INTERNATIONAL CENTER FOR PUBLIC POLICY

—

WITHIN THE

PUBLIC FINANCE RESEARCH CLUSTER

Working Paper 25-11

Decentralization in Theory and Practice: A Comprehensive Review

Kshitiz Shrestha
Charles R. Hankla

Georgia State University | Andrew Young School of Policy Studies

Tel: 404-413-0233
Fax: 404-413-0244

Website:
pfrc.gsu.edu

Address:
55 Park Place NE
7th Floor
Atlanta, GA 30303

Mail:
Public Finance Research Cluster
P.O. Box 3992
Atlanta, GA 30302-3992

Georgia State University | Andrew Young School of Policy Studies

International Center for Public Policy
Andrew Young School of Policy Studies

The Andrew Young School of Policy Studies was established at Georgia State University with the objective of promoting excellence in the design, implementation, and evaluation of public policy. In addition to four academic departments, including economics and public administration, the Andrew Young School houses eight leading research centers and policy programs, including the International Center for Public Policy.

The mission of the International Center for Public Policy (ICePP) at the Andrew Young School of Policy Studies is to provide academic and professional training, applied research, and technical assistance in support of sound public policy and sustainable economic growth in developing and transitional economies.

ICePP is recognized worldwide for its efforts in support of economic and public policy reforms through technical assistance and training around the world. This reputation has been built serving a diverse client base, including the World Bank, the U.S. Agency for International Development (USAID), the United Nations Development Programme (UNDP), finance ministries, government organizations, legislative bodies, and private sector institutions.

The success of ICePP reflects the breadth and depth of its in-house technical expertise. The Andrew Young School's faculty are leading experts in economics and public policy and have authored books, published in major academic and technical journals, and have extensive experience in designing and implementing technical assistance and training programs. Andrew Young School faculty have been active in policy reform in over 40 countries around the world. Our technical assistance strategy is not merely to provide technical prescriptions for policy reform, but to engage in a collaborative effort with host governments and donor agencies to identify and analyze the issues at hand, arrive at policy solutions, and implement reforms.

ICePP specializes in four broad policy areas:

- Fiscal policy (e.g., tax reforms, public expenditure reviews)
- Fiscal decentralization (e.g., reform, intergovernmental transfer systems, urban finance)
- Budgeting and fiscal management (e.g., local, performance-based, capital, and multi-year budgeting)
- Economic analysis and revenue forecasting (e.g., micro-simulation, time series forecasting)

For more information about our technical assistance activities and training programs, please visit our website at icepp.gsu.edu or contact us at paulbenson@gsu.edu.

Decentralization in Theory and Practice: A Comprehensive Review

Kshitiz Shrestha and Charles R. Hankla[1]

July 2025

Abstract

Fiscal decentralization (FD) has become a cornerstone of governance reform globally, transferring authority from central to subnational governments. This comprehensive review synthesizes theoretical frameworks and empirical evidence on FD, examining its core pillars (expenditure assignment, revenue autonomy, transfers, borrowing) and diverse impacts. While FD holds potential for improving service delivery, accountability, and economic efficiency, outcomes vary significantly. The paper analyzes FD's complex effects on economic growth, poverty, inequality, regional disparities, environmental governance, macroeconomic stability, crisis response (including COVID-19), corruption, party systems, and secession risks. It underscores that FD's success is highly context-dependent, requiring robust institutions, political coherence, and careful design tailored to a country's history, capacity, and objectives. No single model fits all contexts.

Keywords: fiscal decentralization, intergovernmental relations, subnational governance, decentralization outcomes

[1] International Center for Public Policy, Public Finance Research Cluster, Georgia State University

1. Introduction

Over the past few decades, fiscal decentralization (FD) has become a widely adopted feature of governance reform across a wide range of countries. At its core, decentralization refers to the transfer of authority and responsibilities from central to subnational levels of government. As national governments seek to bring services closer to people, the design and outcomes of fiscal decentralization can vary widely.

What fiscal decentralization looks like in practice depends on what a country is trying to achieve with decentralization, as well as its history and institutional legacies. In some countries, decentralization is motivated by efficiency gains, while in others, it is a response to political pressures, regional demands, and historical grievances. As a result, no single model fits all. This is evident from the disparity of outcomes of decentralization where in some cases decentralization has improved service delivery and strengthen accountability; in others, it has exacerbated inequality or fueled political fragmentation.

This review paper serves two purposes. First, it provides a structured overview of the conceptual discussion of the core components of fiscal decentralization, including why countries decentralize, the different forms of decentralization, and how different pillars of decentralization are designed. Second, the paper offers a comprehensive review of the theoretical and empirical literature on fiscal decentralization. It assesses the growing body of evidence on how decentralization affects several key outcomes such as public service delivery, economic growth, poverty, and inequality. Additionally, it also examines more recent areas of inquiry including the impact of decentralization on climate change, and crisis response—most notably during the COVID-19 pandemic.

The paper is organized as follows. Section 2 introduces the conceptual framework and key measures of decentralization. Section 3 discusses the waves of fiscal federalism, from first-generation theories to the emerging third-generation framework. Section 4 reviews the impact of fiscal decentralization on several outcomes such as public service delivery, economic growth, poverty and inequality, regional disparities, climate governance, macroeconomic stability, and pandemic response. Section 5 focuses on the political dimensions of decentralization, including its relationship with corruption, the role of political parties, and its implications for territorial cohesion and secession. Section 6 concludes.

2. Reasons for Decentralization

Fiscal decentralization arises from a complex interaction of economic, political, and geographic factors. Panizza (1999) and Arzaghi and Henderson (2005) highlight how decentralization balances voter preferences for localized public goods against inefficiencies in centralized service delivery. The key drivers include country size, population growth, federal constitutions, and income levels, though these factors interact differently across countries. Additionally, Letelier (2005) and Treisman (2006) show that income and urbanization promote greater decentralization but have sector-specific effects, with territorial size and federalism further enhancing decentralization. Stegarescu (2009) finds that economic and political integration, particularly in the EU, promotes local provision but centralizes taxing powers under certain conditions.

Bodman and Hodge (2010) observe a threshold effect of income on decentralization, with high-income countries decentralizing more, while other factors like trade openness and ethnic diversity vary in influence. Jametti and Joanis (2010) emphasize political dynamics, showing how voter asymmetries and intergovernmental competition shape decentralization. More recently, Canavire-Bacarreza et al. (2017) builds on Panizza (1999) and Arzaghi and Henderson (2005) and develop a model that hypothesize that geographic heterogeneity and ethnic fractionalization a significant determinant of higher levels of fiscal decentralization. Recent studies including, Bojanic (2020), and Delgado and Landajo (2025), show geographic heterogeneity, income level, urbanization, and trade openness as the key determinants of fiscal decentralization.

In addition to structural and economic determinants, democratization and institutional reforms have emerged as critical drivers of decentralization, especially in low- and middle-income countries. Faguet (2014), for instance, argues that decentralization is often pursued as a political strategy to strengthen state legitimacy, particularly in post-conflict or transitional states. Decentralization can also be a response to pressures for political inclusion and territorial autonomy, particularly in ethnically diverse or regionally polarized nations. This has been especially evident in Latin America and parts of Africa and Asia, where decentralization has been adopted to quell separatist tensions and accommodate demands for local self-governance (Green, 2010; Eaton & Schroeder, 2010). Furthermore, donor influence and international financial institutions have promoted decentralization reforms as part of good governance agendas, linking fiscal decentralization with improved accountability and service delivery (Smoke, 2015).

Finally, growing attention has been paid to the institutional and historical underpinnings of decentralization. For example, countries with a long-standing tradition of centralized governance, such as those with colonial histories of authoritarian administration, often face more significant challenges in devolving power. Conversely, countries with federal constitutions and a history of subnational autonomy are more likely to embrace and sustain fiscal decentralization (Treisman, 2006). Thus, these structural and institutional factors, along with political incentives, contribute to wide cross-country variation in both the motivations for decentralization reforms.

3. Forms and Types of Decentralization

Decentralization can take various forms, each influencing governance structures differently. The literature broadly categorizes decentralization into two distinct frameworks: one based on the functional dimensions of decentralization—administrative, fiscal, and political decentralization (Boex et al., 2022) and another focused on the depth of authority transfer—deconcentration, delegation, and devolution (Rondinelli et al., 1983; Cheema & Rondinelli, 2007; Dubois & Fattore, 2009). While the first framework explains *what* is decentralized, the second explains *how much* autonomy is granted to subnational entities.

3.1 Three Dimensions of Decentralization: Administrative, Fiscal, and Political

Administrative decentralization refers to the distribution of decision-making responsibilities to lower levels of government, allowing subnational entities to manage personnel, policies, and public service delivery (Schneider, 2003; Ozmen, 2014). It can improve efficiency and responsiveness by bringing governance closer to citizens.

Fiscal decentralization involves the transfer of four main responsibilities from the central government to the subnational governments: i) spending decisions, ii) revenue raising and taxing powers, iii) subnational governments borrowings and iv) intergovernmental fiscal transfers (Schneider, 2003). Stegarescu (2005) suggests two distinct dimensions of fiscal decentralization. The first dimension relates to the division of functional responsibilities and revenues across different levels of government. The second dimension relates to the decision-making authority of subnational governments. It concerns with the autonomy of subnational government over expenditure allocation. Greater fiscal autonomy enables local governments to tailor spending to regional needs but also poses challenges such as fiscal disparities and soft budget constraints (Rodden, 2004). Voigt and Blume (2012) offer a broader framework, suggesting seven components that could possibly capture the various dimensions of federalism and decentralization. Three off these seven components capture fiscal aspects: subnational share of total expenditure, vertical transfers, and unconditional sharing of national revenues. The other four non-fiscal components include elected local executives, subnational democracy, veto power of the house of regional representatives, and political fractionalization.

Political decentralization refers to the transfer of decision-making authority to locally elected governments (Brancati, 2006). It captures the processes by which local officials are elected and their relations with central authorities, such as the role of central party officials in selecting local candidates (Bahl & Martinez-Vazquez, 2022). This process allows subnational governments to shape policies in alignment with local preferences, but its success depends on the institutional design of electoral and governance mechanisms. Moreover, political decentralization provides more power to the citizens and their elected members in making public decisions (Ivanyna and Shah, 2014). The idea is that public decisions based on greater participation is better informed and relevant to the demands of the society than made by national political representatives. The choice of political representatives at local level allows citizens to know their political agents better. Similarly, it allows elected representative to know the preferences of their constituents better.

3.2 The Depth of Decentralization: Deconcentration, Delegation, and Devolution

Beyond these dimensions, decentralization also varies in depth depending on how much authority is transferred (World Bank, 2024).

- Deconcentration, often considered the weakest form, involves shifting administrative responsibilities from central ministries to regional offices without granting real autonomy

(Rondinelli et al., 1983). This form is common in unitary states where the central government retains overall control.

- Delegation goes a step further by transferring decision-making authority to subnational governments that operate under central oversight (Dubois & Fattore, 2009). These entities may have discretion in policy implementation but remain accountable to central authorities.
- Devolution, the most extensive form, involves granting legally recognized authority to subnational governments over administrative, fiscal, and political affairs (Faguet, 2014). In devolved systems, subnational governments possess independent powers, including taxation and policymaking, though their autonomy may still be subject to constitutional constraints (Treisman, 2007).

3.3 Reconciling the Two Frameworks

The classifications in these two frameworks can intersect and complement each other (Smoke and Cook, 2022). Administrative, fiscal, and political decentralization describe *what* is decentralized, while deconcentration, delegation, and devolution describe *how much* authority is transferred. In practice, various combinations of these forms emerge. For instance, administrative decentralization often occurs via deconcentration, as central governments may relocate bureaucratic functions to subnational offices without relinquishing control (Dubois & Fattore, 2009). Fiscal decentralization is commonly implemented through delegation or partial devolution, allowing regional bodies to implement policies and manage resources within prescribed limits (Rodden, 2004). Political decentralization typically requires devolution, enabling subnational governments to exercise decision-making authority independently (Faguet, 2014).

While some forms naturally align, others remain theoretically possible but less common. For instance, political decentralization could exist alongside deconcentration if locally elected officials operate within a highly centralized bureaucratic structure. Similarly, fiscal decentralization might accompany delegation, where local governments manage financial resources but remain accountable to central oversight (Treisman, 2007).

4. **Measures of Fiscal Decentralization**

Over the years, considerable progress has been made on developing decentralization indicators that covers the fiscal and political aspects of decentralization. This section discusses some of the key decentralization indices and their components.

The IMF's Government Finance Statistics (GFS) database is widely used for fiscal decentralization analysis, providing comprehensive data on cross-country fiscal flows and positions. The indicators are available for 86 countries from 1972-2020. Martinez-Vazquez and Timofeev (2009) developed a composite index of fiscal decentralization which employs both revenue decentralization and expenditure decentralization. The composite ratio can be expressed as: $Composite\ Ratio = \frac{RD}{(1-ED)}$. In this formulation, revenue decentralization and expenditure decentralization reinforce each other. For instance, when subnational governments are delegated with the responsibility of service delivery but no the financing then it will raise the ratio by decreasing the denominator. On the other hand, if subnational governments have both the administration and financing of service deliveries then it will increase the ratio by increasing the numerator and reducing the denominator.

A common criticism of these fiscal data-based decentralization measures is that policy making, and policy implementation do not always appear in statistical tables (Harguindeguy, 2019). Fiscal decentralization indices from GFS do not reflect the fiscal autonomy of the subnational governments to collect the revenues or to decide on how to spend the revenues. For example, expenditure mandated by the central government or spent on behalf of the central government appears as subnational government expenditure (Rodden, 2004). Greater subnational share of expenditure might merely reflect the size of economic activities. Moreover, shared taxes might appear as part of subnational revenue even though subnational governments do not have autonomy to determine the tax rate or tax base (Ebel & Yilmaz, 2002). The OECD tax autonomy indicator improves upon traditional measures by accounting for subnational governments' authority over tax rates, reliefs, and revenue-sharing arrangements. Regarding various tax sharing arrangements, it is also concerned with subnational governments authority over determining the revenue split. This data is only available for 40 countries from 1995 to 2023.

