The spatial nature of structural unemployment in South Africa

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Abstract:

The persistence of regional unemployment disparities in South Africa has led to geographically imbalanced development. The advent of 4IR has initiated new ways in which big data can be analysed in a spatial context. Since the 2030 Agenda for Sustainable Development aims at reducing unemployment, this paper will use Twitter data in conjunction with traditional statistics to provide spatial analysis on the topic. Structural unemployment refers to the inability of the economy, due to structural imbalances, to provide employment for the total labour force. In an attempt to quantify this tendency spatially, investigations will be done at a local municipality level (N=213).

To supplement the statistics, social media sentiment analysis from Twitter will be used to provide valuable insights into public opinions and perceptions on poverty, unemployment and related themes, in South Africa. By analysing social media content pertaining to unemployment and job prospects, the study will identify spatial patterns in sentiment that reflect the prevailing attitudes and emotions surrounding structural unemployment in various regions of South Africa. Notably, the sentiment analysis will classify the sentiment of each post as positive, negative, or neutral, enabling the identification of prevailing sentiments. This mixed-method approach will enhance the research output. The quantitative data originate from Global Insight and will include variables like unemployment, employment sector, education level and poverty, among others. A correlation coefficient analysis will be undertaken to identify the spatial concentration of unemployment and poverty, if any. Furthermore, regional trends of structural breaks will be identified by considering the percentage of people employed in the nine official sectors (agriculture, mining, manufacturing, electricity, construction, finance, trade, transport and community services) between 1997 and 2020. Case studies of six municipalities will be undertaken to get a more detailed understanding of temporal change and the selection of municipalities is based on the results of spatial factor analysis.

The persistence of regional unemployment disparities usually has two origins: the first is that it is based on slow or weak labour market equilibrating mechanisms and the second option is due to the structural equilibrium phenomenon. It is expected that the results will show patterns of structural breaks in municipalities where employment patterns deviated from the national trend over time. Employment in agriculture has been on a downward trend, while employment in the finance sector slightly increased and then decreased again following global economic effects. The research will highlight policy implications for local economic growth interventions.