

Mapping the intensity of ward-level barriers to youth's participation in local development planning in Gauteng province, South Africa

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Abstract: Acknowledging that barriers to youth¹'s lack of participation in local development planning – using the case of ward committee (WC) meetings – in Gauteng province varies over space, the paper investigates the intensity of these barriers across the province. The paper employs a geographically weighted regression (GWR) approach that allowed for localized spatial modelling. The GWR results showed that the percentage of employed youth, average household income, percentage of youth who have never interacted with the government, percentage of youth dissatisfied with the local government, and youth's average education level were barriers to participation in WC meetings. Mapping of these barriers showed their intensity, where these covariates are singly or cumulatively barriers to participation in WC meetings. Overall, the results illustrate the need for the formulation of appropriate spatially targeted policies for necessary implementations.

Keywords: local development planning, ward committee meetings, youth participation, intensity, Gauteng, South Africa

1. Introduction

Like its peers around the world, South Africa since 1994 has fostered public participation to strengthen democracy, achieve developmental goals, accountability, and citizens' empowerment in all spheres of government. However, there is evidence that young people are not participating enough in development planning and urban management in their neighbourhoods (Ben-Attar, 2010; Tshoose, 2015; Khuzwayo, 2011). These events deny countries and communities the potential demographic dividend benefits that may result from burgeoning numbers of youth (Drummond, et al., 2014; African Development Bank (AfDB), 2012).

This paper adopted GWR analysis, a quantitative technique, that has the advantage of allowing for spatial heterogeneity patterns exhibited by covariates of youth non-participation in WC meetings – one of the many ward-level development planning processes enshrined in various legislation in the country. In doing so, the paper; (i) identifies barriers to youth non-participation in local development planning, and (ii) maps the local intensity of the identified barriers across the province.

WC meetings, convened by the ward councillor, serve the following statutory roles: representing the community on the compilation and implementation of the integrated development planning; ensuring a constructive and harmonious interaction between the municipality and the community; attending to all matters that affect and benefit

the community; acting in the best interest of the community; and ensuring active participation of the community in the municipality's budgetary process (CoGTA, 2019).

2. Data and methods

The paper used geocoded survey data obtained from the GCRO (GCRO, 2016) that has ward-level (N = 529) representation achieved for all the municipalities and across the province. By focusing on youth (18–34 years), the data preparation yielded a sample size of 12,836 from the original sample size of 30,002 across the province (see GCRO, 2016). The paper regressed the percentage of youth (per ward) who didn't attend WC meetings on several socio-economic covariates. These covariates were identified from the survey data, whilst also being guided by an extensive review of the literature on youth participation in policy formulation processes in local neighbourhoods. The survey of literature included the following publications – Maphunye and Mafunisa (2008), Segktla (2016), Mchunu (2012), Cheruiyot, et al. (2015, 2019), Molepo et al. (2015), Musarurwa (2018), and Naidoo and Ramphal (2018).

With the diagnostic Koenker (studentized Breusch-Pagan) test confirming the spatially varying relationships between the dependent variables and each of the covariates (i.e., non-stationarity), the paper settled on the GWR as the estimation and modelling technique (Fotheringham, et al.,

¹ Youth: Individuals aged between 18 and 34.

2002). Data were analysed in MGWR v. 2.2.1, while maps were produced in ArcMap software.

3. Results and Discussions

Descriptive statistics show the mean percentage for youth who didn't attend WC meetings to be 70.61% – with noticeable zero percentage attendance recorded. Figures 1(a) – 1(e) map the spatially varying localized regression coefficients results for the levels of education, percentage of employed youth, average household income, percentage of youth who have never interacted with government, and percentage of youth dissatisfied with the performance of local government. In Figures 1(a) – 1(e), the yellow-shaded wards are where these coefficients are statistically insignificant, whereas the rest of the wards are where they are statistically significant. In the latter case, the results imply that the respective covariates are barriers to youth's participation in WC meetings.

Figure 1(a) shows that the coefficients for the level of education were widely significant in 467 wards and insignificant in 62 wards. At the provincial level, these results show that level of education as a barrier is widespread – that is, except for parts of the Cities of Johannesburg and Tshwane, the level of education appears to be a barrier in all local municipalities in the province. Higher coefficient values are in Mogale City, Merafong City, and Rand West City local municipalities.

