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## **The Resilience of South African Cities a Decade after Local Democracy**

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## **Abstract**

South Africa emerged from a cataclysm two decades ago to experience a stable democratic transition during which the local government system was transformed. The creation of large metropolitan municipalities was intended to accelerate socio-economic development and urban restructuring in order to overcome the legacy of segregation and exclusion. This paper assesses their achievements, ten years on, using the concept of resilience as the analytical frame. Resilience helps to examine cities as interconnected systems open to external influences but with some capacity for self-organisation and learning. It is useful for exploring the co-existence of urban continuity and change. Evidence shows that the responses of South Africa city authorities to globalisation, urbanisation and democracy have been circumscribed. Continuity and incremental change have been more evident than transformation and development. Hesitant progress exposes cities to the risk of greater social instability. Insights from resilience theory support the idea that enhanced municipal capabilities could facilitate a more enduring outcome.

**Key words:** Resilience; urban transformation; metropolitan government; South African cities

# **The Resilience of South African Cities a Decade after Local Democracy**

## **Introduction**

South Africa negotiated a remarkable political settlement and peaceful transition to democracy two decades ago, having been on the verge of civil war and a global investment strike. An important dimension of the crisis was the collapse of local government in many urban areas, prompted by violent community protests and tax boycotts. From the turbulence emerged an unprecedented social compromise to negotiate a new path of national renewal and reconstruction. A vital product of the transition was the consolidation of metropolitan government in 2000. This was a long drawn-out process because of sensitivities surrounding the incorporation of separate racial communities and resistance from established interests (DPLG, 1998; Cameron, 1999).

The creation of the metros as relatively autonomous, unitary authorities recognised that cities were critical to solving many of the country's biggest problems. An array of fragmented local administrations with disparate tax bases and technical capabilities designed to serve distinct racial groups was amalgamated to form fully-democratic city governments covering large territories. Such a bold step reflected the history of struggle against the inequities of apartheid local government with its distorted settlement patterns and unequal access to basic services. It also reflected a realisation that administrative fragmentation could prevent cities from achieving their potential. Three compelling reasons were given for creating the metros:

- to distribute municipal resources more fairly across each city so as to redress inequalities in amenities;
- to reshape the inefficient metropolitan form through strategic planning and coordination of investment in infrastructure; and
- to strengthen the economic competitiveness of cities and avoid duplication of effort through economies of scale (DPLG, 1998; Cameron, 1999).

Local government was required by the 1996 Constitution and subsequent legislation to be 'developmental'. This meant working with communities to meet their aspirations for a better life by promoting their social and economic upliftment (Parnell et al, 2002; van Donk et al,

2008). It was not about delivering services to passive beneficiaries or atomised consumers. Service provision was an enabling condition for development, and municipalities were expected to build human capabilities and strengthen community organisation to support this. An active citizenry would also help to hold municipal leaders to account and thereby broaden and deepen democracy.

The Constitution recognised municipalities as a distinct sphere of government, rather than an agent of national or provincial government (DPLG, 1998; Boraine et al, 2006; Schmidt, 2008). They had the right to govern on their own initiative, with a special role in promoting development and democracy. Their main responsibilities were essential household services (water, electricity, sanitation, refuse removal and local roads) as the ‘hands and feet’ of the state. They were to be largely self-financing by charging for services and levying property rates. Supplementary government funding would meet historic backlogs and pay for free services to the very poor. The principle of ‘co-operative government’ required the three spheres to work together in good faith (DPLG, 1998; Patel and Powell, 2008). This was essential for national sectoral programmes (housing, transport, schools, health, etc) to align with municipal spatial plans, regulatory functions and basic infrastructure.

Ten years later, this paper seeks to assess the progress made. It considers three dimensions of urban transformation: economic performance, spatial integration and responsive governance. Circumstances have been challenging over the last decade following the country’s re-entry into a more competitive global economy, growing urbanisation pressures unleashed by the removal of influx controls, a highly skewed income distribution, and vested interests in land and property. Yet the mandate of the metros was to promote resource redistribution, urban reconstruction and socio-economic development. Has the process of change commenced or have historical patterns persisted?

The term resilience has begun to feature prominently in the policy discourse on cities, partly in the context of the current global economic crisis, more extreme weather patterns, concerns about urban dependence on external resources (raising issues of food, water and energy security), and recognition of the significance of urbanisation for global environmental change (e.g. Swanstrom et al, 2009; Atkins, 2012; Baker, 2012; UNISDR, 2012). Resilience is a useful analytical concept for this paper for several reasons. It provides a way of thinking about how complex systems such as cities resist or adapt to change: whether their functions

persist in the face of critical disruptions (such as political transitions); how their structures evolve as circumstances change and thresholds are reached; and whether the resulting shifts are incremental or transformative (Walker et al, 2004; Folke, 2006, Pelling, 2011, de Weijer, 2013). Resilience enables the contingent and unpredictable interactions between the various dimensions of cities to be disentangled, including how municipal reorganisation relates to wider economic, social and environmental forces.

The next section discusses the concept of resilience and explains its utility in thinking about cities. The following section explains the questions addressed and the sources of evidence used. Subsequent sections examine the extent of economic progress, spatial integration and improved governance. The final section draws the threads together with some broader reflections on resilience as an analytical frame.

### **The concept of resilience**

Resilience is an attractive idea in policy discourse partly because the common-sense meaning of the term has positive connotations, unlike concepts such as vulnerability, fragility and risk. It means that a system has the capacity to resist threats, recover from crises and adapt to ongoing pressures. It can rebound from shocks and avoid hazards. In social systems this implies a high degree of self-organisation, learning and flexibility in anticipating and responding to difficulties. Resilience is the kind of multi-faceted or boundary concept that can cut across academic and professional divisions and assist efforts to understand how complex natural and social (or ‘socio-ecological’) systems cope with adversity and instability arising from multiple interacting sources (Brand and Jax, 2007; Davoudi, 2012).

Of course there are dangers in such a concept being applied so widely that it is diluted and can mean almost anything. The term originates from the discipline of ecology to describe the response of natural systems to shocks (Holling, 1973). Their resilience is influenced by their diversity and network connectedness. Social systems are influenced by human intentions and agency, which are guided by different interests. The specific viewpoint and framing values of those in influential positions are all-important. In addition, human ingenuity and collective determination may intervene to avert a disaster in a way that is impossible in ecological systems. Social systems are also exposed to an infinite variety of potential threats and risks.

Unless more precise boundaries are drawn around the sphere of interest, it might be difficult to find any systems that qualify as resilient.

The ambiguity of the concept can be limited by defining its scope and context more narrowly (Carpenter et al, 2001; Folke et al, 2010). Key questions are: whose resilience, and to cope with what disruptions? One aspect is the geographical territory being referred to. Another is the time period. Judgements about whether a system is robust depend on the perspective adopted – short or long-term, wide-angle or telephoto lens? Sudden events should also be distinguished from recurring pressures. Resilience is not a neutral attribute of a social system, affecting all groups in the same way. It is necessary to discuss ‘for whom’ it applies and not assume homogeneous interests.

