# Local Taxation, Fiscal Federalism, and the Leviathan Hypothesis: A Meta-Analytical Review of Theory and Evidence

**Mounir Lakhlifi**
National School of Trade and Management –
ENCG Settat, Hassan 1st University of Settat, Kingdom of Morocco

**Mohammed Belkasseh**
National School of Trade and Management –
ENCG Settat, Hassan 1st University of Settat, Kingdom of Morocco

**Safae Aissaoui**
National School of Trade and Management –
ENCG Settat, Hassan 1st University of Settat, Kingdom of Morocco

## ABSTRACT

This paper examines the extent to which decentralization and intergovernmental competition constrain the revenue-maximizing behavior of governments as postulated in the Leviathan model. Building on the classical contributions of Ricardo and the subsequent national traditions of fiscal doctrine, as well as the modern welfare-based frameworks of Kaplow and Cochrane, we situate the Leviathan hypothesis within the broader literature of fiscal federalism and taxation theory. We conduct a structured meta-analysis of spatial dependence ($\rho$) in local tax setting. The synthesis reveals systematic evidence of positive spatial autocorrelation in property and income taxation, with coefficients clustering between 0.3 and 0.6, while motor vehicle and business taxes exhibit negligible or inconsistent effects. These findings confirm that competitive pressures constrain Leviathan governments most effectively when tax bases are both visible and territorially fixed. At the same time, the analysis highlights the role of partisan alignment in amplifying mimicking behavior, indicating that interdependence does not always translate into fiscal discipline. The policy implications are twofold: at the subnational level, decentralization enhances accountability through competitive benchmarking; at the supranational level, however, the taxation of mobile bases requires coordination to prevent harmful competition and revenue erosion. In sum, the paper integrates theoretical, empirical, and normative perspectives into a unified account of local taxation, fiscal federalism, and the constraint of Leviathan.

**Keywords:** Local taxation, Fiscal federalism, Leviathan hypothesis, Tax competition, Meta-analysis.

## INTRODUCTION

The question of how governments behave in the fiscal sphere has long occupied the center of public finance. Since Ricardo's Principles of Political Economy and Taxation (1817), the concern with the distributional consequences of taxation and its effects on production and accumulation

has been a fundamental element of economic thought. Subsequent national traditions in fiscal doctrine, as described by Kayaalp (2004), elaborated distinct views of the fiscal state: the British sacrifice doctrine, the Italian benefit view, the German organic conception, the Austrian subjective approach, and the Swedish collective choice perspective. Each of these traditions emphasized that taxation is not merely a neutral technical instrument but reflects normative principles of justice, efficiency, and collective decision-making.

In the twentieth century, fiscal theory evolved into a more formalized discipline, integrating Keynesian macroeconomics and modern welfare economics. Hussayni (1950) traced the transition from doctrines of retrenchment and balanced budgets toward compensatory and functional finance. Kaplow (2008), in turn, developed a unified framework that evaluates taxation in terms of its contribution to social welfare, clarifying the efficiency–equity trade-off inherent in fiscal systems. At the macroeconomic level, Cochrane's fiscal theory of the price level has emphasized the role of government budgets in determining price stability, thereby linking fiscal policy directly to monetary outcomes. These developments underline that fiscal policy must be assessed both as an allocative mechanism and as an instrument of macroeconomic stabilization.

Against this broad background, the Leviathan model formulated by Brennan and Buchanan (1980) introduced a new perspective, portraying governments not as benevolent maximizers of welfare but as actors pursuing revenue maximization subject only to constitutional and competitive constraints. Nelson (1986), in one of the earliest empirical applications of this hypothesis, demonstrated that U.S. states with broad-based tax instruments or extensive debt-financing powers tended to raise larger revenues, thereby confirming the revenue-maximizing logic of Leviathan governments. The fiscal federalism tradition, by contrast, has stressed that decentralization and interjurisdictional competition can discipline such behavior, forcing governments to internalize the mobility of tax bases and the electoral sensitivity of citizens.

