

Review of Factors Influencing Socially Cohesive Smart Societies in South Africa

Ayodeji OKE, South Africa; Clinton AIGBAVBOA, South Africa; and Taniele CANE, South Africa

Keywords: Built environment, Construction industry, Education, Knowledge, Mentoring, Skills, Training.

SUMMARY

Although, the Smart City theories have been around since the 19th century, the lack of research materials on this concept in South Africa can clearly be seen in current literature materials. As a result, this study aim to bridge the knowledge gap held by urban citizens by examining the influences of socially cohesive cities. The Smart City concept is still fairly new to the South African built environment therefore, a study on smart cities in the Gauteng region in the country was carried out with a view to emphasis its usefulness in developing cities which are thriving in the areas of sustainable and resilient city systems, transparent governance, increased citizen participation specifically in the decision making process in local governments- thus, promoting the formation of Socially unified and sustainable communities- as well as the mobilization of ICT infrastructures.

Review of Factors Influencing Socially Cohesive Smart Societies in South Africa

Ayodeji OKE, South Africa; Clinton AIGBAVBOA, South Africa; and Taniele CANE, South Africa

1. INTRODUCTION

Smart cities make use of the advances in technology to transform the way in which the city functions on a daily basis (Das, 2012), these include ICTs, digital technology and the Internet of Things (IOT) form the epicenter of the smart city idea, thus enabling the development of integrated city departments (Sha and Sonn, 2015), technology savvy infrastructures and city systems (Nam and Pardo, 2011) as well as the efficient management of the cities utilities and resources (Das, 2012). Furthermore, the main objective of the smart city is to provide an environment that improves the quality of life of the citizen (Blumenthal, 2015), by improving the regions stakeholders' ability to make provision for: enhanced service delivery, job creation initiatives, increased knowledge management and educational facilities (Sha and Sonn, 2015).

The government and city planners of developed and some developing countries, have observed the advantages revealed by these smart concepts and have embarked on the journey of transformation and implementation of Smart City concepts in their planning strategies (Das, 2012). Moreover, one of the key functions of a city is to improve the lives of the urban citizens, therefore, this study examines the factors influencing socially cohesive societies with a view to enhancing the Quality of Life of the smart urban citizen.

2. FACTORS AFFECTING SOCIAL COHESION IN CITIES

This section discusses various factors influencing the formation of socially cohesive cities.

2.1 Nation Building and Governance

Nation-building is defined as the provision of a metropolis consisting of a population with a multiple range of; cultures, beliefs, mother-tongue languages and "diverse origins". Moreover, it is a nation that is founded upon an unprejudiced constitution- the supreme law of the land (Abrahams, 2016). In addition, the concept of Nation-Building includes the deployment of; an exclusive country-wide academic syllabus, an inter-connected financial sector as well as stimulating the progressive emergence of communities that collectively make the concerted effort; to reduce the factors driving social segregation among their residents. To this extent, the aspect of Nation-Building encourages the democratic principles of the Republic of South Africa. Therefore, the concept of Nation-Building is identified as one of the essential

components in developing a socially cohesive society, which supports the outputs of; social inclusion, social capital and social mobility.

The role of the democratic government in the development of Nation-Building policies and strategies will ultimately determine its success. However, the deployment of such a large initiative requires the concerted co-operation of the nation's inhabitants (Transparency International – The Global Anti-Corruption Coalition (TI), 2016c). To this end, the confidence levels of the citizens towards the country's political institutions as well as their willingness to vote in elections will determine whether they aspire to form a collaboration with the democratic government of SA (DPME, 2015; UN DESA, 2012). In the instance, where the citizens trust and faith in the political bodies of the country is poor, the proposed targets of the Nation-Building strategy will not be fulfilled; thereby, further driving the rate of exclusion and segregation in the countries societies (Mosselson and Peberdy, 2016).

