor, since wealthier households are better protected from agricultural risk. Thus, the exclusion restriction we propose is that district-wide deviations from revenue are likely to be correlated with household wealth but not to their access to power networks in the city.^{xvi} We test for this explicitly with Hansen's over-identification test.

Table 1 provides summary statistics from the quantitative data, focusing on the heads of households. Of the individuals in our sample, 87 percent were born outside Delhi. Education levels are relatively low: 4.5 years of schooling on average. More than half of respondents note that they knew a person from their home village in the city prior to migrating; on the other hand, only 12 percent knew a close relative. A remarkable percentage of respondents (54%) are from scheduled castes or tribes—historically underprivileged groups with preferential access to government jobs and education. A likely reason for this is that Delhi, as India’s capital, provides many such opportunities.

Respondents naturally had greater interaction with leaders from within the slum. 83 percent claimed to “know and regularly interact” with their pradhan, and 52 percent to know and interact with community or religious leaders. Yet, a striking finding lies in the extent to which governance networks extend beyond the slum’s boundaries. A remarkable 30 percent had interacted with elected politicians; in fact, one in four claimed to have interacted with a member of parliament. We were surprised by these figures at first and conducted further interviews to identify why this is the case. These suggested that Delhi slums are the source of “garrisons” for politicians who use them for boosting attendance at rallies. Politicians also pay careful attention to slum dwellers so they can be assured source of votes. The possibility of pure exaggeration seems unlikely given the contrastingly low percentages that report an acquaintance with bureaucrats (10%) and NGO staff (8%). These figures instead appear to be consistent with the limited incentives NGO staff and bureaucrats face to interact with the poor.

One concern with our identification strategy is that the first stage regression can only be estimated on the sub-sample that migrated to Delhi within the coverage of the climate data. Thus Table 1 also compares whether the migrant sub-sample is different in their observed

characteristics from the entire sample. The samples are not significantly different from each other on almost all the characteristics, except household size (migrant households are about 0.3 persons larger), age of head of household (migrant heads are 1.4 years older), and initial contact with a fellow villager (about 0.07% more for a migrant than a Delhi native). In the following discussion, we present both OLS results from the full sample and the 2SLS linear probability model on the migrant sub-sample.

Regression results

Table 2^{xvii} reveals a consistent pattern of interaction between individuals and pradhans. In both the OLS and 2SLS specifications, we find that household heads are roughly 20 percent more likely to know a pradhan who has a professed political affiliation. This effect is even more pronounced in the newest slums, but decreases as slums become more established over time. Individual contacts and wealth are less important. The last panel suggests that having a network of others from a migrant's home village decreases probability of interaction with the slum leadership, unless the pradhan himself shares the caste or religious identity. This is consistent with the qualitative evidence from the Rajiv colony: ethnic groups migrating together transplant traditional leadership structures from the village, but are less likely to interact with the broader slum leadership in heterogeneous slums.^{xviii}

Bureaucrats, unlike pradhans, are more likely to interact with elite slum dwellers. Table 3 shows that those with broad networks that extend beyond close relatives or villagers gain better access to government officials. Further, there is a significant effect of material wealth: a Rs. 10,000 increase in wealth results in a 6 to 16 percent increase in access in the OLS and IV regressions, respectively. The remarkable increase in the IV estimate of the wealth effect—a

finding that also holds true for the police and elected politicians—suggests that there is little direct positive feedback between political networks and material wealth. Instead it may be that governance ties provide slum dwellers an alternative asset class for savings and risk management. Such alternative strategies are unavailable to rural residents.

Table 3 also demonstrates the importance of the pradhan, and the differences in his or her role as the settlement becomes more established. The first two columns demonstrate that assuming that pradhans of a particular identity, education, affiliation and years of residence have the same level of influence in all slums, we find little effect of the pradhan's characteristics on bureaucratic networks. However, allowing for changes in the pradhan's role as slums become more established and slum dwellers more embedded in village networks, a very different picture emerges.