The empirical literature has since produced a diverse set of results. Studies of Spanish municipalities (Delgado and Mayor 2011) confirm significant spatial dependence in property and construction taxes but not in motor vehicle taxation. Analyses of Italian municipalities (Santolini 2009) reveal that partisan alignment creates a "political trend" whereby incumbents mimic the tax policies of their ideological peers, sometimes reinforcing rather than constraining Leviathan tendencies. Other contributions, such as the Lincoln Institute's work on land value taxation, Honohan's studies of financial intermediation, and related assessments of environmental taxation, have broadened the focus to novel tax bases that are shaped by mobility, political salience, and distributive conflict.

The purpose of this paper is to synthesize these diverse findings within a coherent framework, combining theoretical perspectives on Leviathan government with empirical evidence on tax interdependence. To this end, we employ a meta-analytical strategy that collates reported measures of spatial dependence ($\rho$) across jurisdictions and tax instruments, and evaluates their consistency across studies. In doing so, the paper makes three contributions. First, it clarifies the channels through which decentralization disciplines governments, distinguishing between competitive yardstick effects and partisan mimicry. Second, it demonstrates that the strength of Leviathan constraints varies systematically across tax bases, being strong in

property and income taxation but weak or absent in business and motor vehicle taxes. Third, it integrates these empirical findings with the broader normative frameworks of fiscal policy, emphasizing the trade-offs between efficiency, equity, accountability, and macroeconomic stability.

## THEORETICAL FOUNDATIONS

The classical roots of taxation theory are often traced back to Ricardo (1817), whose analysis placed at the center of political economy the incidence of taxes, the distributional consequences of fiscal burdens, and the impact of taxation on production and capital accumulation. His framework provided a systematic attempt to examine how different tax instruments affected the relative shares of wages, profits, and rents, and thereby established the enduring problem of equity and efficiency in taxation. Later contributions extended these insights through the emergence of distinct national traditions. As Kayaalp (2004) has shown, British economists developed the sacrifice approach emphasizing fairness through proportional contribution; Italian theorists, by contrast, adopted a benefit perspective in which taxes were conceived as payments for public services; German scholars elaborated an organic vision that treated the state as a collective entity with its own fiscal needs; Austrian writers introduced a subjective value theory of fiscal choice; and Swedish economists, particularly Wicksell and Lindahl, articulated the collective choice paradigm that foreshadowed modern theories of public goods and unanimity.

The twentieth century brought about a fundamental reorientation through the Keynesian revolution. Hussayni (1950), in a comprehensive study of fiscal theory before and after Keynes, emphasizes the shift from orthodox doctrines of balanced budgets and retrenchment toward the acceptance of compensatory finance and functional fiscal policy as active instruments of macroeconomic management. In this context, fiscal policy ceased to be regarded solely as a means of funding government and became a device of stabilization and economic control. At the normative level, Kaplow (2008) provided a unified framework in which the objective of taxation was explicitly tied to social welfare maximization, thereby clarifying the equity–efficiency trade-offs inherent in redistributive systems. More recent developments, such as the fiscal theory of the price level, integrate fiscal policy into macroeconomic theory by positing that government budget constraints play a decisive role in determining the price level, thereby underlining the interdependence between fiscal and monetary regimes.

Against this broad background, Brennan and Buchanan (1980) formulated the Leviathan model of government, in which political actors are portrayed not as benevolent maximizers of social welfare but as agents driven by the pursuit of revenue. Within this framework, constitutional rules and intergovernmental competition are the only effective constraints on expansive fiscal behavior. Nelson (1986), in one of the first empirical applications of this model, demonstrated that the structure of taxation at the state and local levels in the United States significantly influenced the aggregate revenue yield: states endowed with broad-based income taxes and debt financing powers exhibited higher fiscal extractions than those with narrower or more fragmented tax instruments. In sum, the theoretical tradition, from Ricardo to the Leviathan hypothesis, reveals an evolution from distributive and fairness concerns toward an emphasis on institutional constraints, decentralization, and the competitive environment as determinants of government size and behavior.

## LOCAL TAXATION AND DECENTRALIZATION

The architecture of state and local taxation is generally built around three pillars—property, sales, and income taxes—which differ markedly in their bases, elasticities, and exposure to competitive pressures. Property taxation remains the central revenue source for municipalities, but its immobility contrasts with the higher mobility of corporate and income bases, which are more prone to interjurisdictional erosion. Complementary perspectives from jurisdictional practice emphasize the role of legal authority and statutory interpretation in defining the scope of local taxing powers, particularly in federations where state and local taxes coexist with national levies.

