

Intergovernmental grants misrepresentation in the balance sheets of italian municipalities

Fabio Fiorillo & Federico Quaresima
Università Politecnica delle Marche

May 20, 2019

Abstract

In 2008 the incoming Berlusconi's Government cancels the taxation on main houses (ICI), substituting it with an intergovernmental grant of equal amount. The balance sheet representation changes consequently, but the balance sheets of many municipalities do not register the compensating grants in the correct line: about the 38 ordinary statute regions do not register compensating grants in the right budget line, this share reduces in 2009 and 2010, but it remains high, a quarter of municipalities still register such grants in a line different from the correct one. Statistical analysis reveals that such misrepresentation sometimes is done underrating the entrance from ICI (and overrating general entrance) sometimes writing the compensating transfers in the budget line devoted to tax on main houses (the tax that was cancelled). In our opinion such misrepresentation is too high to describe it as a pure random error. Our research question is to investigate if such errors depend on lack in competencies of municipalities or are somehow intentional: municipalities misrepresent the grants they received recording them in another line and summing them with other elements, because of they will to signal themselves to stakeholders. Thus we want to investigate if a window dressing activity is applied by municipality and which kind of activity it is.

JEL: H71, H83 Keyword: Budget misrepresentation, ICI cancellation, municipalities

1 Introduction

In 2008 the incoming Berlusconi's Government cancels the taxation on main houses (ICI), substituting it with an intergovernmental grant of equal amount. The balance sheet representation changes consequently, up to 2007 the tax revenues are registered in the line dedicated to ICI, which specified the part coming from main houses (abitazioni principale). From 2008, balance sheet representation change, a new line appears in titulus 2 (transfers): compensating grants for ICI on main houses (Trasferimenti compensativi per ICI sull'abitazione principale), while in the titulus 1 (taxes), the ICI revenues are specified in these lines: ICI on luxury main houses (ICI su abitazione principale per fattispecie non esenti), other revenues from ICI (I.C.I. su fattispecie diversa da abitazione principale).

However, the balance sheets of many municipalities do not register the compensating grants in the correct line. Just as example we report the figures of three balance sheets deposited on Ministry of Interior, the first one is of a municipality which registers correctly (Ancona, in the center of Italy), the second and the third does not register correctly

table 1 about here

Such misrepresentation is not sanctioned, before the introduction of the new public accounting system, municipalities had some discretionality in reporting, the only requirement of a municipality balance sheet is registered all the revenue and all the expenses and to respect the balance. In any case, the statistical amount of this representation is huge enough.

In 2008 about the 38% of the municipalities in ordinary statute regions do not register compensating grants in the right budget line, this share reduces in 2009 and 2010, but it remains high, a quarter of municipalities still register such grants in a line different from the correct one¹.

table 2 about here

In our opinion such misrepresentation is too high to describe it as a pure random error. Our research question is to investigate if such errors depend on lack in competencies of municipalities or are somehow intentional, municipalities misrepresents the grants they received recording them in another line and summing them with other elements, because of they will to signal themselves to stakeholders. We can rule out the attempt of not respecting the budget rules, since municipalities are controlled by central government who gives grants and knows the exact value of them. In our opinion, such behavior is not in order to alter the budget rules, but only in order to change the representation of the same budget balance. Thus we want to investigate if this misrepresentation in budgeting is applied by municipality and which kind of activity it is.

In the next section we review the literature on misrepresentation, creative accounting and budget transparency. In section 3 we describe data and statistics in order to build a good description of the phenomenon. In the section 4 we estimate some probit models in order to understand which are the reasons of such misrepresentation. Section 5 concludes.

2 Literature review

For governments and local authorities, the main purpose of the budget is to determine spending limits and prioritize expenditures within such limits. The latter, in turn, are usually calibrated with reference to expected revenues, in order for budgets to balance or for budgeted deficits not to exceed a given threshold. Moral hazard thus exists for revenue misrepresentation or balance creative accounting in general. Admittedly, a certain degree of inaccuracy in taxation forecasting and reporting is unavoidable, owing to the uncertainty about the

¹Note that the figure registered in the balance sheet not necessary is the real amount of compensating grants also for Municipalities which fill the correct budget line.

future (Rubin, 1987) or to the organization workforce's fallacies and mistakes. Reporting errors, however, can also be purposeful (Larkey and Smith, 1989). Deliberate mistakes occur when producers of information intentionally report something different from what is suggested by the accounting data at their disposal. The literature provides several explanations for intentional budget bias (Mayper et al., 1991; van der Ploeg, 2010). Revenue under-estimation, for instance, can provide a buffer against unanticipated expenditures or revenue shortages; it can create a safeguard with which to pay for discretionary expenses during the financial year or in future. Alternatively, it can also be used to give the impression, at the end of the year, that a provident governance resulted in collecting savings. Revenue overestimation, on the other hand, may increase spending limits and can consequently be used to delay fiscally and politically sensitive decisions such as service cuts and tax hikes. In periods of financial crisis, the incentives for revenue misrepresentation are likely to increase (Anessi-Pessina and Sicilia, 2015).

Nowadays, cities around the world are constantly facing budget deficits. This state of play enhances competition for scarce resources which, in our case, could be identified with tax base and tax payers. City marketing strategies (Braun, 2008) are a way to realize the Tiebout hypothesis (Tiebout, 1956) that people can and often do choose with their feet. Although citizens often do not have perfect mobility, the idea is to attract people and, above all, entrepreneurs from the outset and then foster that relationship to keep people living, doing business and spending money in the city. Indeed, city communication specialists promote place assets – government services provided, tourist attractions, business-friendly policy, aesthetic appeal, for examples – to gain competitive advantage, build a tax base, attract tourists, lure businesses and residents and more. In practice, organizations use myriad available avenues – press releases, websites, brochures, magazines, social media feeds, town hall meetings, text messages and so on – to promote value added as a mechanism to attract and keep people and firms. Essentially, the idea is to foster a positive organization–public relationship via specific, tailored, meaningful public relations and marketing mixes.

One document not often thought about as a promotional vehicle is the city budget. Local governments do not see the annual budget process as an opportunity to engage citizens in setting community priorities and create public support for difficult budget decisions. Building support for those decisions is essentially a political marketing challenge. It entails identifying citizens' needs, desires, values and dreams and responding with a budget that clearly reflects those things. Nevertheless, budget documents themselves are indeed communication tools. Releasing an annual budget document is one way the city can fulfill its duties to public affairs reporting (Lee, 2002) of the city's status. Such reporting is 'a post-hoc "report card" to the citizenry about the operations and activities of an agency' (Lee, 2002, p. 33) and is essential to maintain democratic values, such as accountability to the public and transparency.

Public reporting occurs, as a necessity in a functioning democracy, for myriad reasons – marketing information to potential service users; public compliance with laws and rules; to change behavior; or as an end itself (Lee, 2006). Technically, the budget document itself would fall under the definition of public reporting, an activity intended to communicate systematically information about authorities operations to the public. The budget document is recognized

as a marketing tool, especially when needing to convince citizens of a tough budget cut or even a tax increase. Budget documents can become – and are becoming – part of a place’s strategic marketing mix also oriented towards firms. Budget documents reflect a place’s taxing and spending priorities, thus outlining the government’s policy commitments. Therefore, audiences responding to the budget include internal employees, politicians, entrepreneurs, citizens, other administrators and so on. Each group will manipulate different symbols to achieve desired budgetary goals (Anton, 1967; Sementelli and Herzog, 2000; Brogan, 2012). Accounting and budgeting – getting myriad organizations and stakeholders to agree on resource allocation – ‘ may be more of a social invention complicit in the construction of social reality, than a “ rational ” reflection of a technical rationality ’ (Covaleski and Dirsmith, 1988). Thus, it is clear the incentive to misrepresent or manipulate budget headings by government units, ministries and city council members to attract, among others, firms and their potential tax base.