In a manner reminiscent of Manoj Kumar's taking care of the 'documents' of Madanpuri, in the newest slums, politically affiliated pradhans are apparently delegated responsibility for bureaucratic issues reducing the probability of direct interaction between bureaucrats and slum dwellers by around 30%. This relationship decreases by around 1% for every year the slum continues to survive. In contrast, more educated pradhans appear to act as facilitators of interaction in the newest slums, a relationship that reduces as the slum becomes more established. The consistent pattern that emerges is that pradhans' intermediating role for bureaucratic interaction is greatest in the youngest, most fragile settlements.

Similar results hold for police officers in Table 4, but here rather than the length of slum establishment influencing the pradhan's importance, it is the density of village networks. Residents with fellow villagers in their slum and politically affiliated pradhans are the most shielded from police attention, with the probability of interaction dropping by around a third.

More educated pradhans also seem better able to protect slum dwellers from the police. The pradhan's influence is even larger than that of the householder's own wealth, even though the effect of having an additional Rs. 10,000 in assets increases police interaction significantly from 6 to 22 percent in the IV specification.

Finally, Table 5 examines access to elected politicians. Here again we see a strong elite effect with wealthier individuals (coefficients increasing from 9 to 20 percent in the IV specification for a 10,000 rupee increase in wealth), and those who had close relatives in the city prior to migrating, having a much higher chance of knowing and interacting with an elected politician.

Once again, the importance of the pradhan is largely lost unless we consider the different role informal leaders play in different types of slums. Two effects are worthy of note. First, more educated pradhans reduce the probability of direct interaction between slum dwellers and politicians in the newest slums by around 1% for every additional year of education. This effect however is much less if the slum dweller is embedded among fellow villagers. As in the case of Madanpuri, this suggests that in more heterogeneous slums, pradhans gain part of their ability to speak for the slum through education.

In contrast, the interaction between slum dwellers in ethnic enclaves and politically affiliated pradhans increases the probability of slum dweller interaction with politicians by around 37 percent. This effect reverses that seen for the police. Once again, the qualitative evidence, particularly from Lakshmi colony, provide an interpretation: politically affiliated pradhans in ethnic enclaves are better able to deliver blocks of manpower to politicians' rallies, this very political access protecting them from police intervention.

V. Conclusion

This study has used “participatory econometrics” to shed some light on the understudied question of the internal governance of slums in Delhi. In-depth qualitative work in four slums selected with a comparative design helped inform the construction of a questionnaire that was administered to a representative sample of households in Delhi slums. This allowed us to check the generalizability of our qualitative findings.

The qualitative work highlighted the extremely risky environments under which slum residents lived: subject to a constant threat of demolition, fire, theft, and uncertain property rights. Informal systems of government evolved in these slums whose primary role was to serve as intermediaries to mitigate this risk and to provide access to public services. However, less established slums and those that were more heterogeneous in their networks seemed to be particularly vulnerable and received greater benefits from the role of the *pradhan*.

The quantitative results both reinforce and extend the qualitative findings. *Pradhans* are accessed by people of all social classes, and even by those who otherwise have few networks. A remarkable proportion of slum dwellers interact with elected politicians, though fewer gain access to bureaucrats. *Pradhans* play a crucial role in intermediating between slum dwellers and formal government, but this role becomes less pronounced over time. Slum dwellers embedded in village networks tend to benefit the most from the *pradhans*’ intervention, being shielded from the police and gaining enhanced access to politicians. Education and existing political affiliation are the main characteristics that drive a *pradhan*’s ability to manipulate government networks. Access to sources of authority like politicians, bureaucrats and police officers is elite driven, and more likely to occur in more established slums.

Urbanization in Delhi does appear to be providing the poor with a greater voice in democratic discourse. Slum dwellers benefit from remarkable access to politicians and other government officials. Though wealthier slum dwellers do seem more able to make themselves heard, a more important factor is the degree of informal organization achieved by the slum itself. Acting collectively, even poor slum dwellers can gain a voice. Such organization is easiest in ethnically-homogeneous, more established enclaves, but even in the newest slums, leaders can emerge to act as a conduit for democratic responsiveness.