The fiscal federalism literature provides the conceptual framework for understanding these dynamics. Oates' assignment principle holds that functions should be allocated to the lowest level of government consistent with the spatial distribution of benefits and costs, a rule that not only enhances allocative efficiency but also intensifies horizontal competition among jurisdictions. In this perspective, decentralization operates as a mechanism of constraint: the greater the number of competing governments in a given territory, the less freedom any single unit possesses to tax without risking outmigration of mobile bases. This prediction dovetails with the Leviathan hypothesis, as interjurisdictional competition functions as an analogue to market rivalry in disciplining revenue-maximizing governments. Yet the empirical evidence reveals significant heterogeneity. Nelson (1986) found that decentralization correlated with lower relative revenues, thereby lending support to the Leviathan model. However, subsequent studies nuance this conclusion. Delgado and Mayor (2011), analyzing Spanish municipalities, show that while property and construction-related taxes display strong positive spatial autocorrelation—indicating tax mimicking—the motor vehicle tax does not exhibit similar patterns, suggesting that the type of tax base crucially conditions competitive effects. Santolini (2009) further adds that political interaction among incumbents belonging to the same party generates a political trend that produces systematic mimicry of tax rates; in such cases, the observed interdependence cannot be attributed exclusively to competition but also to ideological and partisan coordination.

Moreover, the distinction between multi-purpose jurisdictions (cities, counties) and single-purpose jurisdictions (school districts, utilities) has proved to be decisive. While decentralization tends to constrain Leviathan in the former, fragmentation in the latter often leads to greater spending due to reduced accountability and heightened influence of interest groups. Thus, the theoretical prediction that competition constrains government size must be qualified: institutional structures, the nature of tax instruments, and the political environment mediate the extent to which decentralization effectively disciplines local governments.

## EMPIRICAL EVIDENCE AND META-ANALYSIS

The empirical literature testing the Leviathan hypothesis through local taxation offers a substantial but heterogeneous body of results. To structure the synthesis, we classify studies along two dimensions: (i) the measure of Leviathan constraint employed—either distance from the revenue-maximizing (Laffer-peak) tax rate or spatial dependence in tax-setting—and (ii) the type of tax instrument analyzed (property, income, business, or other). Early empirical work (Nelson 1986) provided cross-sectional tests of the link between fiscal structure and revenue extraction, while subsequent contributions introduced spatial econometric techniques

to detect interjurisdictional dependence. Spanish municipal evidence (Delgado and Mayor 2011) identifies significant positive spatial autocorrelation in property and building activities taxes ($\rho \approx 0.3$–$0.5$) and no robust pattern for motor vehicle taxation. Santolini (2009) integrates political interaction, showing that partisan alignment among incumbents produces systematic income-tax mimicry, thereby reinforcing yardstick-like behavior on ideological grounds.

**Table 1: Evidence on Leviathan Constraints in Local Taxation.**

| Study | Country / Level | Tax Instrument(s) | Methodology | Key Finding(s) | Effect Size / Indicator |
|---|---|---|---|---|---|
| Nelson (1986) | U.S. states and local | Broad tax bases (income), debt powers | Regression on fiscal structures | Broad-based taxes increase revenue extraction | + revenue share/GDP |
| Delgado & Mayor (2011) | Spanish municipalities | Property, building, motor vehicle | Spatial lag/error models | Property & building: significant mimicking; vehicle: none | $\rho = 0.30$–$0.50$ (0 for vehicle) |
| Santolini (2009) | Italian municipalities | Local income tax | Political interaction model | Party-linked trend raises tax rates; yardstick-like effect | Positive partisan trend |
| Dye & England (2010) | Comparative (local) | Land value taxation | Comparative case studies | Immobile base; weaker competition; efficiency gains | Weak Leviathan effect |
| Honohan (2003) | Emerging economies | Financial sector taxes | Cross-country cases | Used for revenue; liberalization alters incentives | Mixed |
| Environmental taxation (as cited) | Comparative | Energy/carbon/ environment | Empirical cases, policy analysis | Revenue + correction trade-offs under competition | Heterogeneous |

