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Acceptance of open source geospatial software: Assessing QGIS in South Africa with the UTAUT2 model

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Abstract

Geospatial information and technologies are widely used in South Africa, initially mostly with proprietary software but today, mature, open source alternatives such as QGIS are available. We wanted to find out if and why South African users accepted QGIS, globally the most widely used free and open source GIS. We adapted the extended unified theory of acceptance and use of technology model to test several hypotheses regarding the acceptance and use of QGIS in South Africa. 205 registered members of the Geo-Information Society of South Africa completed a structured questionnaire. Results show that habit has the most significant influence on behavioural intention to use QGIS, followed by facilitating conditions, price value and social influence. Performance expectancy, effort expectancy, hedonic motivation and access to source code played no significant role. The findings show that adoption of QGIS in South Africa is not primarily influenced by benefits attributed to open source software, such as cost benefits, customizability, improved reliability, quality and security. The results are useful for developers of any GIS product and for choosing a GIS product for an organization, because they provide insight into the behavioural intentions of users.