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Exploring the Progression of Local Transparency Considering Institutional and Geographical Factors: A Latent Growth Model

Gonçalo Brás^{a,b,c,d,#} , Kathleen M. Dowley^e , and João Marôco^{f,*} 

^aDINÂMIA'CET-Iscte, University Institute of Lisbon; ^bCESAM, University of Aveiro; ^cIN+, LARSyS, University of Lisbon; ^dCeBER, University of Coimbra; ^eState University of New York at New Paltz; ^fWilliam James Centre for Research, ISPA

ABSTRACT

Transparency plays a pivotal role in local governance for various well-documented reasons. This study examines the evolution of local government transparency in Portuguese municipalities during the period Transparency International's Municipal Transparency Index was operational. We apply latent growth models spanning from 2013 to 2017 which demonstrated that local transparency increased during the analysis period due to institutional isomorphism (normative and mimetic), though we observed asymmetric growth in local transparency across the Portuguese territory. Since this time, municipalities have expanded their responsibilities under Law No. 50/2018, but the MTI is currently unfunded. Given this context, the urgent need to prioritize local transparency is clear, and we propose recommendations for policymakers to conduct an updated assessment. These recommendations take into account regional variations in local transparency and the increasing responsibility of local government transparency efforts to national efforts to achieve the UN Sustainable Development Goals.

KEYWORDS

Governance; local transparency; municipalities; latent growth model

PLAIN LANGUAGE SUMMARY

Transparency in local government is essential for good governance, helping to build trust and accountability between officials and the public. This study looks at how transparency in Portuguese municipalities has changed over time, from 2013 to 2017, by considering both institutional and geographical factors. Using a statistical approach called a latent growth model, we found that transparency has generally improved, influenced by factors like the adoption of similar practices among municipalities. However, we also noticed that transparency has grown unevenly across different regions of Portugal. Our research highlights the importance of continuing to assess and improve local transparency, especially since there hasn't been a consistent method for doing so since 2018. With municipalities taking on more responsibilities, it's crucial for policymakers to focus on enhancing transparency to support good governance across the country. We suggest that future assessments of transparency should consider regional differences and the growing role of municipalities in achieving the United Nations Sustainable Development Goals (SDGs). While the SDGs are global, it is local governments that are best positioned to transform the abstract 2030 Agenda into something concrete and workable in the communities they

CONTACT Gonçalo Brás  goncalo.bras@iscte-iul.pt  DINÂMIA'CET-Iscte, Centre for Socioeconomic and Territorial Studies, University Institute of Lisbon, Lisbon – Portugal.

*Current affiliation: Universidade Lusófona, Centro Universitário de Lisboa.

#Current affiliation: Santarém Polytechnic University.

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serve (Global Taskforce of Local and Regional Governments, UNDP, & UN-Habitat, 2016). This research aims to inform and guide policymakers in making informed decisions that will benefit all citizens.

While the positive impact of transparency on governance varies by context (Kosack & Fung, 2014), ‘transparency is one of the keywords of contemporary governance’ (Erkkilä, 2020, p. 1) and a way to improve democracy (Androniceanu, 2021). As a multidisciplinary concept (del Sol, 2013), transparency crosses a range of good governance factors (Hood, 2010) and is defined by two functional dimensions: information and accountability (Romero, 2023). Information should be timely, accessible, and useful, rather than fragmented and overly broad (Baume & Novak, 2020; Mabillard & Zumofen, 2017). Accountability mechanisms should enhance the flow of information to increase the legitimacy of public/civil institutions and serve to strengthen trust between civil society actors and public institutions (Ardigó, 2022; Brown, 2008). The systemic and dynamic interaction between information and accountability mechanisms constitutes a significant aspect of institutional transparency (Romero, 2023). In the absence of this balance, institutions risk falling into what is known as pseudo-transparency, where local governments perform transparency efforts by flooding local e-government portals with too much or too difficult to decipher data (Grimmelikhuisen et al., 2013).

In our approach to local governance, ‘transparency is defined as the publicity of all the acts of government and its representatives to provide civil society with relevant information in a complete, timely, and easily accessible manner’ (da Cruz et al., 2016, p. 872). In this transparency framework, and with a participatory approach connecting academia, governmental institutions, and civic movements, Transparency International’s official representative in Portugal launched the Municipal Transparency Index (MTI) in 2013. Inspired by the efforts of Portugal and Spain, Italy has recently launched their own transparency index for municipalities (Alaimo et al., 2023). Switzerland has also partially adopted the Portuguese method to create a transparency index for its 16 municipalities (Keuffer & Mabillard, 2020).

The reliability of the Portuguese MTI, the scarcity of local transparency indexes in Europe, the growing interest in studying local transparency efforts, and the limited number of longitudinal studies in this domain motivate this research. The few empirical studies on local transparency in Europe typically focus on its determinants (see Araujo & Tejedo-Romero, 2016; Brás & Dowley, 2021; Sičáková-Beblavá et al., 2016), explore the e-government aspect by examining internet use (Bonsón et al., 2012; Pina et al., 2010; Tejedo-Romero & Araujo, 2020), test the connection with open government (Lourenço, 2013; Ruijter et al., 2020), or conduct comparative analyses between countries (Navarro-Galera et al., 2018; Pina et al., 2010; Tejedo-Romero et al., 2023).

To our knowledge, the evolution of local transparency itself has been largely overlooked by researchers, particularly from the perspective of institutional theory and with attention to geographic and socio-demographic determinants. Therefore, our aim is to bridge this gap by introducing the novel application of a latent growth model (LGM), in contrast to previous studies in local transparency, and advance the underdeveloped state of the art in this field. Our contribution aims to examine the development of MTI scores from 2013 to 2017, taking into account the institutional context and unique characteristics of the 308 Portuguese municipalities, such as the population density and those located on islands. This exploratory research seeks to accomplish two primary objectives: first, to validate the relevance of sustained efforts to report and track transparency efforts and highlight the consequences of the current absence of local transparency assessments; second, to propose new avenues for shaping a revised MTI. Both objectives aim to raise awareness among policymakers about the importance of implementing and promoting local transparency assessments to enhance governance throughout the Portuguese territory.

The paper is structured as follows. The literature review section offers theoretical insights into the institutional and geographical idiosyncrasies of local transparency. The methodological section details

the research approach, followed by the presentation and discussion of results within the theoretical framework. Practical and theoretical implications are then discussed, leading to concluding remarks.

Literature review

According to institutional theory, organizations are shaped by their broader institutional surroundings, encompassing norms, values, and regulations (Scott, 1987; Zucker, 1987). Within this framework, organizations seek legitimacy by conforming to institutional pressures, which can come from various sources such as competitors, customers, regulatory bodies, and societal expectations (Beddewela & Fairbrass, 2016). When an organization takes the initiative to publish transparency results, it signals to its stakeholders and the broader institutional environment that transparency is a valued practice (Christensen & Cheney, 2015; Sampson et al., 2019). Therefore, this action can be driven by a desire to gain legitimacy (Licht, 2011), enhance reputation (López-López et al., 2018), or respond to increasing demands for transparency from stakeholders (Crane, 2020).

Other organizations operating within the same industry or sector might interpret transparency initiatives as a response to institutional pressure (Villena & Dhanorkar, 2020) or as the emergence of a new norm for responsible management (Parris et al., 2016). They may feel compelled to adopt similar practices to maintain their legitimacy, trust and reputation (Schnackenberg & Tomlinson, 2016), align with industry standards (Camilleri, 2015; Nikolaeva & Bicho, 2011), or avoid scrutiny from stakeholders (Danker, 2013). This process of emulation and conformity among organizations within an institutional field is known as institutional isomorphism (Greenwood et al., 2017).

Transparência e Integridade, Associação Cívica, the official representative organization of Transparency International in Portugal, initiated a project focused on evaluating the informational disclosure practices of Portuguese municipalities in line with transparency standards. The data collected for the project begins in 2013 and extends until 2017, highlighting the Municipal Transparency Index (MTI) as the primary indicator. The link to institutional isomorphism (of the mimetic or normative variety) is acknowledged by those who worked to develop the index.