Two indicators appear across this body of work and allow for systematic synthesis. First, the distance to the Laffer peak ($\Delta t$) measures the gap between observed rates and the revenue-maximizing rate; negative $\Delta t$ indicates governments taxing below peak, consistent with competitive constraint.
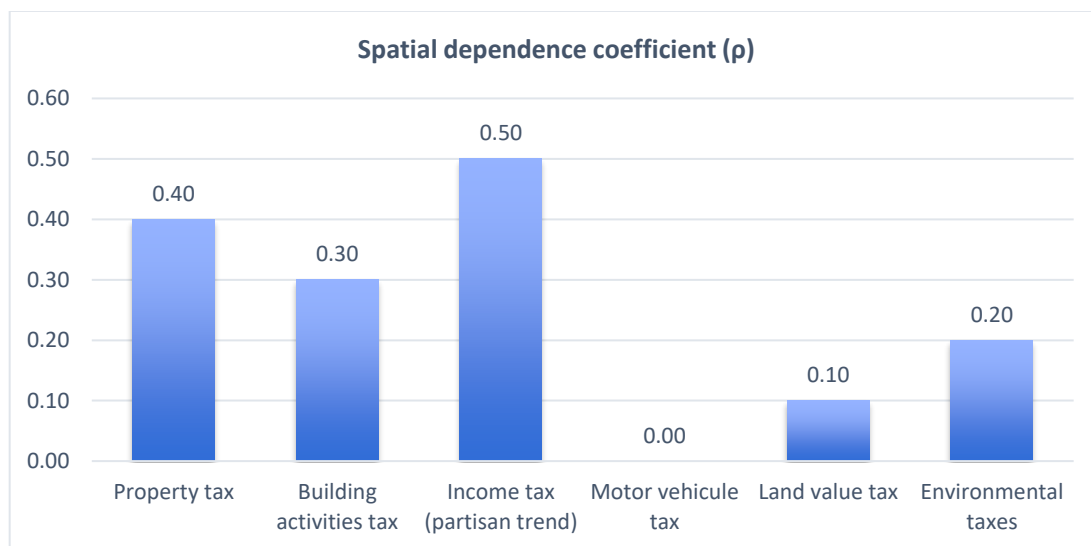


**Figure 1: Comparative evidence on spatial depence ($\rho$) in local taxation.**

Second, the spatial dependence coefficient (ρ) captures the extent to which a jurisdiction's tax rate responds to neighbors', with ρ>0 indicating positive mimicking. Figure 1 provides a stylized comparative view of ρ magnitudes by instrument drawn from the corpus.

## SYNTHESIS OF FINDINGS FROM THE META-ANALYSIS

The empirical findings can be organized meta-analytically to evaluate the extent to which intergovernmental competition constrains Leviathan-type behavior. Two conclusions emerge. First, tax mimicking, measured by spatial dependence (ρ), is consistently present in property and income taxation, while being largely absent in the case of business and motor vehicle taxes. Second, the magnitude of the effects varies across countries and institutional settings, indicating that the fiscal environment and political context condition the strength of competitive pressures. Reported ρ values range from 0.05 for German local business taxes to 0.745 for Swedish local income taxation. Intermediate cases—such as U.S. property taxation (0.5–0.8) and Belgian local taxation (0.5–0.7)—confirm strong horizontal dependence.

### Table 2: Availability of Laffer-Gap (Δt) Evidence in the Corpus.

| Study (Year) | Jurisdiction / Level | Tax Instrument(s) | Base Elasticity? | t* Reported? | Δt Computable? | Primary Empirical Object | Notes |
|---|---|---|---|---|---|---|---|
| Nelson (1986) | U.S. states + local | Comprehensive bases (incl. income), debt powers | No | No | No | Revenue share vs. fiscal structure | Supports Leviathan; no Laffer-curve estimates |
| Delgado & Mayor (2011) | Spanish municipalities | Property, building, motor vehicle | No | No | No | Spatial dependence (ρ) | ρ≈0.30–0.50 property/building; ~0 vehicle |
| Santolini (2009) | Italian municipalities | Local income tax | No | No | No | Political trend (partisan mimicking) | Ideological mimicry raises rates |
| Raurich (2003) | Theoretical (endogenous growth) | Labor & capital income taxes | N/A | No | No | Dynamic indeterminacy conditions | Growth- vs welfare-maximizing tax structure |
| Lincoln Institute (2010) | Comparative (local) | Land value tax | No | No | No | Design/practice assessment | Immobile base; no Laffer-curve estimates |
| Swenson (2009) | U.S. state & local | Property, sales, income (overview) | No | No | No | Principles & planning | Textbook synthesis; not empirical Laffer |