Similarly, Ivanyna and Shah (2014) propose an aggregate decentralization index adjusting for a number of institutional factors that are important for determining the actual authority and independence of local decision-making. These factors include (1) the security of the existence of local governments, (2) local expenditure, tax, and borrowing autonomy, (3) home rule of self-governance, and (4) local government control over public hiring, firing and other human resources policies of their own employees (Bahl & Martinez-Vazquez, 2022). However, the data is only available for mid 2000's (mostly 2005) and has not been updated.

The Regional Authority Index (RAI) by Hooghe et al. (2016) makes significant contribution in the measurement of decentralization that incorporates the multidimensional aspects of decentralization. It disaggregates decentralization into two dimensions: self-rule, measuring a regional government's autonomous capacity, and shared rule, assessing regional influence over national decisions. The dataset covers 96 countries from 1950 to 2018. However, it does not cover the municipal governments (Ladner et al., 2025). To address this gap, the Local Autonomy Index (LAI) captures municipal-level decentralization through seven dimensions - legal autonomy, organizational autonomy, policy scope, financial autonomy, central or regional control, vertical influence, and political discretion. The data is limited to 57 European countries between 1990 and 2020.

Less work has been done on developing political decentralization index. There are efforts of measuring it by focusing on different electoral system and relative strength of political parties in selecting local candidates and political agendas (Bahl & Martinez-Vazquez, 2022). Hankla et al. (2019) have developed political decentralization index that emphasizes democratic decentralization and party integration, incorporating factors like elected subnational executives and national parties' control over local elections. This dataset spans 135 countries from 1975 to 2019, offering a unique perspective on the role of national parties in subnational governance. Moreover, the V-Dem dataset by Coppedge et al. (2023) provides indices for local and regional government autonomy, covering 172 countries from 1990 to 2023. These indices measure the extent to which the elected government at regional/local level can operate without interference from the unelected body at the corresponding levels. They offer insights into subnational governance dynamics, shedding light on the significance of elected representatives at the grassroots level of government and the structure and autonomy of regional governance below the national level.

Table 1. Fiscal Decentralization Indices

Database	Source	No. of Countries	Years Covered
Government Finance Statistics (GFS)	International Monetary Fund (IMF)	75	1972–2022
OECD tax autonomy	OECD	40	1995–2022
Regional Authority Index	Hooghe et al. (2016)	96	1950–2022
Local Autonomy Index	Ladner et al. (2025)	57	1990–2020
Democratic decentralization and Party Integration	Hankla et al. (2019)	135	1975–2019
Local/Regional Government Index	V-Dem Dataset	171	1990–2023

5. Pillars of Fiscal Decentralization

5.1 Expenditure Decentralization

Expenditure decentralization (ED) is a core pillar of fiscal decentralization. The fundamental rationale behind expenditure decentralization is that subnational governments are better positioned to allocate resources efficiently, as they have a closer understanding of local needs and preferences (Oates, 1972).

The foundational principle of expenditure decentralization is the *subsidiarity principle*, which posits that public services should be provided by the lowest level of government capable of managing them efficiently, ensuring a close match between service provision and local preferences (McLure & Martinez-Vazquez, 2000). While local governments are well-suited for services with localized benefits (e.g., waste management and local roads), higher tiers of government should handle services with spillover effects, such as national defense or environmental regulations (Bahl & Bird, 2018). Misalignment in service provision, such as a single municipality funding a regional hospital, can lead to inefficiencies, either through under-provision at the local level or excessive centralization of services with localized benefits.

In addition to the subsidiarity principle, the literature has identified several complementary principles to guide the design of expenditure assignments (Martinez-Vazquez et al., 2006; Boadway & Shah, 2009; Bahl & Bird, 2018; Martinez-Vazquez, 2024). The *correspondence* *principle* suggests that the geographic scope of service benefits should align with the jurisdiction providing it. The *benefit principle* encourages cost recovery through user fees and charges, revealing preferences and managing demand. The *affordability principle* highlights the need to match assigned responsibilities with adequate financial resources, while the capacity principle stresses the importance of administrative and technical readiness at the subnational level, often requiring phased devolution or differentiated mandates. Finally, the *coordination principle* underscores the importance of ongoing intergovernmental dialogue, given that no assignment can fully anticipate all contingencies or overlaps.

Effective design of expenditure decentralization involves several critical considerations (Ehtisham, 1997). First, responsibilities must be clearly delineated to avoid duplication and promote accountability. Second, expenditure assignments should be matched with corresponding revenue-generating powers to provide subnational governments with adequate financial autonomy. Third, building administrative and technical capacity at the local level is essential for managing decentralized functions. Fourth, strong monitoring and evaluation systems are needed to ensure fiscal discipline and service quality while maintaining national standards.

Expenditure responsibilities are typically categorized into three levels: (i) exclusive responsibilities which are assigned solely to one level of government level (e.g., national defense to the central government), (ii) shared responsibilities where multiple tiers are jointly responsible (e.g., education and healthcare), and (iii) delegated responsibilities where a higher-tier government assigns responsibility for implementation to a lower-tier with service delivery. The assignment should aim to align expenditure responsibilities with revenue capacity and avoid unfunded mandates, which can lead to inefficient service delivery and fiscal stress at subnational levels (Shah, 2004; Rodden, 2006). Effective institutional frameworks, including clear legal provisions and intergovernmental coordination mechanisms, are essential to ensure smooth implementation.

5.2 Revenue Decentralization

Another important pillar of Fiscal Decentralization is revenue decentralization which delves into the extent to which subnational governments can generate their own revenue to finance expenditures. Taxation is a fundamental tool of fiscal policy, providing governments with revenue to finance public goods and services. The general principles of taxation emphasize efficiency, equity, administrative feasibility, and transparency (Musgrave, 1959). Efficiency ensures that taxes do not excessively distort economic decisions, equity ensures fairness in tax burden distribution, administrative feasibility ensures that taxes can be collected efficiently, and transparency ensures accountability in tax policy. As Martinez-Vazquez (2024) explains, when local authorities bear the political costs of taxation, they are more likely to use public funds efficiently. In contrast, reliance on intergovernmental transfers can lead to the "common pool problem," reducing fiscal discipline.

A fully autonomous subnational tax is one that satisfies five distinct conditions (Bird, 2015; Yilmaz et al., 2012):

i. Discretion to Levy: Subnational governments can decide whether to levy the tax.
ii. Base Determination: They determine the tax base.
iii. Rate Setting: They set the tax rate.
iv. Administration: They assess, collect, and enforce the tax.

In practice, few subnational taxes meet all the conditions. Even where subnational governments have discretion over taxation, central governments often impose constraints on tax bases and rates to prevent negative spillover effects such as tax competition and revenue disparities. Nevertheless, the “correspondence principle” states that the jurisdiction responsible for providing a public good should also have the authority to levy taxes to finance that good. Without meaningful control over tax rates, bases and administration, subnational governments may become overly reliant on intergovernmental transfers, weakening fiscal accountability and reducing incentives for efficient service delivery.

The First- and Second-Generation theories of fiscal federalism provide frameworks for understanding subnational taxation. First Generation Theory, rooted in Musgrave (1959) and Oates (1972), argues that taxation should be assigned based on the benefit principle, meaning local governments should levy taxes on immobile bases such as property, while central governments should handle redistributive taxation such as income tax. The Second-Generation Theory of Fiscal Federalism (SGFF) emphasizes incentives and political economy considerations in tax assignment (Weingast, 2013). A key principle suggests “tax assignment should follow expenditure responsibilities”, meaning that subnational governments should have revenue sources that match their spending obligations. If local governments manage only basic services like waste collection, user fees and property taxes may suffice. However, when they oversee costly social services such as healthcare and education, reliance on central transfers can undermine fiscal sustainability and accountability (Bird, 2015). Additionally, subnational governments should have meaningful control over their own-source revenues, including the ability to set tax rates, choose tax bases, and enforce collection. Without such authority, they lack real fiscal autonomy, undermining accountability, efficiency, and sustainable decentralization (Bird, 2015).

From a practical standpoint, Martinez-Vazquez (2024) recommends a closed list of subnational taxes to minimize distortionary practices, co-habitation of tax bases to ensure access to buoyant revenues and granting subnational governments autonomy over tax rates, rather than tax bases, to preserve harmonization and reduce compliance costs. The types of taxes assigned to subnational governments vary based on several factors such as the fiscal autonomy, administrative capacity, and political structure of the country. Below is a discussion of various taxes and their potential assignment to subnational governments.

i. <u>Personal income tax (PIT)</u>

Typically, PIT is assigned to the central government due to its complexity and the need for uniformity in tax policies across jurisdictions. However, in some countries, the tax base can be shared between the different tiers of government by adopting a common definition of the tax base. This approach streamlines the tax administration process, as both levels of government use the same income definitions, exemptions, deductions, and credits, reducing confusion for taxpayers and tax authorities. Additionally, it lowers the risk of tax evasion, as taxpayers are less likely to exploit differences in tax bases between jurisdictions.

One of the main challenges of assigning PIT to subnational governments is the mobility of individuals across jurisdictions. People tend to be more mobile across subnational jurisdictions (e.g., moving between states or regions within a country) than they are internationally. This mobility creates a constraint on the ability of subnational governments to set highly progressive PIT rates as high earners may relocate to lower-tax jurisdictions, eroding the local tax base. As a result, it is typically considered more efficient for the national government to use the most progressive aspects of the tax system, such as higher tax rates for higher income brackets and progressive tax credits.

If the PIT base is shared between the national and subnational governments, there are two common options for how the subnational governments can structure their rates:

a. Tax on Tax

A "tax on tax" approach allows the national government to set the pattern of marginal tax rates at different income levels, and the subnational government then levies a tax that is a proportion of the national tax. This structure is often used in countries where subnational governments have limited fiscal autonomy but still require a way to raise revenue. For example, a local government might levy a 5% tax on the amount of national PIT owed by its residents. This approach can simplify the tax administration and lower compliance costs.

b. Tax on Base

A "tax on base" approach allows the subnational government to set its own rate and base structure. This gives local governments more flexibility in determining how progressive their PIT system will be. While this provides more autonomy to local governments, it also introduces the risk of tax competition, where jurisdictions may lower their rates to attract wealthy individuals or businesses.

ii. <u>Sales Tax</u>

Sales tax is one of the most common taxes assigned to subnational governments because of its relatively simple administration and its direct link to local consumption patterns. It also allows subnational governments to generate revenue with relatively low compliance and administrative costs. Sales taxes are also less distortionary than other forms of taxation, such as income taxes, which makes it attractive from an economic efficiency perspective (Bahl & Bird, 2008).

A common method for subnational governments to implement sales tax is via base piggyback, where subnational governments adopt a tax rate that is added to the national or federal sales tax base. This reduces the need for separate definitions of the taxable base, simplifying the tax administration and lowering compliance costs.

Value-Added Tax (VAT) is the most prevalent form of consumption tax across the world. Because VAT is a multi-stage tax applied at various points in the supply chain, differences in subnational VAT rates or base definitions can increase compliance burdens for businesses operating across jurisdictions (Bird & Gendron, 2001). Due to the administrative complexity and compliance costs, subnational VATs are considered infeasible (Bird, 2011). Thus, a general consensus from the literature is that VAT is best administered centrally, with subnational governments relying on revenue-sharing mechanisms instead of direct VAT levies.

Nevertheless, Canada stands as a notable example, having successfully implemented subnational VATs. Canada operates two distinct subnational VAT models: the Harmonized Sales Tax (HST) and the Quebec Sales Tax (QST). The HST is a joint federal-provincial VAT where the Canada Revenue Agency (CRA) administers and collects the tax, later redistributing the provincial share. This model simplifies compliance and ensures policy uniformity across participating provinces (Bird & Gendron, 2001). In contrast, Quebec administers its own QST, maintaining full control over its tax policy but requiring businesses to comply with dual tax reporting, increasing administrative complexity (Vaillancourt, 2013).

The HST model offers efficiency by reducing compliance costs and tax administration burdens, while the QST model grants Quebec greater fiscal autonomy at the cost of increased complexity (Bird & Smart, 2014; 2016). Canada's experience highlights the trade-offs in subnational VAT design and shows a need for greater degree of intergovernmental coordination to minimize economic distortions across regions (Bird, 2011).

iii. Excise Tax

Unlike broad-based consumption taxes like the Value Added Tax (VAT) or general sales tax, excise taxes are product-specific and often justified on public health, environmental, and regulatory grounds (Bird, 2011; Cnossen, 2010). The assignment of excise taxation to subnational governments depends on the mobility of the taxed good, administrative capacity, and the potential for tax competition. United States and Canada permit state and provincial governments to levy excise duties, resulting in variations that sometimes distort market behavior. In contrast, the European Union harmonizes excise tax structures to prevent competitive distortions while allowing for some national discretion (Bird & Gendron, 2001). The EU's Excise Duty Directive establishes common rules for the taxation of goods such as alcohol, tobacco, and energy products, ensuring that these taxes do not create unfair competition or disrupt the functioning of the single market. While member states must comply with minimum excise tax rates set by the EU, they retain the flexibility to impose higher rates or introduce additional levies based on national policy objectives, such as public health or environmental concerns

iv. Taxes on Motor Vehicles

Vehicle-related taxes, including fuel taxes, registration fees, and road tolls, are significant revenue sources for both national and subnational governments. These taxes are often justified on the basis of the "benefit principle," where road users pay for infrastructure and maintenance costs (Bird, 2011). In federal systems like Canada and the United States, both national and subnational governments levy fuel taxes, sometimes leading to inefficiencies when rates differ widely between neighboring regions (Bird & Gendron, 2001). Properly structured vehicle-related taxes can provide subnational governments with stable revenue while ensuring road users contribute to infrastructure upkeep.

v. Property Tax

Property tax satisfies key principles of subnational taxation whereby much of the tax burden falls on local residents who benefit from public services, thus promoting accountability and fiscal autonomy (Bahl & Martinez-Vazquez, 2008). The tax base, real property, is immobile, generally stable, and grows with economic development, providing a potentially elastic and reliable source of revenue for local governments (Bird, 2011). Furthermore, property tax can act as a quasi-benefit charge, as improvements in local services are capitalized into property values, creating a direct link between payments and benefits (Bahl & Martinez-Vazquez, 2008). Moreover, local governments possess a comparative advantage in administering property taxes due to their proximity to the tax base and knowledge of local land use patterns (Smoke, 2014).