(...) MTI proposed in this work received national exposure through coverage in both traditional and social media as well as a web portal specifically created for this purpose (<http://poderlocal.transparencia.pt>). Journalists, bloggers, and civic-minded individuals publicized the MTI, putting additional pressure on local governments to disclose information not yet contained on official websites. 'Name-and-shame' techniques are extreme examples of the role the MTI can play in improving government transparency, but, for public managers and elected officials, public disclosure of positive results provides an additional incentive to foster a culture of transparency. It offers the municipalities the opportunity to publish the requested information on their municipal websites and thus improve their transparency scores. (da Cruz et al., 2016, pp. 885–886)

Informed by institutional theory, we argue that municipalities in Portugal, during the period in which the MTI is measured and reported on, seek legitimacy by conforming to institutional pressures, which can come from various sources such as other municipalities, citizens, regulatory bodies, media and societal expectations. This specific framework adheres to an institutional mimetic or normative isomorphism approach as applied to the public sector (Frumkin & Galaskiewicz, 2004).

In mimetic isomorphism, public organisations tend to imitate (or mimic) the actions of successful peers; positive attention or a competitive edge derived from transparency efforts prompts emulation for success (Ashworth et al., 2007). In normative isomorphism, public organizations adhere to sectorial or societal norms; if transparency efforts and reporting practices becomes prevalent, public organisations adopt transparent practices to align with norms, showing commitment to ethics and accountability (Bellé et al., 2019). In coercive isomorphism, public governance emphasizes conformity through political and legal pressures, influencing transparency practices (Alsharari, 2022). It shapes how organizations adopt similar transparency measures to meet legitimacy demands, often driven by regulatory frameworks and oversight from higher authorities within governance structures (Lodge & Wegrich, 2005). Several studies highlight the crucial importance of contextual factors in

shaping isomorphic processes across organizations, regardless of the degree of public sector involvement (see Ansmann & Seyfried, 2022; Pillay et al., 2017; Rees et al., 2024).

Local government websites with easily accessible portals to information have generally been seen to promote openness and transparency (Bertot et al., 2010), with the internet connection playing a crucial role in bringing citizens and politicians closer together (Nixon & Johansson, 2005). While most scholars have demonstrated a positive relationship, there are a few who, for example, argue that the trend of streaming ‘city council [meeting]s on social media, and their intensity of use, the effect on transparency is basically ornamental (Gandía et al., 2016, p. 28). Early work by Ciborra (2005) suggested that e-governance, instead of bringing citizens and politicians closer, could be a mechanism to govern at a distance. And a recent analysis of the transparency of the websites of Spanish municipalities, Simelio et al. (2019), concluded that municipal councils acted only to earn their own accolades, while promoting little citizen participation and using social networks unidirectionally.

While we recognize that not all scholars agree on the value of local government transparency and efforts to measure and track it, we remain more persuaded by the work demonstrating a positive connection, and therefore want to better understand the impact of Transparency International’s efforts to design, implement and enact the MTI in Portugal had on local government transparency. Thus, our first question:

Is there any evidence that local transparency increased in Portuguese municipalities, during the period the MTI was being measured and reported on? [RQ1]

Our secondary interest focuses on regional variation in transparency scores during this time period, as mimetic and normative isomorphism may be influenced by factors like geography (distance from the capital), and demography. Scholars have started to examine sociodemographic and geographic differentiation among municipalities, such as differences stemming from where the municipality is located (urban vs rural; inland vs. coastland) and how densely populated it is. These studies contribute to a wider literature on transparency that has more traditionally focused on political factors such as party in power, and/or political competitiveness of the district (García-Soriano et al., 2020; Hua et al., 2021; Rodrigues et al., 2023; Yu et al., 2023).

Löfving et al. (2022), for example, found significant differences between low density rural and high density urban areas in digitalisation efforts in transparency in Sweden. Mourão et al. (2023) found differences between Croatian cities and other small rural localities in a study of budgetary transparency. Similarly, Jairo et al. (2015) found that urban areas in Vietnam typically exhibit higher levels of transparency in local governance than rural areas. With a specific focus on rural areas in North-West Romania, Bulău-Olaru et al. (2024) revealed that larger communes showing slightly better compliance with transparency regulations compared to smaller local authorities.

With this in mind, we raised the following research question: *Is there any difference in local transparency between High-Density municipalities and Low-Density municipalities? [RQ2]*

Additionally, a few authors have identified the lowest levels of transparency in Portugal were reported in the archipelagos and have referred to this anomaly as the “island factor” or “island effect” (Brás & Dowley, 2021; da Cruz et al., 2016). Beyond Portugal, Cuadrado-Ballesteros (2014) reported a similar finding in the Spanish archipelagos (Canary Islands and Balearic Islands). However, this apparent lack of local transparency in countries’ islands has not been widely and deeply covered by academics and only a few works are available in which this fact is reported only as a parallel or secondary finding.

To contribute to this relatively new research we ask: *Is there any difference in local transparency between continental municipalities and island municipalities? [RQ3]*

There is evidence to support the argument that lack of local transparency can seriously affect public governance (Arkorful et al., 2021) and public services provision (Bauhr & Carlitz, 2021). To mitigate this issue and achieve greater transparency in local government, strategies from the

central government can support and encourage transparency at the local level (Piña & Avellaneda, 2019). Simultaneously, formal and informal institutions could take on a localized nature, sharing resemblances across regions yet retaining unique attributes influenced by the specific institutional context or culture of each area (Rodríguez-Pose, 2013). This dynamic contributes to enhancing transparency (Storper, 2005), a goal that may be furthered by targeted projects aimed at promoting it (see Awung & Marchant, 2020; da Cruz et al., 2016; Kassen, 2013).

Finally, the United Nations SDGs are a comprehensive framework consisting of 17 goals and 169 targets aimed at addressing critical global challenges such as poverty, inequality, and climate change, with a target completion date of 2030. Adopted in 2015 by the Paris Agreement, the SDGs emphasize the interconnectedness of these goals (Lim et al., 2018), highlighting the necessity for collaborative efforts across various sectors and levels of society to achieve a sustainable and equitable future (Leal Filho et al., 2024). The global SDGs require localized translation to become meaningful and implementable (Global Taskforce of Local and Regional Governments, UNDP, & UN-Habitat, 2016). Local governments serve as the critical bridge between abstract international frameworks and practical community-level interventions, uniquely equipped to contextualize and operationalize the 2030 Agenda's aspirational targets within their specific territorial and social environments (see Frank & Mattioli, 2023; Leccis, 2021; Urquijo-Reguera et al., 2024). By leveraging their intimate understanding of local needs, resources, and challenges, municipalities can transform high-level global objectives into tangible, actionable strategies that directly address the specific developmental requirements of their communities (David et al., 2024).

Methods

Data and measurement

The dataset comprises information from all 308 Portuguese municipalities spanning the period from 2013 to 2017. Therefore, rather than representing a sample, our study includes the complete population of municipalities (census) for the aforementioned five time periods. The data was obtained from the official representative of Transparency International (www.transparency.org) in Portugal, which is *Transparência e Integridade, Associação Cívica* (www.transparencia.pt). The data was integrated into the municipal transparency index (MTI) project framework, which attracted extensive participation from governmental and monitoring institutions, civic movements, and academics, involving multiple research centres and universities (see da Cruz et al., 2016). The MTI has been the focus of considerable academic interest over the years and has been widely utilized in scholarly research (Brás & Dowley, 2021; da Cruz et al., 2016; Tavares & da Cruz, 2020; Tejedo-Romero et al., 2023). The aim of MTI was to annually assess the extent of the Local Authority's commitment to transparency. In other words, it enables citizens and decision-makers to gauge the transparency level of municipalities by analysing the information provided on their websites. Comprising 76 indicators, the MTI scale spans from 0 (indicating the lowest local transparency) to 100 points (indicating the highest local transparency).

In terms of geographical variables, the inter-ministerial Portugal 2030 Coordination Commission, during its plenary session under deliberation no. 31/2023/PL on September 22, 2023, identified Low-Density municipalities (total of 165) in Continental Portugal. In the absence of institutional information for municipalities in the Portuguese archipelagos in this domain, it is known that population density is the institutional the main criteria to classify TD. Considering the average value of population density in Low-Density municipalities at the Portugal mainland ($40.32 \text{ inhabitants/km}^2$)¹, we applied this threshold to Portuguese islands. According to this threshold, Calheta (Azores), Corvo, Lajes das Flores, Lajes do Pico, Santa Cruz das Flores, São Roque do Pico and Porto Moniz have been added to the 165 municipalities from the Portuguese mainland. In this institutional context, we employ dummy variables, with a value of 1

Table 1. Geographical distribution of Portuguese municipalities between TD and L.

