The capacity of e-government tools: claimed potentials / unnamed limitations

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Abstract

Contemporary cities are characterized by the inequality reflected in uneven geographies of quality-of-life conditions. In many cities the gap between better and worse off areas is increasing in the age of neoliberal dominated urban policies. This spatial inequality exacerbates the exclusion of certain groups and places. When differentials in quality-of-life conditions are a matter of concern, local governments usually assert their intention to respond to citizen’s needs and deprivations. It is in this context that information and communication technology tools are being incorporated in Indian cities to promote local governance by improving quality-of-life and increasing efficiency and transparency in the response to citizen’s demands and needs.

Depending on the institutional environment and how information is created, processed and disseminated, these “e-government” tools can exacerbate existing exclusionary practices rooted in private property and work. The objectives of this paper are two-fold. First we want to explore how one of these tools, in particular the local e-grievance redressal system, can be used as a proxy of self-expressed need. Secondly, we want to investigate whether there is a (mis)match between self-expressed needs and deprived areas. This helps to answer the question how these systems capture the requirements of the most deprived. A related question is what impact, if any, this tool has on the traditional way poorer groups, local officers and politicians deal with area needs.

The main methods used are geocoding the information captured by e-grievance redressal systems and spatial visualisation of the processed information. Preliminary results show that the self-expressed needs do not necessarily concentrate in the most deprived areas. This suggests that the e-grievances redressal system does not guarantee a narrowing of the gap between the different sections of the city, nor does it necessarily capture the requirements of those in the most need.
Background / neoliberal dominated urban policies and uneven geographies

Contemporary cities are characterized by the inequality reflected in uneven geographies of quality-of-life conditions. In many cities the gap between better and worse off areas is increasing in the age of neoliberal dominated urban policies and influenced by globalisation process (Borja and Castells, 1997; Castells, 1996, 1999; Harvey, 2000). Wacquant (2009 p.306) offers a useful sketch of the neoliberal state model that originated in the United States but has been taken up by elites across the globe including India as a “political project aiming to remake the nexus of market, state and citizenship from above.”

This mode of statecraft suits urban middle-classes oriented to the future, enamoured with world-classing their cities, and who have the resources to compete in the formalizing job-market, live in a legitimate flat, and secure needed services. The ethos of self-responsibility and entrepreneurialism mixed with consumerism and faith in technology position them as the candidate to represent the implied ‘good’ urban citizen in city development plans, e-governance initiatives and large-scale urban renewal/development projects. The link between capitalism, neoliberal urbanization, and the middle-class have been well established (Harvey 2008; Brenner and Theodore 2002, Marcuse 2009) and it is useful to view the present battles over urban space as well as inequalities and illegitimate (informal) occupancy in regards to the neoliberal state’s interest in increasing capital accumulation and middle-class interests in modernizing the cityscape. The middle-class is becoming active in civil-society and demanding their right to the city.

At the neighbourhood level this usually takes the form of citizen or housing societies demanding that officials enforce or create regulations to deal with urban blight (encroachments, slums, hawkers, beggars) in their residential areas and other public spaces they wish to enjoy more (Baud and Nanain 2008; Fernandez and Heller 2006). At the higher levels this takes the form of filing public interest litigations to use the courts to pressure municipal public officials to enforce rules and regulations often resulting in numerous evictions and demolitions as well as the closure or relocation of urban informal industries to the periphery (Bhan 2009). Less personalized but just as effective, corporate economic interests (corporations, architects, & real estate developers) and state officials friendly to their cause, leverage arguments of obsolescence and rent gaps to rationalize which areas get targeted for urban renewal or development. These arguments—blight, rent gaps and obsolescence—are mutually reinforcing. They both tend to aestheticize anti-poor politics and neoliberal practices, to elevate exchange value over use-value, and to elevate the demands of the middle-class and elite over the needs of the poor and working classes. While close scrutiny would often reveal informal aspects in middle class and elite modes of occupancy, these are not the focus of public interest litigation and their legitimacy is never seriously questioned.