Nevertheless, property tax faces persistent political and administrative challenges. It is highly visible and often unpopular, as taxpayers perceive it as levied on unrealized wealth rather than income, triggering resistance especially during periodic reassessments that can produce sudden increases in tax liability (Bird, 2011). Despite its potential progressivity and fairness, the high cost of regular valuations and the difficulty of enforcement, particularly in developing countries, hamper effectiveness. Reassessments are often infrequent, undermining buoyancy and leading to large one-time tax shocks that generate political backlash (Bahl & Martinez-Vazquez, 2008).

From a fiscal design perspective, property tax aligns well with key principles of subnational revenue systems - adequacy, stability, efficiency, and accountability (Smoke, 2014). Local governments typically have better knowledge of land use and market values, giving them a comparative advantage in administering this tax. Internationally, property taxes perform better in high-income countries, where they contribute around 2–3% of GDP. In developing countries, however, property tax contributes to less than 0.5%. Capacity gaps, insufficient political will, and central control frequently limit property tax potential, especially in developing countries, underscoring the need for stronger local institutions and sustained reform.

vi. User Fees

User fees are an essential component of subnational government finance, rooted in the benefit principle of taxation, the idea that those who benefit from a public service should bear its cost (Bryson, 2008). Unlike general taxes, which are often unrelated to individual consumption, user fees create a direct connection between service use and payment, promoting efficiency, accountability, and fiscal discipline (Fuest & Kolmar, 2007). By charging for specific services like water, waste collection, or park use, user fees encourage cost-reflective service provision and mitigate overuse, while also reducing pressure on general revenue sources.

Subnational governments can implement various types of user fees tailored to the services they provide:

- Public Utility Fees: Charges for services such as water supply, sewage treatment, and waste collection. These fees directly link usage to payment, encouraging conservation and efficient use of resources.
- Regulatory Fees: Fees associated with permits and licenses, including building permits, business licenses, and health permits. These are designed to cover the costs of regulatory activities and ensure compliance with local ordinances.

- Recreational Fees: Charges for access to public amenities such as parks, swimming pools, and cultural facilities. These fees support the maintenance and operation of recreational services and can be adjusted based on usage patterns and maintenance costs.
- Transportation Fees: Tolls for roads, bridges, and parking facilities. These fees can manage congestion, fund infrastructure maintenance, and promote the use of alternative transportation modes.

Madhoo and Nath (2014) distinguish between user charges and administrative fees or charges. User charges apply to services provided directly to individuals and resemble prices due to their voluntary nature, users choose to consume the service and pay accordingly. Administrative or tax-like charges, by contrast, are compulsory payments for entitlements or privileges, often with regulatory objectives, such as license or registration fees. Thus, user charges align closely with market mechanisms and administrative fees serve regulatory and informational functions, often with limited impact on consumption behavior.

From an economic perspective, user fees improve allocative efficiency by providing information on demand, ensuring that services are valued at the margin, and enabling resource targeting (Madhoo & Nath, 2014). They also serve regulatory purposes, promoting efficient consumption and environmental protection, such as through road pricing and congestion charges (Huber & Runkel, 2009). However, full cost recovery is not always feasible or desirable. For example, water pricing may prioritize social welfare and affordability over cost recovery, reflecting equity concerns. For subnational governments, user fees are particularly suitable for local and excludable services where benefits are geographically concentrated, such as utilities, public transport, or recreational facilities. User fees offer several advantages: they are less distortionary than general taxes, relatively transparent, and politically feasible as citizens perceive a clearer link between payment and service (Madhoo & Nath, 2014).

Internationally, the use of user fees varies significantly. In China, local governments increasingly rely on user fees and service charges for infrastructure development and utility services, reflecting fiscal decentralization trends (Que et al., 2018). However, the system often lacks transparency and equity, with low-income groups disproportionately burdened. In Colombia and Brazil, decentralization reforms enabled municipalities to levy user fees, but weak administrative capacity often undermines revenue potential and service delivery quality (Bird, 2011). In India, local bodies have struggled to implement effective user fees due to political resistance, low willingness to pay, and limited administrative capacity (Bahl & Linn, 2014). A key lesson from international practice is that successful user fee systems depend on transparent pricing, regular adjustments to reflect costs, and administrative capacity at the subnational level (Madhoo & Nath, 2014). Without these, user fees risk becoming regressive or politically contentious.

5.3 Intergovernmental Transfers

Intergovernmental transfers are the third pillar of fiscal decentralization, serving as mechanisms to address both vertical fiscal imbalances (between central and subnational governments) and horizontal fiscal disparities (across subnational jurisdictions). Transfers help subnational governments fulfill their expenditure responsibilities, correct for externalities, finance national priorities, and promote fiscal equalization.

Oates (1990) identifies three key rationales for intergovernmental transfers:

(i) Bridge vertical fiscal imbalances between central and subnational governments, helping local governments meet expenditure needs.
(ii) Equalize horizontal disparities and help jurisdictions with weaker revenue bases or higher expenditure needs.
(iii) Correcting externalities by subsidizing services with spillover benefits beyond local jurisdictions
(iv) Encourage fiscal discipline and performance through well-designed conditional or performance-based grants.

Intergovernmental transfers vary in their structure, purpose, and conditionality. The main types include:

a. Unconditional Transfers

Unconditional transfers provide general-purpose funds to subnational governments with no restrictions on their use. These transfers allow full expenditure autonomy while reducing vertical and horizontal fiscal imbalances (Lago et al., 2024). However, unconditional grants can create soft budget constraints, leading to inefficient spending and reduced local revenue effort.

b. Conditional Transfers

Conditional transfers are earmarked for specific programs or expenditure categories. These include matching grants and specific-purpose grants. Generally, there are three kinds of conditional transfers (Yilmaz et al., 2012):

- Matching, Open-Ended grants require recipient governments to contribute a portion of the funding for a specific service or project, with the higher-level government matching this contribution at a predetermined rate. This type of grants typically has no upper limit on the amount that the donor government will transfer, so long as the recipient continues to provide its share, the central or state government will keep matching it. One well-documented example is the U.S. Medicaid program, where state governments contribute funding, and the federal government matches it at varying rates based on state income levels (Ward, 2020).
- Matching, Close-Ended grants function similarly to open-ended ones but include a funding cap. While the recipient government must still contribute a portion of the financing, the transferring authority sets a maximum limit on the amount it will provide. This ensures that the total cost of the program remains predictable and prevents wealthier jurisdictions from disproportionately benefiting. These grants are often used in infrastructure projects, where both local and higher-level governments share financial responsibility but within a controlled budget. A notable example is the European Union's Structural and Investment Funds, which provide co-financing for regional development projects but place limits on total funding per region (Bachtler & Ferry, 2015).

- Nonmatching grants do not require the recipient government to provide co-financing. Instead, the transferring authority provides a fixed sum of money with the stipulation that it must be spent on a specific public good or service (Boadway & Shah, 2024). Non-matching grants are typically employed for projects such as poverty alleviation, disaster relief, or public health initiatives, where the focus is on equitable access rather than incentivizing additional local spending.

One important innovation within conditional transfers is Performance-Based Grants (PBGs), which link funding to measurable improvements in governance, service delivery, or institutional capacity (Boadway & Shah, 2024). Traditional conditional transfers often emphasize compliance with input requirements, such as spending on specific goods or services. In contrast, performance-based grants (PBGs) adopt an output-based approach, linking funding to clearly defined service delivery results like student test scores or immunization rates. This design gives local governments greater flexibility in choosing how to achieve results while holding them accountable for performance. By shifting the focus from inputs to outputs, PBGs promote transparency, reduce opportunities for rent-seeking, and empower citizens through improved access to performance data. Furthermore, this approach shifts away from rigid ex-ante control mechanisms toward ex-post monitoring and assessment (UNCDF, 2021). Although the effectiveness of PBGs depends on the availability of granular data at the local or regional level, recent trends show a growing adoption of these grants (Dougherty et al., 2024).

The transfer pool can be determined through three main approaches (Bahl et al, 2001). First, ad-hoc appropriations set transfer amounts annually without a fixed rule. Second, cost reimbursement bases transfers on estimated expenditures for specific functions. Third, fixed revenue sharing allocates a set percentage of national tax revenues. Ad-hoc transfers often lead to greater central government discretion, making long-term planning difficult for subnational governments. Cost reimbursement ensures policy alignment but limits local autonomy in resource allocation. Fixed revenue sharing provides predictable funding, which can be distributed based on derivation or formula-based equalization, ensuring a more stable and transparent transfer system.

The allocation of transfers among subnational governments follows different methods, each with distinct implications for fiscal equity and efficiency (Bahl et al, 2001). They include:

a. Ad hoc allocations—Discretionary transfers determined annually by the central government, often lacking transparency and predictability.
b. Cost reimbursement—The central government reimburses subnational expenditures on designated programs. This ensures policy alignment but limits local autonomy.
c. Derivation-based sharing—Revenues from centrally collected taxes (e.g., VAT, income tax) are distributed based on derivation basis, primarily where they were collected. This approach provides subnational governments with some level of fiscal autonomy; however, it often benefits wealthier jurisdictions leading to regional fiscal disparities.
d. Formula-based grants—Transfers are distributed according to a predefined formula, incorporating factors such as population, revenue capacity, and expenditure needs, ensuring predictability and fairness (Bahl, 2000).

Many governments have moved away from ad-hoc transfers in favor of formula-based and derivation-based approaches to reduce rent-seeking and inefficiency (Lago et al., 2024).

A critical phenomenon observed in intergovernmental transfers is the so-called "fly-paper effect", where lump-sum transfers from central governments stimulate subnational government spending more than an equivalent increase in local revenue would (Baekgaard et al., 2016; Dell'Anno & Martinez-Vazquez, 2019; Boadway & Shah, 2024). Traditionally viewed as a form of fiscal illusion, where voters misperceive the costs of government spending, the fly-paper effect suggests that subnational governments prioritize additional public expenditures rather than lowering local taxes. However, recent research reframes this effect as a rational response to costly tax collection at the subnational level, where transfers reduce the marginal cost of public funds, leading to a more efficient allocation of resources (Aragon, 2013; Vegh & Vuletin, 2016).

5.4 Subnational Borrowing

As revenue functions are decentralized, the need for subnational borrowing becomes increasingly important, especially as local governments assume responsibility for capital-intensive public services. While a few developed countries have successfully established mechanisms for subnational governments to access financial markets, many others, particularly in middle- and lower-income countries, continue to struggle in providing effective borrowing frameworks. Despite these challenges, the general trend toward decentralization in recent decades has shifted greater responsibility for local public functions, many of which are capital-intensive, to subnational governments (Smoke, 2023). As these responsibilities expand, so too does the need for sustainable financing mechanisms. Urbanization is further intensifying the demand for infrastructure development, reinforcing the necessity of subnational borrowing as a viable funding tool (Smoke, 2023). Access to private financial markets grants subnational authorities greater autonomy in determining the scale and timing of such capital expenditures, enabling them to address local development needs more effectively.

Importantly, the dynamics of subnational borrowing are influenced by several factors, including the design of fiscal equalization schemes, intergovernmental transfers, and central government fiscal policies. These elements shape borrowing behaviors by altering the fiscal capacities and incentives for subnational governments. For example., regions with varying fiscal capacities may exhibit different borrowing patterns based on expected tax revenues and intergovernmental transfers, which can lead to fiscal imbalances (Barrios & Martinez-Lopez, 2016). Moreover, Goodspeed (2002) has shown that, in federations, central government transfers shape regional government behavior by creating incentives for fiscal irresponsibility, often leading to excessive borrowing due to the soft budget constraints and common pool effects. Recently, Martinez-Lopez (2021) extends Goodspeed's model by introducing federal government borrowing, which makes states more aware of the real costs of borrowing, reducing their tendency to overborrow. This adjustment promotes more efficient fiscal behavior at both the federal and state levels.

5.4.1 Potential benefits of subnational borrowing

As revenue functions are decentralized, the need for subnational borrowing becomes increasingly important, especially as local governments assume responsibility for capital-intensive public services. Access to private financial markets grants subnational authorities greater autonomy in determining the scale and timing of such capital expenditures, enabling them to address local development needs more effectively. It also reduces pressure on national budgets, freeing up central resources for redistributive policies and essential public services.

i. Increasing infrastructure development and public investment capacity

Capital infrastructure investments are essential for delivering public services, yet they require substantial financial resources, long-term planning, and careful budgeting due to their multi-year nature and fiscal constraints (Martinez-Vazquez & Vulovic, 2016). Borrowing allows subnational governments to accelerate infrastructure development beyond what is possible through regular revenues. Addressing the "lumpiness" of investments—large, infrequent expenditure that require significant upfront financing—helps local governments smooth budgetary pressures over time through borrowing. By increasing public investment capacity, borrowing helps break the "low-level investment trap", where inadequate infrastructure leads to poor service delivery, low willingness to pay taxes, and weak cost recovery (Yilmaz et al., 2012; Smoke, 2023). A key guiding principle is the "Golden Rule," which dictates that borrowed funds should finance capital expenditures rather than recurrent costs.

ii. Promoting fiscal discipline and strengthening financial management

Borrowing fosters fiscal discipline by requiring subnational governments to carefully assess project feasibility and financial sustainability before taking on debt. Unlike intergovernmental capital transfers, which can encourage overspending due to the common pool problem, borrowing ensures that local governments internalize the full financial implications of their investment decisions (Martinez-Vazquez & Vulovic, 2016). Since borrowed funds must be repaid, local governments are incentivized to allocate resources efficiently and avoid excessive debt accumulation.

Moreover, the process of securing loans enhances financial transparency and accountability. Generally, lenders conduct rigorous assessments of a government's creditworthiness, imposing financial scrutiny that encourages better budgeting, debt management, and institutional capacity-building (Freire et al., 2004). The need to negotiate and manage long-term debt obligations can foster professionalization in financial administration and strengthens revenue collection efforts. They can further enhance overall fiscal governance, reduce reliance on central transfers and improve subnational financial autonomy (Smoke, 2023).

iii. Satisfying the benefit principle

Borrowing aligns the costs of capital investments with the long-term benefits they generate. By financing infrastructure through debt, local governments ensure that future taxpayers, who will directly benefit from these investments, contribute to their repayment (Martinez-Vazquez & Vulovic, 2016). This supports the benefit principle, which stipulates that individuals should contribute to public goods in proportion to the benefits they receive.