Table 1: Summary Statistics

Variable	Full sample mean	Migrant subsample mean	Difference: migrant - fullsample
Categorical Variables			
Knows Pradhan	0.8279	0.8382	0.0102
Knows Community or religious leader	0.5237	0.5332	0.0095
Knows Bureaucrat	0.0973	0.0934	-0.0039
Knows Police	0.1434	0.1349	-0.0085
Knows and interacts with NGO Staff	0.0798	0.0892	0.0094
Knows Elected politician (MLA, MP, Munic. Council)	0.2993	0.3216	0.0223
Init. contact: close relative	0.1210	0.1371	0.0161
Init. contact: villager	0.5187	0.5851	0.0664**
Init. contact: other	0.1646	0.1846	0.0201
Female	0.0623	0.0705	0.0082
(Other) Backward Caste	0.1782	0.1846	0.0065
Scheduled Caste or Tribe	0.5307	0.5207	-0.0100
Muslim	0.1047	0.1203	0.0156
Pradhan-shared identity	0.2606	0.2448	-0.0158
Pradhan- political affil.	0.9339	0.9544	0.0204
Continuous Variables			
Household assets net of housing values	3156.35 (8162.08)	3131.49 (8660.51)	-24.86 (488.55)
Age (In Years)	38.0087 (11.0357)	39.3817 (10.4392)	1.3730** (0.6148)
Years in Delhi	19.5412 (10.8554)	19.7905 (6.3580)	0.2493 (0.4804)
Education (Years)	4.4501 (4.5781)	4.1452 (4.4846)	-0.3049 (0.2605)
Household size	4.9950 (1.9327)	5.2863 (1.9250)	0.2913** (0.1111)
Pradhan's education	6.2743 (4.8157)	6.4979 (4.8298)	0.2236 (0.2781)
Pradhan's community years	17.4825 (7.0037)	17.1017 (6.6633)	-0.3809 (0.3915)
Age of basti settlement	20.4489 (7.0669)	19.9108 (6.4739)	-0.5381 (0.3863)
Number of households in the basti	2308.33 (3445.52)	2568.58 (3706.86)	260.25 (208.11)

Notes: 1) standard deviations, and standard errors for the means and respectively the difference, in parentheses, for the continuous variables

2) * difference significant at 10%, ** difference significant at 5%, using a t-test for the continuous variables, and a chi-squared test for the categorical variables

3) Pradhan-shared identity is an indicator = 1 if the respondent has the same caste or religion as the pradhan

4) Pradhan political affiliation is an indicator = 1 if the pradhan reported any political affiliation

Table 2:

Governance networks: pradhan							
	Individual regression	Pradhan characteristics	2SLS	Basti age x	2SLS	Village x	2SLS
Assets (Rs. 10000s)	0.025 [0.016]	0.026 [0.015]	0.151 [0.085]+	0.019 [0.016]	0.153 [0.085]+	0.025 [0.015]	0.171 [0.097]+
Init. contact: close relative	0.002 [0.036]	0.004 [0.035]	-0.023 [0.051]	-0.005 [0.036]	-0.022 [0.051]	0.004 [0.034]	-0.028 [0.052]
Init. contact: villager	0.010 [0.027]	0.005 [0.029]	-0.071 [0.056]	0.003 [0.029]	-0.069 [0.055]	-0.175 [0.119]	-0.249 [0.216]
Init. contact: other	-0.044 [0.040]	-0.057 [0.040]	-0.037 [0.052]	-0.044 [0.037]	-0.029 [0.051]	-0.049 [0.041]	-0.030 [0.052]
Pradhan-shared identity		-0.061 [0.036]	-0.024 [0.030]	-0.160 [0.146]	-0.086 [0.156]	-0.128 [0.063]+	-0.116 [0.083]
Pradhan's education		0.005 [0.007]	0.003 [0.008]	-0.016 [0.023]	-0.006 [0.027]	0.009 [0.007]	0.008 [0.009]
Pradhan- political affil.		0.230 [0.129]+	0.200 [0.111]+	0.774 [0.156]**	0.542 [0.179]**	0.172 [0.156]	0.099 [0.158]
Pradhan's community yrs		0.006 [0.006]	0.007 [0.006]	0.026 [0.021]	0.030 [0.023]	0.004 [0.005]	0.006 [0.008]
Basti age x prdn shared id.				0.005 [0.006]	0.004 [0.007]		
Basti age x prdn's educ.				0.001 [0.001]	0.001 [0.001]		
Basti age x pol. affil.				-0.026 [0.005]**	-0.016 [0.007]*		
Basti age x prdn's res.(yrs)				-0.001 [0.001]	-0.001 [0.001]		
Villager x prdn shared id.						0.130 [0.062]*	0.145 [0.098]
Villager x prdn's educ.						-0.007 [0.002]**	-0.008 [0.006]
Villager x pol. affil.						0.124 [0.107]	0.173 [0.223]
Villager x prdn's res.(yrs)						0.005 [0.003]	0.001 [0.004]
Household / basti controls	yes	yes	yes	yes	yes	yes	yes
Observations	780	780	474	780	474	780	474
Adjusted R-squared	0.04	0.07		0.11		0.08	
F	3.42	8.81	0.137	47.3	0.144	38.01	0.193
Hansen's over-id J			3.451		3.528		3.704
Prob > chi2			0.063		0.06		0.054