Concern about uneven geographies and the e-governance response

There is growing interest in understanding and explaining uneven geographies. This relates to the concern of levelling off quality-of-life conditions at global, national and local level. At global level the Millennium Development Goals includes a clear commitment to improve the lives of slum dwellers. At national level, India adopted the MDG goals setting its own targets and setting up pro-poor policies and reforms in urban areas within specific programmes such as the Jawaharlal Nehru National Urban Renewal Mission Programme (JNNURM). One of the responses at local level to address the JNNURM requirements (mandatory reforms) was the implementation of information and communication technology tools (ICT) or e-government tools. In the city of Kalyan-Dombivli this is listed in the approved City Development Plan as the “introduction of a system of e-governance” (Kalyan Dombivli Municipal Corporation, 2006). Under the e-governance section of the Kalyan Dombivli Municipal Corporation (KDMC) City Development Plan it is also indicated that “the project has been already replicated at various Municipalities within and outside Maharashtra. The [e-governance] project has received accolades / awards at State, National and International level” (Kalyan Dombivli Municipal Corporation, 2006, 143).
One of the components of the e-governance system in Kalyan-Dombivli is the module called “Complaints and Redressal System”. In general, these ICT innovations are introduced to promote local governance by improving quality-of-life and increasing efficiency and transparency in the response to citizen’s demands and needs. However, it should be noted that e-governance tools are embedded in larger forces of neoliberal policies and class antagonisms over space and value (both use and exchange). These forces impact how and why local governments take up ICT. Thus to view them as apolitical or neutral tools would miss the ways they could possibly contribute to exacerbating rather than treating inequalities (Benjamin et al 2007). It is also important to keep in mind the role that the private ICT sector plays in the uptake of e-governance tools and the framing of governance problems and being amenable to technological and informational fixes. They benefit in the form of lucrative contracts with the local state. Also there is economic incentive (contract extension) for them to maintain the localities creating dependence upon them by obfuscating knowledge transfer to city officials and employees. E-government tools and ICT innovations in general are being pushed by private sector/consultants that benefit from pushing “governance problems” as technology deficit and info deficit problems.

At this point it is important to highlight that not all inhabitants enjoy citizenship rights. Chatterjee’s (2004) work offers an important directive to avoid the erasure of unequal social life. He argues that concepts of civil society and citizen need to be divided in two; into civil and political society and citizens and populations. Civil society is the domain of middle and elite classes who are able to comply with private property laws, tax responsibilities, and participate in the professional economy—a situation where the links between civil society, the state, and the market are clear and reinforcing. However, the urban poor’s citizenship status is tenuous at best given the illegality or quasi-legality of their work and occupancy. Therefore the state and powerful market actors do not regard them and their organizations as having the same rights or ability to participate in governance as civil society. Rather, the poor are ‘populations’ who occupy political society. ‘Populations’ rest upon negative normative assumptions that imply deviance and degrees of (un)deservingness and that rationalize the adverse incorporation of certain groups when it comes to claiming and using their citizenship rights (Baud et al. 2009). What population(s) the poor belong to (encroacher, slum-dweller, rag-picker, migrant from Bihar) is more determinate of the form and content of their relationships with the state and markets than their tenuous citizenship status. Political society5 engages in constant negotiations over what different poorer groups and areas can claim and at what price. Since these claims come from those whose productive activities and means of place-making are objects of stigma and illegality these arrangements are often ad-hoc, vary from case to case, and are off the record. Fieldwork in Kalyan-Dombivli shows that these negotiations do not occur over e-grievance redressal systems. Poorer inhabitants tend to be offline in that they do not have access to computers or even basic knowledge of how the internet works let alone English proficiency. Also, they are used to going to party workers or ward councillors when they have an issue and avoid going to the municipality where they have learned to expect rudeness and disregard. Past experience and lack of knowledge result in them mainly self-excluding from this mode of citizen engagement.