To understand the dynamics of deceit in the budget process, it is necessary to understand also the roles of the participants and the role differentiation that influences budget advocacy, examination, decision, and execution (Jones and Thompson, 1986). Because much of budgeting is concerned with accountability and control within an organization’s overall management control process, it is useful to differentiate between the different types of control and the purposes of each of them. Ex ante controls, applied before spending takes place (generally in the preparation, negotiation, and enactment phases of the budget process), may be distinguished from ex post controls, which are applied as spending occurs or after spending has taken place (after encumbrance, expense, and disbursement). Ex ante rules are generally enforced by budget analysts in the executive and legislative branches and by their political masters, the elected and appointed officials, as they review new spending proposals. Ex post controls are derived by economists, program evaluators, policy analysts, and auditors as they render the results of their examination of performance, accountability, efficiency and effectiveness after programs have been delivered to the citizens.

Uncertainty produced by faulty information or by lack of information in budget formulation or execution can stimulate strategic misrepresentation. When managers lack data on past or current year spending, or when data are inaccurate, program needs and accomplishments may be stated in anticipation of the preferences of controllers and elected officials. Rules that appear to make no sense financially and that are perceived by agencies as either not cost-beneficial or contradictory to the public interest also may result in strategic misrepresentation. For instance, not allowing an agency to carry forward money saved in one fiscal year to the next as a reward for efficiency and savings behavior is one prominent example of a rule that program advocates perceive to be counter to public and organizational interest. Under-execution of the budget signals citizens that agencies have too much financial resources and should have their taxes reduced. End-of-year spending pressure sometimes causes governments to misrepresent their needs, to use up surpluses that might be withdrawn by controllers, and to move any resources not spent from annual accounts into accounts that can be rolled forward to the next year. This latter practice may involve some degree of creative accounting to satisfy auditors and to maintain accountability to reviewers of the next year’s budget (Jones and Euske, 1991).

From a backward-looking perspective, creative accounting allows the budget

manager to avoid presenting a (excessive) deficit. But creative accounting also allows him to avoid revealing a surplus. Although public deficits are badly perceived, politicians and citizens do not consider excessive surpluses a good thing either (Anthony, 1985). From a forward-looking perspective, the latest reported balance also determines the adjustment that must or can be made while planning the next annual budget. If a surplus is reported, the ministry, or the city council member, face claims either to increase public spending or reduce the tax burden (Tellier, 2006). Ceding to these claims would undermine the long-term fiscal balance, especially if the surplus was triggered by a favorable business cycle. The prospect of this kind of fiscal deterioration would in turn lower the prime minister's, or the mayor's, chance to be re-elected or to comply with the existing numerical fiscal rule in the future, when such a rule will continue to exist. Using these financial technicalities, the budget manager can generate an asymmetry of information between the government and the tax payers. This is possible because the finance ministry is well-regarded as having the necessary expertise by the citizens (Zimmerman, 1977; Giroux, 1989).

However, only few studies have investigated the influence of personal characteristics of policy-makers and political economy issues (Clémenceau and Soguel, 2017). According to Naser and Pendlebury (1992), 'creative accounting is a process of modifying the operating results, away from (revealing) the actual picture and towards the desirable results'. It 'may reflect opportunistic accounting' (Koen and Van den Noord, 2005). For Milesi-Ferretti (2004), 'the incentives to use nonstructural fiscal measures – often described as creative accounting – may increase in the presence of fiscal rules'. Evidence has notably been provided in the 2000s that European Union countries largely employed such gimmicks in order to satisfy the Maastricht criteria (Balassone et al., 2007). In the 1990s, similar studies for the U.S. demonstrated that States have incentives to use creative accounting in order to circumvent rules (Von Hagen, 1991).

Governments can manipulate financial data in order to balance the budget (Reischmann, 2016), an issue that is well known and has been described in many ways, as "creative accounting" (Milesi-Ferretti, 2004), "accounting fudges" (Dafflon and Rossi, 1999), "fiscal adjustment illusion" (Easterly, 1999), "fiscal gimmickry" (Koen and Van den Noord, 2005), and "cooking the books" (Laughland and Paul, 1997).

Beyond and related to the above mentioned issues, the other strand of literature we review in the present work concerns transparency. As a fundamental claim in democratic societies transparency is one of the policies undertaken to monitor the performance in the public activity, favor accountability and reduce corruption of public officials (Holzner and Holzner, 2006). Literature about transparency finds the theoretical underpinning in the agency theory and the legitimacy theory (for an extensive review, see Ferraz Esteves de Araujo and Tejedro-Romero (2016)). According to the agency theory, in the relation between public officials (the agents) and citizens (the principal) some problems arise when there is asymmetry of information and policy makers do not act in the interests of the citizens. Transparency in public activity is a means to improve policy effectiveness and make policy makers more accountable. According to the legitimacy theory acquired from the literature of the private organizations, the diffusion of information is a way to legitimate actions to their stakeholders. Some contributions have measured fiscal transparency indicators based on financial and non-financial information published on website of public

administrations (for a survey, see Jorge et al. (2011)). The “top down” approach is suitable to address the Italian case where there is a complex legislative framework, which disciplines transparency obligations and the monitoring of their fulfillment. Based on these different measures of transparency, a branch of literature tries to address the relation between different dimensions (economic and political) of transparency and accountability (see, among others, Blumkin and Gradstein (2002); Meijer (2013)).

Kolstad and Wiig (2009) argues that transparency in resource revenues such as the Extractive Industries Transparency Initiative (EITI) has been insufficient and needs to be complemented by other policies. Lindstedt and Naurin (2010), using cross-sectional data, find that making political institutions more transparent turns out to be an effective measure to reduce corruption only if conditions for publicity and accountability as education, media circulation and free and fair elections are strong. Moving from the analysis of fiscal transparency’s website content of the Portuguese and Italian local governments, Jorge et al. (2011) find that the size of the municipalities and the rate of abstentionism in the last local elections are the only significant determinants of transparency. Using a measure of municipal transparency in New Jersey, Piotrowski and Bertelli (2010) find that, among several economic, social and institutional determinants, only the level of education, the percentage of elderly people and the size of the budget are significantly correlated with transparency. Ortiz-Rodríguez et al. (2018) provide evidence that socio-economic factors such as education, population density, access to internet as well as e-government factors such as the provision of public information online, the percentage of procedures completed after online start, the level of online services provided and broadband availability, are all relevant to the disclosure of information by the Spanish regional governments. Albalade (2012), drawing on the 2010 transparency indexes constructed by Transparency International for Spanish Municipalities, finds that large municipalities and left-wing local government leaders are associated with better transparency indexes.

Transparency may play an important role especially at local level. Literature emphasizes that at this level of government greater efficiency in the provision of public services is likely to occur, depending on the inter-jurisdictional competition which in turn enhances the control process by the citizens and guarantees greater accountability of the public officials (see a recent paper by Hong (2016)).

3 Data and statistics

3.1 Error dummies

We consider the data of balance sheet of the 6701 municipalities of ordinary regions from 2006 to 2010, the year 2006 and 2007 are before the ICI reform, from 2008 and 2010 the ICI on non luxury main houses was cancelled. We do not consider data after 2010 since the local fiscal changes (because of l. 42/2009) again and it is not comparable. In order to investigate we calculate a list of dummies for each year.

- AB.PRINC_0: ICI on main houses
- AB.PRINC_TOT: ICI on main houses equal to total ICI (with total ICI₀).