Moreover, the citizens perception of the country's corruption levels, further affects the ability of the country's administrative authorities, in achieving the targets set out in the National-Building strategy (SACN, 2016), The Transparency International – The Global Anti-Corruption Coalition (TI, 2016c), defines corruption as the exploitation of the revenues afforded to government authorities, throughout the hierarchal pyramid; on the one hand to the detriment of the countries systems, sub-systems as well as the rights of its inhabitants and on the other hand for the inequitable financial growth of the administrative authorities (SADAC, 2012).

According, to the Department of Planning, Monitoring and Evaluation (DPME, 2015); the high rate of corruption in SA accentuates the need to establish strategies and standards which decrease these rates. An annual report presented by TI Corruption Perspectives Index, quantifies the above statement. The annual index aims to determine the corruption levels experienced in a country's civic systems, in doing so; they are able to provide a ranking of the region in relation to the total number of global countries analyzed in the annual index as well as through the use of various indicators they are able to score a countries level of corruption on a scale from 0, representing extremely corrupt to 100 indicating extremely low levels of corruption (TI, 2016b).

Smart strategies have the capability to support the process of Nation-Building and the regime of democratic governance in South Africa (City of Johannesburg Metropolitan Municipality, 2012), thereby assisting societies in becoming more inclusive as they empower citizens to collectively work together. Through the formation of such collaborative relationships, citizens will have the ability to innovatively improve their proficiencies. In doing so, they create opportunities for local and national authorities to deploy; even-handed tax systems, economic growth strategies as well as mobilize policies to assist in mitigating the concerns of basic

resource shortages (City of Johannesburg, 2011a).

2.2 Sense of Belonging

Instilling the perception of belonging - which is also known as social capital (Abrahams, 2016) - in citizens and among different societies, requires the formation of a unified country, that is, a country in which cities, regional areas and authorities on a national level share a mutually agreed set of “values, norms, visions and goals”, to aid them in the process of developing a country in which citizens work in partnership with one another (SADAC, 2012). Furthermore, the factor includes the ability of an individual to feel as if they are part of the community they associate themselves with as well as the sense that they are appreciated (SADAC, 2012; Berrone and Ricart, 2016). However, fostering the perception of belonging to a common group or community requires the modification of civic areas and infrastructures; which provide citizens with a safe haven that supports the interaction among the different citizens (South African Cities Network (SACN, 2016).

According to SADAC (2012), the ability of individuals to acknowledge and respect the choices and beliefs of one another, is identified as the recognition sub-factor. Much more, a prerequisite of this sub-factor is the need for inhabitants to master the capability of providing each other with constructive criticism, which is conveyed with a positive tone of voice or non-violent gestures (TI, 2016c).

2.3 Economic Growth

The evolution of a country's economy is critical for the formulation of a socially inclusive society, for instance the UN DESA (2012) stressed the need for state authorities to re-focus and re-strategies, the manner in which their fiscal sector is amalgamated with intercontinental economies. The Gross Domestic Product (GDP) is used to measure the growth rate of a country's economy, according to Statistics South Africa (Stats SA, 2016a), the SA economy grew by 3.3% in the first 6 months of 2016, which is an increase of 0.3% from the first 6 months of 2015. Although this marginal growth looks promising for the South African economy, the deficit between GDP and the country's rate of urbanization has increased, as a result; a decline in the GDP per capita has resulted in revenue losses for the working class citizens (Sachs, 2016).

Furthermore, the capacity to boost a country's economic growth perspectives, directly impacts the ability of the state to foster the creation of employment lead-ins for its citizens. For this reason, failure to enhance fiscal opportunities for citizens, enterprises and the state, negatively affects the unemployment rate of a country (SADAC, 2012). The latter is underscored in the statistics; the SA unemployment rate increased from 25% in 2011 (SADAC, 2012) to 26.7%

in the first quarter of 2016 (Stats SA, 2016b). However, the South Africa democratic government has confronted the factor of equal opportunities for all by presenting an equal distribution of resources and financial prospects to its population since the disposal of the Apartheid Regime in 1994 (SADAC, 2012).