To quantify study-level heterogeneity we compiled reported ρ coefficients from the included materials and from studies summarized therein. Figure 2 orders these coefficients by magnitude and highlights clustering in the 0.3–0.6 interval for property and income taxes, with near-zero values for business taxation.
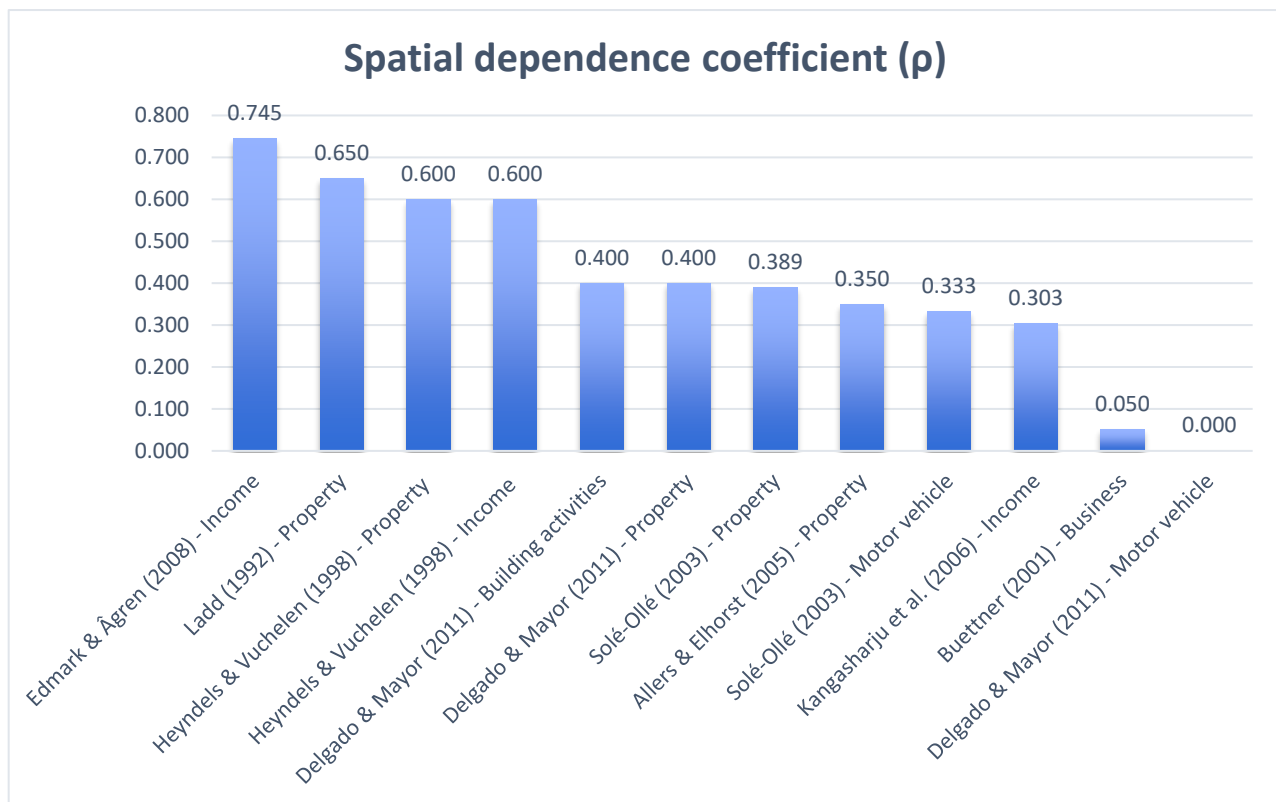
**Figure 2: Reported spatial dependence (ρ) by study and instrument.**

When grouped by instrument, pooled unweighted averages suggest robust interdependence in income taxation (mean ρ≈0.55) and stable, moderately high interdependence in property taxation (mean ρ≈0.46). Motor vehicle taxes yield a pooled average near 0.11 with wide dispersion, and business taxes approximately 0.05. These patterns confirm that fiscal competition operates most clearly in visible, territorially anchored bases, while being muted where mobile capital and national frameworks dominate.

