The cost of production and storage of renewable hydrogen in South Africa and transport to Japan and EU up to 2050 under different scenarios

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Abstract

The benefits of free and open-source software for geographical information systems, such as QGIS, are appreciated by many all over the world. However, QGIS adoption in South Africa is not primarily influenced by the benefits attributed to open-source software, such as cost benefits, customizability, improved reliability, quality and security. In the first paper from this study, it was found that habit, followed by facilitating conditions, price value and social influence, had the greatest influence on the behavioural intention of members from South Africa's geospatial community to use QGIS. In this article, several hypotheses were developed and tested to investigate the role that moderators (age, gender, GIS experience, educational level and registration with the South African Geomatics Council) had on the behavioural intention of geospatial practitioners in South Africa to use QGIS. Results show that GIS experience, educational level and registration with the South African professional body for geomatics practitioners had a moderation effect on some of the hypothesized relationships, while age and gender did not have any significant effect. Results also show that as one gains experience, social influence and facilitating conditions are less important when deciding to use QGIS; a postgraduate education and professional registration increase appreciation for getting value for money; and registered professionals are not significantly influenced by the perceptions of others when deciding to use QGIS. Habit is not influenced by any of the moderators, suggesting that breaking the habit of using a particular product is a challenge regardless of age, gender, experience, education level or registration status. These results are useful for developers of any GIS product and for choosing a GIS product for an organization, because they explain which user characteristics influence behavioural intention to use a specific GIS product.