To this end, one of the major implementations by the democratic government of South Africa was the passing of the Broad-Based Black Economic Empowerment (B-BBEE) Act No. 53 in 2003. Although, the deployment of the B-BBEE Act has done wonders for these previously disadvantaged individuals. According to Mosselson and Peberdy (2016), findings from the GCRO QOL survey for the year 2015 revealed that, a number of survey respondents feel that not all individuals that are identified as previously disadvantaged should automatically benefit from the deployment of such legislation. The latter, further adds that the formation of such acts is negatively affecting communities ability to become inclusive. Furthermore, the democratic government of South Africa has implemented several programmes in an attempt to decrease the high unemployment rate experienced in the country, these include among others: the Expanded Public Works Programme (EPWP) and the Community Works Programme (CWP) (Peberdy and Götz, 2016).

The EPWP has been deployed by the National Department of Public Works (NDPW, 2006). The primary aim of the programme is to create job opportunities throughout the countries multiple sectors, for members from the communities surrounding the projects/initiatives locations. Since the implementation of the programme in 2004 a total of 5 745 718 job openings have been created (DPME, 2015). However, according to the GCRO QOL survey 2015; the general consensus of the learners who have been involved in the EPWP and the CWP, indicate that the programmes have assisted them in developing their skills (Peberdy and Götz, 2016). Moreover, the programmes have not been as successful in assisting personnel; in the establishment of their own unique enterprises, due to the fact that the programmes are unable to spur the innovative dynamics afforded to these individuals, as a result the number of entrepreneurs emerging from initiatives such as these are very low (Peberdy and Götz, 2016).

2.4 Poverty and Inequality

According to the City of Johannesburg (2012), there is a distinct relationship between poverty, inequality and unemployment. To this extent, one of the aspirations of the implementation of the country's National Development programme 2030 (NDP, 2012); is to reduce the number of poverty stricken citizens by the year 2030, through the support of the SA municipal, provincial and national democratic stakeholders. Through the incorporation of a number of different networks in their societies, amongst others, these include: providing the citizens with complimentary basic health services from civic hospitals and clinics; reducing the number of citizens sleeping on the streets by providing basic housing to them; furthermore, they have

reserved these disadvantaged individuals from the additional expenditure pertaining to the consumption of water, electricity, sanitation and transportation (SADAC, 2012).

Moreover, a reduction in a cities poverty statistics requires the mobilization of local initiatives which encourages citizens to become innovatively pro-active and optimistic; through the provision of future fiscal and knowledge prospects (COJ, 2012:107). Similarly, according to SADAC (2012), the GDP per capita; has a direct effect on the lowest income classes of the South African population. Contrary to the aforementioned, the DPME (2015) stipulated that although the index is an important component used in the analyses of income distribution among the population, it does not truly reflect the financial distribution among the different income classes, they further indicate that the average growth of the GDP per a capita since 2003, has averaged at 2%. Furthermore, through the mobilization of the South African National Planning Commission (NPC), the South African government aspires to confront the provision of equal opportunities to all using a bottom-up approach. To this end, their main priority is to expedite strategies that will improve the level of schooling afforded to the youth of SA; the central focus of empowerment will be on those from disadvantaged backgrounds.

To provide a possible solution to acquiring these essential skills and work experience, a youth wage subsidy scheme is being brainstormed and planned- the aim of the scheme is to reduce the levels of expenditure enterprises are required to absorb; when employing these unexperienced individuals (City of Johannesburg Metropolitan Municipality, 2012). The national census, conducted by Stats SA (2011:1), presented a youth unemployment rate of 31.50% in the City of Johannesburg. The formation of a socially cohesive city requires the exposure of the dynamic potential harnessed in women. For this reason, there is a need for the provision of opportunities for women, specifically in the areas of: the country's administrative authorities, judiciary systems, financial sector, increased involvement with the public as well as the education and cultural sub-systems of the country (DPME, 2015).