**E-governance romanticism**

This paper relates to a wider research program that explores the role of Spatial Information Infrastructure in reducing urban deprivations in Indian cities (see: Pfeffer et al., 2008). There is a general belief that more and better information can lead to more efficient planning and decision-making, and subsequently more effective urban governance in terms of inclusion (Pfeffer et al., 2008). At the same time, some authors recognize that within decision-making, policy choices and decisions are value judgements and cannot be determined by information (Wong, 2006, 20). On the contrary, in a real policy process issues such as “ideology, interests, institutional norms and practices and prior information” play a key role in influencing decisions (Weiss 2001:286 in: Davoudi, 2006).

The optimism towards information rests upon assumptions of a polity marked by citizens equally disposed to partake of these tools and that government is interested in forming inclusive cities more than
it is interested in being able to compete for capital and middle-class inhabitants while maintaining its avenues of rent-seeking from the poor’s insecure position in the city. In addition, the idea that more information leads to more equitable outcomes is always assumed but never yet to be proven (Haque 2002; Taylor and Lips 2008). The elevation of access to information (transparency) as a human right combined with the faith in technology to overcome present governance issues of corruption, incompetence and inefficiency have caused many to celebrate e-governance uncritically (Mazzerella 2006) and view it divorced from contexts were social, political, economic, and digital-divide inequality are the norm.

E-governance/e-government? Tools, claimed potentials and unnamed limitations

E-grievance redressal systems are “public feedback mechanisms” with the characteristic that the interactions between the citizens and the complaints they send to the government can be traced back. It is because of that characteristic that e-grievance redressal systems and public feedback mechanisms are considered “the key to increase transparency in e-government initiatives” (UNDP, 2005). E-grievance redressal systems are also considered as part of participatory mechanisms of accountability to citizens which presuppose that citizens should be encouraged to participate in service delivery (Cavill and Sohail, 2004).

There is a general positive view about the potentials and the capacities that e-governance and e-grievance redressal systems in particular have. They are usually presented as an opportunity to increase openness and transparency within the public administration; to support efficient city management and to monitor effectiveness in the response to grievances (Wallack and Nadhamuni, 2007, 9); and to provide information for infrastructure problems identification (Ranganathan, 2008, 6). The limitations listed are more related to scaling up the technical infrastructure than questioning whether these systems are able to capture the requirements of the most deprived and influence policy and actions. There is also an absence in the debate on the exclusionary practices that these systems may entail.

Those critical of growing state-created grievance and public feedback mechanisms cite the issues highlighted in the former section and this mode of participation as being better labelled as administrative incorporation (Rodan and Jayasuriya 2007). They argue that administrative incorporation both individualizes and thus depoliticizes citizen-government relationships by bypassing party and politicians for issues of bureaucratic accountability. It limits what is open to participation—citizens who can access these systems are allowed to make comments/requests related to a particular service/department or to an already established process, but not regarding more substantive issues of whose interests and needs policies and processes are oriented towards (Jayasuriya and Rodan 2007).

Additionally, taking into account that in the present “informational age” some areas are bypassed by technology resulting in “switched-off” areas (Castells, 1996, 34) one could expect that -despite the opportunities described- e-grievance redressal systems might be hindering further the capacity of deprived groups to channel complaints or put them in relative disadvantage with groups which are “plugged-in” or live in “switched-on” areas.

In this study, the data produced by an e-grievance redressal system is analyzed to identify what sorts of complaints are submitted where and whether there is a relation with areas of multiple deprivations.

Data and Methods

For the analysis of the e-grievances and multiple deprivations different databases and methods were employed.

The analysis of the e-grievance redressal system is based on the list of all e-grievances submitted in the year 2007 which contains data on pending and solved complaints, in particular the submission date, sector and type of complaint, response to the complaint and some kind of geographical reference like an
indistinct address or landmark. In addition interviews and small-scale workshops with local officials and councillors, but also local self-help groups from poorer areas, and employees of the Poverty Alleviation Cell, took place in November 2008 to investigate the role and use of the e-grievance redressal system.

For the mapping of multiple deprivations spatially disaggregated databases from the Indian Census of 2001 were used to construct an index of multiple deprivations (IMD) as designed in Baud et al. (2008, 2009). While household tables referring to basic services and households assets could be obtained for health wards only (of which there were only 8 in 2001), population data like number of literate or employed inhabitants were provided for the 96 electoral wards (EW). This limited the construction of the IMD to only social and human capital aspects.

