

To what extent does socio-economic status still affect household access to water and sanitation services in South Africa?

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Despite the significant progress of water and sanitation services since the fall of Apartheid, many parts of South Africa still do not enjoy much of these facilities that many take for granted. Since 1997 South Africa declared basic water and sanitation a human right under the auspices of the Water Services Act (1997), yet still by 2005 it was estimated that about 6 million South Africans still lacked access to basic level of service.

To better understand the socio-economic characteristics of households that do not have access to piped water and a flush toilet (arguably the end points for any infrastructural improvement plan attempting to reverse Apartheid-era neglect) data from the 2014 South African General Household Survey (GHS) was analysed because it has an array of questions that collect data on socio-economic variables and details of toilet type and piped water access. Little empirical work exists for South Africa and even less comparing piped water and flush toilet access from the same data set.

Generally, 90 percent of South African households have access to piped water whilst two-thirds have access to flush toilets. This is indicative of the need to address access to sanitation more thoroughly as it appears that piped water access has improved over time whilst a third of South African households are still without proper sanitation. As expected, probit modelling showed that households who live in formal housing (brick house, flat, cluster home or garden cottage) are significantly more likely to have access to both piped water and proper sanitation facilities. However, the distribution of sanitation facilities has been less inclusive as compared to piped water. Only 72.6 percent of households classified as living in formal housing access a flushing toilet whereas close to 92 percent access piped water. Similarly, living in an urban area significantly increases the chances by 15% of households having piped water. For flush toilet sanitation there is a 75% higher chance of having such a facility if living in an urban area.

When examining racial differences, the African subset of the population with access to piped water is comparable within 10 and 11 percentage points to other race groups but that gap increases to some 40 percentage points when comparing flush sanitation facilities. Similarly, only just over half (57.8%) of female-headed households compared to nearly three-quarters (71.6%) of male-headed households have flushing toilets. Thus, race and gender of the household head serve as good proxies for socio-economic status.

Geographical differences are also apparent. Notably, Limpopo and the Eastern Cape have 50% or less of households with piped water on the property. The Free State, Gauteng and the Western Cape are all 90% or higher. When examining flush toilet access, households with the poorest access include Limpopo, the

Eastern Cape and Mpumalanga. The 2014 GHS data shows that for households in rural areas, the highest proportion from a single race group is African (at 38%).

Households with piped water tend to be smaller since larger households are typically associated with higher levels of poverty and a higher incidence of piped water and flush toilet access was found with rising educational years and as the number of employed household members increase. It was found that the gaps between no flush vs flush is larger than the corresponding gap for piped water vs no-piped. This potentially signals that household socio-economic status is more important in the case of flush toilet access. Differences in income between access and no access is wider for flush toilet than piped water merely confirming that a lack of access to flush toilets affects the poorest in the country more.

Overall it can be clearly shown that progress in sanitation provision lags behind that of piped water. The socio-economic variables examined are not driving the incidence of household access to piped water relative to the access to flush sanitation. Access to a flush toilet is more dependent upon many of the socio-economic variables since they act as poverty signals including household size, the number of people employed in the household, connection to the electricity mains, geographical location (urban/rural), gender of the household head, educational attainment of the household head and dwelling type. Arguably piped water has been largely addressed as a supply-side issue, with government expanding infrastructure to accommodate households country-wide. This has not been matched in the domain of flush sanitation services. This could be indicative of a lack of infrastructure and service delivery in poor rural areas. Such a premise is supported by the National Planning Commission which identifies that the rural municipalities have little of the technical expertise to manage the whole supply chain of WSS projects from source to tap.