Additionally, borrowing can ensure intergenerational equity by distributing financial responsibilities across multiple generations, preventing the full burden from falling on current taxpayers. It also reduces pressure on national budgets, freeing up central resources for redistributive policies and essential public services (Smoke, 2023).

5.4.2 Potential risks of subnational borrowing

Despite the potential benefits, subnational borrowing is fraught with risks that can undermine fiscal sustainability at the local level. These risks are often linked to inadequate fiscal discipline, using borrowed funds to cover current expenditures rather than financing capital projects, and the moral hazard arising from the expectation of central government bailouts. The following sections outline the key risks associated with subnational borrowing.

i. Soft-budget constraints and moral hazard

One of the most pronounced risks of subnational borrowing arises from the presence of soft-budget constraints, which lead to a moral hazard problem. In the context of fiscal decentralization, soft-budget constraints refer to the tendency of subnational governments to borrow irresponsibly, anticipating that the central government will eventually intervene to cover the debt if the local government faces fiscal distress. This expectation can erode market discipline and promote risky borrowing behavior, as both subnational governments and lenders expect a bailout (Freire et al., 2004). In such cases, local governments may overspend or undertake projects without due regard for future debt obligations, knowing that they may not bear the full cost of their borrowing.

Guo et al. (2022) developed a dynamic infinite-horizon model to show that vertical fiscal imbalances can further exacerbate the soft budget problem. Their model shows that in the absence of central government commitment, anticipated bailouts or transfers induce excessive borrowing by local governments, leading to high levels of debt for both local and central governments. The study also highlights the 'time-inconsistency problem' where central governments, aiming to avoid future fiscal instability, end up over-transferring in the present.

ii. Irresponsible borrowing and bailouts

When subnational governments accumulate excessive debt, there is often pressure on the central government to intervene to prevent default and maintain stability. However, such bailouts can lead to a cycle of irresponsible borrowing and moral hazard, as local governments may feel emboldened to take on more debt, knowing that they can rely on the central government for assistance in times of fiscal distress (Martinez-Vazquez & Civelek, 2019; Saxena, 2022). This undermines the credit discipline of both subnational governments and lenders, who may perceive an implicit guarantee of repayment by the central government. In extreme cases, such as those witnessed in Argentina and Brazil during the 1980s, bailout practices can lead to macroeconomic instability at the national level, exacerbating the risk of financial crises.

Financial markets, in theory, should respond to deficit bias and procyclicality by imposing higher interest rates, widening credit spreads, and eventually imposing borrowing constraints that force fiscal adjustments. However, empirical evidence suggests that markets rarely constrain deficit bias effectively, only penalizing fiscal profligacy at extreme stages (Debrun et al., 2009).

iii. Shifting fiscal burdens to future generations

A related concern is the shifting of fiscal burdens to future generations, which can undermine intergenerational equity. When subnational governments borrow excessively to finance capital projects, the costs of these investments are often spread over time. However, decisions made by the current generation of policymakers may overly discount the costs borne by future generations, leading to excessive borrowing and fiscal irresponsibility. Moreover, this shifting of debt burdens is not limited to generational transfers but can also occur between different political administrations. The growth of debt in anticipation of elections has been observed not only in emerging democracies but also in mature democracies, exacerbating fiscal instability and creating an environment of irresponsibility (Swianiewicz, 2004).

5.4.3 Approaches for controlling subnational borrowing debt

Given these risks, particularly the prevalence of soft-budget constraints and political incentives for overborrowing, countries have employed various regulatory approaches to manage subnational debt. These can be broadly classified into ex-ante and ex-post regulations, which together aim to prevent irresponsible borrowing and ensure fiscal discipline. Ex-ante regulations, such as direct central government control, fiscal rules enshrined in constitutions, and reliance on financial market mechanisms, set the framework for borrowing decisions. Ex-post regulations, including sanctions for noncompliance and imprudent behavior, ensure accountability after borrowing decisions have been made. A combination of both approaches is widely recommended to address the potential moral hazard and over-borrowing that might occur under a purely ex-ante or ex-post system (Webb, 2004).

There are four main approaches to managing subnational borrowing: market discipline, cooperative approaches, administrative controls, and rules-based controls. Market-based approach relies on the financial markets to constrain borrowing, with lenders' willingness to lend being the primary check on borrowing. For this to work, capital markets must be open, transparent, and free from expectations of central government bailouts. While this approach offers autonomy and flexibility for subnational governments, its effectiveness is limited by the availability of reliable financial information and market access (Ter-Minasian & Craig, 1997; Ahmad et al., 2005).

In contrast, the administrative approach places control directly in the hands of the central government, which can set borrowing limits, approve individual borrowing operations, or centralize borrowing altogether. While this offers the central government greater control, it can lead to inefficiencies and moral hazard, as subnational governments may assume that they are implicitly guaranteed assistance in case of default (Joumard & Kongsrud, 2003). The cooperative approach involves negotiations between central and subnational governments to set borrowing limits and fiscal targets (Martinez-Vazquez, 2024). This method fosters dialogue and awareness of macroeconomic implications, but its success depends on the central government's ability to guide and enforce agreements.

Rules-based controls involve the imposition of fiscal rules by the central government, such as debt ceilings, balanced budget rules, and expenditure limits. These rules are easy to monitor and enforce, providing clear constraints on borrowing. However, they may fail to prevent excessive borrowing if off-budget liabilities or contingent debts are not fully accounted for. Recent literature suggests that a combination of fiscal anchors, such as debt-to-GDP ratios, and operational rules, such as expenditure ceilings, are needed to ensure long-term fiscal sustainability at both central and subnational levels (Eyraud et al., 2020). However, applying this framework at the subnational level can be challenging due to the complex dynamics between different government levels and the limited fiscal autonomy of many subnational entities (Eyraud et al., 2020). Additionally, weak institutional capacity, often compounded by political interference and limited technical expertise, can undermine the effective implementation of fiscal rules at the subnational level, particularly in developing countries.

Fiscal Responsibility Laws (FRLs) have emerged as a means to ensure longer-term fiscal sustainability through medium-term fiscal targets, transparency, and accountability. These laws typically emphasize monitoring and enforcement mechanisms and include provisions to address issues like moral hazard and short-term policymaking. While fiscal councils, established as part of FRLs, play a key role in monitoring fiscal rules, their impact on subnational borrowing is not yet well-established (Liu & Webb, 2016; Martinez-Vazquez & Civelek, 2019). Despite the growing consensus that fiscal rules, such as debt limits and expenditure ceilings, are effective, no single regulatory approach has been universally adopted. Generally, a mixed strategy that integrates different elements from various approaches, tailored to the specific context of the country or regions, is recommended for practical implementation (Plekhanov & Singh, 2007; Martinez-Vazquez & Vulovic, 2016).

6. Evolution of Fiscal Federalism Theory

6.1 First Generation Theory of Fiscal Federalism (FGFF)

The first-generation theory of fiscal federalism (FGFF) provides a normative framework for determining the allocation of responsibilities between central and subnational governments. Rooted in Musgrave's (1959) seminal division of public finance into three branches - resource allocation, income redistribution, and macroeconomic stabilization, FGFF posits that these functions are best assigned based on their inherent characteristics and the capacity of different levels of government to fulfill them effectively. The central government is better suited for macroeconomic stabilization and income redistribution because these functions require uniform policies and centralized coordination to ensure consistency and equity across the entire population. Redistribution is particularly effective at the national level, as the limited mobility of individuals across national borders reduces the risk of migration in response to redistributive policies, which could otherwise undermine their effectiveness (Musgrave and Musgrave, 1989). Similarly, macroeconomic stabilization involves managing national monetary and fiscal policies, which inherently require a centralized approach to address aggregate economic challenges like inflation, unemployment, and economic growth.

In contrast, decentralization is better suited for the allocative function of public finance, which involves the provision of public goods and services. Subnational governments are closer to local populations and are better positioned to understand and respond to the heterogenous preferences and demands of their constituents. The Decentralization Theorem, put forward by Oates (1972), provides a strong theoretical foundation for this argument. It argues that efficiency is maximized when public services are provided by the jurisdiction that internalizes all benefits and costs. Centralized provision, while uniform, risks inefficiencies by failing to account for regional heterogeneity in preferences which can lead to misallocation of resources. By allowing local governments to tailor the provision of public goods to the specific needs of their jurisdictions, there's a higher probability of matching supply with demand, thereby achieving greater allocative efficiency.

Moreover, the decentralized structure encourages experimentation, with jurisdictions acting as laboratories for policy innovation, leading to long-term improvements in public service delivery (Oates, 1972; 1999). Furthermore, decentralization also enhances accountability by tying expenditure decisions more closely to the costs borne by local taxpayers. When local governments finance public programs through taxation, communities are more likely to assess the benefits against the actual costs and make prudent fiscal decisions. This is further explored by the second-generation literature on fiscal federalism.

6.2 Second Generation Theory of Fiscal Federalism (FGFF)

Second-generation theory of fiscal federalism adapts the theoretical frameworks of both 'public choice theory' and 'the new theory of the firm' to the realm of intergovernmental relations. Public choice theory argues that public officials are self-interested and respond to fiscal and political incentives (Buchanan & Tullock, 1962). It emphasizes the potential for government failure, similar to market failure, which includes rent-seeking, bureaucratic inefficiency, and the misalignment of incentives (Mueller, 2003). Similarly, the 'new theory of the firm' views the firm as a nexus of contracts among self-interested agents, each with differing information and incentives (Williamson, 1975; Bratton, 1989).

Second-generation fiscal federalism (SGFF) builds on these foundations and further explores the mechanisms that can align self-interested actions with citizen welfare (Qian & Weingast, 1997). This shift in focus has led to the study of principal-agent problems, asymmetric information, and governance structures that influence fiscal decisions. In a similar vein, SGFF emphasizes the importance of designing institutional frameworks that align the incentives of political officials with the welfare of citizens (Qian & Weingast, 1997).

One of the most influential frameworks within SGFF is Weingast's (1995) theory of 'Market-preserving federalism', which positions federalism as a mechanism to discipline self-serving politicians and ensure efficient market functioning. It outlines five conditions for market-preserving federalism: (i) a clear delineation of authority among levels of government, (ii) subnational authority over the economy, (iii) national enforcement of a common market, (iv) hard-budget constraints for all governments, and (v) institutional durability to prevent arbitrary shifts in authority. Market-preserving federalism ensures that governance structures do not undermine economic efficiency while addressing the risks of political opportunism. The framework illustrates how well-designed institutions can mitigate the risks of rent-seeking and align the incentives of government officials with broader economic goals.

SGFF also addresses governance challenges such as corruption, rent seeking, and clientelism. Decentralization can either mitigate or exacerbate these issues depending on institutional design. For instance, decentralization may increase accountability by bringing decision-making closer to citizens, but it can also enable local elites to capture resources and manipulate systems to their advantage (Prud'homme, 1995). Besley & Coate (2003) further analyze the political economy of decentralization, modeling how locally elected representatives influence the allocation of public goods in centralized systems. They find that centralization often results in conflicts of interest, as representatives prioritize their districts over national welfare, leading to inefficiencies and overprovision in politically influential areas.

Additionally, Tommasi and Weinschelbaum (2007) formulated a principal-agent framework that highlights a key tradeoff between centralization and decentralization. On one hand, centralization helps internalize externalities. On the other hand, it also creates a "democratic deficit" as decisions are made farther away from the citizenry. He argues that decentralization is often preferable due to its ability to bring decision-making closer to citizens, even when preferences are homogeneous. Seabright (1996) adds to this by showing the limitations of elections in centralized systems. Elections function as "incomplete contracts" due to unverifiable information and asymmetries in accountability. While centralization allows for better policy coordination, voters may find it difficult to hold officials accountable as decisions are usually made at the center. Decentralization, on the other hand, improves accountability by narrowing the scope of decision-making to local jurisdictions, making it easier for citizens to evaluate and influence the performance of their governments.

6.3 Third Generation of Fiscal Federalism (TGFF)

The FGFF offers a normative framework based on welfare economics and the SGFF introduces self-interested political agents and offers incentive-based explanations based on public-choice theory and new theory of the firm. The emerging Third Generation of Fiscal Federalism (TGFF) represents a conceptual expansion that responds to the increasingly complex, politicized, and institutionally embedded nature of decentralization in practice.

TGFF shifts the analytical lens toward a more institutionally grounded and interdisciplinary understanding of fiscal federalism. While SGFF focuses on incentive alignment among various stakeholders, TGFF pays close attention to how institutional arrangements, both formal and informal, interact with decentralization and shape its outcomes. These institutions include formal mechanisms such as elections and electoral systems, different tiers of governments; less formal organizational features like the party structure and strength, and party competition; and informal mechanisms such as patronage or clientelist networks, or ethnic affiliations. Importantly, TGFF examines how fiscal, political, and administrative decentralization do not operate in silos, but in constant interaction. These interactions shape outcomes like public goods provision and efficiency, as well as broader questions, around accountability, civil conflict, and democratic back sliding.

Riker's (1964) seminal work on federalism emphasizes the role of political centralization via strong national parties and administrative subordination for federalism to function effectively. In the presence of strong national political parties, subnational politicians internalize national objectives due to career concerns. In contrast, in systems with weaker national parties, local elites are more likely to pursue regionalist interests. Building on Riker's hypothesis, Enikolopov and Zhuravskaya (2007) empirically test the role of political centralization in shaping the outcomes of fiscal decentralization. Their results show that strong national parties have positive impact on public goods provision, quality of government, and economic growth. Bizzarro et al. (2018) further show how strong parties can shape economic growth. Strong parties serve as internal accountability mechanisms which enables long-term policymaking. They reduce opportunism and encourage intertemporal policy bargains.

Building on this line of inquiry, Hankla et al. (2019) and Ponce-Rodriguez et al. (2020) show that local autonomy and elected governments will yield socially optimal outcomes in the presence of integrated parties. Integrated parties, where power over local leaders flows upward through party structures, enable local officials to pursue efficient service delivery even in the presence of externalities. Their framework expands upon Oates' (1972) classic "Decentralization Theorem," offering what they term a "strong" decentralization theorem grounded in political institutional context.