In order to analyse the spatial pattern of both the grievances as well as the IMD, the data had to be matched to the geographical boundaries of the EW levels. In 2001 there were only 96 EW, corresponding identically with the population tables, while in 2007 the EW boundaries were considerably re-arranged, resulting in a new map with 107 wards.

**Data processing and mapping**

Sound analysis with the available data is quite a challenge. For example the list of grievances contained some kind of geographical reference; however, this was insufficient to match it with the electoral ward (EW) boundaries (there was no reference to their ward number). Therefore they had to be manually geocoded by the staff. To locate spatially the grievances it was necessary to manually assign an EW number to each of the complaints. This was managed by using planning office maps and attributes such as the address and landmarks combined with staff’s tacit knowledge of the city. Since the data refer to the year 2007, the KDMC staff used the 107 EW classification. Moreover, knowledge on the 96 EW might not have been available among the current staff since the census 2001 EW boundaries are not used locally.

Furthermore, it was not possible to obtain the complete list of census variables for the 96 wards; financial and physical deprivation had therefore to be omitted from the IMD. In addition, it is more logical to relate grievances to population data, however, as population was only available for the 96 wards of 2001, the population reference for the 107 ward is only an estimate, based on the assumption that population is equally distributed and that there were hardly changes in the spatial distribution.

The quality of the geographical boundaries is just sufficient for visualising spatial patterns, though not appropriate for doing metric calculations or accurate spatial overlays.

After assigning the EW number to the grievances list the resulting table was exported to a Geographic Information System software (ArcGIS) to geocode the complaints using the EW number as the commonality. In that way a polygon map containing the geographical boundaries of the different wards was attached to an attribute table containing the list of complaints. The total number of complaints per ward were standardized by the estimated total population per ward. The final value per ward represents the number of complaints per 1000 inhabitants. Apart from the mapping, statistical analysis was applied to the complaints data, specifically frequency tables of groups and variables.

Mapping the IMD followed the same procedure. First, the table was imported to ArcGIS and then geocoded using the 96 EW boundaries.

Finally, the resulting maps were visually compared, namely the map displaying the Index of Multiple Deprivation and the concentration of complaints per wards. The resulting maps where also exported to Google Earth for visualization and discussion with a group of ward councillors, local self-help groups from poorer areas, and employees of the Poverty Alleviation Cell.
Analysis of complaints from e-grievance system in KDMC

The KDMC’s e-grievance system is part of the e-Governance program initiated by the Kalyan Dombivli Municipal Corporation in 1999 and implemented in 2002 (ABM, 2009). The objective was “of creating a system driven Municipal Corporation with highest levels of Transparency, Accountability and Citizen Servicing Standards” with the following claimed benefits for the citizens:

- Time bound service delivery.
- Transparency and Accountability in Corporations functioning.
- Hassle free interactions with quicker response time for all the services.
- Objectiveness in decision making, leading to more impartial and transparent governance.

From the objective we see that the crosscutting claimed benefits are both transparency and efficiency. In terms of accessibility to different groups, the implementation of the programme took into consideration that the e-governance tools could be accessible via the internet but also via a group of public offices called “Citizen Facilitation Centres” (CFCs). It is also interesting to note the participation of the public and private sector in the development and implementation of the e-governance programme. This includes the Indian Institute of Technology, National Centre for Science and Technology and TATA Institute Of Fundamental Research, VJTI (engineering college in Mumbai) and Mumbai based ABM Knowledgeware Ltd (ABM, 2009).

Some of the usual potentials of e-governance are being claimed in KDMC’s e-grievance system. Despite receiving several awards and being replicated in other municipalities, an analysis of some local newspapers suggests that there are some limitations. The e-governance system does not necessarily speed up the resolution of complaints, some people still prefer to have face-to-face interactions to place a complaint or they are not aware of the existence of the system (Dolare, 2007; Sharma, 2008). The latest also was mentioned during the interviews with ward councillors. A similar result was found in a case study carried out in another Asian city with a grievance redressal system, showing that resolving complaints in urban services still “necessitates further under-the-table payments or the influence of powerful intermediaries (political leaders, influential friends and mastaa$– muscle men”). The same study shows also the lack of awareness and that small proportion of citizens are willing to proceed with formal complaints mechanisms. The reported feeling is that “there will be no follow-up to their complaint and that officials are often unavailable or indifferent” (Cavill and Sohail, 2004).