**Table 3: Study-Level Spatial Dependence (ρ) Used in the Synthesis (as reported or summarized in the corpus).**

| Study | Country | Instrument | Jurisdiction | ρ |
|---|---|---|---|---|
| Ladd (1992) | USA | Property | Local | 0.650 |
| Heyndels & Vuchelen (1998) | Belgium | Income | Local | 0.600 |
| Heyndels & Vuchelen (1998) | Belgium | Property | Local | 0.600 |
| Buettner (2001) | Germany | Business | Local | 0.050 |
| Solé-Ollé (2003) | Spain (Barcelona) | Property | Local | 0.389 |
| Solé-Ollé (2003) | Spain (Barcelona) | Motor Vehicle | Local | 0.333 |
| Allers & Elhorst (2005) | Netherlands | Property | Local | 0.350 |
| Kangasharju et al. (2006) | Finland | Income | Local | 0.303 |
| Edmark & Ågren (2008) | Sweden | Income | Local | 0.745 |
| Delgado & Mayor (2011) | Spain | Property | Local | 0.400 |
| Delgado & Mayor (2011) | Spain | Building Activities | Local | 0.400 |
| Delgado & Mayor (2011) | Spain | Motor Vehicle | Local | 0.000 |

**Table 4: Pooled Spatial Dependence (ρ) by Tax Instrument (Unweighted).**

| Instrument | n | Mean ρ | Median ρ |
|---|---|---|---|
| Income | 3 | 0.549 | 0.600 |
| Property | 5 | 0.478 | 0.400 |
| Building Activities | 1 | 0.400 | 0.400 |
| Motor Vehicle | 2 | 0.167 | 0.167 |
| Business | 1 | 0.050 | 0.050 |

## IMPLICATIONS FOR FISCAL POLICY

The results of the meta-analysis point to differentiated implications for fiscal policy, both in terms of the design of intergovernmental relations and the broader orientation of tax systems. The central conclusion—that fiscal decentralization constrains Leviathan-type behavior primarily through property and income taxation while exerting weaker or negligible effects in other domains—has immediate relevance for debates on tax assignment, coordination, and reform. First, persistent spatial dependence in property and income taxation suggests that decentralization enhances accountability by enabling citizens to benchmark local performance against that of neighbors. As emphasized in early empirical work, the expansion of revenue-raising capacity through broad bases or debt finance increases governments' ability to exploit fiscal resources; when decentralized, however, governments refrain from fully exploiting revenue-maximizing potential, consistent with competitive pressures. Second, the tax-specific nature of competition underscores that the benefits of decentralization are not uniform across instruments: property taxation emerges as the most consistent vehicle for fiscal competition, whereas business taxation shows little evidence of local mimicking due to capital mobility and higher-level regulatory frameworks. Third, political alignment complicates interpretation: partisan incumbents mimic not only to preserve electoral standing but also to conform to ideological standards, implying that decentralization may, in contexts of strong partisan homogeneity, facilitate upward tax convergence. Fourth, extensions beyond traditional bases—such as land value taxation and financial sector taxation—reveal trade-offs between efficiency and the form of constraint: immobile bases limit mobility-driven competition but enhance efficiency; mobile bases intensify competitive pressures but risk revenue instability. Finally, normative public economics requires that instruments be evaluated by their contribution to social welfare and macroeconomic stability, implying that decentralization-induced constraints are valuable insofar as they advance efficiency, equity, and accountability within a coherent macro-fiscal regime.