There are various interpretations of resilience currently in use. The predominant approach in policy and practice equates resilience with the ability of a city or region to recover its infrastructure and institutions following an environmental disaster (Vale and Campanella, 2005; Wallace and Wallace, 2008; Atkins, 2012; UNISDR, 2012). This is defined by academics as ‘engineering’ resilience or robustness (Walker et al, 2004; Martin, 2012). The emphasis is on tolerating disturbance and avoiding catastrophe. This is indicated by how fast and efficiently the system returns to a stable state or restores the pre-existing position (‘bounce-back’) (Pelling, 2003). There is no allowance for the regime to change its basic structure over time. The positive implication is that the system can withstand shocks, avert disasters and preserve accumulated infrastructural strengths to keep the city’s basic metabolism working. There are safety nets and other protective mechanisms in place to safeguard vulnerable groups against hazards. Unemployment benefit is an obvious measure designed to counteract the effects of economic crises on households. It also functions as an automatic stabiliser with disproportionate benefits for lagging regions because of the injection of extra resources when unemployment rises.

There are limiting features of engineering resilience in certain situations (Evans, 2011; Martin, 2012; de Weijer, 2013). Systems may get locked-into particular patterns and organisational arrangements which risk long-term stagnation and decline at the very time when conditions require adaptation and development. The behaviour of agents may be constrained by prevailing rules and stubborn practices which restrict experimentation, creativity and the pursuit of wider opportunities. Institutional inertia and vested interests may

reinforce business-as-usual and reproduce the status quo. Social protection may unintentionally confine people in poverty, not provide them with the means to escape. Fixed infrastructure may become less fit-for-purpose over time because it relies on inappropriate patterns of resource consumption or requires more maintenance. Although such systems may continue to function satisfactorily in the short-term, the lack of dynamism and innovation may mean growing obsolescence over time. In other words, robustness and recovery are not enough for many systems to thrive, especially in a shifting environment. A deliberate effort may be required to alter the prevailing norms of behaviour and break out of the established regime.

The second approach to resilience is broader and more concerned with progressive change over time. Resilience is conceived of more as a process than the description of an outcome (Pendall et al, 2010). Systems don't generally stand still or return to the same stable state after disruption. They evolve and adapt their structures and procedures to new conditions in a continuous manner (Newman et al, 2009; Christopherson et al, 2010; Pike et al, 2010). This is often known as 'adaptive' or 'evolutionary resilience' (or 'bounce-forward') (Simmie and Martin, 2010; Martin, 2012; Davoudi, 2012). The idea originates from theories of complex adaptive systems (Folke, 2006; Folke et al, 2010), which perceive cities as interconnected structures that are open to external forces and yet have an internal dynamism of their own. There are positive and negative feedback loops at work, with uncertain and unpredictable effects, so progress is rarely linear (de Weijer, 2013). In other words, outcomes are contingent on all kinds of factors and not predetermined. The idea of emergence describes how surprising patterns can arise out of many relatively simple interactions and their chain reactions through the system. A virtuous circle may emerge from the ripple effects of greater resourcefulness, creativity and productivity improvements over time. For example, concentrations of firms in large cities may stimulate intense comparison, competition and cooperation, creating a dynamic that spurs progress, attracts mobile capital and talent, and promotes growth from within (Turok, 2009).

Alternatively, a vicious cycle may arise when systems breach critical thresholds and internal problems become self-reinforcing. A downward spiral is by no means inevitable since crises can also be catalysts for positive transformation by exposing the limitations of existing arrangements. They can galvanize exceptional public effort and support for shifting the current trajectory of the system onto a new path of recovery and renewal. Self-organisation is

an important principle, meaning that systems have an inherent ability to renew themselves in the light of shifts in their environment (Holling, 2001; Folke et al, 2010; Evans, 2011; Martin, 2012). Sustainable change is more likely to stem from an organic process of adjustment, rather than something achieved through a coercive strategy introduced from above. Evolutionary resilience implies that devolving responsibility can contribute to progressive change by strengthening city leadership and accountability, and encouraging social learning, compromise and consensus-building between diverse interests.

If the two notions of resilience can coincide, this suggests that aspects of continuity and change can co-exist within the same system, in the sense that vital functions persist while other components adjust to shifting conditions (de Weijer, 2013). This could constitute a dynamic type of stability in which vulnerable elements are protected from negative shocks while the system as a whole progresses to a more viable and desirable position. The balance between continuity and change is clearly critical to the sustainable development of a city. Cities in different circumstances are likely to require different forms and combinations of stability, adaptation and development for long-term progress. This reinforces the point that the concept of resilience needs to be contextualised because there is something locally-specific and unique about the threats and opportunities facing every city. Similarly, the kinds of policy responses required also need local specification and application.

## **Questions and methods**

The crisis in South Africa two decades ago was a tipping point that led to the transition to democracy. This resulted in the reorganisation of the country's governing institutions, particularly at the local level with the creation of the metros. The fundamental question is whether they have made progress in promoting socio-economic transformation, or have inherited conditions been reproduced?

Resilience theory suggests that crises can precipitate radical change by revealing systemic weaknesses and mobilising collective action. However, other outcomes are also possible because economic and social structures can resist efforts to alter the status quo if they threaten their interests. A key challenge for the post-apartheid government has been how to tackle the inherited inequalities without losing the confidence of skilled and affluent sections of the population. The question therefore is whether the institutional will and capabilities

have existed at city level to respond to the new political dispensation with transformative actions.

We consider three dimensions of change: economic progress, spatial integration and responsive government. These are central to the urban agenda in all countries. Economic development underpins job creation, higher living standards and municipal revenues to fund better public services. Spatial integration supports more efficient, equitable and sustainable urban environments. And responsive government is vital for effective and legitimate policies, especially as change is disruptive and dependent on popular consent. Space constraints prevent consideration of other issues that would conventionally be regarded as relevant to urban resilience, namely stressed natural resources (such as water scarcity and vulnerable ecosystems), infrastructure systems (such as ageing electricity and sanitation networks), and volatile food and energy prices.

The sources of evidence include two nation-wide surveys based on samples of approximately 30,000 households each - the General Household Survey (GHS) and the Labour Force Survey (LFS). Special disaggregated data for the metros was supplied by the national statistics agency. The data was analysed and presented at the smallest spatial level permitted by the sampling procedure. The 2001 and 2011 Censuses of Population were also used for population and employment data. The data on popular perceptions and attitudes to city government was derived from the South African Social Attitudes Survey (SASAS). This was supplemented by information on community protests as an indicator of discontent, derived from systematic recording of media reports by Municipal IQ.

Cities were defined on current metro boundaries. These approximate to functional labour market areas or commuting catchments for most purposes because of their large jurisdictions, reflecting the political imperative to incorporate outlying suburbs and dormitory townships in order to create the spatial basis for effective strategic planning and redistribution. The popular slogan ‘one city, one tax base’ was used prior to 1994 to advocate a unified revenue base for the different parts of each metropolitan area (Cameron, 1999).

### **Economic progress**

The economic resilience of cities can be considered to have two basic dimensions. The narrower aspect (corresponding broadly to engineering resilience) is the capacity to weather the impact of shocks, such as global downturns. The broader aspect (corresponding to evolutionary resilience) is the ability to improve the rate and composition of growth over time by increasing investment and productivity. Both are highly relevant to South African cities, bearing in mind their inherited economic weaknesses (National Planning Commission (NPC), 2011a, 2012). Most have a narrow range of tradable industries, dominated by financial and business services and selected manufacturing sectors (South African Cities Network (SACN), 2011). Business ownership is concentrated among a limited number of conglomerates (Fine, 2010; Mohamed, 2010). This limits economic dynamism by contributing to uncompetitive practices, inhibiting small and medium-sized enterprises, and delaying the adoption of new technologies (Economic Development Department (EDD), 2010; NPC, 2011a, 2012; Makgetla, 2011). These drawbacks are compounded by decades of under-investment in human capital and physical infrastructure (NPC, 2011a, 2012).