Figure 1(b) shows that significant coefficients of the average household income are largely limited to the southern parts of the province. This suggests that income is a barrier to youth's participation in WC meetings in these parts of the province. This is predominant in Emfuleni, Midvaal, Rand West City local municipalities and eastern parts of the City of Ekurhuleni. In the rest of the province ($n = 333$), results suggest that household income is not a statistically significant barrier to youth's participation in WC meetings.

As observed in Figure 1(c), the percentage of youth who are employed is a barrier ($n = 249$) mainly in the City of Johannesburg, as well as in Emfuleni and Midvaal local municipalities. In parts of the City of Ekurhuleni and Lesedi local municipality, the percentage of youth who are employed also appears to be a barrier to participation in WC meetings. In contrast, the percentage of youth who are employed appears not to be a statistically significant barrier in most wards in the City of Tshwane and in Mogale City, Merafong City, and Rand-West City local municipalities. It is also a statistically significant barrier in the eastern parts of Lesedi local municipality and western parts of the City of Ekurhuleni.

The percentage of youth who have never interacted with government (Figure 1(d)) is a barrier widely in the City of Tshwane, as well as in Rand West City, Emfuleni, Midvaal and Lesedi local municipalities. In the City of Johannesburg, it is a barrier in the central parts of the city particularly.

Dissatisfaction with the performance of local government is a barrier in wards ($n = 267$) falling in Emfuleni, Midvaal, and Rand West City local municipalities, as well as in the

eastern parts of the City of Ekurhuleni, and northern parts of the City of Johannesburg (Figure 1(e)). It is not a statistically significant barrier in 262 wards that fall mostly in the City of Tshwane, Mogale City, and Merafong City local municipalities.

In Figures 1(a) – 1(e), the values in brackets in the legend show the number of wards per class.

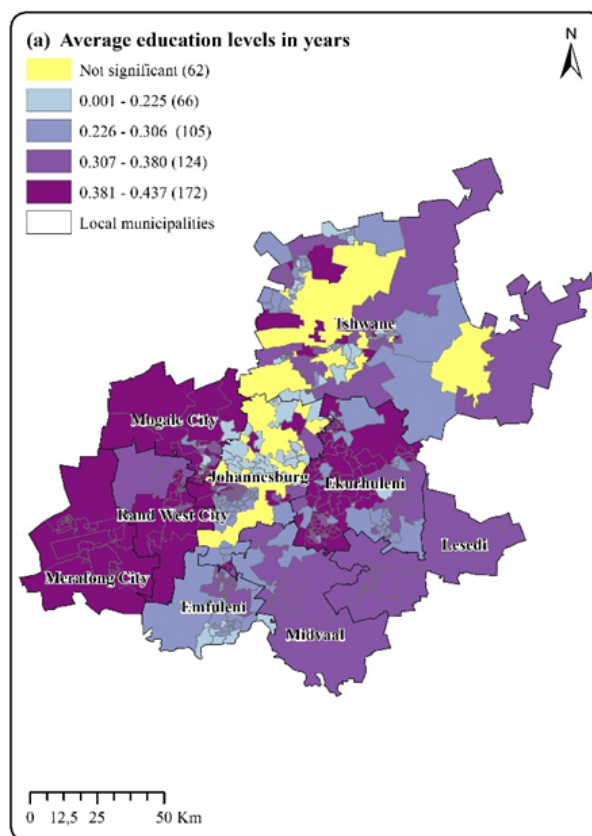


Figure 1 (a). Average education levels in years.