	TD		L	
	Low-density (0)	High-density (1)	Islands (0)	Mainland (1)
Number of municipalities	172	136	30	278

representing High-Density municipalities and a value of 0 representing Low-Density municipalities. In a similar manner, the municipalities of the Portuguese archipelagos were distinguished from those on the mainland using a dummy variable, where a value of 1 represents continental municipalities and a value of 0 denotes municipalities in the archipelagos.

The two dummy variables are hereafter referred to as Territorial Density (TD) and Land (L). Table 1 presents the number of municipalities regarding these two dimensions.

Model and procedures

We use an unconditional latent growth model (LGM) as it is considered a powerful tool for analysing longitudinal data (Preacher, 2018). The unconditional LGM tracks individual trajectories of change in the MTI, reflecting institutional dynamics over the years. Additionally, conditional LGM provide insights into growth trajectories allowing introducing covariates that influence these changes along different time periods (Duncan & Duncan, 2009). To sum, LGM allow us to model individual trajectories of change and understand the covariates based on the Portuguese territory (TD and L) that influence the trajectory of MTI between 2013 and 2017.

As suggested by some authors (Liu et al., 2015; Stoolmiller, 1995), the model freely estimated slope parameters to illustrate how the MTI changes over time for each municipality, aiming to capture the genuine trajectory of MTI growth. Therefore, the measurement model specifies how the MTI relate to the latent growth factors. As suggested by Duncan et al. (2013), for a free (non-linear) latent growth model, this can be represented as:

$$MTI_{it} = \alpha_i + \beta_i \times \lambda_t + \varepsilon_{it}, \quad (1)$$

$$i = 1, 2, 3, \dots, 308; t = 2013, 2014, \dots, 2017$$

where i corresponds to each municipality, t refers to each year of analysis, α_i is the intercept for municipality i , β_i is the slope for municipality i , λ_t are the free time scores, allowing for non-linear growth, and ε_{it} is the error term for each municipality (i) at each time period (t), assuming to be normally distributed with mean zero and variance σ^2 .

The intercept and slope latent variables are regressed on the covariates TD and L and can be explained through the following structural equations:

$$\alpha_i = \gamma_{\alpha 0} + \gamma_{\alpha 1}TD_i + \gamma_{\alpha 2}L_i + \zeta_{\alpha i} \quad (2)$$

$$\beta_i = \gamma_{\beta 0} + \gamma_{\beta 1}TD_i + \gamma_{\beta 2}L_i + \zeta_{\beta i} \quad (3)$$

where $\gamma_{\alpha 0}$ and $\gamma_{\beta 0}$ are the intercepts of the intercept and slope equations, respectively; $\gamma_{\alpha 1}$, $\gamma_{\alpha 2}$, $\gamma_{\beta 1}$, and $\gamma_{\beta 2}$ are the regression coefficients for the covariates; $\zeta_{\alpha i}$ and $\zeta_{\beta i}$ are the residuals for the intercept and slope equations, assumed to be normally distributed with means zero and variances ψ_{α} ψ_{β} , respectively.

Data analysis

Our research made use of a longitudinal dataset encompassing 1,540 observations from Portuguese municipalities, spanning the years 2013 to 2017, with no instances of missing data. The summary descriptives and correlation of the MTI and dummy variables (TD and L) are shown in Table 2. Statistical analysis was performed using SPSS 29.0 and Amos 28.0 software.

Table 2. Correlation coefficients and descriptive statistics for MTI, TD and L.

Variables	N	Mean	SD	Skewness	Kurtosis	(1)	(2)	(3)	(4)	(5)	(6)	(7)
MTI 2013 (1)	308	33.14	9.90	−.17	.03	1						
MTI 2014 (2)	308	33.61	12.36	.44	.47	.50***	1					
MTI 2015 (3)	308	44.30	17.21	.52	.08	.30***	.58***	1				
MTI 2016 (4)	308	52.43	19.58	.62	−.42	.17***	.38***	.75***	1			
MTI 2017 (5)	308	50.90	16.90	.17	−.69	.21***	.30***	.53***	.66***	1		
TD (6)	308	.44	.497	.24	−1.95	.26**	.25**	.15**	.02 ^{n.s.}	.13*	1	
L (7)	308	.90	.297	−2.72	5.40	.15*	.20**	.15**	.12*	.14*	−.22**	1

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, n.s. non statistically significant.

There is no evidence of unidimensional normality violation, as both kurtosis and asymmetry fall below the threshold specified by Kline (2011) – $| \text{Skewness} | > 3$ (marked asymmetry) or $| \text{Kurtosis} | \text{ values} > 10$ (marked kurtosis) or > 20 (very marked kurtosis).

Results

Preliminary analysis

Before presenting the LGM results for differences between and within municipalities, preliminary graphical analyses can be useful to initiate and complement the forthcoming results.

Starting from different baselines, Low-Density municipalities tend to converge with High-Density municipalities over time in terms of transparency. Considering the slope of TD ($\beta = -0.099$; $SE = 1.842$, $p = .150$), although this trend is not statistically significant, it is reasonable to observe this convergence in transparency between municipalities in different TDs – Figure 1.

Conversely, the slope analysis for Land does not reveal any kind of convergence in transparency over time between island and mainland municipalities. This lack of convergence is confirmed by the non-significant slope for L ($\beta = 0.015$; $SE = 3.081$, $p = 0.831$). Figure 2 visually represents this evolution.

Analysis of unconditional LGM

Table 3 shows the estimates of growth parameters of the LGM (Intercept, Slope and Error terms). The estimated mean for intercept is statistically significant, $M(\text{intercept}) = 32.975$ ($SE = 0.562$, $p < .001$) from a scale index of 100 points, which indicates that the average starting of MTI is approximately 33 points. The mean estimate for the slope mean is also statistically significant, $M(\text{slope}) = 17.916$ ($SE = 0.991$, $p < .001$) showing that, on average, MTI increased by almost 18 points at each consecutive data collection point. Covariance between the initial state and growth rate of MTI is negative and statistically significant ($r = -21.695$, $p = .024$), suggesting that municipalities with higher initial MTI levels tend to exhibit slower rates of growth. The variance associated with the intercept and slope is significant, indicating substantial differences among municipalities in their initial scores and growth trajectories, respectively. The unconditional LGM demonstrated excellent fit to the data: $\chi^2 / df = 1.162$; $RMSEA = .023$; $CFI = .999$; $NFI = .993$; $SRMR = .023$.

The evolution of the Municipal Transparency Index (MTI) within Portuguese municipalities can be geographically detailed by comparing the initial year of the MTI (2013) to the final year (2017). Figure 3 illustrates the overall positive progress in Portuguese municipalities from the start to the end of the MTI period.

Justification for conditional LGM

Chi-square statistic test and goodness of fit indices indicate statistical support for the inclusion of both dummy variables within a conditional LGM based on territorial density (TD) and land (L)

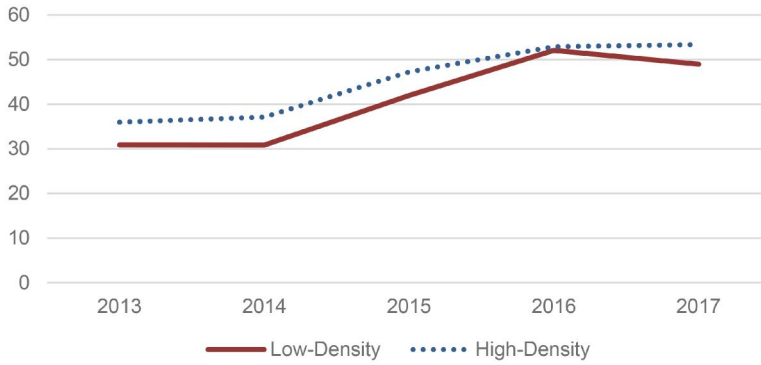


Figure 1. Estimated means of MTI between different TDs (2013–2017).