Two consequences are a very low employment rate by international standards (only two in five working age adults have a job) and extreme income inequality (among the highest in the world) (EDD, 2010; OECD, 2010; Makgetla, 2010; NPC, 2012). Mass unemployment is South Africa's achilles heel, depriving millions of people of income, dignity and well-being. Joblessness causes wider problems of social marginalisation, disaffection, crime and related anti-social activities. Lack of work experience undermines employability and reduces the effective labour supply. Youth unemployment is over twice the rate of adult unemployment, and only one in eight people aged 16-24 has a job (Treasury, 2011c). The draft National Development Plan warned of a 'ring of fire' in the townships around the main cities as disenfranchised youth constitute a hazard and lost resource to society.

Figure 1 indicates the availability of employment across different types of settlement. Lack of paid work forces households to rely on family remittances or social grants from the state. A measure of the health of local economies is the proportion of households who derive their main source of income from employment, compared with those dependent on social transfers. The trajectory is also important – a growing employment share suggests a more robust local economy and vice versa.

*{figure 1 around here}*

Across South Africa as a whole, the proportion of households securing their main source of income from employment declined from 59% in 2002 to 55% in 2010. Jobs failed to keep pace with the expanding workforce. Households reliant on remittances declined from 13% to 9%, with fewer relatives in work, and more social grants available. Grants became the staple income for nearly one in four households (up from 18% to 23%). This provided vital compensation for the labour market's failure to create enough jobs and prevented greater suffering and starvation. The cash transferred into low income areas also supports the local economy. Yet there are concerns about the long-term viability of this trend (Presidency, 2008a). The social wage (including free basic services) now accounts for a quarter of government spending (NPC, 2011a). Grants provide poverty relief rather than a real solution based on building capabilities and providing pathways into work.

Employment was slightly more stable in the metros than elsewhere, although they were also affected. Metro households who derived their main income from work fell from 72% to 68%. Reliance on social grants was lower than elsewhere at 11%, and did not increase. Metro economies are more self-sufficient and robust than rural economies, which rely heavily on transfers from urban areas. Yet the metros' position has become more vulnerable with the decline in employment.

The recession had a severe impact everywhere. Figure 2 compares the employment status of the working age population in different areas between the peak of the economic cycle in the second quarter of 2008 and the second quarter of 2011. Overall, the proportion of adults in employment (formal and informal) fell from 45% to 40%. The Gauteng metros experienced the biggest contraction, down from 58% to 51%. The coastal metros experienced a smaller than average decline. In most places the job loss caused people to become discouraged and stop job seeking ('not economically active'). The increase in recorded unemployment was modest, except in Gauteng where people were more likely to continue looking for work.

*{figure 2 around here}*

A slightly more positive picture of economic progress emerges from the census of population. Its near complete coverage is an advantage, but its treatment of employment matters is less detailed. Table 1 compares the number of people aged 15-65 who did at least an hour of paid

work in 2001 and 2011. The definition is slightly broader than for the GHS and LFS, and the 2011 census definition of work is also slightly wider than 2001 definition. Table 1 shows more substantial growth in employment in Gauteng than in the coastal cities or the rest of the country. Much of this growth has been in financial services and in consumer services such as retail, telecoms, security and health (Aron et al, 2009; OECD, 2011; SACN, 2011). Gauteng's large and expanding economy explains its attraction to migrant populations and relatively strong demographic growth (table 2).

*{Tables 1 and 2 around here}*

Table 3 compares the census employment rate for the metros and the rest of the country, confirming the general shortage of jobs. However, the proportion of people in work is considerably higher in the metros than elsewhere, indicating that people have a better chance of success there. More than one in two adults were in work in Gauteng in 2011 compared with less than one in three in the towns and rural areas. The increase in the employment rate in Gauteng was also more than twice the increase elsewhere. The coastal metros started from a lower base and experienced slower employment growth than Gauteng.

*{Table 3 around here}*

In summary, this evidence shows modest economic progress during the 2000s, followed by vulnerability to the global crisis. One reason for this is the consumption-driven growth that occurred, funded by rising household debt and bank lending (Aron et al, 2009; EDD, 2010; OECD, 2010; Mohamed, 2010). The consumer boom was supplied by rising imports which worsened the trade deficit. This was financed by short-term capital inflows rather than investment in domestic production and tradable industries to diversify the economy and create employment (du Toit and van Tonder, 2009; Makgetla, 2011; The Presidency, 2008a, 2008b). Increasing external demand for the country's mineral resources strengthened the currency but damaged manufacturing exports. Meanwhile Chinese imports accelerated the process of de-industrialisation that began in the 1990s when the country re-entered the global economy. The recession exposed further weaknesses, resulting in a million net job losses affecting 9% of the workforce (EDD, 2010; NPC, 2011b, 2012). Even Gauteng's economic performance has been lacklustre by international standards (OECD, 2011).

The government acknowledges the lack of economic restructuring: “our growth has been largely pedestrian. The structure of our economy has not changed significantly in a hundred years” (The Presidency, 2009, p.6). The launch of a New Growth Path and a revised Industrial Policy Action Plan in 2010 reflected the unsustainable nature of consumption-led growth, concerns about rising household debt, and the desire to boost investment in domestic production (EDD, 2010; OECD, 2010). The subsequent National Development Plan concurred: “Shifting the economy towards more investment and lower consumption is necessary for long-term economic prosperity ... South Africa is in a low growth, middle income trap ... Moving onto (a) new trajectory of high, sustained and job-creating growth implies a break from the current path” (NPC, 2012, p.39, p.110, p.155). The Government’s 2012 Medium Term Budget Policy Statement said: “Urgent decisions across a range of policy areas are needed to start changing the structure of the economy and shift onto a higher growth trajectory ... government must shift the composition of expenditure away from consumption towards capital investment” (Treasury, 2012, p.20-21).

Many observers attribute the limited efforts to alter the economic trajectory to the negotiated political settlement, where democracy was essentially traded off against economic stability (Marais, 2011; Makgetla, 2011; Fine, 2012). The African National Congress came to power in crisis conditions not of its own making, and agreed not to challenge vested interests, not to expropriate economic assets and property, and not to redistribute income significantly. In return, the major corporations agreed to introduce black representation into management positions and boardrooms. The political compromise limited the room for manoeuvre, especially as macro-economic restraints were also accepted involving lower state spending, inflation targeting, reduced corporate taxes and deregulation (Aron et al, 2009; Parsons, 2009; Fine, 2010; Mohamed, 2010). This was intended to stabilise public finances and reassure foreign and domestic capital. It meant no state-induced stimulus to economic growth, and no active industrial policy to strengthen production.

Observers closer to government have attributed the economic continuity to inertia and weak state capabilities rather than an historic compromise or neo-liberal ideology. For example, the NPC stated that the economic legacy of apartheid was not reversed because: “Economic development is often ‘path dependent’ ... momentum is a strong driver ... The democratic government has failed to significantly alter the pattern of growth and development. ... The main problem has been the inability to implement what has been agreed to” (NPC, 2011b,

p.1-2). According to the Finance Minister: “if we are to succeed in putting our economy on a more rapid and inclusive growth path to 2030, we need to effectively direct and manage the levers of change” (Treasury, 2012, p.8). Their message is that government can do much better with more focus, coordination and a longer-term approach.