Robust standard errors in brackets

+ significant at 10%; * significant at 5%; ** significant at 1%

Robust standard errors, clustered at the slum level

Table 3

Governance networks: Bureaucrats							
	Individual regression	Pradhan characteristics	2SLS	Basti age x	2SLS	Village x	2SLS
Assets (Rs. 10000s)	0.058 [0.014]**	0.058 [0.014]**	0.167 [0.086]+	0.058 [0.014]**	0.161 [0.085]+	0.057 [0.014]**	0.167 [0.079]*
Init. contact: close relative	-0.008 [0.029]	-0.008 [0.028]	-0.016 [0.042]	-0.006 [0.029]	-0.008 [0.043]	-0.011 [0.029]	-0.018 [0.040]
Init. contact: villager	0.035 [0.021]	0.035 [0.022]	-0.016 [0.049]	0.036 [0.022]	-0.012 [0.047]	-0.137 [0.092]	-0.147 [0.195]
Init. contact: other	0.071 [0.025]**	0.071 [0.026]*	0.044 [0.044]	0.072 [0.026]*	0.052 [0.043]	0.070 [0.028]*	0.046 [0.047]
Pradhan-shared identity		0.018 [0.023]	0.006 [0.039]	0.005 [0.067]	-0.014 [0.118]	0.049 [0.028]+	0.034 [0.060]
Pradhan's education		0.001 [0.002]	0.003 [0.003]	0.007 [0.006]	0.028 [0.008]**	-0.004 [0.002]+	-0.003 [0.004]
Pradhan- political affil.		-0.017 [0.025]	-0.066 [0.065]	-0.121 [0.060]+	-0.314 [0.131]*	-0.054 [0.028]+	-0.139 [0.138]
Pradhan's community yrs		-0.001 [0.001]	-0.002 [0.003]	0.003 [0.005]	0.011 [0.006]+	-0.002 [0.001]	-0.001 [0.003]
Basti age x prdn shared id.				0.001 [0.003]	0.002 [0.005]		
Basti age x prdn's educ.				0.000 [0.000]	-0.001 [0.000]**		
Basti age x pol. affil.				0.004 [0.002]+	0.011 [0.005]*		
Basti age x prdn's res.(yrs)				0.000 [0.000]	0.000 [0.000]*		
Villager x prdn shared id.						-0.049 [0.040]	-0.044 [0.061]
Villager x prdn's educ.						0.009 [0.004]*	0.010 [0.006]
Villager x pol. affil.						0.082 [0.073]	0.107 [0.194]
Villager x prdn's res.(yrs)						0.003 [0.002]	-0.002 [0.003]
Household / basti controls	yes	yes	yes	yes	yes	yes	yes
Observations	780	780	474	780	474	780	474
Adjusted R-squared	0.06	0.06		0.05		0.06	
F	16.2	25.44	0.097	108.63	0.515	54.79	0.067
Hansen's over-id J			0.036		0.034		0.009
Prob > chi2			0.849		0.854		0.923

