EFFECT OF TRANSPARENCY ON MUNICIPAL REVENUES AND EXPENDITURES IN SPAIN

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ABSTRACT: Transparency is fundamental for the efficient management of government finances. This paper examines the connection between revenues, expenditures and the level of transparency of Spanish municipalities. A panel data methodology, the Juodis, Karavias and Sarafidis causality test and a mixture of ANOVA/linear dependent Dirichlet process are used. The results show a positive impact of unemployment and direct taxes on the transparency index. There is a bidirectional causality between direct taxes and the transparency index. Transparency has a positive impact on direct taxes and a negative impact on indirect taxes.

Keywords: transparency; local governments; causality; taxation.

RESUMEN: La transparencia es fundamental para una gestión eficiente de las finanzas de los gobiernos. En este trabajo se examina la conexión entre los ingresos, los gastos y el nivel de transparencia de los municipios españoles. Se utiliza una metodología de datos de panel, el test de causalidad de Juodis, Karavias y Sarafidis y una mezcla de ANOVA/proceso de Dirichlet dependiente lineal. Los resultados muestran un impacto positivo del desempleo y los impuestos directos sobre el índice de transparencia. Hay una causalidad bidireccional entre los impuestos directos y el índice de transparencia. La transparencia tiene un impacto positivo sobre los impuestos directos y un impacto negativo sobre los impuestos indirectos.

Palabras Clave: transparencia; gobiernos locales; causalidad; impuestos.

1. Introduction

Transparency is, in general, a fundamental aspect for the development of good governance as has been demonstrated over the years (Grimmelikhuijsen & Meijer, 2014; da Cruz et al., 2016). It has become of great interest to both policy makers and citizens (Grimmelikhuijsen, 2012), which has also manifested itself in an increase in the number of research on transparency, accountability and corruption (Lyrio, et al., 2018).

Citizens are demanding greater transparency, demanding greater control over financial spending and over institutions (Meijer et al., 2018; Ruijer et al., 2020). The increased demand for transparency of public institutions contributes to improving political efficiency and providing fully accessible information to citizens in real time (Rodríguez Bolívar et al., 2013). In this way, transparency also tends to reduce the number of corrupt practices (de Mingo & Cerrillo-i-Martínez, 2018; Faura-Martínez & Cifuentes-Faura, 2020). It seeks to increase the effectiveness of government management by making efficient use of the scarce resources available, being necessary for this purpose to effectively employ transparency mechanisms in the decision-making process (Araujo & Tejedo-Romero, 2016).

According to the literature, the exposure or concealment of information, i.e., transparency, is inherently political and can be influenced by citizens and political factors. The determinants of transparency have been examined, but the causal relationship between transparency and other factors has not been studied. Thus, it is useful to know whether there is a causal relationship between transparency and government revenues and expenditures.

The causality between expenditures and revenues is key for policy makers to make appropriate decisions (Bolat, 2014) and has been extensively analyzed. The literature establishes several assumptions about the causality between expenditures and revenues:

- Expenditures and revenues change at the same time (there is bidirectional causality between variables). There is fiscal synchronization.

- Expenditures cause revenues, so the government spends more than it takes in at times of recession. In this context, taxes are increased to reduce the gap.

- Revenues cause expenditures. The government spends more because it has more financial resources or because of fiscal illusions, which can stimulate demand for public goods and services and stimulate spending due to tax cuts.

- There is independence between revenues and expenditures.

If there is no fiscal synchronization, spending and revenue decisions are made separately, which can lead to large deficits if spending exceeds revenue. Barro's (1979) "tax smoothing" theory determines that an increase in spending today will lead to an increase in taxes in the future. If expenditures cause revenues, institutions spend first, and pay later, so an increase in government spending, without a corresponding increase in revenues, will increase the budget deficit. All this will result in the government having to borrow, with a consequent increase in debt (Dritsaki, 2017). If revenues cause expenditures, the deficit could be reduced by an increase in revenues through a tax increase. This view is supported by Blackley (1986), who demonstrates the existence of positive causal relationship between revenue and expenditure. Other authors consider that government spending and revenues are determined by long-run economic growth, so changes in one of these fiscal variables has no effect on the other (Ali and Shah, 2012). Expenditures are determined by the needs of citizens and revenues are defined by the tax burden that can be tolerated by the population. Thus, achieving fiscal balance would be a mere matter of coincidence. This is known fiscal neutrality or institutional separation hypothesis (Takumah, 2014).