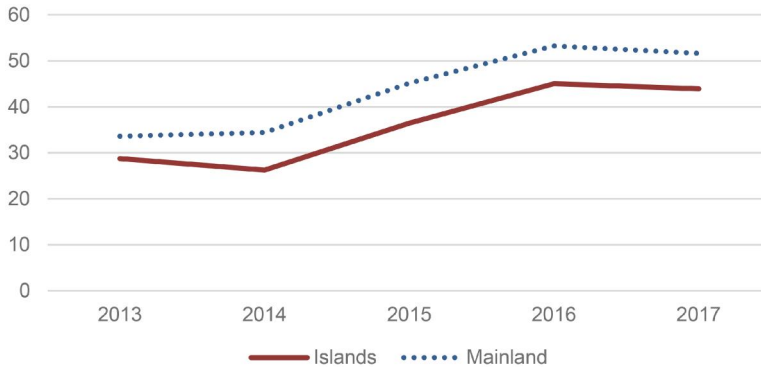


Figure 2. Estimated means of MTI between different land typologies (2013–2017).

Table 3. Estimates of growth parameters of the LGM.

	Estimate	SE	Z	P
<i>Means</i>				
Intercept	32.975	0.562	58.706	***
Slope	17.916	.991	18.086	***
<i>Covariances</i>				
Intercept <-> Slope	-21.695	9.591	-2.262	.024*
<i>Variances</i>				
Intercept	61.652	7.876	7.828	***
Slope	180.832	22.553	8.018	***
E1	37.552	6.763	5.552	***
E2	88.479	9.096	9.727	***
E3	173.281	16.973	10.209	***
E4	147.036	21.172	6.945	***
E5	85.448	16.197	5.276	***

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

(see Table 4). Either TD or L improve the goodness of fit on of the conditional vs. unconditional LGM.

Analysis of the conditional LGM

Firstly, both TD and L show statistically significant effects on the intercept parameters MTI, e.g., at the baseline. This result suggests that in municipalities with higher territorial density, the initial MTI is higher compared to those with lower territorial density ($\beta = .436$, $SE = 1.016$, $p < .001$).

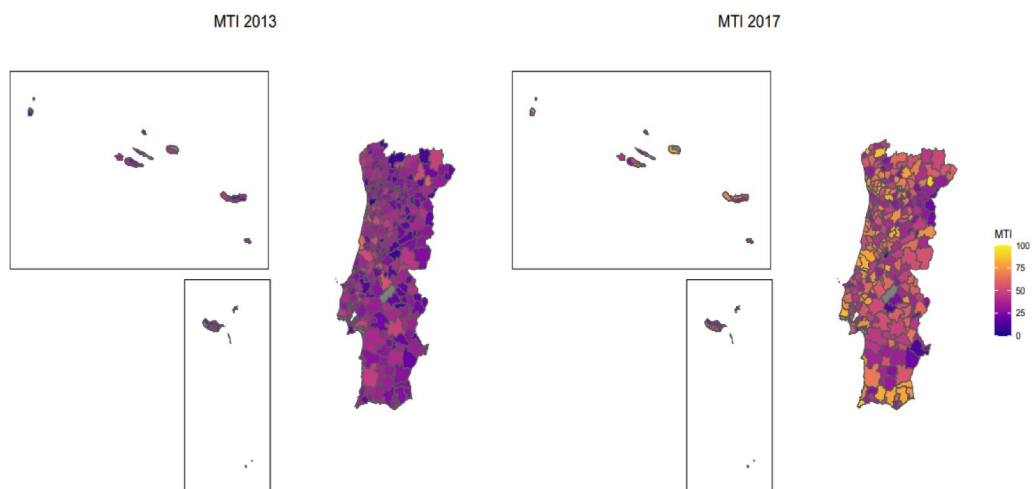


Figure 3. Geographical distribution of the MTI within Portuguese municipalities.

Table 4. Chi-square statistic test.

Model	DF	χ^2	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Without TD effect	2	39.528	***	.053	.054	.086	.089
Without L effect	2	30.048	***	.040	.041	.064	.066

Notes: *** $p < 0.001$.

Likewise, continental municipalities also displayed higher MTI compared to island municipalities ($\beta = .321$, $SE = 1.699$, $p < .001$). Although TD has a greater influence than L in predicting initial levels of MTI, the difference between the two covariates is not statistically significant ($Z = .061$, $p = .951$). Both geographical variables explained 23,3% ($R^2 = 0.233$) of the MTI variance in the intercept.

Secondly, neither TD ($SE = 1.879$, $p = .272$) nor L ($SE = 3.155$, $p = .849$) displayed statistical significance effects on the MTI slope. In other words, statistical evidence indicates that neither geographical variable impacts the growth trajectory of MTI. Despite this fact, both geographical variables presented significant variances at the intercepts [$V(\text{intercept}) = 46.127$, $p < .001$] and slopes [$V(\text{slope}) = 176.132$, $p < .001$], suggesting significant differences in municipalities both in the starting point and the growth rate of MTI.

Thirdly, there is statistical evidence indicating a non-linear growth pattern for MTI. Specifically, there is a marginal growth of 5.6% between 2013 and 2014, which although not statistically significant, is quasi-significant ($SE = .031$, $p = .105$) considering a least restrictive significance level of $\alpha = 0.10$. Comparing the base year (2013) with subsequent years, the MTI exhibits a notable and statistically significant rise: 51% in 2015 ($SE = .043$, $p < .001$), and 75% in 2016 ($SE = .05$, $p < .001$), levelling off in 2017 (79%). The peak growth of MTI occurred in 2015, followed by a steady but smoother growth rate in 2016, before stabilising in 2017.

Finally, it should be underlined the moderate negative correlation between TD and L ($\beta = -.215$; $SE = .009$, $p < .001$), also shown in descriptives (Table 2). This indicates that Portuguese municipalities with higher TD are more likely to be located on the islands rather than the mainland.

The conditional LGM presents good fit to the data: $\chi^2/df = 1.559$; RMSEA = .043; CFI = .992; NFI = .979; SRMR = .025.

Overall, the main results of conditional LGM can be found in Table 5.

Table 5. Estimates of growth parameters (TD and L) of LGM.

	Estimate	SE	Z	P	Standardized regression weight (β)
Intercept $\leftarrow$ TD	6.821	1.016	6.716	<.001	.436***
Intercept $\leftarrow$ L	8.410	1.699	4.950	<.001	.355***
Slope $\leftarrow$ TD	-2.652	1.842	-1.440	.150	-.099 ^{n.s.s.}
Slope $\leftarrow$ L	.657	3.081	.213	.831	.015 ^{n.s.s.}
MTI 2013 $\leftarrow$ Intercept	1				
MTI 2014 $\leftarrow$ Intercept	1				
MTI 2015 $\leftarrow$ Intercept	1				
MTI 2016 $\leftarrow$ Intercept	1				
MTI 2017 $\leftarrow$ Intercept	1				
MTI 2013 $\leftarrow$ Slope	0				
MTI 2014 $\leftarrow$ Slope	.05	.031	1.620	.105	.056 ^{n.s.s.}
MTI 2015 $\leftarrow$ Slope	.64	.043	14.998	<.001	.510***
MTI 2016 $\leftarrow$ Slope	1.096	.05	21.964	<.001	.752***
MTI 2017 $\leftarrow$ Slope	1				

Notes: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Discussion

The unconditional LGM provides evidence that local transparency improved in Portuguese municipalities between 2013 and 2017, supporting a positive answer to RQ1. Therefore, the project to monitor and improve local transparency in Portugal was succeeding. Alongside political and civic pressure to comply with reporting required of the index, there was pressure from other municipalities competitively showcasing their higher rankings on their own websites (Câmara Municipal de Alfândega da Fé, 2017; Câmara Municipal de Sintra, 2017; Câmara Municipal de Valongo, 2017), heightened by additional publicity from television reports (RTP, 2017; TVI, 2017a, 2017b)². The national press regularly reports on the most and least transparent municipalities (Botelho, 2017; LUSA Agency, 2017). The increase in local transparency in Portugal could be explained by the heightened attention to MTI, which encourages mimetic isomorphism, leading municipalities to imitate the actions of their more successful peers (see Ashworth et al., 2007). The MTI fosters mimetic isomorphism by enabling municipalities to benchmark their transparency levels against peers, motivating them to adopt best practices from higher-performing entities. This competitive environment, combined with reduced uncertainty about effective implementation, encourages local governments to replicate successful transparency measures to improve their own scores and public trust. For instance, a recent study has highlighted the emergence of mimetic isomorphism in Brazilian governance, with states increasingly adopting transparency and anti-corruption measures that mirror both each other's practices and those of the federal government (Silva & Júnior, 2023). In Ghana, public sector organizations are also influenced by mimetic isomorphism, resulting in a trend towards adopting similar sustainable procurement practices and leadership approaches (Nsiah-Sarfo et al., 2023).