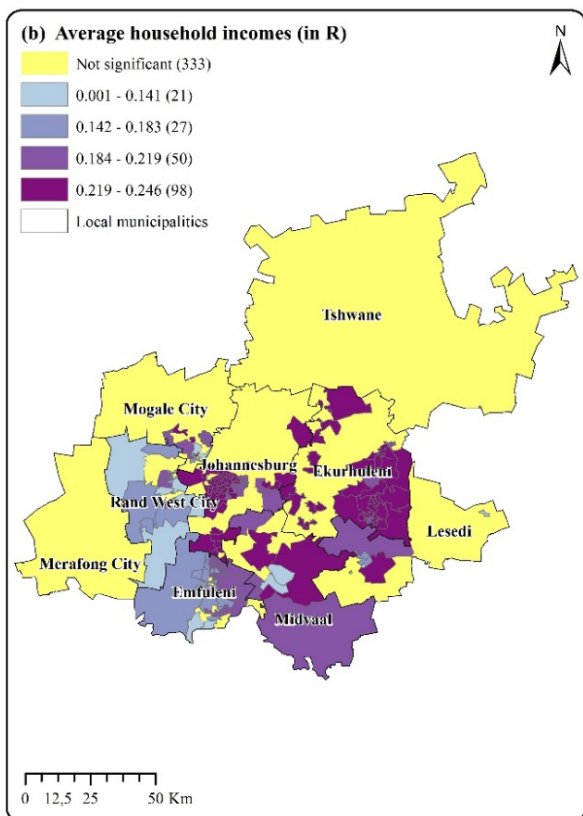


Figure 1 (b). Average household incomes (in R).

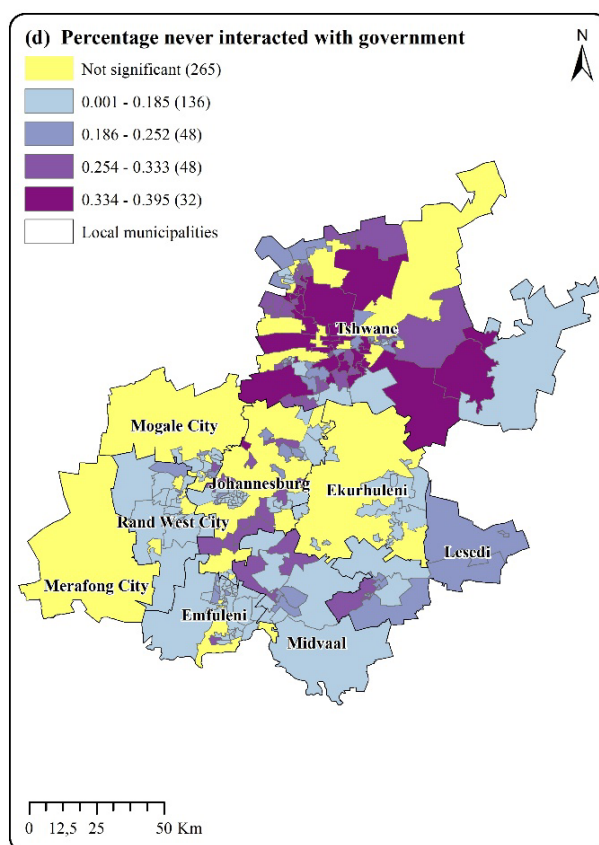


Figure 1 (d). Percentage never interacted with government.

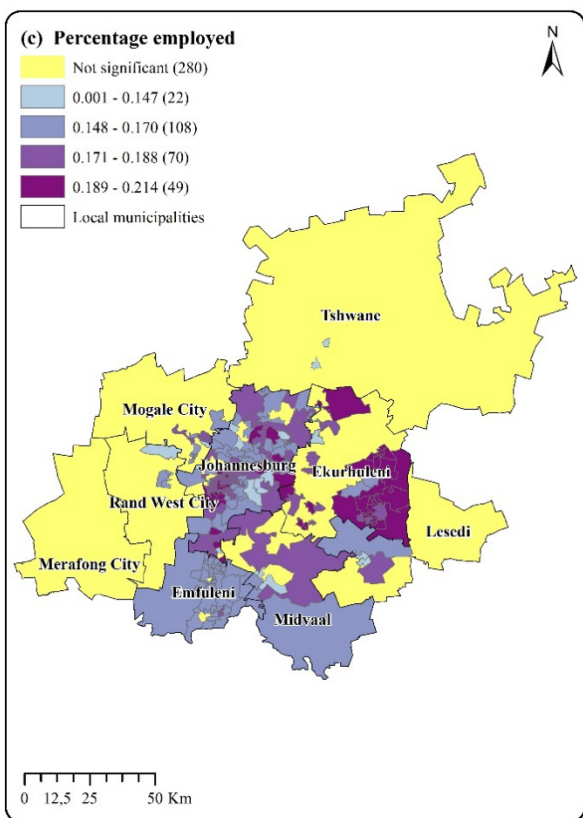


Figure 1 (c). Percentage employed.