KDMC’s e-governance program is a source of pride for the municipal corporation9. Also, the middle-class feels that it is a move “in the right direction.” However, interviews with local politicians and department heads and workers show that while improving the storage and retrieval of data that it will have no effect on “the power and money politics of the city” that shape uneven development nor on the poor’s dependency on political society and clientelism. In fact none of the poorer inhabitants we spoke to even knew about the e-grievance system and none of the ward councillors reported using it or directing their constituents to. If development is at heart a political issue over who gets what, when, how, where and why, then ICT is as likely to exclude and it is to include poorer areas and groups.

The analysis of the mode of delivery of the complaints in 2007 shows that more than 90% of all complaints in KDMC are delivered by hand, only 6% are submitted online and just a negligible proportion used the phone for filing the complaint. That 90% of the complaints are delivered by hand shows that citizens still prefer to deliver the complaints face-to-face. This could also be explained by the limited access to ICT or by the lack of awareness of submitting complaints online.

The analysis of the KDMC’s e-grievance system allows the identification and the distribution of different categories of complaints. Table 1 shows frequencies of the complaints data for the year 2007. In that year four types of complaints were registered, in particular water supply, drainage, storm water drainage and
encroachment. While the first three rather deal with malfunctioning of government services, complaints about encroachment refer to the displeasure of citizen behaviour/activities.

Table 1: Distribution of complaints across different types

<table>
<thead>
<tr>
<th>type</th>
<th>number</th>
<th>percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>drainage</td>
<td>1378</td>
<td>47.2</td>
</tr>
<tr>
<td>water supply</td>
<td>803</td>
<td>27.5</td>
</tr>
<tr>
<td>storm water drainage</td>
<td>89</td>
<td>3.1</td>
</tr>
<tr>
<td>encroachment</td>
<td>647</td>
<td>22.2</td>
</tr>
<tr>
<td>total</td>
<td>2917</td>
<td>100.0</td>
</tr>
</tbody>
</table>

According to the data, the major problems are drainage and water supply (see Table 1 and Figure 1). With respect to water supply, about 60% of the complaints concern ‘no water supply’, ‘shortage in water supply’ and ‘leakage in water lines’, while the major problems of drainage address the cleaning and maintenance of the drainage infrastructure, i.e. the cleaning of septic tanks (70%) and chocking up or overflowing of open gutters (18%). The major problem of storm water drainage refers also to maintenance, specifically the cleaning of the open storm water drainage (75%).

Figure 1 Distribution of complaints per type, aggregated to the level of the EWs of 2007.
The number of complaints with respect to encroachment are considerable. These are complaints submitted by citizens who are displeased about unauthorized constructions and development or unauthorized stalls or labour activities along the road and footpaths. From the description of the resolution of some of the complaints it is found that in many cases these are actually complaints about activities which are not against the rules. This is an example of what we mentioned before as the pressure exerted by citizens (mostly the middle-class) demanding that officials enforce or create regulations to deal with urban blight (encroachments, slums, hawkers, beggars). This also shows that the information produced by the e-grievance redressal systems cannot be taken exclusively as a proxy of “self-expressed needs”. It remains for further research to investigate and differentiate the (sub)categorizes of complains which purely refer to needs that -if not satisfied- might affect the quality-of-life of the most deprived (e.g. no water supply) and those which reflect the “wants” and discontent of some citizens (probably the better off) with urban blight.

Figure 2: Overlay of complaints as graduated colour (aggregated to 2007 EW boundaries) and Index of Multiple Deprivation (IMD) as graduated symbols (matched to the 2001 EW boundaries); the grey area do not anymore belong to KDMC. Note: High values in IMD indicate a high multiple deprivation index.