Robust standard errors in brackets

+ significant at 10%; * significant at 5%; ** significant at 1%

robust standard errors, clustered at the slum level

Table 4

Governance regressions: police officers							
	Individual regression	Pradhan characteristics	2SLS	Basti age x	2SLS	Village x	2SLS
Assets (Rs. 10000s)	0.061 [0.014]**	0.061 [0.014]**	0.200 [0.130]	0.060 [0.014]**	0.188 [0.123]	0.059 [0.014]**	0.222 [0.124]+
Init. contact: close relative	0.032 [0.043]	0.032 [0.041]	0.006 [0.046]	0.033 [0.042]	0.014 [0.047]	0.029 [0.041]	-0.004 [0.041]
Init. contact: villager	0.009 [0.035]	0.013 [0.035]	-0.037 [0.065]	0.013 [0.035]	-0.032 [0.063]	-0.137 [0.109]	-0.250 [0.167]
Init. contact: other	-0.053 [0.031]+	-0.045 [0.030]	-0.063 [0.050]	-0.041 [0.030]	-0.053 [0.048]	-0.040 [0.031]	-0.060 [0.053]
Pradhan-shared identity		0.010 [0.030]	0.024 [0.037]	0.049 [0.091]	0.232 [0.139]+	-0.016 [0.044]	0.000 [0.079]
Pradhan's education		-0.008 [0.004]+	-0.009 [0.005]+	-0.004 [0.011]	0.018 [0.012]	-0.008 [0.003]*	-0.004 [0.005]
Pradhan- political affil.		-0.008 [0.040]	0.060 [0.053]	0.048 [0.095]	0.089 [0.138]	-0.078 [0.035]*	-0.133 [0.117]
Pradhan's community yrs		-0.004 [0.002]	-0.006 [0.004]	0.006 [0.008]	0.002 [0.009]	-0.004 [0.002]	-0.004 [0.003]
Basti age x prdn shared id.				-0.001 [0.004]	-0.009 [0.006]		
Basti age x prdn's educ.				0.000 [0.001]	-0.001 [0.001]*		
Basti age x pol. affil.				-0.003 [0.003]	0.000 [0.005]		
Basti age x prdn's res.(yrs)				0.000 [0.000]	0.000 [0.000]		
Villager x prdn shared id.						0.054 [0.063]	0.042 [0.100]
Villager x prdn's educ.						-0.001 [0.007]	-0.009 [0.006]+
Villager x pol. affil.						0.153 [0.072]*	0.315 [0.153]*
Villager x prdn's res.(yrs)						0.000 [0.004]	-0.003 [0.005]
Household / basti controls	yes	yes	yes	yes	yes	yes	yes
Observations	780	780	474	780	474	780	474
Adjusted R-squared	0.07	0.07		0.07		0.07	
F	13.26	44.48	0.091	64.93	0.212	44.08	0.171
Hansen's over-id J			0.618		0.684		0.476
Prob > chi2			0.432		0.408		0.49

Robust standard errors in brackets

+ significant at 10%; * significant at 5%; ** significant at 1%
robust standard errors, clustered at the slum level