Moreover, several studies reinforce TGFF's emphasis on institutional contexts. Wright et al. (2016) show that decentralized forest governance in Bolivia improved environmental outcomes only when local user groups participate in governance process. Similarly, Lessmann and Markwardt (2010) find that corruption-reducing effect of decentralization depends on the presence of press freedom. Institutional oversight is also necessary in the design of intergovernmental relations. Particularly, it can serve as a check for excessive subnational borrowing.

TGFF is not a rejection of earlier generations, but a necessary expansion. It brings to the center questions that were often treated as peripheral in previous frameworks:

- How do political parties connect or fragment relationships across levels of government?
- What institutional dynamics underpin vertical fiscal imbalances or lead to creeping recentralization?
- How does decentralization interact with the quality of democracy, or conversely, how does democratic erosion shape subnational governance?
- What roles do informal institutions, such as ethnic networks or shadow bureaucracies, play in the delivery of public services or in shaping fiscal behavior?

These questions remind us that fiscal federalism doesn't operate in a vacuum. It is shaped every day by the political realities, institutional legacies, and informal practices that define how power is distributed and exercised. As such, TGFF builds on earlier foundations while acknowledging that good governance is shaped as much by formal rules as by informal power structures, political ambitions, and institutional constraints. At its core, TGFF is about widening the lens. It moves the focus beyond efficiency-incentive alignment to confront real-world complexities of governing in a world that is often messy, polarized, and unpredictable. By focusing on how decentralization works with various political institutions, TGFF provides a practical understanding of the promises and pitfalls of decentralization today.

7. **Fiscal Decentralization Literature Review**

7.1 FD and Service Delivery

The theoretical underpinning of Oates's (1972) theorem suggests that fiscal decentralization can improve both allocative and production efficiency in service delivery. Allocative efficiency refers to the ability of local governments to align public services with local preferences, while production efficiency concerns the provision of public services at the lowest possible cost without sacrificing quality (Litvack, et al., 1998). The subsidiarity principle underpins much of this theory, suggesting that government functions should be carried out by the lowest level capable of doing so effectively (McLure & Martinez-Vazquez, 2000).

However, decentralization also introduces certain risks that can undermine these theoretical efficiency gains. One major concern is related to the interjurisdictional spillovers, where the benefits (or costs) of public services extend beyond local boundaries. In such cases, local governments may underprovide services, as they cannot fully internalize the benefits (Blom-Hansen et al., 2016). Another issue is the possibility of a "race to the bottom," where local governments lower taxes to attract businesses, including environmental and public services standards, potentially compromising essential service delivery (Kunce & Shogren, 2007). Additionally, the "fiscal illusion hypothesis" suggests that when local budgets are heavily funded by grants rather than local taxes, citizens may not connect the service they receive with the taxes they pay, weakening local accountability (Weingast et al., 1981).

Despite these risks, a growing body of empirical research generally support a positive relationship between fiscal decentralization and improvements in public service delivery. Studies show that decentralization often leads to higher spending on social sectors like education and health. Jacqmin and Lefebvre (2021) find that higher share of government spending leads to an improvement in education outcomes among European countries. Similarly, in the Indian context, fiscal decentralization has been positively linked to advancements in both education and health indicators (Singh et al., 2024). Additionally, higher level of decentralization is related to a significant improvement in infant mortality outcomes and other health outcomes in OECD countries (Jimenez-Rubio, 2011a, 2011b; Cavalieri & Ferrante, 2016).

On the other hand, Kyriacou and Roca-Sagales (2024) suggests that health expenditure decentralization to local level have detrimental effect on healthcare access, especially when local elected officials are not affiliated with national political parties. This concern aligns with Hankla et al. (2019), who argue that party system integration is critical to realizing the accountability benefits of decentralization. Sow and Razafimahefa (2018) further stress that these benefits are more likely when decentralization is accompanied by a supportive political environment, substantial expenditure autonomy, and corresponding revenue decentralization. Nakatani et al. (2022) also highlight that countries can realize the benefits of fiscal decentralization on health and education outcomes through good governance.

Furthermore, Arends (2020) cautions against the optimistic narrative around decentralization and public service delivery. Small local governments often face high fixed costs relative to the service volume (Blom-Hansen et al., 2016). Moreover, limited administrative and technical capacities at the local level, especially in sectors like health and education, can further diminish the effectiveness of decentralized service delivery (Prud'homme, 1995). Lastly, as Martinez-Vazquez and Timofeev (2010) noted, central governments often have better equipped in terms of skilled personnel, technology, and resources, and are in better position to handle complex delivery issues (Arends, 2020).

7.2 FD and Economic Growth

The impact of fiscal decentralization on economic growth remains a subject of extensive empirical examination. The theoretical link posits that fiscal autonomy might lead to higher output and growth rates, although the causal pathway can be indirect (Martinez-Vazquez & McNab, 2003). Baskaran et al. (2014) highlights several mechanisms through which decentralization may promote growth: improving the efficiency of public goods provision by tailoring services to local preferences, encouraging political competition among subnational governments, and fostering innovation in policy design. The concept of yardstick competition, where voters evaluate the competence of their representatives based on neighboring jurisdictions, is particularly important in fostering accountability and governance efficiency (Besley & Case, 1995; Salmon, 1987).

Empirical findings, however, report mixed findings (Yaniv, 2014; Martinez-Vazquez et al., 2016). Some studies, such as Xie et al. (1999) and Zhang and Zou (1998), suggest that fiscal decentralization hampers GDP growth, while others, including Feld et al. (2004) and Qiao et al. (2008), find positive effects. Factors contributing to these disparate outcomes include jurisdiction heterogeneity, complex and partially unobserved institutional setups, and the inadequate consideration of political and administrative dimensions. Hanif et al. (2020) evaluates panel data from 15 developing federations and finds a significant positive impact of both tax revenue and expenditure decentralization on economic growth. Furthermore, they add that such impact is predicated upon the perceived level of corruption and the institutional quality.

It is also important to note that higher level of fiscal decentralization does not necessarily imply higher degree of subnational revenue autonomy (Baskaran & Feld, 2013). In this regard, Filippetti and Sacchi (2016) suggests that the pro-growth effects of fiscal decentralization depend on administrative and political decentralization of these entities. Knutsen et al. (2016) further show that local democracy fosters economic growth by enabling decentralized policy selection and incentivizing local politicians.

Several studies have attempted to address the endogeneity issue that plagues the relationship between fiscal decentralization and economic growth (Martinez-Vazquez et al., 2016). For instance, Ligthart and Oudheusden (2017) use instrumental variables based on legal system origin, federal system, geography, and country size, and finds robust evidence of a positive relationship between fiscal decentralization and economic growth. Similarly, Canavire-Bacarreza et al. (2020) use a 'Geographic Fragmentation Index' that is based on country size, elevation and population as an instrument for decentralization. Their findings also confirm a positive impact of fiscal decentralization on economic growth. On the other hand, Gemmell et al. (2013) uses the lags of decentralization as instrument to find negative impact expenditure decentralization on economic growth. More recently, Sima et al. (2023) analyze African and OECD countries, using two-stage least squares (2SLS), Generalized Method of Moments (GMM), and Limited Information Maximum Likelihood (LIML) to address endogeneity concerns. Their findings show that both expenditure and revenue decentralization have significant positive impacts on per capita GDP in both developed and developing countries.

Conversely, Jin and Rider (2020) find a negative relation between fiscal decentralization and economic growth. They use system-GMM to study the relation in China and India, although they note that the result is highly sensitive to the explanatory variables used in the model. Likewise, Hung and Thanh (2022), using 3SLS-GMM on a panel of 18 countries, find that decentralization is negatively related with economic growth.

7.3 FD and Poverty

The direct relation between decentralization and poverty can be ambiguous. Local governments, with their proximity to the populace, are seen as facilitators in designing and implementing poverty alleviation policies, potentially reducing transaction costs (Musgrave, 1969; Oates, 1999). Rao (2002) emphasizes the importance of creating opportunities for the poor and empowering them to seize these possibilities, while also advocating for social safety nets to cushion against immediate shocks. Jütting et al. (2004) argue that increased efficiency in service provision, coupled with local empowerment through decentralization, can enhance access to essential services critical for poverty alleviation.

Sepulveda and Martinez-Vazquez (2011) propose that fiscal decentralization may impact poverty through its influence on the allocation of public expenditures, particularly in sectors like education and public health. Moreover, decentralization, through regional targeting and economic efficiency, could stimulate economic growth and simultaneously reduce absolute poverty (Khan, 2013). The empowerment of the impoverished through increased participation and representation in decision-making processes is also posited as a potential avenue for poverty reduction. Having locally elected officials in charge further enhances this process, fostering a closer connection between policymakers and citizens. This relationship is crucial as it encourages citizens to hold decision-makers accountable for resource mismanagement while enabling policymakers to ensure service providers are meeting their obligations. Ultimately, the prospect of reelection serves as a powerful incentive for both policymakers and service providers to prioritize effective service delivery, thereby addressing the needs of the community more effectively (Su et al., 2019).

Yet, von-Braun and Grote (2002) highlight the risks of decentralization, including expenditure control challenges, elite capture of resources, societal fragmentation, and corruption, which may adversely affect the poor. Additionally, while local governments may have valuable insights into the needs of their communities, they often lack sufficient funds to address these issues effectively (Davoodi & Zhou, 1998). von-Braun and Grote (2002) further highlights that for decentralized spending to truly benefit the poor, local governments must have the political power to prioritize poverty-alleviating initiatives. Even when resources are available, local governments may prioritize efficiency or infrastructure over equity and redistribution (Lobao & Krabill, 2009). Sanogo (2019) also points to the risk of capture by local elites, which can distort policy priorities away from the poor.

Evidence from several countries shows that fiscal decentralization can reduce poverty, but the effects is conditional upon other institutional factors. In Indonesia, both Nursini and Tawakkal (2019) and Siburian (2022) find that fiscal decentralization is conducive to lowering poverty, mainly by allowing local governments to respond better to community needs and increasing local oversight. In Colombia, Ramirez et al. (2017) finds that property tax decentralization significantly reduces both poverty headcount and gap. Song et al. (2022) finds opposite effects of revenue and expenditure decentralization on poverty in China. While revenue decentralization hinders anti-poverty efforts, expenditure decentralization has a positive effect in poverty reduction. From the Philippines, Canare and Francisco (2019) show that fiscal decentralization is associated with lower poverty incidence. However, their study reveals a non-linear relationship, which suggests the existence of an optimal level of decentralization and poverty reduction (Davoodi & Zou, 1998; Xie et al., 1999). Hussain et al. (2021) report that decentralization has both direct and indirect poverty-reducing effects over the long run in Pakistan. Shahzad and Yasmin (2016), however, finds that decentralization may exacerbate poverty and inequality. They further note that stronger institutions may reverse these negative trends, suggesting that decentralization without good governance can be counterproductive. In European countries, Tselios and Rodriguez-Pose (2024) find that fiscal, political, and administrative decentralization reduce poverty and social exclusion, particularly in urban areas and countries with high governance quality. At the regional level, the link is more consistent: greater regional autonomy leads to lower poverty regardless of institutional quality.

Finally, Hernandez-Trillo (2016) provides some cautionary lessons from Mexico. Their study evaluates the country’s 1998 decentralization of poverty relief. The study concludes that decentralization has not yielded expected results due to weak subnational accountability. While decentralization could work in principle, federal government was found to be more accountable than subnational governments in this context. This highlights the significance of institutional capacity and political oversight as critical preconditions for success.

7.4 FD and Income Inequality

With respect to income inequality, the traditional view, as proposed by Oates (1972) and Tiebout (1956), argues that a more decentralized approach to income redistribution may lead to migration patterns where household chose jurisdictions that reflect their preferences. As poor households move to areas with generous redistribution, and rich households to low-tax regions, local inequality decreases, but national inequality remains unaffected. The second-generation theory, on the contrary, argues that local governments, if provided fiscal autonomy, can effectively address inequality by competing for residents through attractive policies (Qian & Weingast, 1997). Local governments, especially in economically disadvantaged regions, can leverage their less generous welfare provisions to attract investment through tax cuts, generating jobs and fostering local redistribution.

Nonetheless, high-income households strategically relocating to low-tax areas can impede the effectiveness of progressive taxes and hinder redistribution efforts (Roller & Schmidheiny, 2016; Feld et al., 2021). This challenge is further compounded by the regressive nature of indirect taxes and property taxes, which are commonly utilized by subnational governments (Sepuldveda & Martinez-Vazquez, 2011). This also aligns with the literature for allocating the redistributive function to the level of government where mobility cost is the highest (Mugrave, 1959; Tselios et al., 2012). Additionally, the diminished fiscal capacity of central government hinders the implementation of redistributive programs causing uneven development across the nation (Rodriguez-Pose & Gill, 2004; Canera et al., 2020, Tselios et al, 2012). There are also concerns about potential elite capture of local governments, leading to taxation policies that may contribute to local inequality (Grossman & Helpman, 1996; Bardhan, 2002).

However, with limited mobility, subnational governments can be more effective in the implementation of income redistribution (Sepulveda & Martinez-Vazquez, 2011). Pauly (1973) shows that, with limited or no mobility of taxpayers, the welfare programs of subnational governments may outperform those provided by central government. Moreover, decentralization can increase public accountability, especially when local governments rely more on their own revenue (Bardhan, 2002). A higher degree of political decentralization can incentivize elected local officials to better serve constituents, enhancing citizen oversights and participation in public service provision. With this context, it is plausible to argue that decentralization is conducive towards promoting a more equitable distribution of resources across income groups, thus reducing interpersonal disparities and fostering inclusion in the economy.

Evidence from cross-country results present a mixed relationship between fiscal decentralization and income inequality. Canare et al. (2020) finds that revenue decentralization is weakly associated with lower income inequality, however, fiscal independence is associated with higher inequality. Another study from the OECD countries explores how the effects of fiscal decentralization differ along the income distribution (Stossberg et al., 2016). They show that fiscal decentralization doesn't uniformly affect all income groups. While decentralization tends to be associated with a reduction in income inequality between high incomes and the median, it is linked to a divergence of low-income groups from the median. The study indicates that mainly middle-income earners seem to benefit from fiscal decentralization. In the similar vein, Sacchi and Salotti (2014b) also finds that a higher level of fiscal decentralization is associated with an unequal distribution of income among households within a country.