Thus this dummy equal 1 when other ICI is equal to 0

- ICI_0: total ICI equal to 0
- ERR_TRASF: no registration in compensating transfer, it is a misrepresentation after 2008

table 3 about here

As we can expect, before the reform a very small share of municipalities collect no ICI from main houses, since the reform cancels the ICI from non luxury houses such share increases. As expected, after the reform there is a strong intertemporal correlation.

table 4 about here

Before the reform about the 10% of municipalities have no ICI from different buildings than main houses. After the reform, this share increases to more than 15%. It is worth to note that after the reform the municipalities where the total ICI coincides with the one collected from main houses are the same group, intertemporal correlation is very high. Some correlation appears also before reform, while correlation is very low between the municipalities which record no secondary ICI before the reform and the ones after reform.

table 5 about here

No municipalities record no ICI before the reform, and a small share (about 2%) do after reform.

table 6 about here

Obviously, no compensating transfers are recorded before the reform. After the reform a huge share of municipalities do not correctly record such grants and there is a strong intertemporal correlation. Municipalities which do not register grants remain the same in the period 2008-2010.

figure 1 about here

It seems there are non correlation among municipalities which record non ICI from main houses before reform and no records of compensating grants after reform.

Analysing the correlation among recording no transfers and recording that all the ICI revenue comes from main house we have:

figure 2 about here

Such correlation could depend on the fact that some municipalities have only luxury main houses and the collect no other ICI, bu it is actually really uncommon case. on the contrary the explanation of positive correlation is that after the reform, municipalities records all the ICI revenue as collected from main houses.

From this analysis it emerges that the number of municipalities which do not record correctly the compensating grants is very high and such behaviour is highly persistent. There is no correlation between recording no ICI before the reform and no compensating transfers after the reform. On the contrary, positive correlation appears between no recording the grants and recording all the ICI as collected from main houses. It suggests that some municipalities register the compensating grants as if they are tax collection from main houses (as Giugliano, in our example). We cannot exclude that some recording of ICI collected from other building are incorrect before reform.

3.2 Too large fluctuation

The time span we considered it is not characterized by process that can justified a large variation in municipalities revenues. The only relevant reform is the cancellation of ICI on main houses. Thus, the variation of ICI gross of compensating transfers should be not important.

$$ICI = ici_ab_p + ici_s + trascomp$$

where ICI is the ICI gross of compensating grants, ici_ab_p is the ICI on main houses, ici_s is the ICI not coming from main houses, and $trascomp$ are compensating transfers.

$$PRINC = ici_ab_p + trascomp$$

In the same way also the variation of the ICI on main houses gross of compensating transfers ($PRINC$) should be not large. We define other dummies

- $ALERT2_ICI_SUP = 1$, when $\frac{ICI_t}{ICI_{t-1}} > 2$, the gross total ICI recorded at year t is more than double of the one recorded at year $t - 1$.
- $ALERT2_ICI_INF = 1$, when $\frac{ICI_t}{ICI_{t-1}} < \frac{1}{2}$, the gross total ICI recorded at year t is less than double of the one recorded at year $t - 1$.
- $ALERT2_PRINC_SUP = 1$, when $\frac{ICI_t}{ICI_{t-1}} > 2$, the gross total ICI recorded at year t is more than double of the one recorded at year $t - 1$.
- $ALERT2_PRINC_INF = 1$, when $\frac{ICI_t}{ICI_{t-1}} < \frac{1}{2}$, the gross total ICI recorded at year t is less than double of the one recorded at year $t - 1$.
- $ALERT2_SEC_SUP = 1$, when $\frac{ici_s_t}{ICI_{ici_s_{t-1}}} > 2$, the ICI from other building recorded at year t is more than double of the one recorded at year $t - 1$.
- $ALERT2_SEC_INF = 1$, when $\frac{ici_s_t}{ici_s_{t-1}} < \frac{1}{2}$, the ICI from other building recorded at year t is less than double of the one recorded at year $t - 1$.

table 7 about here

table 8 about here

note that the share of municipalities which record huge fluctuation are quite large, such results can be partially explained by the large number of small municipalities for which the relative fluctuation are magnified. As we can expect there is a negative correlation among positive and negative huge variation. Moreover a positive huge variation at time t is positively correlated with a negative huge variation at time $t - 1$.

figure 3 about here

Between 2007 and 2008 municipalities classified as ICI coming from main houses gross of transfers, some figures they classified as ICI coming from other building before reform.

Looking at correlation between no recording compensative transfers and huge reductions both in the total ICI gross of compensating transfer and in ICI coming from main houses gross of transfers

figure 4 about here

transfers are not recorded in some line related to ICI, they are recorded in line of generic transfers. Moreover such transfer are not recorded as ICI not raised from different building.

Thus, compensating transfers sometimes are recorded as ICI coming from main houses, sometimes are not registered in an ICI budget line, and it causes anomalous reduction in ICI gross of transfers.

Finally we calculate the joint frequencies, defining

- $ERR2 = ERR_TRASF * AB_PRINC_TOT$, the joint frequency of not recording compensating transfer and the case of having no ICI collected from different building than main houses.
- $ERR3 = ERR_TRASF * ALERT2_PRINC_INF$ is the joint frequency of no transfers and huge reduction in ICI from main houses gross of transfers.
- $ERR4 = ERR_TRASF * AB_PRINC_TOT * ALERT2_PRINC_INF$ is the overall joint frequency.

table 9 about here

In 2008, no recording transfers for about 2/3 depends on recording transfers in a generic line, 1/3 on recording all the ICI as ICI from main house. Very few municipalities are in the overall joint frequencies and very few are not considered in one of these cases $37.7 - (10.2 + 26.9 - 1.5) = 1.6\%$.

In 2009 and 2010, the number of municipalities which do not record compensating transfer decreases while increases the number of transfers which cannot be classified as due to recording transfer in generic line or in ICI coming from main houses (about 10%), Such difference can be explained by the persistence in not recording transfers in 2008 and in the successive years.

4 Estimation and results

table 10 about here

table 11 about here

table 12 about here

table 13 about here

In Table 10 we present the main results. In the pooled analysis, after controlling for regional dummies and yearly fixed effects, we find that the occurrence of fiscal deficit somehow restrain the municipality in reporting errors, in general. This is true also for type 2 error specifically. Deficit per capita seems to have a significant and positive effect on the presence of reported errors in budgeting, while fiscal current surplus generally increase mistakes, moreover concerning error 3. Interestingly enough, the *stability pact* appears having a role in reducing misreporting, especially for the type 2 error. Conversely, a political budget cycle about misreporting is present only when considering error 3, which increase in the electoral years. Municipality with touristic vocation systematically tend to misrepresent the ICI revenue line in their budgets so that we have to more deeply investigate incentives and gains deriving from this behavior. The educational level of citizens significantly improves the formal correctness of the municipal budget while a larger share of foreign inhabitants seems to induce municipalities to misrepresent the budget reporting. Counter-intuitively enough a larger number of newspaper copies sold in the municipality presents a positive association with fiscal budget misreporting.

For reporting errors in general the main results hold. This is true for the occurrence of deficit, the level of deficit per capita (positive relation) and for current surplus. Stability pact has an effect only in 2009 while the touristic vocation of the municipality shows an impact only in 2008. The same holds for the educational level of citizens and the ratio of foreigners: the sign of coefficients are preserved but the statistical significance holds, respectively, only in 2009 and 2008. Also the role of newspapers seems to regard only one year, 2008, maintaining the same direction. Associations count in 2009 while the presence of a commissioner hugely reduce misreporting only in 2008.

For error 2 deficit has the same effect but statistically significant only in 2009. Deficit and surplus maintain the same sign and similar magnitude but they are significant in 2009. The effect of the stability pact is present only in 2008 while no political budget cycle is present considering only type 2 error. It emerges that touristic municipalities misreport more, especially in 2009 and 2010. The educational level counts in 2009 when also newspapers preserve their effect, as before mentioned. Also for only error 2, a commissioner reduce budget misrepresentation but only in 2008

Figures change when considering the type 3 error. In this last estimate we drop deficit variables for a clear endogeneity possibility. The current surplus' effect is still positive but significant only in 2010. Elections count only in 2008 even if the coefficient is significative at the 10% level. The touristic vocation counts in 2008 only. The other characteristics present no effect for what regards this kind of misreporting error.