These statements indicate a broad consensus that the country’s economic trajectory has been marked by continuity rather than change. The systemic problems are variously attributed to the skewed pattern of ownership and control, narrow economic base, low productivity and innovation, lack of labour absorbing industries, weak savings and investment, and marginalisation of the black population. The consequence is a fragile rather than resilient economy. Social grants have cushioned people from the downturn and avoided disorder, without attempting to transform the economic structure. At the very least, more could have been done to create temporary jobs and give people useful skills through all kinds of public works programmes (Makgetla, 2010).

### **Reshaping the built environment**

The resilience of the built environment can be reduced to two dimensions. The more limited aspect (engineering resilience) is the capacity of vulnerable communities to avoid hazards arising from the precarious living conditions (e.g. informal settlements). The broader aspect (evolutionary resilience) is adapting the urban form to enable more efficient flows of people, goods and resources. Both are critical for South African cities, given their dispersed structure and service backlogs inherited from apartheid. The fractured form impedes human interaction, demands excessive travel, raises carbon emissions and undermines municipal viability (OECD, 2011; SACN, 2011; NPC, 2012).

The point of departure is to assess progress in providing people with a permanent residential structure. Protection from the elements, privacy and security are vital for human survival, dignity and community stability. Figure 3 shows that almost a quarter of households (about 3.4 million) live in informal dwellings (shacks) or traditional housing. They are most likely to experience hunger, overcrowding and inadequate services (Statistics SA, 2010). Shack areas are also much more vulnerable to flooding, fires, pollution and unsuitable ground conditions (Huchzermeyer, 2011).

*{figure 3 around here}*

The proportion of informal dwellings fell by three percentage points (from 26% to 23% of all households) over the period 2002-2010. This is a big achievement considering underlying household growth. The government built approximately 1.5 million low-cost ‘RDP’ houses over this period, nearly four times the level of private sector house-building (SAIRR, 2009). However, the actual number of families living in shacks rose slightly between 2002 and 2010 because of population growth and falling household size, so state house-building has not kept pace with need.

The greatest challenge of household growth has been in the metros. The share of households in shacks rose slightly in Gauteng to 22.2%, but fell slightly to 18.8% in the coastal metros. The actual number of families living in shacks in the metros rose from approximately 0.9 million to 1.1 million. In the secondary cities and commercial farming areas, the share of households living in shacks was reduced by about a quarter. Slower population growth in the smaller cities and towns meant house-building made bigger inroads into the backlogs.

Progress in providing people with basic services has been similar. Piped drinking water is required for personal health and everyday living. Figure 4 shows that households in the metros have better access to piped water (off or on-site) than elsewhere, although Gauteng’s position has deteriorated slightly because of urbanisation. There is a bigger backlog in the former Bantustans, where most families have no piped water. Yet these areas have experienced the biggest proportionate improvements in recent years.

*{figure 4 around here}*

Sanitation is another essential requirement for hygiene and public safety as well as human dignity. The standard indicator is households with no access to toilet facilities or just a bucket toilet. Figure 5 shows that metro families have better access to sanitation than rural. There has been less improvement in the metros than elsewhere, narrowing the gap. Urbanisation made it harder for the metros to eliminate the problem.

*{figure 5 around here}*

Electricity is safer, cleaner and more reliable for cooking, heating and lighting than paraffin, wood, coal or candles. Figure 6 shows that access to electricity is more even across the country than water or sanitation. About one in six metro households still lack electricity, compared with one in four in the former Bantustans. Everywhere has seen big improvements in electricity access over the last decade, especially the rural areas. Gauteng's pattern has been different because of household growth.

*{figure 6 around here}*

The consistent finding is that state housing and municipal services in the cities have more or less kept pace with demographic growth, except in Gauteng where the pressure has been greater. Outside the cities the share of households with permanent shelter and services has increased more quickly. With many more households enjoying such facilities, there are fewer people at risk of public health and environmental hazards caused by inadequate services. It seems fair to conclude that there has been clear progress in terms of the narrow definition of resilience. More people living in cities are better-off as a result improved services, and there is less hardship, ill-health and homelessness.

The other dimension is whether the location of new development has been strategic and improved the urban form. This requires building low income housing closer to economic opportunities and creating jobs closer to poor communities. In reality there is growing realisation that little has been achieved in either respect. The NPC stated: "South Africa's towns and cities are highly fragmented, imposing high costs on households and the economy. Since 1994 ... little progress has been made in reversing apartheid geography" (2012, p.266; see also, Treasury, 2011a; OECD, 2011).

This is partly an unintended consequence of the government's preoccupation with numerical housing targets. Investment in bricks and mortar has been divorced from a broader process of reducing poverty and creating sustainable communities. A specific model has been rolled out in which the state buys the land, gets municipalities to provide the services, grants tenure to poor families, and outsources the building of small houses to private contractors. Economising on the land costs has produced identical housing units on greenfield sites, usually on the periphery of existing townships. One house per plot means low densities that complicate the provision of public transport and social facilities, creating dormitory

settlements rather than enabling environments for human development and economic activity (SACN, 2011; Treasury, 2011a; NPC, 2012). New housing has reinforced the inherited pattern of spatial separation, at worst creating enlarged poverty traps on the urban outskirts.

Continuing urbanisation and peripheral expansion have put the transport system under immense pressure to accommodate rising demand for travel associated with long distance commuting and growing car ownership. In theory transport can improve the way cities function and connect the patchwork urban form by supporting denser development around transport nodes and corridors. This requires careful alignment of transport investment, spatial planning, land-use decisions and bulk infrastructure plans.

Yet transport policy, like housing, has been inflexible and unresponsive to location (Wilkinson, 2008; van Ryneveld, 2010; SACN, 2011). The concerns of motorists for efficient roads have dominated, and the links with urban development have been neglected because decisions are made in silos. Road building continues with major schemes such as the Gauteng Freeway Improvement Project. Public transport suffers from historic under-investment and cannot cope with passenger growth, causing serious unreliability, overcrowding and safety problems. Over 90% of government funding is allocated to the provinces and separate national entities such as the Passenger Rail Agency and National Roads Agency, which are remote from peoples' everyday (local) travel realities. Disjointed institutions mean that transport responses to urban sprawl have been piecemeal and reactive, with no attempt to coordinate transport, land-use and infrastructure policies.

Public bus services encapsulate the urban transformation challenge. The government subsidises commuter services run by private companies - the same system that was introduced under apartheid to enable poor blacks to commute long distances to work from outlying townships. The subsidies were calculated to ensure people paid an affordable fare, which meant longer trips received a disproportionate subsidy. This compensates people for travelling further but is ultimately counterproductive in reinforcing peripheral living. On some routes, people commute to jobs that pay much less than the cost of the subsidy (Muller, 2010). It would be more sensible to subsidise well-located housing. The government has failed to renegotiate the system and introduce competition because the bus operators are so well-established.

In summary, spatial patterns of urban development remain unchanged and cities have not prepared well for urbanisation. Vested interests, institutional inertia, and centralised sectoral policies have inhibited the crafting of more appropriate, city-level solutions. The continuing fragmentation of urban investment decisions inhibits a more compact built form from emerging. Poverty traps persist in the absence of policies to increase access to jobs and livelihoods for people living in outlying settlements.