The institutional settings of fiscal decentralization in developing countries can affect the distribution of income inequality (Digdowiseiso et al., 2022). Particularly, Pietrovito et al. (2023) finds that income redistribution is negatively associated with both the institutional measure of fiscal autonomy and the quantitative measure of revenue decentralization. There's also the risk of local elites capturing public resources, potentially exacerbating inequality (Von Braun & Grote, 2002).

While a direct effect of fiscal decentralization on income inequality may not be clear, Hummel and Seiferling (2015) lists following conditions under which fiscal decentralization can be conducive towards a more equal income distribution: i) the government sector should be sufficiently large, ii) decentralization reform should be comprehensive that includes the redistributive government spending, and iii) expenditure decentralization must be accompanied by revenue decentralization.

7.5 FD and Regional Disparities

Theoretically, the impact of fiscal decentralization on regional disparities is ambiguous. On one hand, proponents argue that decentralization can promote regional convergence by enabling lagging regions to better utilize local resources (Rodriguez-Pose & Ezcurra, 2010). Fiscal autonomy gives local governments the flexibility to tailor development policies to their specific needs (Oates, 1993). Furthermore, Barankay and Lockwood (2007) argue that developed regions are already near the efficiency frontier, less developed regions have more to gain from improved public efficiency. Moreover, subnational electoral accountability can motivate local leaders to allocate resources effectively, especially under direct elections and competitive political environments (Siburian, 2020).

However, decentralization can also exacerbate regional inequalities. Richer jurisdictions typically possess more administrative capacity, broader tax bases, and stronger institutions, enabling them to attract investment and offer more generous public services (Prud'homme, 1995). They have the greater ability to attract mobile capital and offer tax breaks or subsidies to investors (Cai & Treisman, 2005). This can lead to interjurisdictional competition where wealthy regions have significant advantage. Additionally, decentralization can weaken the central government's redistributive capacity, limiting its ability to equalize regional disparities (Prud'homme, 1995; Tanzi, 1996). Politically, richer regions may also wield greater influence in shaping national policy, further skewing resource allocation in their favor (Rodriguez-Pose & Ezcurra, 2010). Recent papers highlight the significance of institutional quality in mediating these effects. Effective fiscal decentralization requires not only broad subnational tax autonomy but also well-designed transfer systems (Rompuy, 2020; Blöchliger et al., 2016).

Empirical studies provide mixed evidence regarding the impact of fiscal decentralization on regional convergence. Kyriacou et al. (2017) and Rompiy (2020) find that decentralization is associated with lower regional inequalities in OECD countries. Bartolini et al. (2016) shows that tax decentralization fosters growth incentives, especially in lagging regions. Similarly, Lessmann (2012) finds that decentralization reduces regional disparities in advanced economies but may widen them in developing countries. Siburian (2020) finds that fiscal decentralization reduces inequality in Indonesia by improving local governments' ability to tailor policies and deliver public servants more effectively.

By contrast, Liu et al. (2017) finds that decentralization increased inequality in China. Their result suggests that decentralization amplified existing competitive advantages of already prosperous provinces. Novi et al. (2019) analyzes the 1998 decentralization reform in Italy and finds that decentralization reduced inequality within regions, but between-region inequality remained largely unaffected, particularly because wealthier regions benefitted more. These findings echo earlier concerns that decentralization without adequate coordination, redistribution, and institutional capacity can reinforce regional disparities (Bardhan, 2002; Martinez-Vazquez & McNab, 2003; Prud'homme, 1995; Tanzi, 1996).

7.6 FD and Climate Change

Fiscal decentralization has been linked to both "race-to-the-top" and "race-to-the-bottom" outcomes in environmental governance. Proponents argue that decentralization improves efficiency and responsiveness by tailoring policies to local pollution levels (Oates, 1997; List & Mason, 2001). Empirical studies in the OECD, EU, and APEC countries show that decentralization reduces CO2 emissions and enhances environmental quality, particularly in regions with robust institutional frameworks (Khan et al., 2021; Ali et al., 2022; Safi et al., 2022; List & Gerking, 2000). Moreover, strong institutions play a critical role in enabling decentralization to deliver better environmental outcomes. High-quality institutions ensure effective implementation, reduce rent-seeking, and align local governance with sustainability goals (Molina, 2018; Sun & Razzaq, 2022).

Conversely, another strand of literature warns of a "race-to-the-bottom," where subnational governments lower environmental standards to attract capital. This occurs when fiscal competition drives jurisdictions to prioritize economic growth over sustainability, often leading to increased pollution (Sigman, 2005; Fredriksson et al., 2006). Coordination failures exacerbate these issues, as local governments may offload externalities onto neighboring regions or fail to enforce environmental standards effectively. In the U.S., stricter states strategically locate polluting firms near borders to shift pollution to neighboring jurisdictions (Helland & Whitford, 2003; Monogan et al., 2017). Studies in Korea and Pakistan reveal that lax environmental policies are used to attract industries (Kim, 2011; Li et al, 2021), while in China, decentralization incentivizes local officials to prioritize short-term economic gains over long-term sustainability, weakening enforcement of national environmental policies (Chen & Liu, 2020; Shi et al., 2018; Cai et al., 2022).

Recent articles suggest a non-linear relationship between fiscal decentralization and environmental degradation (Cheng et al. 2020; Hawari et al., 2024; Liu & Li, 2019; Shan et al., 2021; Phan et al. 2021). In the early stages of decentralization, local authorities tend to lower environmental standards to attract capital and boost economic growth (Liu et al., 2019; Ji et al., 2021). However, at a later stage of fiscal decentralization, local governments shift toward sustainable development goals. Public demand for better environmental quality grows. Simultaneously, higher-level authorities exert pressure on local governments to improve environmental supervision. At this stage, local governments begin to invest in environmental protection (Cheng et al., 2020; Liu & Li, 2019). Over time, these efforts lead to a gradual decline in emissions and improved environmental outcomes, indicating a U-shaped relationship.

7.7 FD and Macroeconomic Stability

From theoretical standpoint, fiscal decentralization (FD) has both positive and negative impacts on macroeconomic stability. On the positive side, FD can improve fiscal discipline and policy credibility by creating institutional checks on discretionary fiscal policies, reducing inflationary tendencies, and improving economic efficiency (Jalil et al., 2012). This aligns with the theory of commitment problem, which suggests that decentralization limits the central government's ability to implement inflationary or unsustainable fiscal policies, thereby enhancing macroeconomic stability (Treisman, 2000). Governments often face a time-inconsistency problem, where short-term political incentives, such as increasing spending or printing money, conflict with long-term economic stability (Kydland & Prescott, 1977; Barro & Gordon, 1983). In a centralized system, governments may be tempted to finance deficits through inflationary means or unsustainable borrowing, leading to economic instability. However, decentralization imposes institutional constraints by distributing fiscal authority across multiple levels of government, making it more difficult for national policymakers to implement short-term expansionary policies. Moreover, competition among subnational governments encourages responsible fiscal behavior, as excessive spending or mismanagement may drive away investment and erode local economic stability (Qian & Roland, 1998).

Fiscal decentralization also affects fiscal stability through its impact on revenue generation, expenditure control, and subnational borrowing practices. Decentralized systems with strong revenue autonomy encourage local governments to adopt responsible fiscal practices and avoid excessive deficits (Ali & Batool, 2017). This could stem from increased local accountability, as subnational governments are more directly accountable to voters and have better information about local needs. Decentralization can contribute to price stability if local governments compete for investment and avoid inflationary policies to maintain a favorable business environment (Qian & Roland, 1998).

Empirical studies suggest that revenue decentralization reduces inflation, particularly in countries with strong institutional frameworks and independent central banks (Neyapati, 2004; Jalil et al., 2012). Using data from OECD countries, Bartolini et al. (2018) shows that the disciplinary role of FD becomes even more salient during periods of fiscal stress, finding that decentralization can contribute to sounder fiscal positions even in times of crisis. Similarly, Lago-Peñas et al. (2020) show that expenditure decentralization coupled with lower vertical fiscal imbalance improved macroeconomic stability in OECD countries during the Great Recession. Ahmad et al. (2022) provide evidence from Pakistan, suggesting that both revenue and expenditure decentralization contribute positively to macroeconomic stability by encouraging better resource allocation and economic management. Okonkwo and Godslove (2015) find that in Nigeria, revenue decentralization positively influences macroeconomic stability, especially when combined with productive investment strategies.

Nonetheless, the macroeconomic benefits of decentralization are not automatic and can be undermined by weak institutional arrangements. FD can also introduce risks to macroeconomic stability, particularly if subnational governments lack fiscal responsibility. Soft budget constraints, excessive borrowing, and vertical fiscal imbalances (VFIs) can undermine fiscal sustainability, leading to deficits, inflation, and economic instability (Rodden, 2002; Stein, 1999). When local governments anticipate bailouts from the central government, they may engage in reckless fiscal behavior, exacerbating macroeconomic instability rather than mitigating it. Weak institutional oversight may result in excessive borrowing and inflationary financing of deficits at the subnational level (Thornton, 2007). Countries with fragmented fiscal authority and high VFIs often struggle to coordinate macroeconomic policies, leading to inflationary risks (Martinez-Vazquez & McNab, 2005). Furthermore, FD can fuel inflationary pressures if subnational governments adopt expansionary fiscal policies without internalizing macroeconomic consequences (Dillinger et al., 2000).

Moreover, decentralization may weaken the ability of central governments to implement macro-stabilization policies, particularly when institutional frameworks are underdeveloped or fragmented (Canavire-Bacarreza et al., 2025). Iqbal & Nawaz (2017), using data from Pakistan, report that revenue decentralization has a significant negative effect on macroeconomic stability. Additionally, adverse impacts of expenditure decentralization on macroeconomic stability in Ukraine (Melnyk et al., 2018) and Nigeria (Bushashe & Bayiley, 2023).

7.8 FD and COVID-19 Response

Subnational governments play a crucial role in responding to disasters and crises. Generally, their tax revenues, e.g. property tax, are more stable than central government's revenue base (Dougherty and de Biase, 2021). Nevertheless, their effectiveness depends heavily on institutional capacity, intergovernmental coordination, and fiscal autonomy.

During the COVID-19 pandemic, local governments around the world stepped into critical roles, designing and delivering public health interventions, enforcing containment measures, and supporting vulnerable populations. In Vietnam, provincial authorities set up field hospitals, enforced lockdowns, and launched tools like the Hanoi COVID app to keep residents informed (Huynh et al., 2020). In Nepal, local and provincial governments established quarantine centers, procured testing machines, and mobilized disaster relief funds, often reallocating equalization grants to finance these measures (Mainali et al., 2021). In Indonesia, provincial governments launched community surveillance programs and took charge of testing, although infrastructure disparities led to uneven outcomes (Sevindik et al., 2021).

Similar local responsiveness was seen in other parts of Asia. In South Korea, municipalities showcased local innovation through initiatives such as drive-through testing, the "Good Landlord" campaign, which encouraged property owners to voluntarily reduce rent for struggling small businesses, and the "Favorite Store Pre-pay" program, where residents prepaid for goods and services at local shops to support them during closures (Kim & Jeong, 2022). In India, states such as Kerala and Odisha rapidly identified hotspots and implemented containment zones (Dash & AR, 2022), while in the Philippines, local authorities suspended classes and distributed face masks even before the national government mandated lockdowns (Talabis et al., 2021).

In the U.S., cities like New York and Baltimore provided housing for the homeless and distributed essential supplies like diapers to vulnerable populations, while others like Tulsa and Dallas offered soft loans to businesses and cash transfers to families (Dzigbede et al., 2020). Local governments were also proactive in securing PPE, establishing grant programs, and collaborating with federal agencies like the CDC to "flatten the curve" (Dzigbede et al., 2020). In the UK, local officials ensured continued education for vulnerable children and housing for those experiencing homelessness (Machin, 2023).

Despite these successes, the pandemic also exposed key limitations of decentralized systems. In several countries, local authorities faced severe challenges stemming from fiscal shortfalls, poor coordination, and institutional fragmentation. For example, subnational governments with high levels of autonomy but insufficient financial support, often facing unfunded mandates, struggled to respond effectively (Rodríguez-Pose & Vidal-Bover, 2023). In Latin America, Brazil's weak intergovernmental coordination and uneven health infrastructure contributed to inefficient resource distribution, while in Mexico, a lack of federal financial support led to confusion and policy fragmentation, prompting some states to act independently (Paschoalotto et al., 2022; Cardoso et al., 2022; Ramirez & Castillo, 2022). Coordination failures in Spain reflected the weakening of central health authority capacities due to long-term decentralization (Erkoreka & Hernando-Perez, 2022).

Elsewhere, the pandemic highlighted problems of political fragmentation and rivalry. In China, while provincial governments had significant discretion in easing lockdowns and supporting economic recovery, competition between local officials led to coordination failures, such as one municipality intercepting medical supplies intended for another (Xin & Chen, 2022). Nonetheless, decentralization also fostered policy innovation in China, particularly in provinces where leaders had private-sector experience, enhancing responsiveness to local economic conditions (Huang et al., 2022). In the UK, local governments worked with third-sector partners and community networks to reach vulnerable groups despite financial and staffing constraints, a testament to local resilience amid austerity (Arrieta, 2022).

While local governments demonstrated agility and innovation in crisis response, their effectiveness was often constrained by structural inequalities, underfunding, and fragmented intergovernmental coordination. As Cadaval-Sampedro et al. (2025) suggest, disasters may even reverse decentralization trends in some countries, particularly where subnational governments lack the resources or institutional support to respond effectively. The COVID-19 pandemic exposed longstanding weaknesses in intergovernmental fiscal systems, such as unclear subnational mandates, poor coordination, and inequitable resource sharing, while highlighting the urgent need for reform. At the same time, it also prompted new forms of collaboration between national and subnational governments and a willingness to adapt and innovate (Smoke et al., 2022).

7.9 Decentralization and Corruption

The literature on decentralization and corruption has evolved in response to changing theoretical paradigms. First-generation theories assumed a benevolent government committed to social welfare maximization. However, second-generation theories acknowledge that government actors are self-interested and may act opportunistically (Weingast, 1995; Seabright, 1996; McKinnon, 1997). This shift has opened the door to examining how political incentives and institutional contexts mediate the relationship between decentralization and corruption. While corruption is widely regarded as a major impediment to development. It reduces trust in government, distorts resource allocation, inhibits investment, and increases inequality (Mo, 2001; Gupta et al., 2003; Giannetti et al., 2021). Yet, scholars remain divided on whether decentralization mitigates or exacerbates corrupt practices.