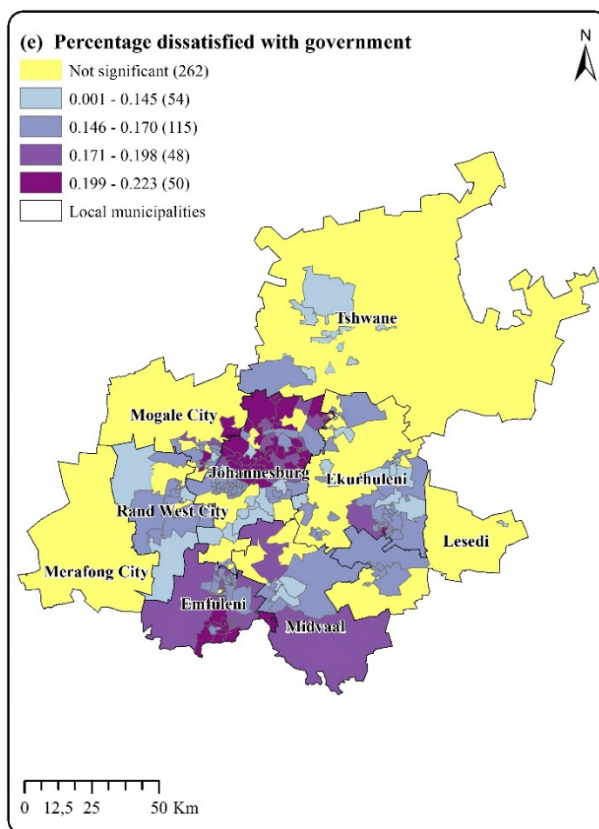


Figure 1 (e). Percentage dissatisfied with government.

Figure 2(a) maps the total number of statistically significant covariates among the five covariates already mentioned above in the given wards. As an illustration, if all five covariates were statistically significant in a given ward, then a value of five was assigned, whereas if only four of the five covariates were statistically significant, then a value of four was assigned and so on. The cumulative effect (i.e., how many of the five covariates were statistically significant) exhibited signifies the level of intensity that these covariates impact the level of youth's non-participation in WC meetings across the various municipalities in the province.

As expected from the results mapped in Figures 1(a)-1(e), all five covariates were barriers to youth's participation in WC meetings in 109 wards, especially in Emfuleni and Midvaal local municipalities. Parts of Lesedi and Rand West City local municipalities, as well as in the cities of Ekurhuleni and Johannesburg exhibit higher intensity of the five covariates as barriers as well. This is an important finding since if policies are to be formulated, such policies must focus on all the five barriers to youth's non-participation in WC meetings. In contrast, only one of either of the five covariates was significant in 159 wards. These wards are spread in Merafong City, larger parts of Mogale City, eastern parts of the City of Ekurhuleni and the City of Tshwane. In the other cases, either two, three or four of the possible five covariates were barriers to participation in WC meetings.

Figure 2(b) maps the local indicators of spatial association (LISA) based on the analysis presented in Figure 2(a). Figure 2(b) shows that local clusters (i.e., high-high and low-low clusters) and local spatial outliers (i.e., high-low and low-high outliers) can be identified (Anselin, 1995). With widespread statistical significance ($n = 431$ out of the total 509 wards in the province), these results buttress the need to pay attention to the results mapped in Figure 2(a).

In Figures 2(a) – 2(b), the values in brackets in the legend show the number of wards per class.