### **The responsiveness of city government**

The resilience of city governments can be interpreted in two ways. The engineering-related dimension can be linked to the popular support and trust of citizens in civic authorities, which gives them basic legitimacy and authority. The broader, evolutionary aspect can be related to the strategic and technical capabilities of city governments to initiate and sustain progressive change. Reconciling these features is important to manage the tensions involved in promoting transformation without undermining peoples' security in the future. The metros were intended to deepen democracy by involving communities in decision-making, but also to be bold about driving urban reconstruction.

Popular trust is an indicator of institutional responsiveness and credibility. Trust strengthens the threads that hold society together and is essential for exercising political power and effective government. The vision and integrity of civic leaders is bound up with public trust, and is vital for societies in transition because their institutions are more fragile and vulnerable to transgression, since informal constraints and conventions are undeveloped (Rotberg, 2012). If citizens judge city governments trustworthy they are more likely to support shifts in policy, pay their taxes, and participate in consultative exercises. Dwindling trust creates uncertainty and instability, and undermines popular consent for government action. Mistrust may reflect all kinds of institutional difficulties, from poor communication and staff shortages to political infighting, administrative incompetence and corruption.

Table 4 shows shifting patterns of trust over the last decade by comparing local government with other institutions. Most public ratings improved between 1998 and 2004, followed by a decline. Confidence in local government was consistently lower than in other entities except political parties. Between 2004 and 2007 local government suffered the biggest decline in trust, suggesting growing concern about its performance. Comparing the late 1990s with the

late 2000s, the lack of improvement is striking considering the major municipal reorganisation at the beginning of the decade. Meanwhile, trust in the courts of law and other institutions has tended to increase.

*{table 4 around here}*

Table 5 shows a sharp deterioration in trust in the Gauteng metros compared with the coastal and other municipalities. Dwindling trust may be linked to municipal misconduct. The two metros with the biggest declines in trust - Ekurhuleni and Tshwane - are subject to a prolonged investigation into alleged corruption, including irregular procurement processes, nepotism in staff appointments and misappropriation of municipal assets (Groenewald, 2010). Political factionalism also resulted in the ANC's regional committee being disbanded and the Ekurhuleni mayor being replaced. Tshwane's municipal manager was suspended in October 2009 on charges of misconduct and maladministration, and 15 officials implicated in an internal corruption report were suspended pending a fuller investigation. Tshwane's mayor was also replaced.

*{table 5 around here}*

The quality of public services is a foundation for public trust and a measure of municipal effectiveness. In 1997 national government introduced a set of principles in an effort to transform the over-centralised, rule-bound service delivery systems inherited from the previous regime. Described as Batho Pele (or 'people first'), they were intended to encourage consultation, transparency, competence, equity and value for money (Roberts and Hemson, 2008). These principles provide a framework for assessing whether municipal services are responsive to users. Peoples' attitudes were assessed in the 2008 SASAS.

Figure 7 shows the level of agreement with statements about services relating to each principle, focusing on people in the metros. The results show that perceptions of municipal services are very mixed. Municipalities never get a positive rating from the majority of respondents – at least as many hold negative views. It seems that a culture of public service, citizen involvement and accountability is some way off. In more detail, almost half of respondents believe that efforts are being made to improve access to services. Perceptions of quality and value for money are finely balanced between supporters and critics. People are

most critical of the lack of consultation and responsiveness. The metros do not seem to communicate or react quickly enough to problems, contradicting the principles of Batho Pele and developmental local government.

*{figure 7 around here}*

Community protests are an extreme form of direct political action born out of frustration with the pace and quality of essential services and housing. Most protests have been targeted at local government and linked with accusations of incompetence and misconduct (Atkinson, 2007; SAPRU, 2009). They seem to have become increasingly violent, damaging public facilities and causing disruption to everyday life. They draw attention to poverty and maladministration, but also fuel perceptions that municipalities are in crisis and that failure is widespread.

Systematic information on service protests has been compiled by Municipal IQ through scanning media reports and creating a consistent database that is regularly up-dated. The number of protests appears to have risen sharply in the last few years (figure 8). Protests in 2012 accounted for nearly a third of the total recorded since 2004. This escalation has caused growing concern at the heart of government. Social unrest destabilises communities and threatens the legitimacy of the democratic system. Vandalised infrastructure is also very costly to repair.

*{figure 8 around here}*

The location of the protests has been uneven across the country, with a concentration in the larger metros. Figure 9 shows the total number of protests in each of the main cities between 2004 and 2012. This accounts for about half of the national total. Cape Town and Johannesburg have experienced disproportionate numbers. Most have occurred in informal settlements and are associated with demands for better living conditions.

*{figure 9 around here}*

A special parliamentary report identified various governance and wider reasons for the protests:

“systemic (such as maladministration, fraud, nepotism and corruption in housing lists); structural (such as healthcare, unemployment, and land issues); and governance (such as weak leadership and the erosion of public confidence in leadership)” (SAPRU, 2009).

An underlying factor appears to be the pressure of urbanisation coupled with frustrated expectations of achieving a better life (Municipal IQ, 2013). Containing population growth within the boundaries of existing informal settlements intensifies the pressure on resources and raises social tensions. Curtailed aspirations from being trapped on the urban outskirts are aggravated by hollow promises of improved services, reflecting municipal indifference or incapacity (Harber, 2011; Huchzermeyer, 2011). Communities believe the formal channels of political influence are too slow or ineffectual. The recession has worsened the problem by pushing more households into poverty and debt.

Heightened negativity surrounding local government has prompted national government to introduce more stringent procedures for regulating municipalities. More prescriptive rules and reporting requirements have reduced their discretion, restricted their scope for experimentation and innovation, and limited their flexibility to respond to local needs (SACN, 2011). The pressure to avoid adverse audits has diverted resources from front-line delivery into back office bureaucracies. A growing ‘culture of compliance’ encourages backward-looking behaviour and inhibits the creativity required to address difficult urban problems. Greater procedural complexity also delays investment in infrastructure and related projects. Under-spending on municipal capital budgets increased from 14% in 2008/09 to 25% in 2010/11 (Treasury, 2011b).

To sum up, there has been no improvement in popular support for local government over the last decade. In fact public trust seems to have deteriorated and protest activity has escalated. This reflects the structural challenges facing urban areas and concerns about the integrity of municipalities. The inability of civic leaders to connect meaningfully with citizens limits the possibilities of joint problem-solving. The government’s response of tighter regulation risks hindering rather than helping the metros’ ability to get on with delivering their mandate.

## **Conclusions**

The creation of metropolitan municipalities was intended to overcome the legacy of spatial segregation and exclusion through urban restructuring and redistribution. The concept of resilience usefully frames the analysis of progress and achievements. First, the notion of resilience supports the idea that crises can precipitate a tipping point from which an opportunity emerges to reconfigure the system. The reorganisation of local government laid just such a foundation for bold transformative policies.

Second, resilience provides a way of thinking about how the complex systems that make up cities resist or adapt to political disruption and institutional redesign. Some functions may persist while others evolve in the changing circumstances. These shifts may take the form of fairly minor, incremental adjustments, or they may be far-reaching, depending on the internal dynamics of the system, feedback effects and resistance from vested interests. There is evidence for both continuity and incremental change in South African cities, but fewer signs of transformation.

In the case of the urban economy, continuity is the dominant feature. The inherited economic structure has persisted, thereby reproducing inequality and unemployment. The period of consumer-driven growth during the 2000s did not provide a platform for sustained prosperity, especially with the shock of the global recession. Social grants have compensated for the government's inability to shift the growth trajectory, but they are a palliative for poverty not a long-term solution.