Table 5

Governance networks: elected politicians (LPM)							
	Individual regression	Pradhan characteristics	2SLS	Basti age x	2SLS	Village x	2SLS
Assets (Rs. 10000s)	0.093 [0.022]**	0.091 [0.023]**	0.199 [0.113]+	0.089 [0.023]**	0.202 [0.109]+	0.090 [0.022]**	0.199 [0.110]+
Init. contact: close relative	0.169 [0.059]**	0.159 [0.059]*	0.186 [0.066]**	0.156 [0.059]*	0.190 [0.069]**	0.155 [0.059]*	0.183 [0.067]**
Init. contact: villager	0.062 [0.033]+	0.053 [0.033]	0.036 [0.064]	0.052 [0.033]	0.041 [0.063]	-0.264 [0.109]*	-0.519 [0.179]**
Init. contact: other	-0.022 [0.034]	-0.024 [0.031]	-0.029 [0.053]	-0.024 [0.032]	-0.026 [0.052]	-0.022 [0.032]	-0.031 [0.055]
Pradhan-shared identity		0.078 [0.041]+	0.071 [0.055]	-0.148 [0.132]	-0.240 [0.243]	0.089 [0.050]+	0.180 [0.099]+
Pradhan's education		-0.003 [0.002]	-0.008 [0.003]*	-0.002 [0.007]	0.018 [0.013]	-0.004 [0.004]	-0.013 [0.004]**
Pradhan- political affil.		0.066 [0.047]	0.080 [0.080]	0.154 [0.089]+	0.242 [0.128]+	-0.025 [0.063]	-0.163 [0.111]
Pradhan's community yrs		0.003 [0.002]	0.003 [0.003]	-0.005 [0.005]	-0.011 [0.008]	0.000 [0.004]	-0.003 [0.006]
Basti age x prdn shared id.				0.010 [0.005]+	0.014 [0.010]		
Basti age x prdn's educ.				0.000 [0.000]	-0.001 [0.001]*		
Basti age x pol. affil.				-0.003 [0.003]	-0.002 [0.006]		
Basti age x prdn's res.(yrs)				0.000 [0.000]	0.001 [0.000]*		
Villager x prdn shared id.						-0.008 [0.061]	-0.149 [0.110]
Villager x prdn's educ.						0.003 [0.004]	0.009 [0.006]
Villager x pol. affil.						0.196 [0.091]*	0.369 [0.139]**
Villager x prdn's res.(yrs)						0.007 [0.004]+	0.010 [0.006]+
Household / basti controls	yes	yes	yes	yes	yes	yes	yes
Observations	780	780	474	780	474	780	474
Adjusted R-squared	0.08	0.08		0.08		0.08	
F	6.72	8.67	0.29	41.57	1.00	42.86	0.77
Hansen's over-id J			0.31		0.40		0.30
Prob > chi2			0.58		0.53		0.59

Robust standard errors in brackets

+ significant at 10%; * significant at 5%; ** significant at 1%

robust standard errors, clustered at the slum level

References

- Besley, T. (1995). Nonmarket institutions for credit and risk sharing in low-income countries. *Journal of Economic Perspectives*, 9(3), 115-127.
- Chambers, R. (1997). *Whose Reality Counts? Putting the First Last*, London: Intermediate Technology Publications.
- Chant, S. (1991). *Women and Survival in Mexican Cities: Perspectives on Gender, Labour Markets, and Low Income Households*. Manchester: University of Manchester Press.
- Fay, M. (Ed.). (2005). *The Urban Poor in Latin America*. Washington, DC: The World Bank.
- Greif, A. (2005). Commitment, coercion, and markets: the nature and dynamics of institutions supporting exchange. In C. Menard & M. M. Shirley (Eds.), *Handbook of New Institutional Economics* (pp. 727-786). Amsterdam: Springer.
- Haddad, L., Ruel, M. T., & Garrett, J. L. (1999). Are urban poverty and undernutrition growing? Some newly assembled evidence. *World Development*, 27(11), 1891-1904.
- Imparato, I., & Ruster, J. (2003). *Slum Upgrading and Participation: Lessons from Latin America*. Washington, DC: The World Bank.
- Jellenik, L. (1991). *The Wheel of Fortune: The History of a Poor Community in Jakarta*. Honolulu: University of Hawaii Press.
- Jha, S. (1999) *Looking Beyond the Battlements: Transition, Society and Space in the City*, mimeographed, Williams College, Williamstown, MA.
- Lomnitz, L. (1977). *Networks and Marginality: Life in a Mexican Shantytown*. New York: Academic Press.
- Mehta, S. (2004). *Maximum City: Bombay Lost and Found*. New York: Knopf.