5 Conclusions

A balance sheet should truly report the descriptions of relevant economic facts, this is true for private firms and it has to be true for public bodies. Stakeholders take informations from this document and base their approvals or their claims about government's action on this.

The misrepresentation of grants that compensate the cancellation of the italian ICI on main houses is too large to be a pure random error, neither such misrepresentation could be attributed only to small and less competent municipalities.

Misrepresentation seems to be a strategic tool in order to signal municipality's behavior to the stakeholders.

References

- Daniel Albalade. The institutional, economic and social determinants of local government transparency. *IREA–Working Papers, 2012, IR12/10*, 2012.
- Eugenio Anessi-Pessina and Mariafrancesca Sicilia. Biased budgeting in the public sector: Evidence from italian local governments. *Local Government Studies*, 41(6):819–840, 2015.
- Robert N Anthony. Games government accountants play. *Harvard Business Review*, 63(5):161–170, 1985.
- Thomas J Anton. Roles and symbols in the determination of state expenditures. *Midwest Journal of Political Science*, 11(1):27–43, 1967.
- Fabrizio Balassone, Daniele Franco, Stefania Zotteri, et al. *The reliability of EMU fiscal indicators: risks and safeguards*, volume 633. Banca d’Italia Rome, 2007.
- Tomer Blumkin and Mark Gradstein. Transparency gloves for grabbing hands? politics and (mis) governance. 2002.
- Erik E Braun. *City Marketing: Towards an integrated approach*. Number EPS-2008-142-ORG. 2008.
- Michael Brogan. The politics of budgeting: Evaluating the effects of the political election cycle on state-level budget forecast errors. *Public Administration Quarterly*, pages 84–115, 2012.
- Maxime Clémenceau and Nils Soguel. Does personal background influence a finance minister to cook the books? an investigation of creative accounting in swiss cantons. *Applied Economics*, 49(10):941–953, 2017.
- Mark A Covaleski and Mark W Dirsmith. The use of budgetary symbols in the political arena: an historically informed field study. *Accounting, Organizations and Society*, 13(1):1–24, 1988.
- Bernard Dafflon and Sergio Rossi. Public accounting fudges towards emu: a first empirical survey and some public choice considerations. *Public Choice*, 101(1-2):59–84, 1999.
- William Easterly. When is fiscal adjustment an illusion? *Economic policy*, 14(28):56–86, 1999.
- Joaquim F Ferraz Esteves de Araujo and Francisca Tejedo-Romero. Political and economics determinant of information transparency in spanish local governments. Technical report, mimeo, 2016.
- Gary Giroux. Political interests and governmental accounting disclosure. *Journal of Accounting and Public Policy*, 8(3):199–217, 1989.
- Burkart Holzner and Leslie Holzner. Transparency in global change: The vanguard of the open society. pittsburgh, 2006.

- Sounman Hong. What are the areas of competence for central and local governments? accountability mechanisms in multi-level governance. *Journal of Public Administration Research and Theory*, 27(1):120–134, 2016.
- Larry R Jones and Kenneth J Euske. Strategic misrepresentation in budgeting. *Journal of Public Administration Research and Theory*, 1(4):437–460, 1991.
- LR Jones and Fred Thompson. Reform of budget execution control. *Public Budgeting & Finance*, 6(1):33–49, 1986.
- SSPM Jorge, Patricia Moura Sa, Anna Francesca Pattaro, and Rui Pedro Lourenço. Local government financial transparency in portugal and italy: A comparative exploratory study on its determinants. In *13th Biennial CIGAR conference, bridging public sector and non-profit sector accounting*, pages 9–10, 2011.
- Vincent Koen and Paul Van den Noord. Fiscal gimmickry in europe. 2005.
- Ivar Kolstad and Arne Wiig. Is transparency the key to reducing corruption in resource-rich countries? *World development*, 37(3):521–532, 2009.
- Patrick D Larkey and Richard A Smith. Bias in the formulation of local government budget problems. *Policy Sciences*, 22(2):123–166, 1989.
- John Laughland and J-M Paul. Belgium cooks its emu books. *EUROPEAN JOURNAL*, 4:16–16, 1997.
- Mordecai Lee. Intersectoral differences in public affairs: The duty of public reporting in public administration. *Journal of Public Affairs*, 2(2):33–43, 2002.
- Mordecai Lee. The history of municipal public reporting. *Intl Journal of Public Administration*, 29(4-6):453–476, 2006.
- Catharina Lindstedt and Daniel Naurin. Transparency is not enough: Making transparency effective in reducing corruption. *International political science review*, 31(3):301–322, 2010.
- Alan G Mayper, Michael Granof, and Gary Giroux. An analysis of municipal budget variances. *Accounting, Auditing & Accountability Journal*, 4(1), 1991.
- Albert Meijer. Understanding the complex dynamics of transparency. *Public Administration Review*, 73(3):429–439, 2013.
- Gian Maria Milesi-Ferretti. Good, bad or ugly? on the effects of fiscal rules with creative accounting. *Journal of Public Economics*, 88(1-2):377–394, 2004.
- Kamal Naser and Maurice Pendlebury. A note on the use of creative accounting. *The British Accounting Review*, 24(2):111–118, 1992.
- David Ortiz-Rodríguez, Andrés Navarro-Galera, and Francisco J Alcaraz-Quiles. The influence of administrative culture on sustainability transparency in european local governments. *Administration & Society*, 50(4):555–594, 2018.
- SJ Piotrowski and Anthony Bertelli. Measuring municipal transparency. In *14th IRSPM Conference, Bern, Switzerland, April*, 2010.

- Markus Reischmann. Creative accounting and electoral motives: Evidence from oecd countries. *Journal of Comparative Economics*, 44(2):243–257, 2016.
- Irene S Rubin. Estimated and actual urban revenues: exploring the gap. *Public Budgeting & Finance*, 7(4):83–94, 1987.
- Arthur J Sementelli and Richard J Herzog. Framing discourse in budgetary processes: Warrants for normalization and conformity. *Administrative Theory & Praxis*, 22(1):105–116, 2000.
- Geneviève Tellier. Public expenditures in canadian provinces: An empirical study of politico-economic interactions. *Public Choice*, 126(3-4):367–385, 2006.
- Charles M Tiebout. A pure theory of local expenditures. *Journal of political economy*, 64(5):416–424, 1956.
- Frederick van der Ploeg. Political economy of prudent budgetary policy. *International Tax and Public Finance*, 17(3):295–314, 2010.
- Jürgen Von Hagen. A note on the empirical effectiveness of formal fiscal restraints. *Journal of Public Economics*, 44(2):199–210, 1991.
- Jerold L Zimmerman. The municipal accounting maze: An analysis of political incentives. *Journal of Accounting Research*, pages 107–144, 1977.