Continuity is also more significant than change in the built environment. The segmented structure of cities has been perpetuated through low income housing built on the periphery. Sectoral policies in transport and infrastructure have also tended to reinforce rather than challenge historic spatial patterns. Applying a narrower concept of resilience, there has been progress in providing many vulnerable families with housing and services. This has reduced the extent of suffering and homelessness, even if it has not transformed their economic prospects.

In the case of local government, there has been a major consolidation of municipal structures and systems. However, this has not been translated into greater public support and confidence in the future. Community protests expose deep concerns about municipal accountability and

competence to improve household services. It appears that metro leaders need to take their relationships with local citizens much more seriously if they are to become real catalysts for transformation.

Looking ahead, weaknesses throughout government expose cities to growing risks of social instability. The dominant political party could do more to strengthen the leadership of the metros, and the government could help to build their administrative capabilities. Different parts of government need to work together better to develop the techniques and capabilities required for meaningful change on the ground. This includes: (i) strategic skills to initiate and promote change (including planning ahead, thinking creatively about local needs, being resourceful and taking calculated risks), (ii) process skills to enable change (understanding the role of different stakeholders, engaging communities and investors, managing contested situations, and negotiating deals between different interests), and (iii) practical skills to deliver change (project planning and management, organisational alignment, financial engineering and managing people). This is consistent with resilience theory in that robust social systems possess a high degree of self-organisation and capacity for experimentation, learning and flexibility. South African metros need to get better at anticipating and responding to challenging conditions by pursuing solutions tailored to local realities.

We conclude with a few broader reflections on the value of resilience as a framework for analysing urban change. First, there are useful insights to be gained from using resilience to explore the relationship between continuity and change in urban systems. Engineering and evolutionary resilience are generally portrayed as alternative, mutually-exclusive approaches. Yet there are advantages in keeping both ideas in the frame in order to contrast the extent and nature of systemic change. Second, resilience is helpful in analysing the interactions between different dimensions of the urban system, although there are risks of dilution from applying the ideas loosely. Therefore it is important to define the scope and context in which the concept is being used carefully.

A third point is that in order to understand the dynamics of change it is important to go beyond the superficial interactions between different dimensions of the system and delve deeply to uncover the driving forces. Disparities in the distribution of power and influence across society need to be taken seriously since they are not always apparent from events. Finally, the concept of resilience appears to have particular potential in analysing the

interaction between the human and natural dimensions of urban systems, especially with mounting concerns over the social impact of deteriorating ecosystems, human vulnerability to extreme weather, inefficient resource consumption patterns and the effects of urbanisation on global environmental change. This is an important agenda for further research.

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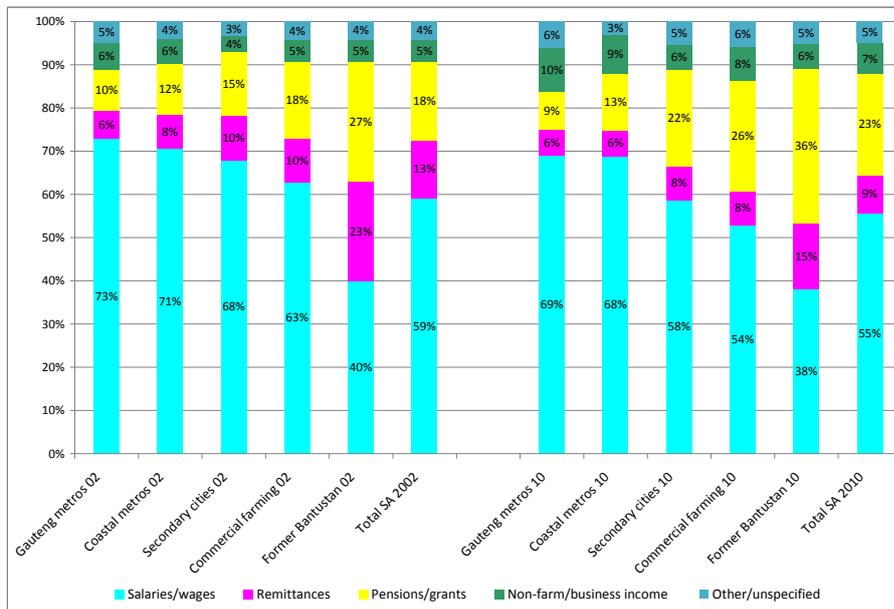
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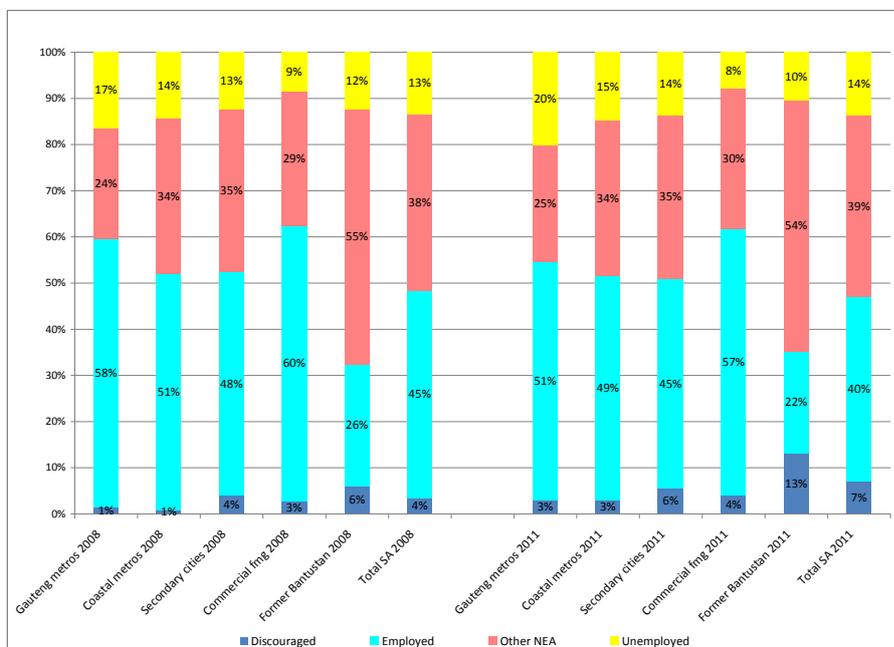
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Figure 1: Main source of household income, 2002 and 2010



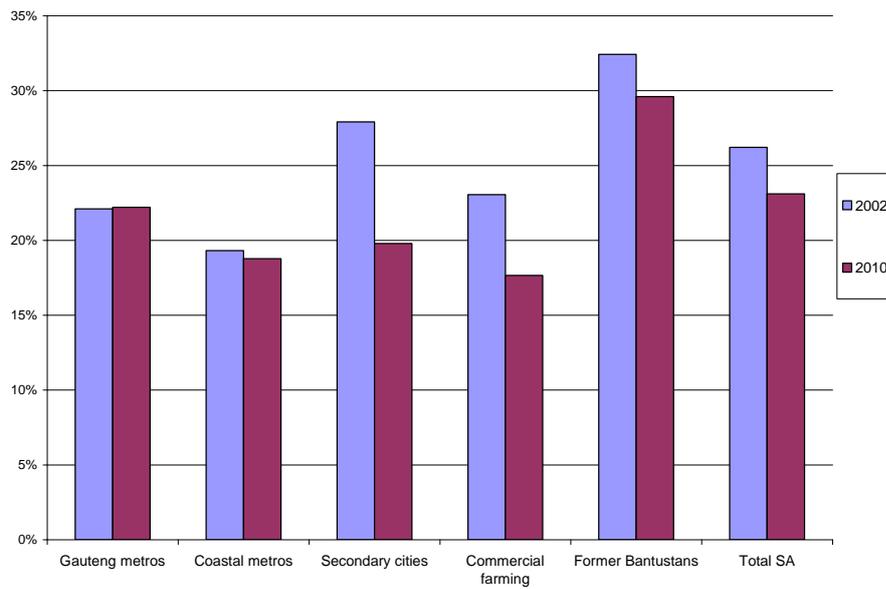
Source: General Household Survey, 2002 and 2010