Moreover, the consistent public scrutiny directed towards the MTI can be seen as a standard intended to benefit citizens within every Portuguese municipality, in line with the concept of normative isomorphism (see Bellé et al., 2019). There is also evidence suggesting that municipalities with higher initial MTI levels tend to exhibit slower rates of growth, confirming the convergence effect also found by Šiřáková-Beblavá et al. (2016) in Slovak municipalities. In other words, municipalities with lower levels of transparency tend to adopt the transparency practices of their better-ranked peers over time, resulting in the fastest convergence to those already performing well. Unlike systems driven by formal mandates or penalties, the MTI relies on voluntary adherence and benchmarking, which do not exert the external legal pressures characteristic of coercive isomorphism. Regardless of whether through mimetic or normative isomorphism, these practices have already been identified in local and regional government bodies across various domains (Ahyaruddin & Akbar, 2018; Joseph & Taplin, 2012).

While the improvement in MTI scores between 2013 and 2017 has been confirmed, the previously mentioned convergence is not entirely supported by the covariates (TD and L). These covariates only affect the baselines (intercepts) of MTI and not its growth over different time periods (slopes). Regarding RQ2, there is a difference in municipal transparency between high and low density areas at the beginning of each period, but not in its growth. High-density municipalities have a higher MTI than Low-density municipalities. The advanced growth rate of the latter is not sufficient to ensure convergence towards High-density municipalities. Notwithstanding the unconditional model suggesting convergence in MTI over time between Portuguese municipalities, this territorial covariate distinction placed emphasis on differences in local transparency as a function of territorial idiosyncrasies. This finding is in line with some previous research studies (da Cruz et al., 2016; Löfving et al., 2022; Mourão et al., 2023).

Similarly, in RQ3, there is a difference in local transparency between continental and island municipalities at the start of each period, but not in its growth. Municipalities on the mainland have a higher MTI than those on the islands over time, and the latter show no signs of converging on their mainland counterparts. This reinforces some prior empirical evidence, with authors referring to the distinctness of Portuguese archipelagos as the “island factor” or “island effect” (Brás & Dowley, 2021; da Cruz et al., 2016), with municipalities from Spain’s Canary and Balearic Islands, also reported as having low levels of transparency by Cuadrado-Ballesteros (2014). We encourage further research on island and archipelago governance, not only in Portugal and Spain, but other EU states as well.

Practical implications

Between 2013 and 2017, this study confirms a significant improvement in transparency across Portuguese municipalities, showcasing the success of the (MTI) project promoted by Transparency International’s official representative in Portugal in achieving its objectives (see da Cruz et al., 2016). However, since 2018, the transparency of Portuguese municipalities has not been evaluated using a consistent, systematic, and proper methodology like the one used to build the MTI. According to Doctor Margarida Mano, President of Portugal’s branch of TI, in an email response to our inquiry on 12 December 2024.

“The MTI was discontinued due to a lack of funding. However, it has undergone some fine-tuning that does not alter the scoring matrix of the indicators. The new version has been tested in the district capitals and is ready to be applied immediately. Without funding, however, there are no conditions for it to proceed. This serves as a clear example of what the Foundation for Science and Technology could have achieved within the scope of the National Strategy to Combat Corruption but did not. It highlights a project that could have benefited from a funding line dedicated to policies aimed at strengthening transparency and public integrity”.

Nowadays, the lack of local transparency assessment in Portugal can have serious consequences. Prior research suggests it can result in reduced institutional accountability (Carlitz, 2013), inefficiencies in local governance (Guillamón & Cuadrado-Ballesteros, 2021), reduced civic engagement and public trust (Kim & Lee, 2019), among others. These negative consequences take on greater urgency given that under the Law on the Transfer of Competences to Local Authorities and Intermunicipal Entities (Law n.50/2018), Portuguese municipalities are becoming more important players in the lives of their citizens with the decentralisation of competencies in areas such as urban planning, education, healthcare, social services, transport, and culture. As a result of acquiring more competencies, Portuguese municipalities are receiving increased benefits from the EU multiannual financial framework (MFF), which is now linked with the EU recovery plan (NextGenerationEU).

Hence, it is urgent to resume local transparency assessment, ideally improving the MTI tool to align more closely with the SDGs outlined in the UN 2030 Agenda. The devastating financial

crisis of 2010 and the recent public health crisis of COVID 19 has damaged public sector legitimacy and increased citizen interest in more sustainable public services. Recent but limited research has demonstrated that local government transparency is positively linked to more effective implementation of the SDGs. For example, Olayinka and Osariemen (2019) conclude that in the African countries considered in their research, public transparency is positively and significantly related to SDG performance. The same has been observed by Lyulyov et al. (2024) for EU countries. And at the local level, Ríos et al. (2024) found local government transparency was positively associated with SDG implementation progress in Spanish municipalities.

Theoretical implications

This study enhances the broader understanding of institutional isomorphism in local transparency, both mimetic and normative, as *“journalists, bloggers, and civic-minded individuals publicized the MTI, putting additional pressure on local governments to disclose information (...) providing “an additional incentive to foster a culture of transparency”* (da Cruz et al., 2016, p. 886). In theory, our results indicate that institutional dynamics were promoting greater local transparency, though territorial and geographic asymmetries suggest the effect is not uniform, with a particular focus on the “island effect”, as argued by Brás and Dowley (2021) and da Cruz et al. (2016).

Concluding remarks

This research reveals two key findings: (i) a general increase in municipal transparency in Portugal from 2013 to 2017, and (ii) an analysis of the territorial idiosyncrasies affecting municipal transparency during this period. From an institutional perspective (mimetic or normative isomorphism approach), these findings highlight the importance of local transparency assessments for monitoring progress in accountability, information disclosure, and governance within Portuguese municipalities. Furthermore, the expanding competences of municipalities (Law n.50/2018), which lead to greater absorption of funds from the EU stimulus package (MFF and NextGenerationEU) and increased engagement with the UN SDGs, underscore the importance of transparency assessment. Without monitoring local transparency (as the MTI has not been published since 2018), local governance in Portugal may face significant challenges in contributing to national reporting on SDG 11 (Sustainable Cities and Habitats) and SDG 16 (Peace, Justice and Strong Institutions), as well SDG 17 (Partnerships). We encourage the Portuguese based Transparency International offices to work with national and subnational stakeholders to revive a version of the index in order to contribute to the broader efforts to achieve the 2030 goals.

Like any other work, this research has its limitations. These include the short longitudinal data with only five data points and the absence of qualitative data collected from municipalities to complement the MTI. This qualitative aspect points to future research avenues aimed at better understanding the reasons for lower transparency levels, both in island regions and low-density territories.

Notes

1. Source: [INE] Statistics Portugal.
2. <https://arquivos.rtp.pt/conteudos/transparencia-nos-municipios/> [Public television transmission].
<https://tviplayer.iol.pt/programa/jornal-da-uma/53c6b2633004dc00624392e1/video/589b20020cf2fb414917556a> [Public television transmission].
<https://tviplayer.iol.pt/programa/jornal-da-uma/53c6b2633004dc00624392e1/video/589b29930cf2fb4149175612> [Public television transmission].