Appendix

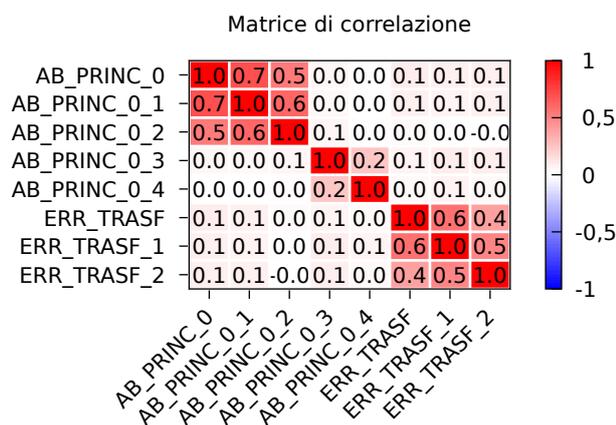


Figure 1: title

Municipalities	balance sheet line	2007	2008	True grants*
Ancona	Main houses ICI	4.990.719,00	119.232,00	
Ancona	Other ICI	19.792.477,00	18.927.533,00	
Ancona	Compensating grants for ICI on main houses	0	4.990.719,00	6.270.058,26
Modena	Main houses ICI	13.590.419,00	334.010,00	
Modena	Other ICI	46.042.840,00	41.910.752,00	
Modena	Compensating grants for ICI on main houses	0	0	16.044.060,16
Giugliano	Main houses ICI	2.083.950,00	8.916.050,00	
Giugliano	Other ICI	8.884.050,00	0	
Giugliano	Compensating grants for ICI on main houses	0	0	2.012.585,06

*Data from The Ministry of Interior on compensating grants

Variable	year	Mean	Median	SQM	Min	Max
ERR_TRASF	2010	0,249	0,00	0,432	0,00	1,00
ERR_TRASF	2009	0,273	0,00	0,446	0,00	1,00
ERR_TRASF	2008	0,377	0,00	0,485	0,00	1,00

Table 3: Share of municipalities with no ICI on main house
 Statistiche descrittive, usando le osservazioni 1-6701
 (i valori mancanti sono stati saltati)

Variabile	anno	Media	Mediana	SQM	Min	Max
AB_PRINC_0	2010	0,542	1,00	0,498	0,00	1,00
AB_PRINC_0	2009	0,525	1,00	0,499	0,00	1,00
AB_PRINC_0	2008	0,476	0,00	0,499	0,00	1,00
AB_PRINC_0	2007	0,0147	0,00	0,120	0,00	1,00
AB_PRINC_0	2006	0,00374	0,00	0,0611	0,00	1,00

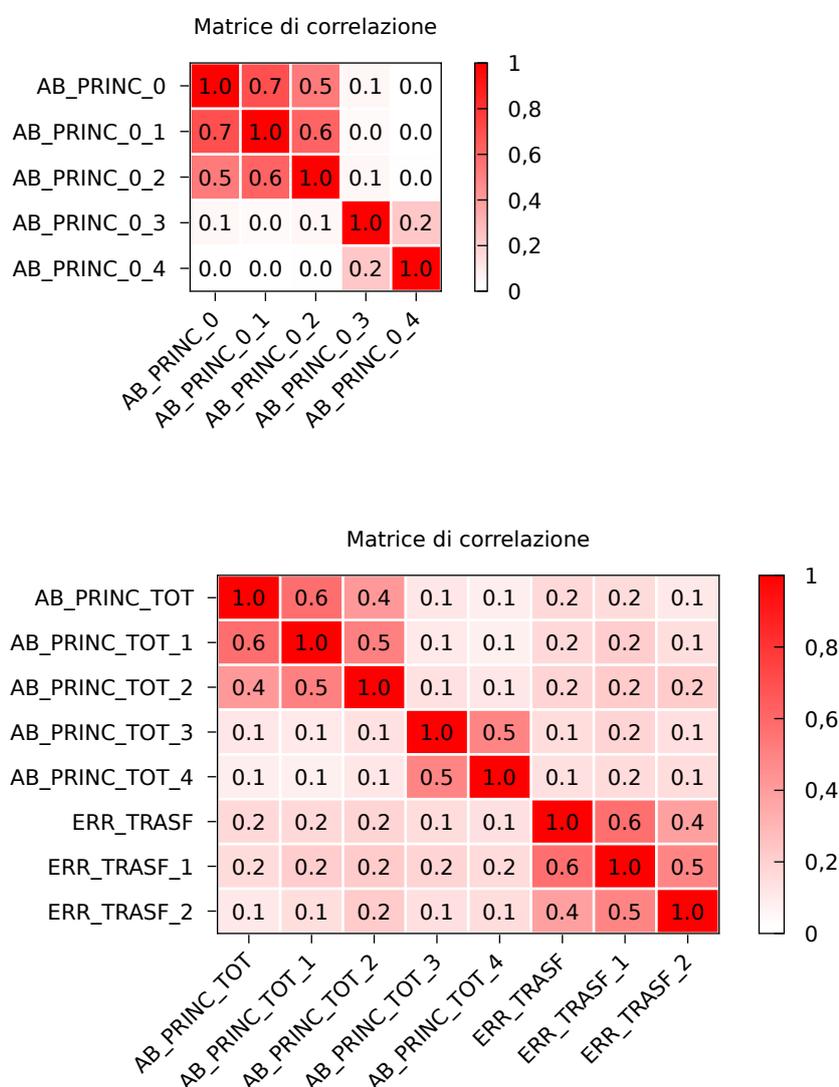


Figure 2: title

Table 4: Share of municipalities with only ICI on main house, with ICI₀
 Statistiche descrittive, usando le osservazioni 1–6701
 (i valori mancanti sono stati saltati)

Variabile	anno	Media	Mediana	SQM	Min	Max
AB_PRINC_TOT	2010	0,148	0,00	0,355	0,00	1,00
AB_PRINC_TOT	2009	0,162	0,00	0,369	0,00	1,00
AB_PRINC_TOT	2008	0,166	0,00	0,372	0,00	1,00
AB_PRINC_TOT	2007	0,106	0,00	0,308	0,00	1,00
AB_PRINC_TOT	2006	0,114	0,00	0,318	0,00	1,00

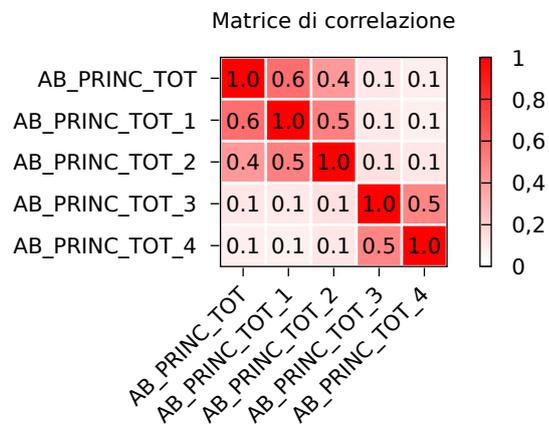


Table 5: Share of municipalities with total ICI equal to 0
 Statistiche descrittive, usando le osservazioni 1-6701
 (i valori mancanti sono stati saltati)

Variabile	anno	Media	Mediana	SQM	Min	Max
ICL0	2010	0,0223	0,00	0,148	0,00	1,00
ICL0	2009	0,0201	0,00	0,140	0,00	1,00
ICL0	2008	0,00449	0,00	0,0669	0,00	1,00
ICL0	2007	0,00	0,00	0,00	0,00	0,00
ICL0	2006	0,00	0,00	0,00	0,00	0,00

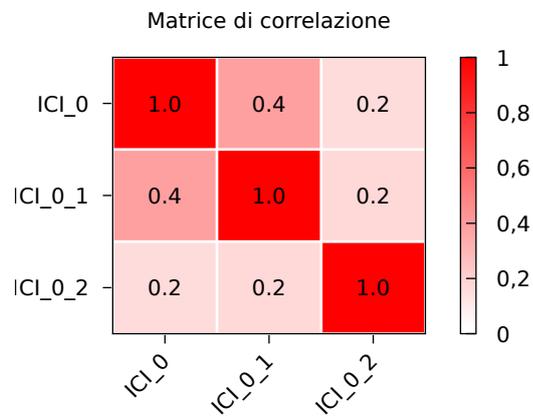


Table 6: Share of municipalities which do not correctly record compensating transfers

Statistiche descrittive, usando le osservazioni 1–6701

(i valori mancanti sono stati saltati, tabella già in introduzione in forma ridotta)

Variabile	anno	Media	Mediana	SQM	Min	Max
ERR_TRASF	2010	0,249	0,00	0,432	0,00	1,00
ERR_TRASF	2009	0,273	0,00	0,446	0,00	1,00
ERR_TRASF	2008	0,377	0,00	0,485	0,00	1,00
ERR_TRASF	2007	0,00	0,00	0,00	0,00	0,00
ERR_TRASF	2006	0,00	0,00	0,00	0,00	0,00