2.5 Access to Basic Services

According to SACN (2016), the provision of basic services has improved nationwide. The JHB revealed an increase to the availability of basic services from 88.1% in 2001 to 93.3% in 2011, ECU revealed an increase from 82.9% in 2001 to 86.6% in 2011 and the COT revealed an increase of 78.7% in 2001 to 85.8% in 2011. As a result, the COT has improved its citizens access to basic services by 7.1%, which is the largest out of the three major metro's in the province of Gauteng. Moreover, the relationship between social inclusion and access to basic services is directly proportional (DPME, 2015). On one hand, this is directly proportional between the two elements could prove to be advantageous to metropolitans but on the other hand it could be detrimental to its future sustainability (SACN, 2016). Nonetheless, Abrahams (2016) spurs the factor of access to basic services for the formation of an equitable society. In

addition, the NDP 2030 (2012) emphasizes the importance of mitigating South African concerns of water security to facilitate and to promote the mobilization of a prosperous and united civic society.

2.6 Co-operation and Community Participation

This factor accentuates the need to stimulate the desire of citizens to be involved with the different activities going on in their communities. In doing so, it encourages the formation of a unified society as the citizens are exposed to different and unique individuals (SADAC, 2012). A barrier that requires attention before such a process of unification can take place, is the need for citizens to be impartial to those within their community with diseases and viruses such as: HIV/AIDS and TB, due to the implications; suffered by both the community and the individual (SADAC, 2012). However, the QOL survey conducted by the GCRO in 2015, stresses the lack of civic participation and the formulation of collaborative relationships between the different community members, societies and organizations (Culwick, 2016).

Furthermore, a sub-factor identified as inclusion refers to the aspect of citizens not being excluded from social entertainment events or from their involvement in National Government Organizations (NGO). Similarly, it refers to the equitable mobilization of growth windows for all (SADAC, 2012). Thus, the term simply refers to a society in which all citizens are treated equally, regardless of the individual's financial status or their indigenous origins (SACN, 2016). The sub-factor of belief provides an analysis of the individual citizen's faith and trust in themselves. Upon acknowledgment of their aptitudes, citizens will feel empowered as well as inspired, to assist and help build up their communities. Thus spurring, the transfer of skills among the different citizens as well as fostering a platform which encourages community members to unite and brainstorm ideas and solutions to community concerns (SADAC, 2012; SACN, 2016). However, a bond between citizens as described above cannot be formed unless the citizens are able to build an honorable relationship with one another. Upon the formation of such a consensual relationship, a degree of confidence will emerge among the citizens and ultimately the community as a whole (City of Johannesburg Metropolitan Municipality, 2012).

2.7 Discrimination

There are diverse cultures, historical backgrounds and languages in South Africa and the province of Gauteng has been identified as the country's most diverse province (Gauteng Provincial Government (GPG), 2014), more specifically the City of Johannesburg Metropolitan Municipality. This is seen as the principal city in the region, due to the fact that the city is constantly expanding in all its city-systems, thus creating an environment which is encouraging and attracting for individuals all over the world (City of Johannesburg (COJ)

2016a). To this extent, in order to facilitate the emergence of a socially inclusive society; SADAC (2012) suggests the national mobilization of a cluster of mutually agreed principles, namely; democracy, freedom, equality, justice and mutual respect. In doing so, they promote the sub-factor of shared values.

The manner in which an individual identifies themselves, aggravates the racism and issues of inequalities in the province of Gauteng. Results presented by the GCRO- QOL Survey 2015, reveal the following: 22% of the respondents identify themselves by their nationality, 20% by their race, 18% by their gender, 10% by their religion and 17% identify themselves as an individual (Mosselson and Peberdy, 2016). Discrimination on the basis of racism and tribalism, is adversely affected by the limited supply of resources. Tribalism refers to the indigenous beliefs and cultures brought-forth by individuals, who are either: national SA citizens re-locating to urban districts or they are individuals from abroad (DPME, 2012). Discrimination on the grounds of Tribalism is rooted from discrimination on the basis of Racism. The latter, according to SADAC (2012) is a direct result of the consequences of the Apartheid Era in SA history.