- Misra, R. P., & Misra, K. (Eds.). (1999). *Million Cities of India* (Vol. 1-2). New Delhi: Sustainable Development Foundation.
- Mitra, A. (2003). *Occupational Choices, Networks, and Transfers: An Exegesis Based on Micro Data from Delhi Slums*. Delhi: Manohar Publishers.
- National Research Council (2003). *Cities Transformed: Demographic Change and its Implications in the Developing World*. Washington, DC: The National Academies Press.
- Perlman, J. (1976). *The Myth of Marginality: Urban Poverty and Politics in Rio de Janeiro*. Berkeley, CA: University of California Press.
- Platteau, J.-P. (1995). An Indian model of aristocratic patronage. *Oxford Economic Papers*, 47(4), 636-662.
- Radoki, C., & Jones, T. L. (2002). *Urban Livelihoods: A People-Centred Approach to Reducing Poverty*. London: Earthscan.
- Rao, V. (1998). Wife Abuse, Its Causes and Its Impact on Intra-Household Allocation in Rural Karnataka: A "Participatory Econometric" Analysis. In M. Krishnaraj, R. Sudarshan & R. Sharif (Eds.), *Gender, Population and Development*. Delhi: Oxford University Press.
- Rao, V. (2002). Experiments in "Participatory Econometrics. In R. Kanbur (Ed.), *Q-Squared: Qualitative and Quantitative Methods of Poverty Appraisal*: Permanent Black.
- Rao, V., & Woolcock, M. (2003). Integrating Qualitative and Quantitative Approaches in Program Evaluation. In F. J. Bourguignon & L. P. d. Silva (Eds.), *The Impact of Economic Policies on Poverty and Income Distribution: Evaluation Techniques and Tools* (pp. 165-190). New York: Oxford University Press.
- Roberts, B. R. (1995). *The Making of Citizens: Cities of Peasants Revisited*. London: Arnold.

- Roy, A. (2002). *City Requiem, Calcutta: Gender and the Politics of Poverty*. St. Paul: University of Minnesota Press.
- Roy, A., & Alsayyad, N. (Eds.). (2004). *Urban Informality: Transnational Perspectives from the Middle East, Latin America and South Asia*. Lanham, MD: Lexington Books.
- Sandhu, R. S. (Ed.). (2003). *Urbanization in India: Sociological Contributions*. New Delhi: Sage.
- Scheper-Hughes, N. (1992). *Death Without Weeping: The Violence of Everyday Life in Brazil*. Berkeley, CA: University of California Press.
- Selby, H., Murphy, A., & Lorenzen, S. (1990). *The Mexican Urban Household: Organizing for Self-Defense*. Austin: University of Texas Press.
- Singerman, D. (1995). *Avenues of Participation: Family, Politics, and Networks in Urban Quarters of Cairo*. Princeton, NJ: Princeton University Press.
- Thomas, J. (1995). *Surviving in the City: The Urban Informal Sector in Latin America*. London: Pluto Press.
- Townsend, R. (1995). Consumption insurance: an evaluation of risk bearing systems in low-income countries. *Journal of Economic Perspectives*, 9(3), 83-102.
- Venkatesh, S. A. (2000). *American Project: The Rise and Fall of a Modern Ghetto*. Cambridge, MA: Harvard University Press.
- Waldinger, R. (1996). *Still the Promised City? African-Americans and New Immigrants in Postindustrial New York*. Cambridge, MA: Harvard University Press.
- Wratten, E. (1995). Conceptualizing urban poverty. *Environment and Urbanization*, 7(1), 11-33.
- World Bank (1999). *World Development Report 1999/2000: Entering the Twenty-first Century*. New York: Oxford University Press.

Endnotes:

ⁱ Mitra (2003) reports on a quantitative analysis of these data.

ⁱⁱ It should be noted that while ensuring a comprehensive, randomized, and uniform approach to the sample selection process, the use of the official register might bias our sample against the inclusion of the most recent—and presumably most vulnerable—migrants living in those spaces not yet recognized by the development authority.

ⁱⁱⁱ For comparative transnational perspectives, see Radoki and Jones (2002) and Roy and Alsayyad (2004). In India, journalists (Mehta 2004) usefully complement the scholarly literature (e.g., Sandhu 2003, Mitra 2004).

^{iv} This is steadily beginning to change due to pressures on governments and development agencies to address the clearest manifestations of urban squalor and unrest in low-income countries (e.g., Imperato and Ruster 2003, Fay 2005), and the high media profile now accorded to resettlement initiatives.

^v See e.g. the Parliament website: <http://www.alfa.nic.in>.