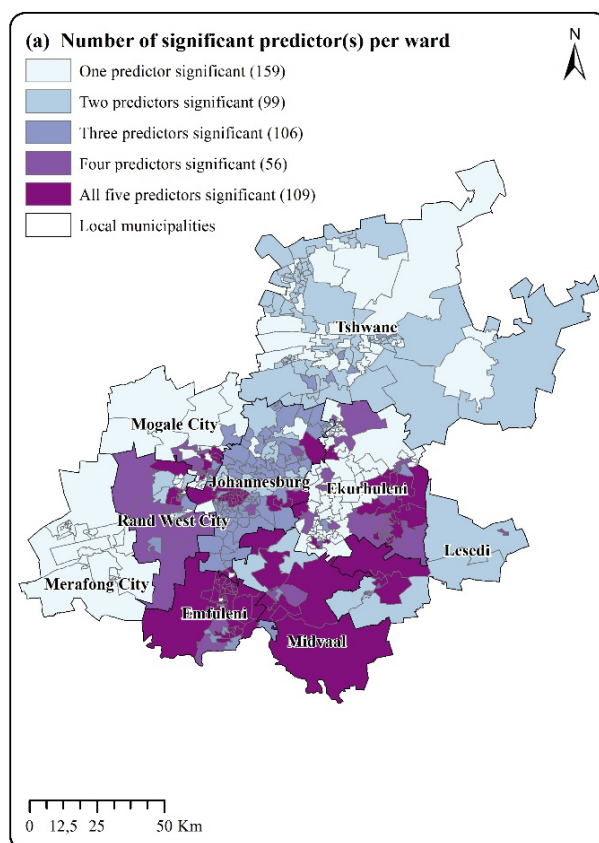


Figure 2 (a). Number of significant covariates per ward.

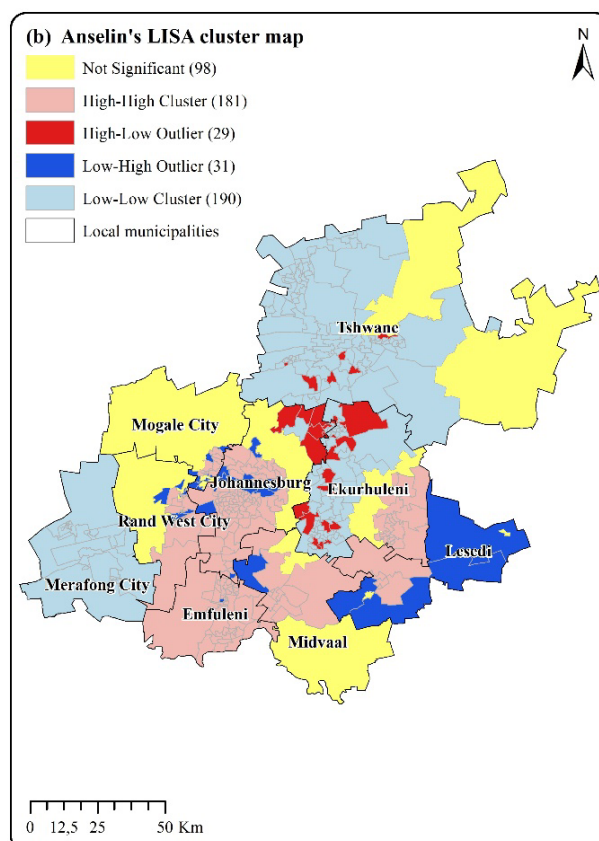


Figure 2 (b). Related cluster map per ward of the number of significant covariates.

4. Conclusion

Overall, this paper has adequately illustrated that barriers to the lack of participation of youth participation in local development planning showed varied intensities, that is, where these covariates are singly or cumulatively barriers to participation in WC meetings. These results support the formulation of appropriate spatially-targeted policies for necessary implementations – towards reducing the lack of participation of youth in local development planning processes in Gauteng province. This policy formulation will depend on the intensity of the mapped covariates.

As illustrated in Figures 1(a) - 1(e) some of spatially targeted policy responses related to the various covariates may have a regional focus or a localized focus (ESRI, 2022). For example, Figure 1(a) shows that the average level of education exhibit little variation, that is, the level of statistical significance (i.e., $|x| > 1.96$) are randomly distributed, across Gauteng province. In this case, remedial policy prescriptions need to focus on the province as a whole. In comparison, percentage of employed youth exhibit strong regional variation, that is, it is a barrier in the City of Johannesburg, as well as in Emfuleni and Midvaal local municipalities. It is also a barrier in some parts of the City of Ekurhuleni and Lesedi local municipality. In this case, remedial prescriptions emerging from the needed policy formulation need to focus on these parts of the Gauteng province, rather than the whole province.

While the above policy formulation focused on specific covariates, Figure 2(a) suggests that some of the covariates are singly or cumulative barriers in some parts of the province. In this case, policy formulation should focus on all covariates, especially in Emfuleni and Midvaal local municipalities. In the City of Johannesburg, Rand West City, and the City of Ekurhueni policy formulation should focus on few specific covariates that are barriers to youth's participation in local development planning.

The specific policy suggestions highlighted by this paper's results were beyond the scope of the paper and lend themselves for further exploration in future research.

5. References

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