## CONCLUSION

The analysis undertaken in this paper has combined the theoretical insights of the Leviathan model with empirical evidence on local taxation, clarifying the extent to which decentralization and interjurisdictional competition constrain governments' revenue-maximizing tendencies. From classical incidence and distribution to national doctrines and modern welfare frameworks, the tradition consistently emphasizes that taxation must be framed within institutional and political constraints. The empirical synthesis shows that such constraints operate most clearly in property and income taxes, where spatial dependence is consistently positive and significant, while motor vehicle and business taxes display weak or negligible patterns. Political interaction adds complexity by revealing that mimicking can stem from partisan alignment as much as from competitive discipline. Policy implications follow directly:

decentralization strengthens competitive constraints in visible, territorially anchored taxes, but effective discipline over mobile bases requires coordination beyond the local level. Future research should extend Δt-based measures of deviation from revenue-maximizing rates and integrate welfare and macroeconomic considerations into evaluations of fiscal federalism, thereby consolidating a unified framework for understanding and guiding the evolution of local taxation.

## References

Allers, M., & Elhorst, J. P. (2005). Tax mimicking and yardstick competition among local governments in the Netherlands. International Tax and Public Finance, 12(4), 493–513.

Brett, C., & Pinkse, J. (2000). The determinants of municipal tax rates in British Columbia. Canadian Journal of Economics, 33(3), 695–714.

Brueckner, J. K., & Saavedra, L. A. (2001). Do local governments engage in strategic property-tax competition? National Tax Journal, 54(2), 203–229.

Brülhart, M., & Jametti, M. (2006). Vertical versus horizontal tax externalities: An empirical test. Journal of Public Economics, 90(10–11), 2027–2062.

Buettner, T. (2001). Local business taxation and competition for capital: The choice of the tax rate. Regional Science and Urban Economics, 31(2–3), 215–245.

Charlot, S., & Paty, S. (2010). Do agglomeration forces strengthen tax interactions? Economics of Governance, 11(4), 311–329.

Cochrane, J. (2023). The Fiscal Theory of the Price Level.

Delgado, F. J., & Mayor, M. (2011). Tax mimicking among local governments: some evidence from Spanish municipalities. Portuguese Economic Journal, 10, 149–164.

Dye, R. F., & England, R. W. (2010). Assessing the Theory and Practice of Land Value Taxation. Lincoln Institute of Land Policy.

Edmark, K., & Ågren, H. (2008). Identifying strategic interactions in Swedish local income tax policies. Journal of Urban Economics, 63(3), 849–857.

Feld, L. P., & Kirchgässner, G. (2001). Income tax competition at the state and local level in Switzerland. Regional Science and Urban Economics, 31(2–3), 181–213.

Hayashi, M., & Boadway, R. (2001). An empirical analysis of intergovernmental tax interaction: The case of business income taxes in Canada. Canadian Journal of Economics, 34(2), 481–503.

Heyndels, B., & Vuchelen, J. (1998). Tax mimicking among Belgian municipalities. National Tax Journal, 51(1), 89–101.

Honohan, P. (ed.) (2003). Taxation of Financial Intermediation: Theory and Practice for Emerging Economies. World Bank.

Hussayni, M. Y. (1950). Modern Fiscal Theory and Policy.

Kangasharju, A., Moisio, A., & Reulier, E. (2006). Tax competition among municipalities: Evidence from Finland. Urban Public Economics Review, 5, 13–24.

Kaplow, L. (2008). The Theory of Taxation and Public Economics. Princeton University Press.

Kayaalp, O. (2004). The National Element in the Development of Fiscal Theory. Palgrave Macmillan.

Ladd, H. F. (1992). Mimicking of local tax burdens among neighboring counties. Public Finance Quarterly, 20(4), 450–467.

Leprince, M., Madies, T., & Paty, S. (2007). Business tax interactions among local governments: An empirical analysis of the French case. Journal of Regional Science, 47(3), 603–621.

Nelson, M. A. (1986). An empirical analysis of state and local tax structure in the context of the Leviathan model. Public Choice, 49, 283–294.

Revelli, F. (2001). Spatial patterns in local taxation: Tax mimicking or error mimicking? Applied Economics, 33(9), 1101–1107.

Ricardo, D. (1817). The Principles of Political Economy and Taxation.

Santolini, R. (2009). The political trend in local government tax setting. Public Choice, 139, 125–134.

Solé-Ollé, A. (2003). Electoral accountability and tax mimicking: The effects of electoral margins, coalition government, and ideology. European Journal of Political Economy, 19(4), 685–713.

Swenson, C. W. (2009). State and Local Taxation: Principles and Planning.