Several mechanisms have been proposed to explain how decentralization might affect corruption. On one hand, decentralization could increase corruption by expanding the number of government actors involved in public decision-making, thereby multiplying the opportunities for rent-seeking (Fan et al., 2009). Fragmentation of authority can lead to coordination failures, and local governments may rely on less competent bureaucrats (Shleifer & Vishny, 1993). Moreover, in the absence of effective oversight, local governments may be more vulnerable to elite capture and clientelism, where powerful actors influence policy decisions in their favor (Bardhan & Mookherjee, 2000; Lucas, 2016). Politicians may use public resources as patronage to secure voter loyalty through material incentives, and over time, the deterrent effect of corruption may weaken as incumbents consolidate power (Bicchieri & Duffy, 1997).

On the other hand, decentralization can reduce corruption through several accountability-enhancing mechanisms. Proximity to constituents allows voters to better monitor government behavior. This can increase the reputational and electoral costs of corruption for local politicians (Weingast, 1995; Seabright, 1996). Local elections can further strengthen this dynamic by making it easier to reward or punish public officials based on performance (Hankla, 2009; von Braun & Grote, 2002). Furthermore, decentralization can intensify inter-jurisdictional competition. As jurisdictions compete to attract mobile capital, the incentive to maintain a clean and efficient administration increases (Arikan, 2004). Political competition also plays a role; multiple contenders for office can reduce the rent-seeking opportunities of entrenched elites and lower the expected payoff from corruption (Albornoz & Cabrales, 2013).

Empirical findings reflect the theoretical ambivalence in the decentralization-corruption relationship. While cross-country studies generally show a negative relationship between fiscal decentralization and corruption, this effect is conditional on the presence of robust institutions. For example, Lessmann and Markwardt (2010) find that decentralization reduces corruption only in countries with a high degree of press freedom, highlighting the importance of monitoring mechanisms. Dell'Anno and Teobaldelli (2015) show that in more decentralized systems, individuals may respond to corruption by relocating to jurisdictions with better governance rather than resorting to informal or underground economic activity. This mobility limits the expansion of the shadow economy and implies that decentralization can reduce corruption indirectly by encouraging economic participation. Alfano et al. (2019) further identify a non-linear relationship—moderate levels of decentralization tend to reduce corruption, while excessive decentralization may lead to diminishing or negative returns.

On the other hand, a substantial body of empirical work finds that decentralization may exacerbate corruption. Gerring and Thacker (2004) show that centralized, unitary systems tend to experience lower levels of corruption compared to federal systems, as centralization can increase coherence in policy implementation and strengthen accountability mechanisms. In contrast, federal systems may suffer from overlapping jurisdictions and blurred lines of responsibility, which can impede anti-corruption efforts. Similarly, Neudorfer and Neudorfer (2014) find that 'self-rule', where subnational governments have authority over policy, administration, and spending, correlates with higher levels of political corruption. They attribute this result to increased opportunities for collusion and bribery at the local level, as decentralization brings officials closer to potential bribe-payers. In contrast, they find 'shared rule', where regional governments participate in national decision-making, is associated with lower corruption due to greater oversight and institutional control.

In the United States, Shon and Cho (2020) find that fiscal decentralization is positively associated with corruption convictions at the state level. They argue that when state and local governments gain greater fiscal autonomy without sufficient checks and balances, opportunities for rent-seeking and misuse of public funds increase. Fatima et al. (2016) show that decentralization of irrigation management to local authorities led to a rise in water theft in Pakistan. In Indonesia, local governments often lack the capacity and oversight mechanisms needed to responsibly manage fiscal powers, creating space for misappropriation of resources (Alfada, 2019; Siburian, 2024).

7.10 Decentralization and Regional Parties

Decentralization has significant implications for party systems, particularly in fostering the emergence and strengthening of regional parties. While some scholars argue that decentralization accommodates regionalist demands and reduces their electoral appeal ("loss by accommodation" thesis), others suggest that it empowers regional parties by creating favorable institutional environments ("gain by empowerment" thesis) (Brancati, 2006; Massetti & Schakel, 2013). The accommodation thesis suggests that decentralization deprives regional parties of their *raison d'être* by addressing their demands for autonomy, leading to their electoral decline (De Winter, 2006; Levi & Hechter, 1985). In contrast, the empowerment thesis argues that decentralization legitimizes regionalist movements and provides institutional platforms for regional parties to thrive (Brancati, 2008). Additionally, regional legislatures serve as a springboard for regional parties to enter national politics, as their presence at the local level reduces barriers to competing in national elections. Political decentralization lowers the incentives for political parties to merge at the national level, leading to more fragmented and regionally focused party systems (Chhibber & Kollman, 1998; 2004).

Brancati (2008) finds that political decentralization, by strengthening regional parties, indirectly increases ethnic conflict. Her quantitative analysis across 37 democracies from 1945 to 2002 shows that while decentralization alone can reduce conflict, its pacifying effect diminishes as the electoral strength of regional parties grows. Meanwhile, Massetti and Schakel (2017) find that regional parties become electorally stronger after decentralization reforms, particularly in regional elections. However, their influence in national elections tends to decline over time. Similarly, Lublin (2012; 2014) challenges Brancati's argument that regional success translates into national electoral gains, showing that the growth of regional parties remains largely confined to subnational politics.

Moreover, political decentralization imposes significant challenges on national parties, disrupting centralized party structures and intensifying competition at the subnational level (Morgan, 2018). Established national parties face difficulties adapting to decentralized political landscapes, as they must compete with emerging regionalist parties while maintaining national coherence. While national parties may embrace pro-decentralization policies to co-opt regionalist supporters and curb secessionist demands (Meguid, 2008), decentralized electoral systems can also encourage party fragmentation, making it harder for national parties to dominate political competition (Harbers, 2010).

Bohlken (2015) argues that decentralization is not simply a bottom-up democratic development but rather a top-down strategy. National elites may implement decentralization when party networks are weak or fragmented, using local democratization as a mechanism to manage intra-party competition and strengthen state control without ceding real authority. For instance, national governments may introduce local elections while limiting fiscal or administrative autonomy, ensuring that regional parties lack the resources to challenge the central government effectively. While decentralization can empower regional parties by giving them a platform to govern and a stronger electoral presence, it can also be structured to maintain elite dominance. If decentralization is implemented in a way that strengthens patronage networks rather than fostering genuine political competition, it may reinforce clientelistic linkages rather.

Decentralization is often seen as a means to improve governance by bringing decision-making closer to citizens, increasing local accountability, and fostering regional autonomy. However, decentralization is not an irreversible process, over time, central governments may seek to reassert authority over subnational entities, particularly when decentralization is perceived as undermining national unity, economic stability, or administrative efficiency. National governments can achieve recentralization without explicitly reversing decentralization by employing a range of strategies that constrain subnational autonomy while maintaining the appearance of decentralized governance (Dickovick & Eaton, 2013). Aalen and Muriaas (2018) further discuss how decentralization can be manipulated to serve central interests by creating institutional gaps, dominating local institutions, overwhelming opposition, or confining political rivals to regional enclaves. Thus, decentralization is a delicate process of balancing regional autonomy with central authority.

7.11 Decentralization and Secession

7.11.1 Why Do Regions Secede or Remain within a Country?

Secessionist movements are generally driven by a combination of economic, political, ethnic, and institutional factors. Regions may pursue independence due to economic grievances, political marginalization, or distinct ethnonational identities (Sorens, 2012; Sambanis & Milanovic, 2011). Wealthier regions may seek independence if they perceive themselves as net contributors to the central government, believing they would be better off retaining their fiscal resources rather than redistributing them (Bolton & Roland, 1997; Buchanan & Faith, 1987). Conversely, poorer regions, particularly resource-rich areas, may push for secession if they feel exploited by national policies that disproportionately extract their wealth (Ahmed, 2020; Aspinall, 2009).

From a political standpoint, regions with distinct ethnic, linguistic, or cultural identities are more likely to pursue independence if they feel marginalized by the central government (Hale, 2008). Political exclusion, weak regional representation, or policies perceived as suppressing regional identities can fuel separatist sentiments, as seen in Catalonia, Quebec, and Scotland (Sorens, 2012). However, regions may choose to remain within a country due to economic dependence on national transfers, security concerns, or strategic political compromises (Collier & Hoeffler, 200). Institutional constraints, such as rigid constitutional barriers to secession, can create legal barriers to independence, while legal pathways that provide for self-determination may facilitate peaceful separations (Fitjar, 2010).

Moreover, civil war settlements often influence decentralization outcomes. When decentralization is a product of conflict resolution, it may reflect military realities rather than long-term stability. Cadaval-Sampredo et al. (2025) finds that military conflict is likely to increase the level of decentralization, particularly in developing countries. If granted reactively, decentralization can be perceived as a concession to separatist pressures, reinforcing moral hazard concerns by incentivizing further secessionist demands (Lake & Rothschild, 2005). The unequal distribution of political and economic benefits, regional economic specialization along ethnic lines, and the erosion of previously acquired autonomy also fuel separatist tendencies (Wimmer et al., 2009).

7.11.2 Who is more likely to secede?

The likelihood of secession is higher in certain types of regions. First, large regions tend to exhibit stronger separatist tendencies than smaller ones due to their greater economic and political leverage (Sambanis & Milanovic, 2014). Second, wealthier regions, especially those with per capita incomes above the national average, are more likely to seek independence, as they may resent fiscal equalization policies that redistribute their wealth (Bolton & Roland, 1997). Examples include Catalonia in Spain and Flanders in Belgium.

Third, regions with significant cultural, ethnic, or linguistic differences from the rest of the country are more prone to secessionist demands (Wimmer et al., 2009). Territorially concentrated minorities, such as the Kurds in Iraq or the Uyghurs in China, face structural disadvantages that may incentivize independence (Fearon & Laitin, 1999). Fourth, in multiethnic countries with political parties based on ethnic identity, secessionist movements may emerge as a response to perceived favoritism by the central government toward the dominant ethnic group (Glaeser, 2005; La Porta et al., 1999).

7.11.3 Decentralization as a conflict-reduction mechanism

Decentralization has been widely advocated as a tool for preventing secession by granting regions greater political and fiscal autonomy. By bringing governance closer to the people, decentralization enhances participation, provides institutional mechanisms for addressing grievances, and reduces the incentives for violent conflict (Gurr, 2000; Hechter, 2000; Oates, 1972). Fiscal decentralization, in particular, allows regions to control their taxation and spending, mitigating economic grievances that could otherwise fuel secessionist demands (Treisman, 2007). Revenue-sharing mechanisms help reduce dissatisfaction by ensuring equitable redistribution of resources, making independence less economically attractive (Sharma, 2025). Empirical studies show that fiscal transfers to subnational governments can ease ethnic tensions, particularly in high-income democracies (Bakke & Wibbels, 2006; Tranchant, 2008).

Political decentralization can also reduce the risk of conflict by providing ethnonationalist minorities with local control over education, culture, and social policies, preserving their distinct identities while maintaining national unity (Sorens, 2015). Ethnically based federalism can fragment conflicts by encouraging cross-cutting alliances and reducing ethnic polarization at the national level (Horowitz, 1985; Posner, 2004). Examples of successful conflict mitigation through decentralization include Switzerland’s canton system and Belgium’s linguistic federalism (Lijphart, 2012).

Post-conflict societies have frequently employed decentralization as a tool for peacebuilding. In Colombia, decentralization reforms provided insurgent groups with opportunities for political participation (Eaton, 2021; Shenk 2023). However, decentralization is most effective in reducing secessionist pressures when implemented preemptively. Cederman et al. (2015) argue that decentralization works best when introduced before conflicts escalate. When granted reactively in response to separatist demands, autonomy may be perceived as a concession to pressure, encouraging further secessionist ambitions.

7.11.4 Decentralization as a path to secession

While decentralization can reduce conflict, it can also facilitate secession under certain conditions. By strengthening regional political institutions and financial independence, decentralization can empower subnational governments to pursue separation more effectively (Madiès et al., 2018). First, decentralization can empower regional parties that promote secessionist agendas. When regional political parties dominate local institutions, they can mobilize support for independence and shift public discourse toward secession (Brancati, 2006). Regional parties, once entrenched, can legitimize separatist demands and push for greater autonomy, as seen in Quebec and Catalonia (McGarry & O’Leary, 2009).

Second, fiscal decentralization reduces economic interdependence between regions and the central government. If wealthier regions gain greater control over their finances, they may feel less reliant on national transfers, making secession economically viable (Buchanan & Faith, 1987). Catalonia's demand for independence, for instance, is partly rooted in its ability to generate and manage its own tax revenues independently of Madrid (Muñoz & Tormos, 2015).

Third, excessive decentralization can create institutional instability by making central governments weaker and unable to enforce national policies effectively. Asymmetric federalism, where certain regions receive special autonomy privileges, can create resentment among other regions and lead to further fragmentation (Rode et al., 2018). In countries like Spain and India, asymmetry has been a source of ongoing tensions between regions with autonomy (e.g., Catalonia, Punjab) and those without special privileges (e.g., Andalusia, Bihar).

7.11.5 Empirical evidence on decentralization and secession risk

Empirical studies present mixed findings on whether decentralization prevents or provokes secession. Some research suggests that fiscal decentralization reduces ethnic rebellion and conflict, particularly in wealthier countries (Tranchant, 2008; Bakke & Wibbels, 2006). Federalism and fiscal transfers have been associated with lower ethnic protest among geographically concentrated minorities (Bakke & Wibbels, 2006). Political decentralization helps mitigate tensions by integrating regional elites into national governance. Brancati (2009) argues that decentralization can serve as a deterrent to conflict by granting ethnic minorities greater autonomy and control over their own affairs. Additionally, institutionalizing regional autonomy can provide minority groups with a legitimate means to participate in governance, mitigating demands for secession and promoting peaceful coexistence within multiethnic states.

However, other studies indicate that fiscal autonomy can increase separatist ambitions, especially in regions that feel exploited by the central government (Sorens, 2016). Asymmetric autonomy arrangements can increase demands for further independence rather than prevent it (Rode et al., 2018).