The visual comparison of the maps (Figure 2) shows that the complaints do not necessarily concentrate in the most deprived areas according to the IMD. When these maps were shown to city officials, politicians and self-help groups from poorer areas, no one felt that they accurately reflected the areas in the city with the greatest need for water and drainage improvements. This suggests that the e-grievances redressal system does not guarantee a narrowing of the gap between the different sections of the city, nor does it necessarily capture the requirements of those in the most need.
Conclusions

The main findings show that there is a mismatch between deprived areas and self-expressed need areas probably reflecting different strategies open to households to cope with the absence or malfunctioning of urban services and the differential capability to exert pressure against urban blight. The capacity of e-government tools to reduce the gap between deprived and well-off areas is not mainly dependent on the introduction of sophisticated ICT tools but on more complex process of integration. The level of penetration of these tools, both in terms of citizen up-take and administrative utility, is shaped by local socio-economic inequalities and traditional modes of politics, administration, and street-level delivery. This triggers the need to better explain, track and spatially identify profiles of inclusion, exclusion and adverse incorporation (see van Dijk 2009). The dynamics and many of the characteristics underpinning uneven development within cities will be missed if we rely too much on technology and government databases to determine need. Additionally, the impact that this tool has had on the usual way poorer groups, local officers and politicians deal with area needs appears to be minimal. Thus the more KDMC and other municipalities in similar contexts push for this type of citizen engagement and service provision the less inclusive these municipalities are likely to come vis a vis poorer groups and places. However, even if these tools are combined with more qualitative ground-truthing and data from other sources to better reflect need and service inequalities the real impact that this more accurate source of information would have on triggering pro-poor policies remains low given the limited citizenship of the urban poor and first-order governance priorities.

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1 For how tenants of neoliberalism have been taken up and adapted in India see: Chopra 2003, Fernandes and Heller 2006.

2 Something out-of-date—can be a product, place, identity, practice, or concept. In terms of urban renewal it is a place or structure that past its prime and stubbornly is trying to avoid modernization (Weber 2002)
3 Whitehead and More (2007) discuss how the issue of urban redevelopment in Mumbai is being determined by the gap between existing rents and rent that could be accumulated if land was put to “higher and better use.” (2429)

4 The monitoring of these growing inequalities across the cities as well as the identification of pockets of deprivation in certain locations has received the attention of recent research studies with focus on cities in the south (Baud et al., 2008; Baud et al., 2009; Martinez, 2009)

5 Populations, their associations, patrons, local-level politicians and bureaucrats, and street level service providers

6 The usefulness of geocoding complaints and aggregating them at the electoral ward level was discussed with the heads of KDMC’s IT department. It was agreed that this type of analysis would both allow them to benefit from this data reserve (e.g. spatial distribution of complaints in different sectors) and it would be a learning opportunity for the staff in regards to increasing their familiarity with spatial analysis via a Geographic Information System. In this context KDMC made available a list of all e-grievances submitted in the year 2007.

7 Social capital is described by the percentage of people in scheduled cast. Human capital is the combination of percentage of literate people, percentage main worker and the number of HH dependants.

8 The inconsistency in the data, and in particular the mismatch between administrative boundaries, probably relates to a lack of standards in spatial information and a lack of coordination among different organizations and different government levels.

9 “KDMC has pride of being one of the few ULB’s in the country to implement these reforms. In most effective and scientific manner. At KDMC today e-governance has become the basic for delivering good governance to the citizens. Recently administrative reforms and public grievances, GOI has declared Golden Icon Award to KDMC. E-governance project for outstanding performance in citizen centric centre service delivery” (Kalyan Dombivli Municipal Corporation, 2006)

10 In fact, needs should be differentiated from wants and rights. To say that people have rights, according to Smith (1994, p. 34), is “to require them to be treated in a certain way, to get something to which they are entitled or at least to raise this expectation”. Smith goes further and differentiates rights (which are respected and guaranteed) from wants (which can be met and are related to personal desires) and from needs (which can be satisfied and quantified). “To assert a need is to appeal to some external standard, however implicitly, which may legitimate something that would otherwise merely be a want” (Smith, 1994, p. 36).