^{vi} For the purposes of this paper, we focus on the responses pertaining to the management of collective action problems and relations with the state. In the broader sense, however, retaining social ties—and the sense of identity that goes with it—to the community of origin is itself part of the risk management strategy. Our respondents frequently expressed a desire to make annual return visits, a wish for their children to be born in (and subsequently married to partners from) their home community, and a hope that they would eventually return home. The demographic profile (not reported here) certainly supports this, with a huge bulge in the age distribution between 20 and 40 years. In colloquial terms, slum residents are hatched, matched, and dispatched in villages, but in their peak earning years seek their fortune in the dynamic, if squalid and dangerous, city.

^{vii} Names of the slums have been changed to protect the identity of respondents.

^{viii} Some terminology for the general reader: in India, slums in their entirety are often referred to as colonies; within colonies are *bastis* (particular spatially defined sub-communities usually sharing a common ethnicity, caste, religion, nationality, or home village/state). Bastis are comprised of *jhuggis* (the most humble of family dwellings, typically made from cardboard and sticks) which residents hope to make *pucca* (i.e., upgrade to corrugated iron or some other more durable, less porous material). Slum-wide leaders, known as *pradhans*, may preside over councils or *panchayats*. Power of a different kind is wielded by less savory strongmen—i.e., those called upon to collect bribes,

intimidate residents, and extract special ‘service fees’ (e.g., for electricity connections or physical protection)—known as *goondas*.

^{ix} One of the most tangible manifestations of this is securing control of the (black) ‘market’ for ration cards and tokens, the formal markers of citizenship and identity that enable residents to make claims against the state and receive entitlements to basic foodstuffs.

^x Resident of Rajiv colony.

^{xi} In this sense, we can surmise that risk as experienced in poor urban communities is quite different from that experienced in poor rural areas. In the latter, risks tend to be associated with crop failure (through drought, flood, disease, or insect invasion) and often non-existent public services. In the former, risk stems from poorly defined property rights; higher susceptibility to contagious and water-borne diseases; exposure to organized crime, drugs, and gang violence; unemployment, underemployment, and/or unsafe working conditions; overwhelmed (as opposed to absent) public services; and the adverse effects of regional and national macro-economic shocks. This has important scholarly and policy implications, given that (as indicated above) most of our formal models and theories of poverty are largely derived from rural data.

^{xii} This is true even in more established slums. “When we go to the police”, says a resident of Rajiv colony, “they do not listen to us. Even if we are severely injured they do not file a case. They take Rs. 1000-2000 from the accused and leave him. So what happens to them? They get beaten up and nothing happens to the guilty party... People do not support each other because they are scared; they just stand by and see people being beaten up.” Laments another resident, “We sometimes say to the police, ‘I shall complain against you’, but the police reply, ‘If you complain against us then somebody else will do the same job we are doing.’... Those who are honest and poor, nobody respects them.”

^{xiii} He claims:

They have to do whatever I do – if I call the MLA. Next day they have to. If I call the Nigam Parshad (Municipal Council). Next day they have to.

^{xiv} As one remarks, “the Pradhan looks after (legal documents); it is not my headache. We don’t have any legal documents.”

^{xv} Current wealth is measured by the total value of household durable goods and financial instruments. This figure does not include housing values. Given unclearly-defined property rights, our estimates of property wealth that can

be realised is tenuous, and so we prefer this imperfect measure of wealth. It is reassuring, however, that the correlation between wealth net and inclusive of housing valuations approaches a third.

^{xvi} A joint significance test of the instruments in the first stage regression yields an F-statistic of 9.24, significant at the 0.1% level.

^{xvii} The regressions in Tables 2-5 control for individual and basti characteristics, but we do not report these effects for reasons of brevity.

^{xviii} Notice that the over-identification test comes close to rejection, casting doubt on our proposed exclusion restriction in the case of the *pradhan*. Given that the same push factors that result in migration by the less wealthy also encourage simultaneous migration by other villagers and thus potentially leadership selection, the possibility of a direct effect of crop deviations on an individual's ties to the slum leader cannot be dismissed. For formal government authorities, the above argument does not hold, and reassuringly Hansen's test does not approach rejection for any of the other governance networks.