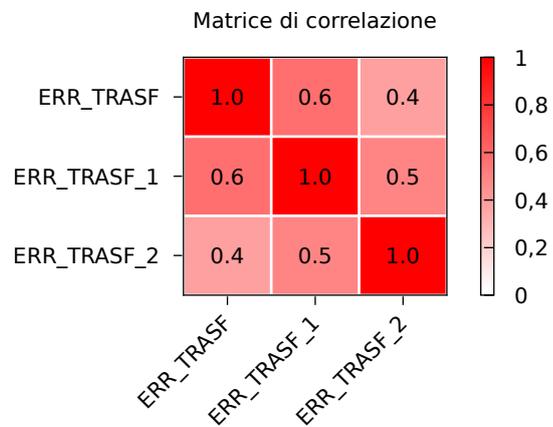


Table 7: title
 Statistiche descrittive, usando le osservazioni 1–6701
 (i valori mancanti sono stati saltati)

Variabile	Media	Mediana	SQM	Min	Max
ALERT2_ICI_SUP	0,567	1,00	0,496	0,00	1,00
ALERT2_ICI_SUP_1	0,484	0,00	0,500	0,00	1,00
ALERT2_ICI_SUP_2	0,332	0,00	0,471	0,00	1,00
ALERT2_ICI_SUP_3	0,734	1,00	0,442	0,00	1,00
ALERT2_ICI_INF	0,344	0,00	0,475	0,00	1,00
ALERT2_ICI_INF_1	0,435	0,00	0,496	0,00	1,00
ALERT2_ICI_INF_2	0,595	1,00	0,491	0,00	1,00
ALERT2_ICI_INF_3	0,183	0,00	0,386	0,00	1,00

Matrice di correlazione

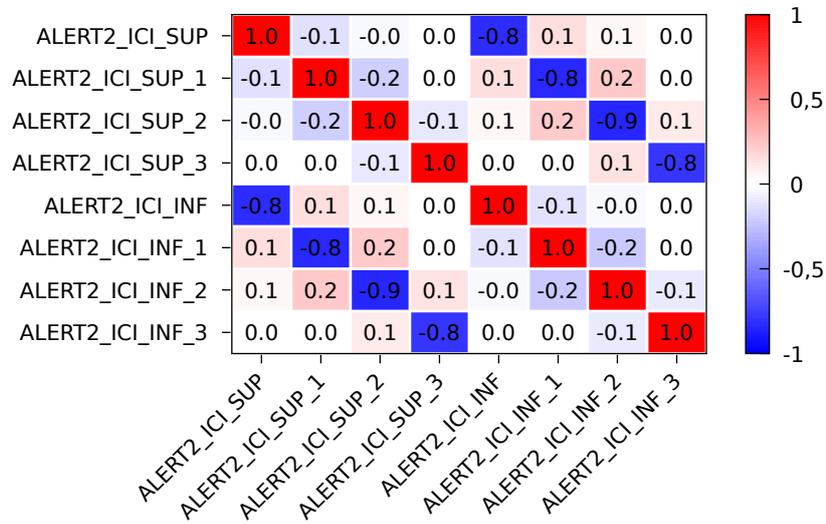


Table 8: title

Statistiche descrittive, usando le osservazioni 1-6701
(i valori mancanti sono stati saltati)

Variabile	Media	Mediana	SQM	Min	Max
ALERT2_PRINC_SUP	0,518	1,00	0,500	0,00	1,00
ALERT2_PRINC_SUP_1	0,512	1,00	0,500	0,00	1,00
ALERT2_PRINC_SUP_2	0,326	0,00	0,469	0,00	1,00
ALERT2_PRINC_SUP_3	0,518	1,00	0,500	0,00	1,00
ALERT2_PRINC_INF	0,285	0,00	0,451	0,00	1,00
ALERT2_PRINC_INF_1	0,426	0,00	0,495	0,00	1,00
ALERT2_PRINC_INF_2	0,629	1,00	0,483	0,00	1,00
ALERT2_PRINC_INF_3	0,412	0,00	0,492	0,00	1,00

Matrice di correlazione

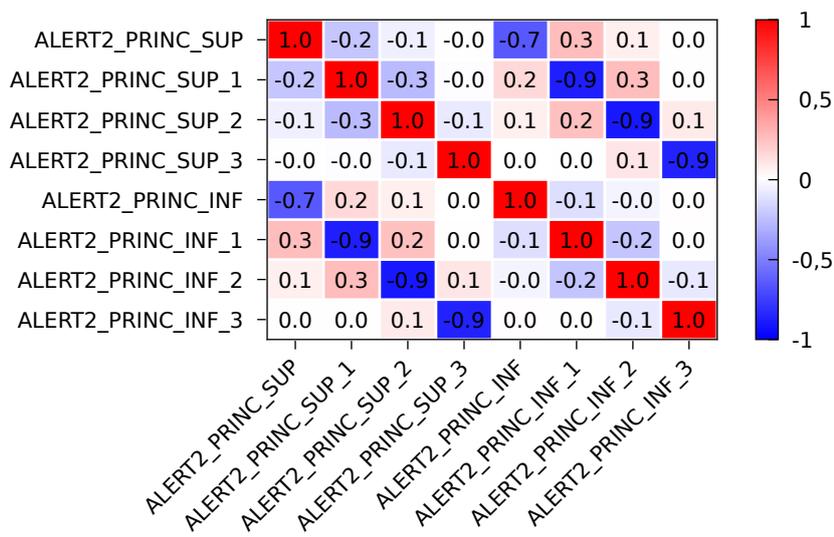


Table 9: Joint frequencies

Statistiche descrittive, usando le osservazioni 1-6701
(i valori mancanti sono stati saltati)

Variabile	2010	2009	2008
ERR_TRASF	0,249	0,273	0,377
ERR2	0,0619	0,0789	0,102
ERR3	0,118	0,136	0,269
ERR4	0,0238	0,0295	0,0150