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ORCID

Gonçalo Brás  <http://orcid.org/0000-0002-8704-4035>

Kathleen M. Dowley  <http://orcid.org/0000-0001-8296-963X>

João Marôco  <http://orcid.org/0000-0001-9214-5378>

References

- Ahyaruddin, M., & Akbar, R. (2018). Indonesian local government's accountability and performance: The isomorphism institutional perspective [accountability; performance; institutional isomorphism]. *Jurnal Akuntansi Dan Investasi*, 19(1), 1–11. <https://doi.org/10.18196/jai.190187>
- Alaimo, L. S., Galli, E., Rizzo, I., & Scaglioni, C. (2023). A new index of transparency: Evidence for the Italian municipalities. *Socio-Economic Planning Sciences*, 89, 101678. <https://doi.org/10.1016/j.seps.2023.101678>
- Alsharari, N. M. (2022). Risk management practices and trade facilitation as influenced by public sector reforms: Institutional isomorphism. *Journal of Accounting & Organizational Change*, 18(2), 192–216. <https://doi.org/10.1108/JAOC-11-2018-0117>
- Androniceanu, A. (2021). Transparency in public administration as a challenge for a good democratic governance. *Administratie SI Management Public*, 36(36), 149–164. <https://doi.org/10.24818/amp/2021.36-09>
- Ansmann, M., & Seyfried, M. (2022). Isomorphism and organizational performance: Evidence from quality management in higher education. *Quality Assurance in Education*, 30(1), 135–149. <https://doi.org/10.1108/QAE-07-2021-0114>
- Araujo, J. F. F. E. D., & Tejedo-Romero, F. (2016). Local government transparency index: Determinants of municipalities' rankings. *International Journal of Public Sector Management*, 29(4), 327–347. <https://doi.org/10.1108/IJPSM-11-2015-0199>
- Ardigó, I. A. (2022). Local government accountability mechanisms. In *U4 anti-corruption helpdesk* (pp. 1–22). Transparency International.
- Arkorful, V. E., Lugu, B. K., Hammond, A., & Basiru, I. (2021). Decentralization and citizens' participation in local governance: Does trust and transparency matter? – An empirical study. *Forum for Development Studies*, 48(2), 199–223. <https://doi.org/10.1080/08039410.2021.1872698>
- Ashworth, R., Boyne, G., & Delbridge, R. (2007). Escape from the iron cage? Organizational change and isomorphic pressures in the public sector. *Journal of Public Administration Research and Theory*, 19(1), 165–187. <https://doi.org/10.1093/jopart/mum038>
- Awung, N. S., & Marchant, R. (2020). Transparency in benefit sharing and the influence of community expectations on participation in REDD+ projects: An example from Mount Cameroon National Park. *Ecosystems and People*, 16(1), 78–94. <https://doi.org/10.1080/26395916.2019.1698658>
- Bauhr, M., & Carlitz, R. (2021). When does transparency improve public services? Street-level discretion, information, and targeting. *Public Administration*, 99(3), 500–516. <https://doi.org/10.1111/padm.12693>
- Baume, S., & Novak, S. (2020). Introduction. In S. Baume & S. Novak (Eds.), *Compromises in Democracy* (pp. 1–17). Springer International Publishing. https://doi.org/10.1007/978-3-030-40802-2_1
- Beddewela, E., & Fairbrass, J. (2016). Seeking legitimacy through CSR: Institutional pressures and corporate responses of multinationals in Sri Lanka. *Journal of Business Ethics*, 136(3), 503–522. <https://doi.org/10.1007/s10551-014-2478-z>
- Bellé, N., Belardinelli, P., Cantarelli, P., & Mele, V. (2019). On iron cages and suboptimal choices: An experimental test of the micro-foundations of isomorphism in the public sector. *International Public Management Journal*, 22(2), 373–414. <https://doi.org/10.1080/10967494.2018.1494066>
- Bertot, J. C., Jaeger, P. T., & Grimes, J. M. (2010). Using ICTs to create a culture of transparency: E-government and social media as openness and anti-corruption tools for societies. *Government Information Quarterly*, 27(3), 264–271. <https://doi.org/10.1016/j.giq.2010.03.001>
- Bonsón, E., Torres, L., Royo, S., & Flores, F. (2012). Local e-government 2.0: Social media and corporate transparency in municipalities. *Government Information Quarterly*, 29(2), 123–132. <https://doi.org/10.1016/j.giq.2011.10.001>
- Botelho, L. (2017). *Câmaras estão mais transparentes, com Lisboa e Porto a meio da tabela*. Público. <https://www.publico.pt/2017/02/08/politica/noticia/municipios-estao-mais-transparentes-mas-os-maiores-pecam-por-falta-de-informacao-1761213>

- Brás, G. R., & Dowley, K. M. (2021). Impact of demographic, political and financial factors on municipal transparency: A dynamic panel approach. *International Journal of Public Sector Management*, 34(2), 101–117. <https://doi.org/10.1108/IJPSM-11-2019-0289>
- Brown, L. D. (2008). *Creating credibility: Legitimacy and accountability for transnational civil society*. Kumarian Press.
- Bulău-Olaru, I. G., Ranta, A. E., & Stănică, V. I., PhD(c), Doctoral School of Public Administration and Public Policy, Department of Public Administration and Management, Faculty of Political, Administrative and Communication Sciences, Babes-Bolyai University, Cluj-Napoca, Romania. (2024). Citizens' free access to information. The case of local institutions from rural areas of the north-western region from Romania. *Transylvanian Review of Administrative Sciences*, 73(73 E), 52–74. <https://doi.org/10.24193/tras.73E.4>
- Câmara Municipal de Alfândega da Fé. (2017). *Índice de Transparência Municipal*. <https://www.cm-alfandegadafe.pt/pages/1947>
- Câmara Municipal de Sintra. (2017). *Transparência Municipal*. <https://cm-sintra.pt/institucional/transparencia-municipal>
- Câmara Municipal de Valongo. (2017). *Câmara de Valongo com mais serviços e informação online*. <https://www.jpn.up.pt/2017/02/08/camara-de-valongo-apresentou-portal-do-municipio/>
- Camilleri, M. A. (2015). Valuing stakeholder engagement and sustainability reporting. *Corporate Reputation Review*, 18(3), 210–222. <https://doi.org/10.1057/crr.2015.9>
- Carlitz, R. (2013). Improving transparency and accountability in the budget process: An assessment of recent initiatives. *Development Policy Review*, 31(s1), s49–s67. <https://doi.org/10.1111/dpr.12019>
- Christensen, L. T., & Cheney, G. (2015). Peering into transparency: challenging ideals, proxies, and organizational practices. *Communication Theory*, 25(1), 70–90. <https://doi.org/10.1111/comt.12052>
- Ciborra, C. (2005). Interpreting e-government and development. *Information Technology & People*, 18(3), 260–279. <https://doi.org/10.1108/09593840510615879>
- Crane, B. (2020). Revisiting who, when, and why stakeholders matter: Trust and stakeholder connectedness. *Business & Society*, 59(2), 263–286. <https://doi.org/10.1177/0007650318756983>
- Cuadrado-Ballesteros, B. (2014). The impact of functional decentralization and externalization on local government transparency. *Government Information Quarterly*, 31(2), 265–277. <https://doi.org/10.1016/j.giq.2013.10.012>
- da Cruz, N. F., Tavares, A. F., Marques, R. C., Jorge, S., & de Sousa, L. (2016). Measuring local government transparency. *Public Management Review*, 18(6), 866–893. <https://doi.org/10.1080/14719037.2015.1051572>
- Danker, M. (2013). Understanding stakeholder activism, managing transparency risk. In D. Crowther & G. Aras (Eds.), *The governance of risk* (Vol. 5, pp. 33–72). Emerald Group Publishing. [https://doi.org/10.1108/S2043-0523\(2013\)0000005006](https://doi.org/10.1108/S2043-0523(2013)0000005006)
- David, N. M., Loupa-Ramos, I., & Silva, J. B. (2024). Navigating governance with sticks, carrots, and sermons: Paving paths for sustainable development goals through local spatial planning. *Sustainable Development*, 32(6), 6374–6391. <https://doi.org/10.1002/sd.3033>
- del Sol, D. A. (2013). The institutional, economic and social determinants of local government transparency. *Journal of Economic Policy Reform*, 16(1), 90–107. <https://doi.org/10.1080/17487870.2012.759422>
- Duncan, T. E., & Duncan, S. C. (2009). The ABC's of LGM: An introductory guide to latent variable growth curve modeling. *Social and Personality Psychology Compass*, 3(6), 979–991. <https://doi.org/10.1111/j.1751-9004.2009.00224.x>
- Duncan, T. E., Duncan, S. C., & Strycker, L. A. (2013). *An introduction to latent variable growth curve modeling: Concepts, issues, and application*. Routledge.
- Erkkilä, T. (2020). *Transparency in public administration*. Oxford Research Encyclopedia of Politics. <https://doi.org/10.1093/acrefore/9780190228637.013.1404>
- Frank, A. D. L. P., & Mattioli, L. (2023). Implementation of sustainable development goals at the local-neighborhood scale. *Journal of Urban and Regional Analysis*, 15(1), 125–149. <https://doi.org/10.37043/JURA.2023.15.1.6>
- Frumkin, P., & Galaskiewicz, J. (2004). Institutional isomorphism and public sector organizations. *Journal of Public Administration Research and Theory*, 14(3), 283–307. <https://doi.org/10.1093/jopart/muh028>
- Gandía, J. L., Marrahí, L., & Huguet, D. (2016). Digital transparency and Web 2.0 in Spanish city councils. *Government Information Quarterly*, 33(1), 28–39. <https://doi.org/10.1016/j.giq.2015.12.004>
- García-Soriano, D., Quesada-Román, A., & Zamorano-Orozco, J. J. (2020). Geomorphological hazards susceptibility in high-density urban areas: A case study of Mexico City. *Journal of South American Earth Sciences*, 102, 1–11. <https://doi.org/10.1016/j.jsames.2020.102667>
- Global Taskforce of Local and Regional Governments, UNDP, & UN-Habitat. (2016). *Roadmap for localizing the SDGs: Implementation and monitoring at subnational level*. United Cities and Local Governments. https://www.uclg.org/sites/default/files/roadmap_for_localizing_the_sdgs_0.pdf
- Greenwood, R., Meyer, R. E., Lawrence, T. B., & Oliver, C. (2017). *The SAGE handbook of organizational institutionalism*. SAGE Publications. <http://digital.casalini.it/9781526415059> <http://digital.casalini.it/5018766>

