

# ERSA Policy Brief

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## Spatial dependence of per capita property tax income in South Africa

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South African municipalities rely on income from property tax and other sources to provide a range of services to communities. Indeed, property tax is an important income source, in particular for municipalities in urban areas where the property market is well functioning and developed. According to the National Treasury's 2011 Local Government Budgets and Expenditure Review, property tax income accounts for twenty percent for municipalities in urban areas.<sup>1</sup>

Although the regulatory environment is clearly set for local government in South Africa, understanding the manner in which the level of property tax income is determined by municipalities is important for various reasons. This paper focuses only on one aspect, which is to determine whether per capita property tax income in a municipality is influenced by per capita property tax income of its neighbouring municipality. Regional scientists have referred to this kind of influence as spatial interaction, spatial dependence or spatial effect. Therefore, our study provides insight into the debate regarding the notion of spatial dependence of local government finance as summarised in Brueckner (2003) and others as cited in the main document, using South Africa as the case study<sup>2</sup>.

We use the Bayesian spatial econometric approach to test whether there are spatial interactions between South African municipalities with regard to property tax income determination. Our analysis focuses on the 2011-12 municipal financial year where reliable information for the determinants of property tax income are collected from 2011 Census data. We find a strong spatial dependence of per capita property tax income. Indeed, per capita property tax income in municipality *i* changes because of a change in per capita property tax income in neighbouring municipalities. Based on these empirical results, we conclude that it is important for policy makers to recognise that any (i.e. financial) policy measure or action targeting one or a group of municipalities has the potential to affect other neighbouring municipalities in one way or the other. This is because of strong spatial interactions that exist among South African municipalities.

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<sup>1</sup> National Treasury (2012) Local Government Budgets and Expenditure Review. Accessed at <http://www.treasury.gov.za/publication>

<sup>2</sup> Brueckner J K (2003) Strategic interaction among governments: An overview of empirical studies. *Int. Reg. Sci. Rev.* 26: 175–188