2.8 Migration and Urbanization

South Africa has an urbanization rate of 60% (USRG, 2015), thus the influx of more than 50% of its population from rural to urban areas has raised many concerns for city level stakeholders. Two of the major concerns of migration for authorities are; their ability to provide basic services and the creation of new infrastructures to cater for the increase in the urban population, with the limited amount of resources at their disposal (SACN, 2016). Furthermore, metro-migrants are defined as individuals whose origins are founded upon in the rural regions and they have moved to the city with the intention of finding employment and building a prosperous future for themselves (SACN, 2016).

In addition, the influx of personnel into these sub-national units, further adds to the already complex social eco-systems dynamics within these different communities. Each of these new migrants occupy their; own opinions, indigenous values and beliefs as well as basic service needs and the desire to growth themselves as individuals. As a result, adding to the pressures of creating an amalgamated and impartial society (City of Johannesburg Metropolitan Municipality, 2012). Despite the high influx rates of foreign individuals into the province of Gauteng, according to Mosselson and Peberdy (2016), the negative perception of the local nationals towards these foreign immigrants, has decreased. To this end, an attempt to further reduce the levels of xenophobia experienced in the country, communities have come together to form a platform, which is used by the different individuals to freely express their fears, opinions as well as experiences, through the use of CWP's, thus further growing the sense of trust and unification among communities (DPME, 2012).

3. CONCLUSION AND RECOMMENDATION

This study develops on current literature by evaluating various factors that can influence social cohesion in societies. The reviewed literature reveals that the factors can be grouped into two which are government and people related. It was observed that the lack of willingness of urban citizens to share knowledge and skills among community members as well as various forms of discrimination and lack of cooperation, results in the inability of the knowledge capital of individuals in the community to expand. This eventually affect social cohesion among the people resulting in lack or low level of development of the individual and the society at large. This is also in agreement with the change of name from Millennium Development Goals to sustainable Development Goals by the United Nations where emphasis is placed not only on the provision of amenities but also on the impact of such on the environment, finance as well as current and future individuals that will be affected by the development. The government also need to put in place policies and regulations for nation building, poverty eradication and unhindered access to basic services and facilities. There is also a need to manage issues relating to migration, urbanization, inequality and other economic indices to manage and enhance social cohesion in any society.

REFERENCES

- Abrahams, C. (2016). 20 years of social cohesion and nation-building in South Africa. *Journal of South African studies*, 42(1):95-96-107.
- Berrone, P. & Ricart, J.E. (2016). *IESE: Cities in motion index 2016*. New York, USA: IESE: University of Navarra Business School.
- Blumenthal, M. (2015). Smart is the new green. 17(1):33.
- City of Johannesburg (JHB). (2011). *GDS2040 Outreach Programme- Week 8- Smart City*, Conference held in Johannesburg, Gauteng: City of Johannesburg Metropolitan Municipality.
- City of Johannesburg (JHB). (2011b). *City of Johannesburg*. Available from: http://www.joburg.org.za/index.php?option=com_content&view=article&id=7222:working-towards-a-smart-city&catid=88:news-update&Itemid=266. (Accessed 28 July 2016).
- City of Johannesburg Metropolitan Municipality (2012). *Joburg 2040: Growth and development strategy (GDS 2040)*. Johannesburg, Gauteng: City of Johannesburg Metropolitan Municipality.
- City of Johannesburg Metropolitan Municipality (COJ) (2012). *Joburg 2040: Growth and development strategy (GDS 2040)*. Johannesburg, Gauteng: City of Johannesburg Metropolitan Municipality.
- Culwick, C. (2016). Gauteng city-region observatory quality of life survey 2015: 1. Quality of life indexes. Pretoria, South Africa: Gauteng City-Region Observatory.