- Grimmelikhuijsen, S. G., Porumbescu, G. A., Hong, B., & Im, T. (2013). The effect of transparency on trust in government: A cross-national comparative experiment. *Public Administration Review*, 73(4), 575–586. <https://doi.org/10.1111/puar.12047>
- Guillamón, M. D., & Cuadrado-Ballesteros, B. (2021). Is transparency a way to improve efficiency? An assessment of Spanish municipalities. *Regional Studies*, 55(2), 221–233. <https://doi.org/10.1080/00343404.2020.1772964>
- Hood, C. (2010). Accountability and transparency: Siamese twins, matching parts, awkward couple? *West European Politics*, 33(5), 989–1009. <https://doi.org/10.1080/01402382.2010.486122>
- Hua, J., Zhang, X., Ren, C., Shi, Y., & Lee, T.-C. (2021). Spatiotemporal assessment of extreme heat risk for high-density cities: A case study of Hong Kong from 2006 to 2016. *Sustainable Cities and Society*, 64, 1–15. <https://doi.org/10.1016/j.scs.2020.102507>
- Jairo, A., Nguyen, C. V., Tran, A., & Phung, T. D. (2015). The urban-rural gap in governance and public administration: Evidence from Vietnam. *International Public Management Review*, 16(1), 165–191.
- Joseph, C., & Taplin, R. (2012). Local government website sustainability reporting: A mimicry perspective. *Social Responsibility Journal*, 8(3), 363–372. <https://doi.org/10.1108/17471111211247938>
- Kassen, M. (2013). A promising phenomenon of open data: A case study of the Chicago open data project. *Government Information Quarterly*, 30(4), 508–513. <https://doi.org/10.1016/j.giq.2013.05.012>
- Keuffer, N., & Mabillard, V. (2020). Administrative openness and diversity in Swiss municipalities: How does local autonomy influence transparency practices? *International Review of Administrative Sciences*, 86(4), 782–798. <https://doi.org/10.1177/0020852318823278>
- Kim, S., & Lee, J. (2019). Citizen participation, process, and transparency in local government: An exploratory study. *Policy Studies Journal*, 47(4), 1026–1047. <https://doi.org/10.1111/psj.12236>
- Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.
- Kosack, S., & Fung, A. (2014). Does transparency improve governance? *Annual Review of Political Science*, 17(1), 65–87. <https://doi.org/10.1146/annurev-polisci-032210-144356>
- Leal Filho, W., Dibbern, T., Pimenta Dinis, M. A., Coggo Cristofolletti, E., Mbah, M. F., Mishra, A., Clarke, A., Samuel, N., Castillo Apraiz, J., Rimi Abubakar, I., & Aina, Y. A. (2024). The added value of partnerships in implementing the UN sustainable development goals. *Journal of Cleaner Production*, 438, 140794. <https://doi.org/10.1016/j.jclepro.2024.140794>
- Leccis, F. (2021). *Enhancing effectiveness in planning: An innovative approach to implement the 2030 agenda at the local scale* [Paper presentation]. Computational science and its applications – ICCSA 2021, Cham.
- Licht, J. D. F. (2011). Do we really want to know? The potentially negative effect of transparency in decision making on perceived legitimacy. *Scandinavian Political Studies*, 34(3), 183–201. <https://doi.org/10.1111/j.1467-9477.2011.00268.x>
- Lim, M. M. L., Sogaard Jørgensen, P., & Wyborn, C. A. (2018). Reframing the sustainable development goals to achieve sustainable development in the Anthropocene – A systems approach. *Ecology and Society*, 23(3), 1–19. <https://doi.org/10.5751/ES-10182-230322>
- Liu, Y., Liu, H., Li, H., & Zhao, Q. (2015). The effects of individually varying times of observations on growth parameter estimations in piecewise growth model. *Journal of Applied Statistics*, 42(9), 1843–1860. <https://doi.org/10.1080/02664763.2015.1014884>
- Lodge, M., & Wegrich, K. (2005). Control over government: Institutional isomorphism and governance dynamics in german public administration. *Policy Studies Journal*, 33(2), 213–233. <https://doi.org/10.1111/j.1541-0072.2005.00103.x>
- Löfving, L., Kamuf, V., Heleniak, T., Weck, S., & Norlén, G. (2022). Can digitalization be a tool to overcome spatial injustice in sparsely populated regions? The cases of Digital Västerbotten (Sweden) and Smart Country Side (Germany). *European Planning Studies*, 30(5), 917–934. <https://doi.org/10.1080/09654313.2021.1928053>
- López-López, V., Iglesias-Antelo, S., Vázquez-Sanmartín, A., Connolly, R., & Bannister, F. (2018). e-Government, transparency & reputation: An empirical study of Spanish local government. *Information Systems Management*, 35(4), 276–293. <https://doi.org/10.1080/10580530.2018.1503792>
- Lourenço, R. P. (2013). *Open government portals assessment: A transparency for accountability perspective*. Electronic Government.
- LUSA Agency. (2017). *Alfândega da Fé e Vila do Bispo foram os municípios mais transparentes em 2017*. Diário de Notícias. <https://www.dn.pt/portugal/interior/alfandega-da-fe-e-vila-do-bispo-foram-os-municipios-mais-transparentes-em-2017-9249892.html/>
- Lyulyov, O., Pimonenko, T., Saura, J. R., & Barbosa, B. (2024). How do e-governance and e-business drive sustainable development goals? *Technological Forecasting and Social Change*, 199, 123082. <https://doi.org/10.1016/j.techfore.2023.123082>
- Mabillard, V., & Zumofen, R. (2017). The complex relationship between transparency and accountability: A synthesis and contribution to existing frameworks. *Public Policy and Administration*, 32(2), 110–129. <https://doi.org/10.1177/0952076716653651>