Figure 2: Employment status of working age population, 2008-2011



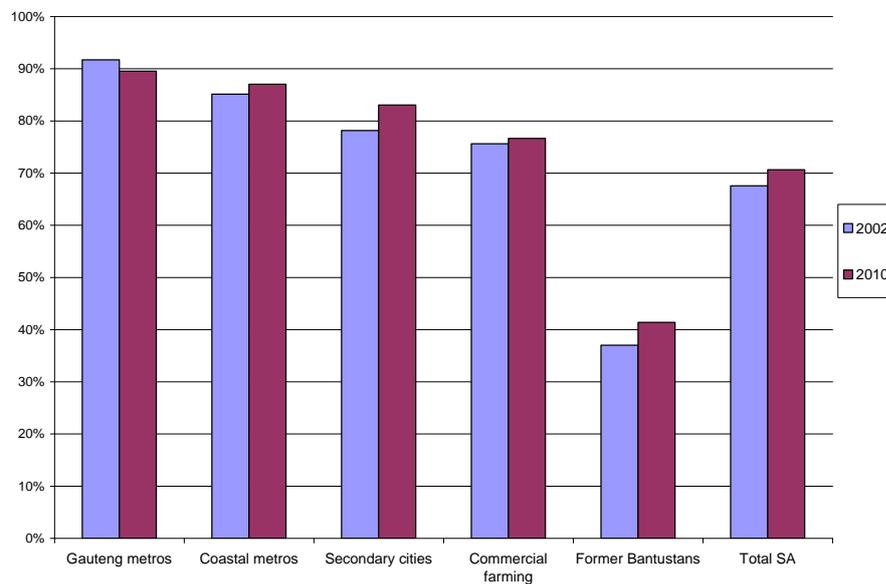
Source: QLFS, 2008 and 2011

Figure 3: Percentage of households living in informal dwellings, 2002-2010



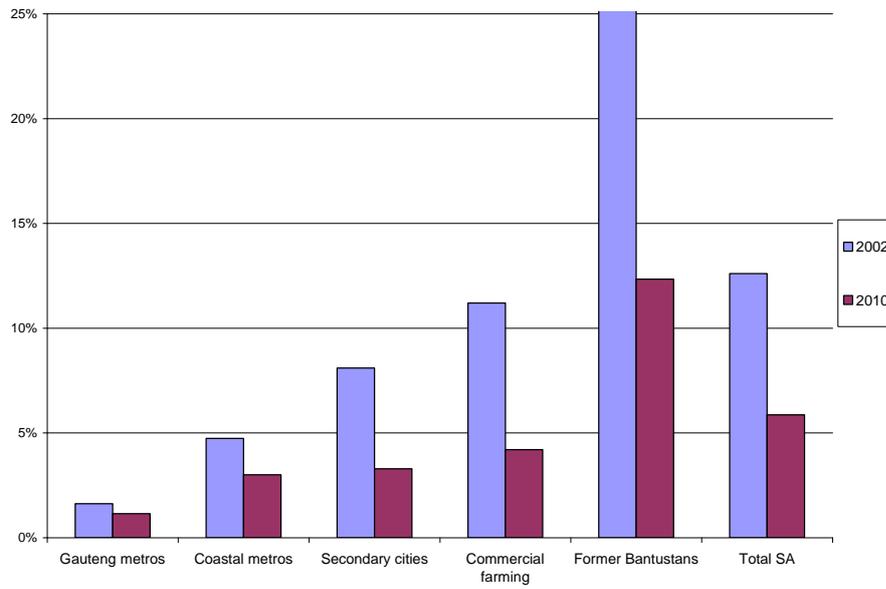
Source: General Household Survey, 2002 and 2010

Figure 4: Percentage of households with access to piped water, 2002-2010



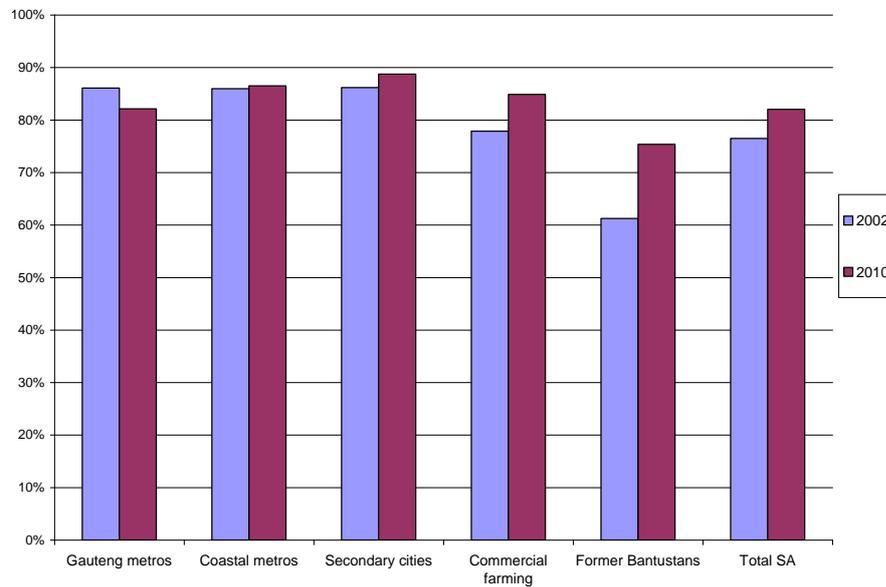
Source: General Household Survey, 2002 and 2010

Figure 5: Percentage of households with bucket toilets or no toilets, 2002-2010



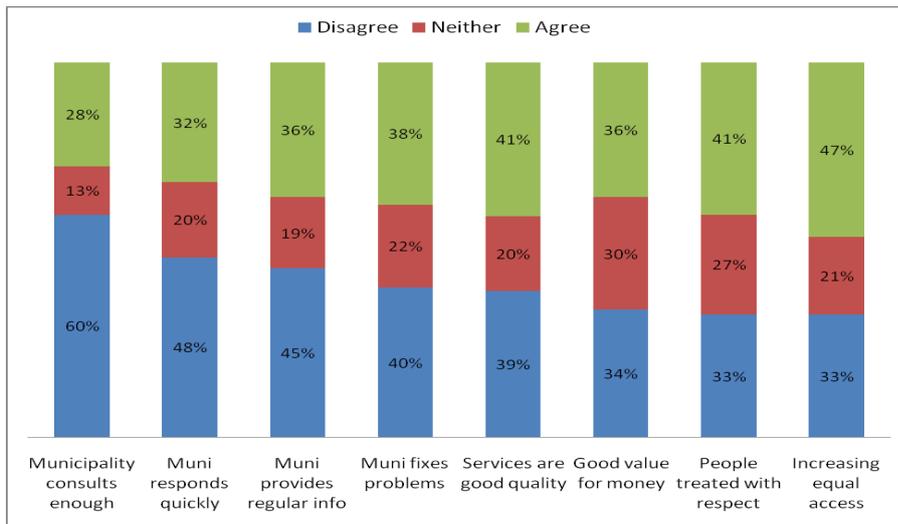
Source: General Household Survey, 2002 and 2010