- Das, D. K., Burger, E., & Eromobor, S. (2012). Indicative planning perspectives for development of Bloemfontein as a smart city in South Africa. *Interim: Interdisciplinary Journal*, 11(1), 1-16.
- Department Economic Development and Tourism (DEDT). (2013). *Western Cape Government*. Available from: https://www.westerncape.gov.za/your_gov/254. (Accessed 14 September 2016).
- Department Planning, Monitoring and Evaluation (DPME) (2015). *Development indicators 2014*. Pretoria, South Africa: Department Planning, Monitoring and Evaluation (DPME).
- Gauteng Provincial Government (GPG) (2014). *Gauteng a better place to live: Gauteng provincial government a review of 20 years of democracy 1994-2014*. Pretoria, South Africa: Gauteng Provincial Government.
- Mosselson, A. & Peberdy, S. (2016). *Gauteng city-region observatory quality of life survey 2015: 4. Headspace and happiness*. Pretoria, South Africa: Gauteng City-Region Observatory.
- Nam, T. and Pardo, T.A. (2011). *The proceedings of the 12th Annual International Conference on Digital Government Research*. Center for Technology in Government, USA.
- National Department of Public Works (NDPW) (2006). *Expanded public work programme (EPWP) contractor learnership programme: Management plan for labor intensive construction learnerships*. Pretoria, South Africa: National Department of Public Works.
- National Department of Public Works (NDPW) (2006). *Expanded public work programme (EPWP) contractor learnership programme: Management plan for labour intensive construction learnerships*. Pretoria, South Africa: National Department of Public Works.
- Peberdy, S. & Gotz, G. (2016). *Gauteng city-region observatory quality of life survey 2015: 7. entrepreneurship*. Pretoria, South Africa: Gauteng City-Region Observatory.
- Sachs, M. (2016). *A resilient South Africa making hard choices in difficult times*. Pretoria, South Africa: Treasury South Africa Resilience.
- Sha, R., & Sonn, H. (2015). The quest for smart cities: utilities management. *IMIESA*, 40(7), 24-29.
- South African Cities Network (2016). *State of South African cities report 2016*. Johannesburg, Gauteng: South African Cities Network (SACN).
- South African Department of Arts and Culture (SADAC) (2012). *A national strategy for developing an inclusive and a cohesive South African society*. Pretoria, Gauteng: Department: Arts and Culture- Republic of South Africa.
- Statistics South Africa (Stats SA) (2016b). *Quarterly labor force survey quarter 1: 2016*. Pretoria, South Africa: Stats SA.
- Statistics South Africa (Stats SA). (2016a). *Statistics South Africa*. Available from: <http://www.statssa.gov.za/?p=8196>. (Accessed 02 September 2016).
- Transparency International (TI). (2016a). *Transparency International (TI)- The Global Anti-Corruption Coalition*. Available from: <http://www.transparency.org/cpi2015#results-table>. (Accessed 28 August 2016).

Transparency International (TI). (2016b). *Transparency International (TI)- The Global Anti-Corruption Coalition*. Available from: <http://www.transparency.org/what-is-corruption>. (Accessed 28 August 2016).

United Nations Department of Economics and Social Affairs (2012). *United Nations Department of Economics and Social Affairs*. Available from: <http://www.un.org/en/development>. (Accessed 23 June 2016).

Urban Safety Reference Group (USRG) (2015). *The state of urban safety in South Africa report*. Pretoria, South Africa: South African Cities Network.

BIOGRAPHICAL NOTES

CONTACTS

Dr. Ayodeji Oke
University of Johannesburg
P. O. Box 17011, Doornfontein 2008
Johannesburg
SOUTH AFRICA
Tel. +27849155117
Email: emayok@gmail.com

Prof. Clinton Aigbavboa
University of Johannesburg
P. O. Box 17011, Doornfontein 2008
Johannesburg
SOUTH AFRICA
Tel. +27787958231
Email: caigbavboa@uj.ac.za

Ms. Taniele Cane
University of Johannesburg
P. O. Box 17011, Doornfontein 2008
Johannesburg
SOUTH AFRICA
Tel. +27781082406
Email: tanielekc@gmail.com