- Mourão, P. J. R., Bronić, M., & Stanić, B. (2023). The impact of local governments' budget transparency on debt in Croatia. *South East European Journal of Economics and Business*, 18(2), 21–33. <https://doi.org/10.2478/jeb-2023-0016>
- Navarro-Galera, A., Alcaraz-Quiles, F. J., & Ortiz-Rodriguez, D. (2018). Enhancing sustainability transparency in local governments—An empirical research in Europe. *Sustainability*, 10(7), 2161. <https://doi.org/10.3390/su10072161>
- Nikolaeva, R., & Bicho, M. (2011). The role of institutional and reputational factors in the voluntary adoption of corporate social responsibility reporting standards. *Journal of the Academy of Marketing Science*, 39(1), 136–157. <https://doi.org/10.1007/s11747-010-0214-5>
- Nixon, P., & Johansson, H. (2005). Transparency through technology: The internet and political parties. In B. N. Hague & B. D. Loader (Eds.), *Digital democracy* (pp. 149–166). Routledge. <https://doi.org/10.4324/9780203984031>
- Nsiah-Sarfo, D. J., Ofori, D., & Agyapong, D. (2023). Sustainable procurement implementation among public sector organisations in Ghana: The role of institutional isomorphism and sustainable leadership. *Cleaner Logistics and Supply Chain*, 8, 100118. <https://doi.org/10.1016/j.clscn.2023.100118>
- Olayinka, E., & Osariemen, A. (2019). Does public transparency and accountability impact sustainable development goals? A case study of selected African countries. *African Accounting and Finance Journal*, 2(1), 24–52.
- Parris, D. L., Dapko, J. L., Arnold, R. W., & Arnold, D. (2016). Exploring transparency: A new framework for responsible business management. *Management Decision*, 54(1), 222–247. <https://doi.org/10.1108/MD-07-2015-0279>
- Pillay, S., Reddy, P. S., & Morgan, D. (2017). Institutional isomorphism and whistle-blowing intentions in public sector institutions. *Public Management Review*, 19(4), 423–442. <https://doi.org/10.1080/14719037.2016.1178322>
- Piña, G., & Avellaneda, C. (2019). Central government strategies to promote local governments' transparency: Guidance or enforcement? *Public Performance & Management Review*, 42(2), 357–382. <https://doi.org/10.1080/15309576.2018.1462215>
- Pina, V., Torres, L., & Royo, S. (2010). Is e-government leading to more accountable and transparent local governments? An overall view. *Financial Accountability & Management*, 26(1), 3–20. <https://doi.org/10.1111/j.1468-0408.2009.00488.x>
- Preacher, K. J. (2018). Latent growth curve models. In G. R. Hancock, L. M. Stapleton, & R. O. Mueller (Eds.), *The reviewer's guide to quantitative methods in the social sciences* (pp. 178–192). Routledge.
- Rees, J., Taylor, R., & Damm, C. (2024). Opening the 'black box': Organisational adaptation and resistance to institutional isomorphism in a prime-led employment services programme. *Public Policy and Administration*, 39(1), 106–124. <https://doi.org/10.1177/09520767221118490>
- Ríos, A.-M., Guillamón, M.-D., & Benito, B. (2024). The influence of local government transparency on the implementation of the sustainable development goals in municipalities. *Journal of Public Budgeting, Accounting & Financial Management*, 36(4), 417–444. <https://doi.org/10.1108/JPBAFM-12-2023-0229>
- Rodríguez-Pose, A. (2013). Do institutions matter for regional development? *Regional Studies*, 47(7), 1034–1047. <https://doi.org/10.1080/00343404.2012.748978>
- Rodrigues, A. O. A., Marques, C. S., & Ramadani, V. (2023). Artisan entrepreneurship, resilience and sustainable development: the quintuple helix innovation model in the low-density and cross-border territories. *Journal of Enterprise Information Management*, 37(5), 1603–1626. <https://doi.org/10.1108/JEIM-02-2023-0066>
- Romero, R. C. (2023). Defining transparency: A functional approach: Eine Funktionsherangehensweise. *JeDEM – eJournal of eDemocracy and Open Government*, 15(1), 219–242. <https://doi.org/10.29379/jedem.v15i1.714>
- RTP. (2017). *Transparência nos municípios*.
- Ruijter, E., Détienne, F., Baker, M., Groff, J., & Meijer, A. J. (2020). The politics of open government data: Understanding organizational responses to pressure for more transparency. *American Review of Public Administration*, 50(3), 260–274. <https://doi.org/10.1177/0275074019888065>
- Sampson, C. J., Arnold, R., Bryan, S., Clarke, P., Ekins, S., Hatswell, A., Hawkins, N., Langham, S., Marshall, D., Sadatsafavi, M., Sullivan, W., Wilson, E. C. F., & Wrightson, T. (2019). Transparency in decision modelling: What, why, who and how? *PharmacoEconomics*, 37(11), 1355–1369. <https://doi.org/10.1007/s40273-019-00819-z>
- Schnackenberg, A. K., & Tomlinson, E. C. (2016). Organizational transparency: A new perspective on managing trust in organization-stakeholder relationships. *Journal of Management*, 42(7), 1784–1810. <https://doi.org/10.1177/0149206314525202>
- Scott, W. R. (1987). The adolescence of institutional theory. *Administrative Science Quarterly*, 32(4), 493–511. <https://doi.org/10.2307/2392880>
- Sičáková-Beblavá, E., Kollárik, M., & Sloboda, M. (2016). Exploring the determinants of transparency of Slovak municipalities. *NISPAcee Journal of Public Administration and Policy*, 9(2), 121–145. <https://doi.org/10.1515/nispa-2016-0017>
- Silva, S. J. C. D., & Júnior, A. C. B. (2023). Compliance and mimetic isomorphism of the anti-corruption law in Brazilian States. *Cadernos Gestão Pública e Cidadania*, 29, 1–12. <https://doi.org/10.12660/cgpc.v29.90353.85203>

- Simelio, N., Ginesta, X., de San Eugenio Vela, J., & Corcoy, M. (2019). Journalism, transparency and citizen participation: A methodological tool to evaluate information published on municipal websites. *Information, Communication & Society*, 22(3), 369–385. <https://doi.org/10.1080/1369118X.2017.1386706>
- Stoolmiller, M. (1995). Using latent growth curve models to study developmental processes. In J. M. Gottman (Ed.), *The analysis of change* (pp. 103–138). Psychology Press.
- Storper, M. (2005). Society, community, and economic development. *Studies in Comparative International Development*, 39(4), 30–57. <https://doi.org/10.1007/BF02686164>
- Tavares, A. F., & da Cruz, N. F. (2020). Explaining the transparency of local government websites through a political market framework. *Government Information Quarterly*, 37(3), 101249. <https://doi.org/10.1016/j.giq.2017.08.005>
- Tejedo-Romero, F., & Araujo, J. F. F. E. (2020). E-government-enabled transparency: The effect of electoral aspects and citizen's access to Internet on information disclosure. *Journal of Information Technology & Politics*, 17(3), 268–290. <https://doi.org/10.1080/19331681.2020.1713958>
- Tejedo-Romero, F., Rodrigues, M., & Araujo, J. F. F. E. (2023). How far is municipal transparency from neighbours? Evidence from Spain and Portugal. *International Journal of Public Sector Management*, 36(3), 193–215. <https://doi.org/10.1108/IJPSM-01-2022-0026>
- TVI. (2017a). *E a autarquia mais “transparente” do país é...*
- TVI. (2017b). *Ranking de avaliação de sites dos municípios coloca Penela em último.*
- Urquijo-Reguera, J., Illán Sailer, J. C., Trobat Llompart, M., & Canal Oliveras, R. (2024). A methodology for prioritizing sustainable development goals targets at the local level: The case of Barcelona City Council. *Sustainable Development*, Forthcoming. <https://doi.org/10.1002/sd.3228>
- Villena, V. H., & Dhanorkar, S. (2020). How institutional pressures and managerial incentives elicit carbon transparency in global supply chains. *Journal of Operations Management*, 66(6), 697–734. <https://doi.org/10.1002/joom.1088>
- Yu, P., Yung, E. H. K., Chan, E. H. W., Wang, S., Chen, Y., & Chen, Y. (2023). Capturing open space fragmentation in high-density cities: Towards sustainable open space planning. *Applied Geography*, 154, 1–12. <https://doi.org/10.1016/j.apgeog.2023.102927>
- Zucker, L. G. (1987). Institutional theories of organization. *Annual Review of Sociology*, 13(1), 443–464. <https://doi.org/10.1146/annurev.so.13.080187.002303>