Although there are more and more studies on transparency, we do not know of any that analyze the causal relationship between expenditures, revenues and transparency in Spain at the municipal level. This paper fills this gap and, in addition, takes into account other variables such as deficit, debt, transfers, unemployment rate, the gender of the mayor and the political party in power. The effect of income and expenditure on transparency is also studied through panel data estimators. The impact of various indicators on deficit and debt is analyzed separately, distinguishing between municipalities according to the gender of the mayor.

2. Data and methodology

In Spain, although great efforts have been made to improve transparency, such as the approval of Law 19/2013, of December 9, on transparency, access to public information and good governance, there is still much to be done (Medina, 2018; Cifuentes-Faura, 2021). This is one of the reasons why the study has focused on Spanish municipalities. Moreover, transparency problems are more frequent at the municipal level (Cuadrado-Ballesteros, 2014). The analysis is limited to the period 2008-2017.

Transparency refers, in this work, to the disclosure of information by municipalities on their decisions, processes, operation and performance and is given through the government transparency index provided by Transparency International-Spain. This index shows the minimum public information necessary to facilitate public accountability (Araujo & Tejedo-Romero, 2016). It takes values between 0 (not at all transparent) and 100 (fully transparent). There have been 6 editions of this index. The first edition took place in 2008 evaluating the 100 largest municipalities with a population of more than 50,000 inhabitants, and the last one in 2017, provides information on the 110 largest municipalities.

The financial data has been provided by the Ministry of Finance and the rest of the variables by the Spanish Ministry of the Interior and the National Institute of Statistics.

From the methodological point of view, preliminary tests have been carried out before estimation, such as the study of cross-sectional dependence, slope heterogeneity, unit root and cointegration tests to ensure the validity of the analyses by determining which is the most appropriate technique. Specifically, based on the results of the cross-sectional dependence test (Pesaran, 2015) and slope homogeneity (Pesaran and Yamagata, 2008), the equilibrium relationship and long-run elasticities have been estimated using a Westerlund (2005) cointegration model. After checking for cross-sectional dependence, second generation panel unit root tests were applied. Having an unbalanced panel, the cross-sectional augmented Dickey-Fuller (CADF) test was used.

The causality of the panel data was carried out using the Juodis, Karavias and Sarafidis (2021) test. For robustness, an ANOVA/linear dependent Dirichlet process (DDP) mixture model was employed to test how deficit and debt are explained by transparency and by other variables such as unemployment rate and gender of the mayor.

3. Preliminary results and conclusions

Among the preliminary results, it can be highlighted that, according to the Juodis, Karavias and Sarafidis test, total revenues, direct taxes, and gender influence the transparency index. On the other hand, transparency acts as a cause of direct and indirect taxes, debt and deficit. From this point of view, there is a two-way relationship between direct taxes and the transparency index. It also validates the hypothesis that spending causes revenues, which leads municipalities to spend more. It is found that municipalities governed by political parties with a right-wing ideology tend to contribute more to debt and deficit reduction. Unemployment has a positive impact on direct taxes, debt and deficit, and at the same time, unemployment reduces indirect taxes, total revenues and expenditures.

Taking into account the gender of the mayor, political party exerts a causal effect on debt only in the case of male mayors. Transparency, political party and gender are determinants of the deficit when a man governs as well as when a woman governs, while the unemployment rate causes the deficit only when the mayor is a man.

To fight debt and deficit in Spanish municipalities, it is important to ensure transparency and to keep unemployment at low levels. Improving the quality of governance contributes to greater transparency in Spanish municipalities (Araujo and Tejedo-Romero, 2016). These local regions should take advantage of fiscal illusion to improve governance by ensuring greater transparency (Guillamón et al., 2011).

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