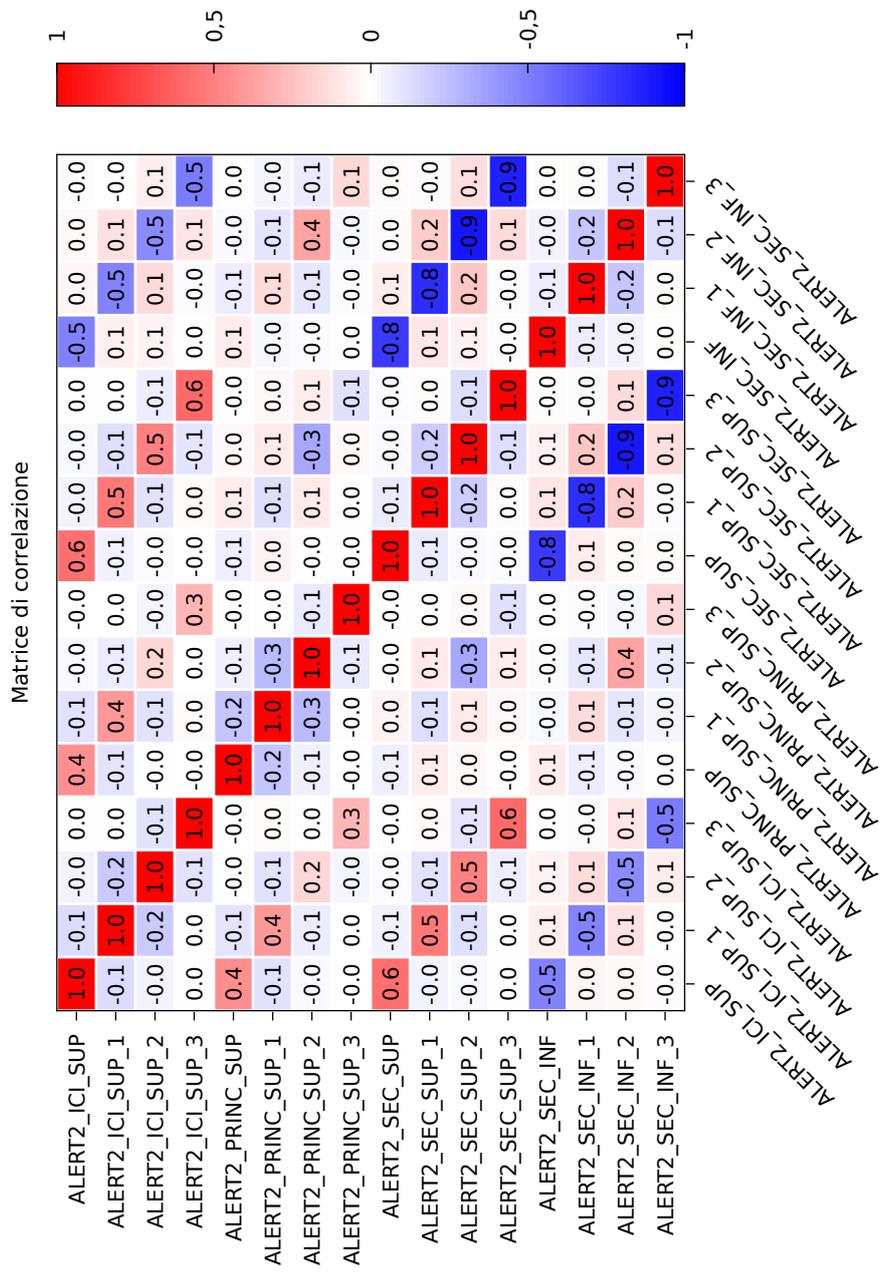


Figure 3: title

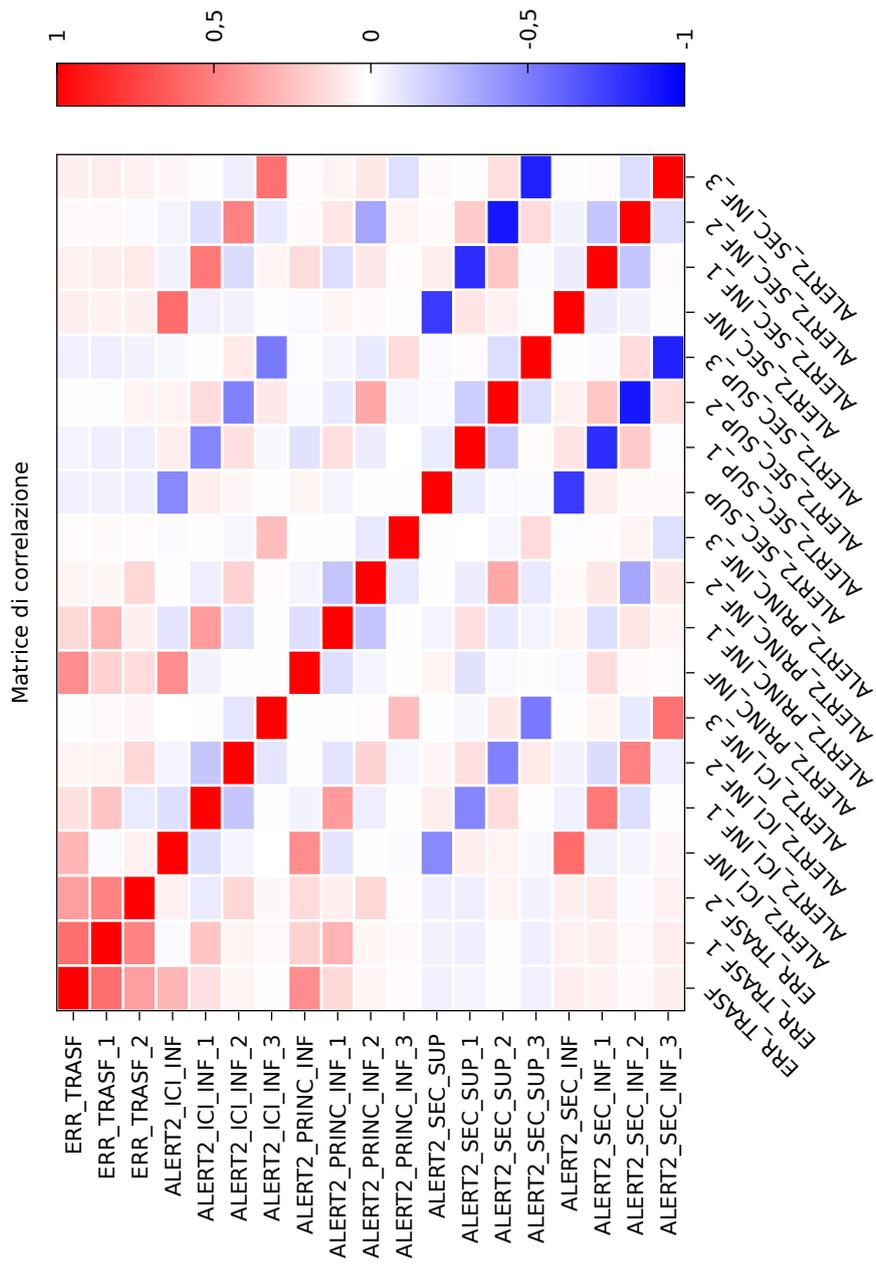


Figure 4: titolo

Table 10: Errors

	(1)	(2)	(3)
	Err_trasf	Err2	Err3
	Coef./p-value	Coef./p-value	Coef./p-value
main			
popolazione	-0.0021419*** (0.00)	-0.0005553 (0.19)	-0.0014011** (0.04)
altitudine	0.0002716*** (0.00)	0.0001962*** (0.00)	0.0002181*** (0.00)
dummy_deficit	-0.0650713*** (0.00)	-0.0833513*** (0.01)	
deficit_per_capita	0.4996613*** (0.00)	0.2936738** (0.02)	
avanzo_per_capita	0.3414684** (0.02)	0.1157809 (0.25)	0.2554594** (0.02)
debito_per_capita	0.0000002 (0.83)	0.0000055* (0.10)	-0.0000125 (0.31)
TR_VERO_pc	0.0062412 (0.46)	-0.0878768 (0.20)	0.0201051 (0.13)
patto_di_stabilità	-0.0690881** (0.01)	-0.0905758** (0.02)	-0.0221246 (0.48)
dummy_elezioni	0.1904226*** (0.00)	0.0478193 (0.13)	0.3562856*** (0.00)
numero_mandato_personale	-0.0072955 (0.61)	0.0291468 (0.14)	-0.0399624** (0.02)
affluenza	0.0089291 (0.94)	-0.1122190 (0.49)	0.0444925 (0.75)
comune_turistico	0.1538602*** (0.00)	0.2128181*** (0.00)	0.1681668*** (0.00)
quota_istruiti	-0.0074256*** (0.00)	-0.0096578*** (0.00)	-0.0051765** (0.03)
quota_stranieri	0.0179299*** (0.00)	0.0029958 (0.75)	0.0167965** (0.02)
giornali_venduti_per_capita	0.0239446*** (0.00)	0.0469428*** (0.00)	0.0233449*** (0.01)
associazioni_per_capita	4.9578754** (0.01)	-0.5996241 (0.82)	2.2559299 (0.35)
no_sindaco	-0.3672761 (0.13)	-0.2284750 (0.50)	0.0097143 (0.97)
età	-0.0018037* (0.08)	-0.0009232 (0.53)	-0.0025120** (0.03)
uomo	0.0155412 (0.63)	0.0406349 (0.39)	-0.0029292 (0.94)
education	-0.0186346 (0.11)	0.0186055 (0.25)	-0.0216352 (0.10)
Constant	-0.6115311*** (0.00)	-1.7355608*** (0.00)	-1.0361207*** (0.00)
No. of Obs.	18667.000	18667.000	17357.000
IC	22153	10435	16089