Figure 6: Percentage of households with access to electricity, 2002-2010



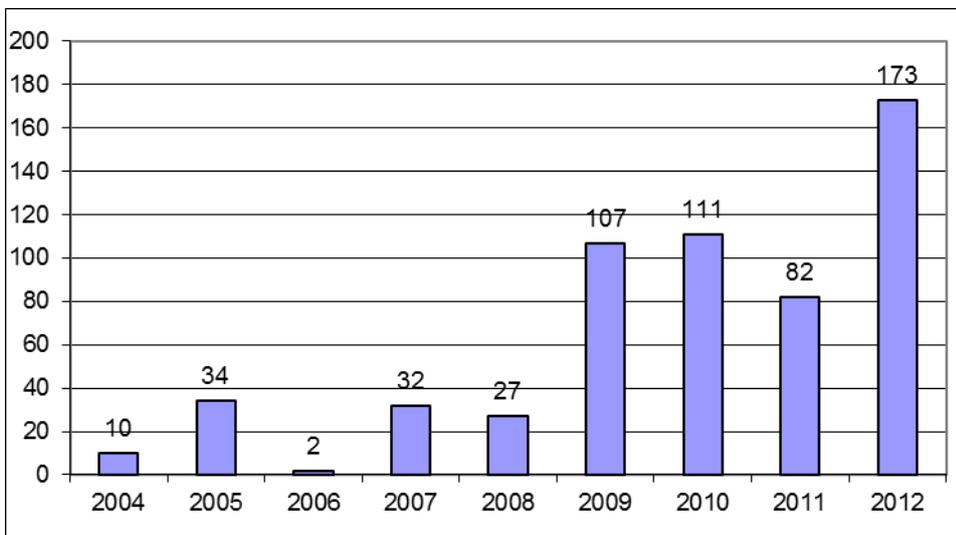
Source: General Household Survey, 2002 and 2010

Figure 7: Agreement with statements about municipal performance - metros, 2008 (%)



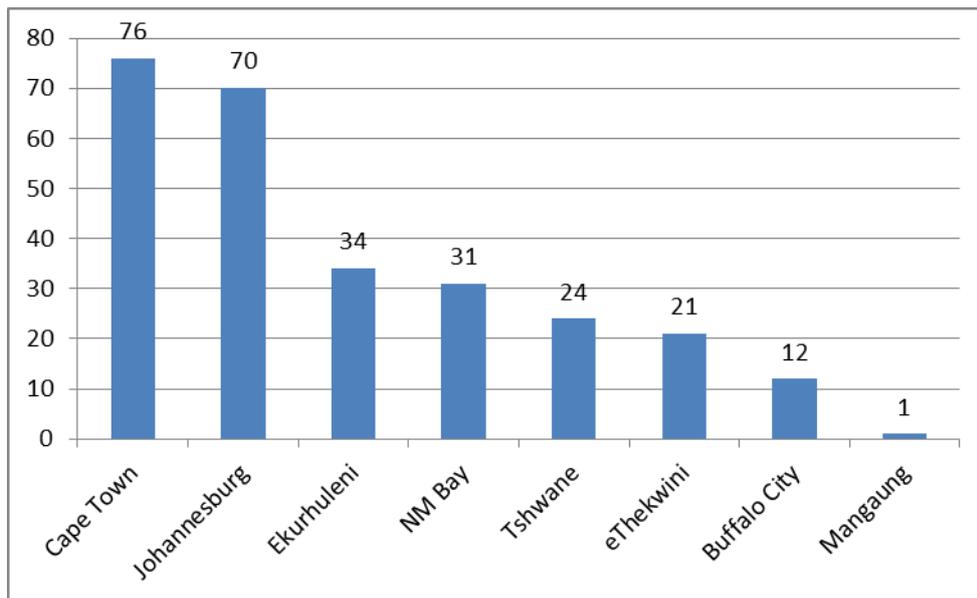
Source: HSRC South African Social Attitudes Survey.

Figure 8: Major service delivery protests, 2004-2012



Source: Municipal IQ Municipal Hotspots Monitor, 2013

Figure 9: Major service delivery protests by municipality, 2004-2012



Source: Municipal IQ Municipal Hotspots Monitor, 2013

**Table 1: Employment in the metros and rest of South Africa, 2001-2011**

	Employment in 2001 (000)	Employment in 2011 (000)	Change (%) (000)
Gauteng metros	2,500	3,903	1,403 (56%)
Coastal metros	1,949	2,577	628 (32%)
Rest of South Africa	5,135	6,700	1,665 (30%)
<b>Total</b>	<b>9,584</b>	<b>13,180</b>	<b>3,596 (38%)</b>

*Source:* Statistics SA: Census of Population

**Table 2: Population in the metros and rest of South Africa, 2001-2011**

	Population in 2001 (000)	Population in 2011 (000)	Change (%) (000)
Gauteng metros	7,686	10,535	2,849 (37%)
Coastal metros	6,988	8,334	1,346 (19%)
Rest of South Africa	30,146	32,902	2,756 (9%)
<b>Total</b>	<b>44,820</b>	<b>51,771</b>	<b>6,951 (16%)</b>

*Source:* Statistics SA: Census of Population

**Table 3: Employment rate in the metros and rest of South Africa, 2001-2011**

	Employment rate in 2001	Employment rate in 2011	Change 2001-2011
Gauteng metros	47.3	51.3	+4.0
Coastal metros	42.5	44.4	+1.9
Rest of South Africa	31.2	32.7	+1.5
<b>Total</b>	<b>36.4</b>	<b>38.9</b>	<b>+2.5</b>

*Source:* Statistics SA: Census of Population

**Table 4: Trust in Institutions, 1998-2008** (% ranked in descending order by trust in 2008)

<i>Trust in:</i>	1998	1999	2000	2001	2003	2004	2005	2006	2007	2008
Churches	82	81	74	81	84	81	81	82	83	82
Broadcasting Corporation	-	-	-	-	75	73	71	72	-	71
National government	47	60	43	52	57	69	64	59	52	51
Courts	42	45	37	45	50	58	56	52	49	49
Parliament	-	-	-	-	57	65	59	55	46	47
Police	42	47	39	40	42	46	45	39	38	40
Local government	37	48	32	38	45	55	48	44	34	38
Political parties	30	39	29	27	-	-	42	37	27	29

Note: Percentages saying they strongly trust or trust in each institution in SA at present.

Source: HSRC National Opinion Survey and South African Social Attitudes Survey.

**Table 5: Trust in local government, 2003-2008** (%)

Trust in local government in:	2003-2004 average	2007-2008 average	Difference
Coastal metros	42	45	+3
Gauteng metros	45	25	-20
Rest of South Africa	54	37	-17

Note: Percentages saying they strongly trust or trust in local government. The data for individual years is added together and averaged to increase the number of responses and to reduce the sampling errors.

Source: HSRC South African Social Attitudes Survey.