Table 11: Err trasf

	(1)	(2)	(3)
	2008	2009	2010
	Coef./p-value	Coef./p-value	Coef./p-value
dummy_errore_trascrizione			
popolazione	-0.0025203** (0.04)	-0.0024339 (0.10)	-0.0012054 (0.30)
altitudine	0.0001852** (0.01)	0.0002576*** (0.00)	0.0003017*** (0.00)
dummy_deficit	-0.0725369* (0.05)	-0.0815582** (0.04)	-0.0877020** (0.04)
deficit_per_capita	0.3451869** (0.05)	0.5290159** (0.03)	0.6916573*** (0.01)
avanzo_per_capita	0.1434684 (0.26)	0.6139255** (0.02)	0.6404578** (0.03)
debito_per_capita	0.0000037 (0.24)	-0.0000059 (0.23)	-0.0000212 (0.31)
TR_VERO_pc	-0.0680667 (0.27)	0.0624099 (0.17)	-7.2797449*** (0.00)
patto_di_stabilità	-0.0322782 (0.48)	-0.1154475** (0.02)	-0.0632495 (0.23)
dummy_elezioni	0.0412949 (0.28)	-0.0000851 (1.00)	-0.0392091 (0.45)
numero_mandato_personale	-0.0195650 (0.47)	0.0026217 (0.91)	0.0212809 (0.40)
affluenza	-0.0491366 (0.81)	-0.1626499 (0.43)	-0.0666598 (0.77)
comune_turistico	0.2066443** (0.02)	0.1441933 (0.11)	0.1483502 (0.12)
quota_istruiti	-0.0052003 (0.11)	-0.0079405** (0.02)	-0.0036536 (0.35)
quota_stranieri	0.0264535** (0.01)	0.0154954 (0.16)	0.0019145 (0.87)
giornali_venduti_per_capita	0.0246988** (0.05)	0.0211148 (0.12)	-0.0047046 (0.76)
associazioni_per_capita	2.8351413 (0.40)	7.6360778** (0.03)	4.3137653 (0.25)
no_sindaco	-4.9228029*** (0.00)	-0.7160682* (0.06)	0.1746454 (0.60)
età	-0.0038708** (0.02)	-0.0003726 (0.83)	-0.0003043 (0.87)
uomo	0.0044960 (0.93)	0.0196280 (0.73)	-0.0046896 (0.94)
education	-0.0065689 (0.75)	-0.0388197* (0.05)	-0.0116946 (0.58)
Constant	-0.2180845 (0.38)	-0.4876221* (0.05)	-0.4212500 (0.12)
No. of Obs.	6406.000	6383.000	5878.000
IC	8509	7456	6557

Table 12: Err2

	(1)	(2)	(3)
	2008	2009	2010
	Coef./p-value	Coef./p-value	Coef./p-value
ERR2			
popolazione	-0.0022449 (0.30)	0.0001144 (0.70)	-0.0001249 (0.83)
altitudine	0.0001700* (0.09)	0.0000871 (0.42)	0.0002427** (0.04)
dummy_deficit	-0.0617338 (0.21)	-0.1380306*** (0.01)	-0.0703670 (0.24)
deficit_per_capita	0.0503615 (0.80)	0.4388285** (0.04)	0.5525250* (0.06)
avanzo_per_capita	-0.0081844 (0.95)	0.5814800** (0.02)	0.2607810 (0.36)
debito_per_capita	0.0000046 (0.10)	-0.0000171 (0.49)	-0.0000503 (0.13)
TR_VERO_pc	-0.0646929 (0.24)	-4.5559276*** (0.00)	-7.3579341*** (0.00)
patto_di_stabilità	-0.1510893** (0.02)	-0.0380766 (0.56)	0.0109170 (0.88)
dummy_elezioni	-0.0422489 (0.40)	-0.0184879 (0.85)	-0.0263168 (0.73)
numero_mandato_personale	0.0208211 (0.56)	0.0223119 (0.49)	0.0672363* (0.07)
affluenza	-0.3754960 (0.15)	-0.0062994 (0.98)	-0.0553990 (0.86)
comune_turistico	-0.0216549 (0.87)	0.2754804** (0.02)	0.4761723*** (0.00)
quota_istruiti	-0.0091908* (0.07)	-0.0098074** (0.05)	-0.0014237 (0.82)
quota_stranieri	0.0066873 (0.66)	0.0054081 (0.73)	-0.0149826 (0.42)
giornali_venduti_per_capita	0.0393402** (0.03)	0.0611689*** (0.00)	0.0164726 (0.46)
associazioni_per_capita	-5.0610896 (0.26)	3.2464362 (0.49)	0.8979841 (0.86)
no_sindaco	-5.2818233*** (0.00)	-0.5079455 (0.38)	0.2600845 (0.60)
età	-0.0003563 (0.88)	-0.0011531 (0.65)	0.0004788 (0.87)
uomo	0.0607724 (0.44)	-0.0239353 (0.76)	0.0741507 (0.43)
education	0.0288065 (0.30)	0.0162068 (0.55)	0.0079633 (0.79)
Constant	-1.3060448*** (0.00)	-1.5974131*** (0.00)	-1.8770072*** (0.00)
No. of Obs.	6406.000	6383.000	5878.000
IC	4290	3728	2944

Table 13: Err3

	(1)	(2)	(3)
	2008	2009	2010
	Coef./p-value	Coef./p-value	Coef./p-value
ERR3			
popolazione	-0.0011607 (0.17)	-0.0038128 (0.10)	-0.0004633 (0.51)
altitudine	0.0001061 (0.19)	0.0002154** (0.03)	0.0002444** (0.02)
avanzo_per_capita	0.1318075 (0.23)	0.2994721 (0.30)	0.7088084** (0.02)
debito_per_capita	-0.0000224 (0.25)	-0.0000059 (0.59)	0.0000023 (0.93)
TR_VERO_pc	-3.0221754*** (0.01)	0.0439058*** (0.00)	-4.3542486*** (0.00)
patto_di_stabilità	0.0113014 (0.81)	-0.0377071 (0.54)	-0.0554356 (0.38)
dummy_elezioni	0.0696052* (0.08)	0.1148004 (0.17)	0.0459546 (0.46)
numero_mandato_personale	-0.0452126 (0.12)	-0.0356130 (0.24)	0.0438225 (0.17)
affluenza	0.0155442 (0.94)	-0.2145761 (0.39)	-0.1677939 (0.55)
comune_turistico	0.2994267*** (0.00)	0.1715229 (0.13)	-0.0347158 (0.79)
quota_istruiti	-0.0028132 (0.43)	-0.0019261 (0.66)	-0.0031864 (0.52)
quota_stranieri	0.0196766* (0.07)	0.0124469 (0.37)	0.0036212 (0.80)
giornali_venduti_per_capita	0.0178169 (0.18)	0.0134848 (0.43)	-0.0133770 (0.49)
associazioni_per_capita	5.1137129 (0.15)	-3.1269667 (0.52)	0.2463384 (0.96)
no_sindaco	-0.2311836 (0.73)	-0.7489541 (0.17)	1.0206856*** (0.00)
età	-0.0039306** (0.03)	0.0004107 (0.85)	-0.0042897* (0.07)
uomo	-0.0277737 (0.63)	-0.0137958 (0.84)	-0.0247532 (0.74)
education	-0.0189223 (0.37)	-0.0312437 (0.20)	-0.0249720 (0.34)
Constant	-0.3185651 (0.23)	-1.0392540*** (0.00)	-0.8791591*** (0.01)
No. of Obs.	6332.000	5747.000	5278.000
IC	7532	4726	4044