The relationship between decentralization and secession risk follows a U-shaped pattern (Sharma, 2025). Insufficient fiscal autonomy in low-income, resource-rich regions can lead to dissatisfaction, as these regions may perceive their poverty as "fiscally induced." Excessive fiscal autonomy in high-income regions can foster resentment toward national redistribution policies, making these regions more likely to pursue independence. A well-balanced fiscal system that combines regional autonomy with equitable redistribution is necessary to mitigate secessionist pressures. Furthermore, in multiethnic societies, decentralization may create new tensions rather than resolving old ones. If local governments are dominated by ethnic majorities, they may use their autonomy to discriminate against local ethnic minorities, worsening intergroup relations and increasing the likelihood of conflict.

More recently, Ricart-Huguet and Sellars (2023) propose a political economy theory explaining how local vs regional decentralization might have different implications for central government. They argue that while regional decentralization can benefit from economies of scale and address heterogeneous preferences, it also enables political opposition to organize and scale more effectively, posing a threat to central authorities. Local decentralization, despite being less efficient and more fragmented, offers a politically safer alternative by satisfying citizen demands for devolution. Furthermore, examples from Uganda and Peru show that central governments can strategically use local decentralization to maintain control, even in contexts with strong regional identities and demands.

7.11.6 Asymmetric decentralization: A potential solution

Traditional view of decentralization neglects the significance of ethnic, linguistic, and cultural heterogeneity inherent in many states (Bird & Ebel, 2007). In practice, treating all regions identically may exacerbate ethnic and political tensions, especially in regions with strong identities and aspirations for self-governance. Asymmetric decentralization can be a pragmatic response to the address these concerns (Libman, 2012; Sacchi & Salotti, 2014a).

Asymmetric decentralization manifests in political, administrative, and fiscal asymmetric. Political asymmetry refers to the variations in the degree of self-rule granted to regions, which can include the right to enact legislation or even constitutional recognition of autonomy, as seen in Spain's autonomous communities (Hooghe et al., 2016; Fiorillo et al., 2021). Administrative asymmetry, on the other hand, considers the difference in capacities in policy implementation and management, with certain regions exercising more control over local services, regulations, and public administration (Lele, 2019). Finally, fiscal asymmetry involves differences in revenue-raising powers or transfer dependence and reflects the uneven economic endowments and needs across regions (Sacchi & Salotti, 2014a; Allain-Dupre et al., 2020).

Additionally, these dimensions can be further categorized into 'de jure' and 'de facto' arrangements (Martinez-Vazquez, 2002). De jure asymmetry is encoded in laws and constitutions, establishing formal differences in power sharing across regions. However, the practical exercise of these rights, i.e. de-facto arrangement, often depends on the political context, administrative capacity, and central-local relations (Allain-Dupre et al., 2020).

One of the benefits of asymmetric decentralization is that it allows space for innovative public policies, often referred to as "laboratory federalism." In an asymmetric setting, subnational governments can serve as testing grounds for policy experimentation, where innovative governance models are piloted at the local level before potential nationwide adoption (Oates, 1999; Grazzini et al., 2020). Moreover, subnational governments can select the degree of autonomy or integration that beset aligns with their unique circumstances and preferences. This is referred to as the "menu federalism" (Congleton et al., 2003). Rather than imposing a uniform system, "menu federalism" offers regions the option to "opt in" or "opt out" of certain responsibilities, enabling regions to adopt tailored arrangements (Congleton, 2015).

Prominent examples include Spain, with its Foral regime (Garcia-Milà & McGuire, 2007); the Friuli-Venezia Giulia region in Italy (Podesta, 2017); Canada, which allowed the "opt in" or "opt out" to the regions (Allain-Dupre, et al., 2020). China exhibits a form of asymmetric decentralization often termed as "Chinese-style decentralization" (Chien & Zhao, 2015). While the provinces are granted considerable fiscal autonomy, the central authorities maintain strong administrative and political control (Li & Chan, 2017; Li, 2018; Yu et al., 2016). Thus, the asymmetric decentralization is primarily driven by economic reasons than political.

8. Conclusion

Decentralization is complex and multifaceted in nature. While it has become a widely adopted feature of governance reform, it is important to note that there is no one-size-fits-all model of decentralization. The design and impact of decentralization are deeply shaped by institutional context, historical legacies, and political dynamics within a country. We also trace the evolution of fiscal federalism, from the normative claims of first-generation theories to the incentive-driven frameworks of the second generation, and now the institutionally grounded analysis offered by the third-generation fiscal federalism. This shows that fiscal federalism, as both a theory and a policy framework, continues to evolve as it adapts to real-world governance.

Empirical evidence shows that decentralization can deliver positive outcomes such as improved public service delivery and improved accountability, when accompanied by robust institutions, political coherence, and administrative capacity. However, it can also amplify regional disparities, exacerbate corruption, or trigger political fragmentation when poorly designed or implemented without sufficient safeguards.

Ultimately, effective design of decentralization requires recognizing the trade-offs and tailoring institutional arrangements to local needs and capacities. As decentralization continues to evolve, more attention must be paid to interdisciplinary approaches and novel empirical methods to examine the interactions between fiscal structures, political institutions, and governance outcomes.

References

Aalen, L., & Murias, R. (2018). *Manipulating Political Decentralisation: Africa's Inclusive Autocrats.* New York, NY: Routledge.

Ahmad, E., Albino-War, M., & Singh, R. (2005). Sub-National Public Financial Management: Institutions and Macroeconomic Considerations. *International Monetary Fund (IMF) Working Paper 05/108*.

Ahmad, S., Shah, S., Mazhar, F., Khan, M., & Javaid, M. (2022). Fiscal decentralization and macroeconomic performance in Pakistan. *Journal of Contemporary Issues in Business and Government, 28*(1), 479-500.

Ahmed, M. (2020). The Dynamics of (Ethno)nationalism and Federalism in Postcolonial Balochistan, Pakistan. *Journal of Asian and African Studies, 55*(7), 979-1006.

Albornoz, F., & Cabrales, A. (2013). Decentralization, Political Competition and Corruption. *Journal of Development Economics*, 103-111.

Alfada, A. (2019). Does Fiscal Decentralization Encourage Corruption in Local Governments? Evidence from Indonesia. *Journal of Risk and Financial Management, Vol 12(3)*, 1-14.

Alfano, M., Baraldi, A., & Cantabene, C. (2019). The Effect of Fiscal Decentralization on Corruption: A Non-linear Hypothesis. *German Economic Review, 20*(1), 105-128.

Ali, H., & Batool, M. (2017). Fiscal Decentralization and Macroeconomic Stability: Theory and Evidence from Pakistan. *Pakistan Journal of Humanities and Social Sciences, 5*(1), 1-14.

Ali, S., Masood, S., Siddique, M., Naureen, N., & Ahsen, S. (2022). Impact of Fiscal Decentralization, Natural Resource Rents, and Institutional Quality on Environmental Quality of South Asian Economies. *Competitive Educational Research Journal*.

Allain-Dupré, D., Chatry, I., & Moisio, A. (2020). Asymmetric decentralisation: Trends, challenges and policy Implications. *OECD Regional Development Papers No. 10*.

Aragon, F. (2013). Local spending, transfers, and costly tax collection. *National Tax Journal, 66*(2), 343-370.

Arends, H. (2020). The Dangers of Fiscal Decentralization and Public Service Delivery: a Review of Arguments. *Polit Vierteljahresschr, 61*, 599-622.

Arikan, G. (2004). Fiscal Decentralization: A Remedy for Corruption. *International Tax and Public Finance*, 175-195.

Arrieta, T. (2022). An Assessment of the Resilience of Local Government in England: Was it Well-Equipped to Overcome the Covid-19 Pandemic? *The Political Quarterly*.

Arzaghi, M., & Henderson, J. V. (2005). Why countries are fiscally decentralizing. *Journal of Public Economics, 89*, 1157-1189.

Aspinall, E. (2009). *Islam and Nation: Separatist Rebellion in Aceh, Indonesia.* Stanford, CA: Stanford University Press.

Bachtler, J., & Ferry, M. (2015). Conditionalities and the Performance of European Structural Funds: A Principal–Agent Analysis of Control Mechanisms in European Union Cohesion Policy. *Regional Studies, 49*(8), 1258-1273.

Baekgaard, M., Serritzlew, S., & Blom-Hansen, J. (2016). Causes of Fiscal Illusion: Lack of Infromation or Lack of Attention. *Public Budgeting & Finance, 36*(2), 26-44.

Bahl, B., & Bird, R. (2018). *Fiscal Decentralization and Local Finance in Developing Countries: Development from Below.* Cheltenham, U.K.: Edward Elgar Publishing.

Bahl, R. (2000). *Intergovernmental Transfers in Developing and Transition Countries: Principles and Practice.* World Bank.

Bahl, R., & Bird, R. (2008). Subnational Taxes in Developing Countries: The Way Forward. *Institute for International Business Working Paper Series, IIB Paper No. 16*.

Bahl, R., & Linn, J. (2014). *Governing and Financing Cities in the Developing World.* Cambridge, MA: Lincoln Institute of Land Policy.

Bahl, R., & Martinez-Vazquez, J. (2008). The Determinants of Revenue Performance. In *Making the Property Tax Work: Experiences in Developing and Transition Countries* (pp. 35-57). Cambridge, Massachusetts: Lincoln Institute of Land Policy.

Bahl, R., & Martinez-Vazquez, J. (2022). Perspectives in Fiscal Decentralization: Challenges and the Unfinished Agenda. *Canadian Tax Journal*, 69-96.

Bahl, R., Boex, J., & Martinez-Vazquez, J. (2001). *The Design and Implementation of Intergovernmental Fiscal Transfers.* Atlanta: Andrew Young School of Policy Studies, Georgia State University.

Bakke, K., & Wibbels, E. (2006). Baltimore, Maryland: Diversity, disparity, and civil conflicts in federal states. *World Politics, 59*(1), 1-50.

Barankay, I., & Lockwood, B. (2007). Decentralization and the productive efficiency of government: evidence from Swiss cantons. *Journal of Public Economics, 91*, 1197-1218.

Bardhan, P. (2002). Decentralization of governance and development. *Journal of Economic Perspectives, 16*(4), 185-225.

Bardhan, P., & Mookherjee, D. (2000). Capture and Governance at Local and National Levels. *American Economic Review*, 135-139.

Barrios, S., & Martinez-Lopez, D. (2016). Fiscal Equalization Schemes and Subcentral Government Borrowing. *ADBI Working Paper Series No. 595*.

Barro, R. J., & Gordeon, D. B. (1983). A Positive Theory of Monetary Policy in a Natural Rate Model. *Journal of Political Economy, 94*(4), 589-610.

Bartolini, D., Sacchi, A., Salotti, S., & Santolini, R. (2018). Fiscal Decentralization in Times of Financial Crises. *CESifo Economic Studies, 64*(3), 456-488.

Bartolini, D., Stossberg, S., & Blöchliger, H. (2016). Fiscal Decentralisation and Regional Disparities. *OECD Economics Department Working Papers No. 1330.*

Baskaran, T., & Feld, L. P. (2013). Fiscal Decentralization and Economic Growth in OECD Countries: Is There a Relationship? *Public Finance Review*, 421-445.

Baskaran, T., Feld, L., & Schnellenbach, J. (2014). Fiscal Federalism, Decentralization and Economic Growth: Survey and Meta-Analysis. *CESIFO Working Paper No. 4985*.

Besley, T., & Case, A. (1995). Incumbent behavior: Vote-seeking, tax-setting, and yardstick competition. *American Economic Review, 85*.

Besley, T., & Coate, S. (2003). Centralized versus decentralized provision of local public goods: a political economy approach. *Journal of Public Econoics, 87*(12), 2611-2637.

Bicchieri, C., & Duffy, J. (1997). Corruption Cycles. *Political Studies*, 477-495.

Bird, R. (2011). Subnational Taxation in Developing Countries: A Review of the Literature. *Journal of International Commerce, Economics and Policy, 02*(01).

Bird, R. (2015). Fiscal Decentralization and Decentralizing Tax Administration: Different Questions, Different Answers. *International Center for Public Policy Working Paper 15-09*.

Bird, R., & Ebel, R. (2007). Subsidiarity, Solidarity and Asymmetry: Aspects of the Problem. In R. Bird, & R. Ebel (Eds.), *Fiscal Fragmentation in Decentralized Countries.* Edward Elgar Publishing.

Bird, R., & Gendron, P. (2001). VATs in Federal States: International Experience and Emerging Possibilities. *International Studies Program Working Paper #01-4*.

Bird, R., & Smart, M. (2014). VAT in a Federal System: Lessons from Canada. *Public Budgeting & Finance*, 38-60.

Bird, R., & Smart, M. (2016). Taxing Consumption in Canada: Rates, Revenues, and Redistribution. *Canadian Tax Journal, 64*(2), 417-42.

Blöchliger, H., Bartolini, D., & Stossberg, S. (2016). Does Fiscal Decentralisation Foster Regional Convergence? *OECD Economic Policy Paper*.

Blom-Hansen, J., Houlberg, K., Serritzlew, S., & Treisman, D. (2016). Jurisdiction size and local government policy expenditure: assessing the effect of municipal amalgamation. *Americal Political Science Review, 110*(4), 812-831.

Boadway, R., & Shah, A. (2009). *Fiscal Federalism: Principles and Practice of Multiorder Governance.* Cambridge University Press.

Boadway, R., & Shah, A. (2024). Reflections on Emerging Roles of Intergovernmental Fiscal Transfers: From Financing to Accountability in Decentralized Subnational Governance, Preserving the Environment and Responding to Fiscal Shocks. *International Center for Public Policy Working Paper 24-08*.

Bodman, P., & Hodge, A. (2010). What Drives Fiscal Decentralisation? Further Assessing the Role of Income. *Fiscal Studies, 31*(3), 373-404.

Boex, J., Williamson, T., & Yilmaz, S. (2022). *Decentralization, Multilevel Governance and Intergovernmental Relations: A Primer.* Local Public Sector Alliance/ The World Bank.

Bohlken, A. (2015). *Democratization from Above The Logic of Local Democracy in the Developing World.* New York, NY: Cambridge University Press.

Bojanic, A. N. (2020). The empirical evidence on the determinants of fiscal decentralization. *Revista Finanzas y Política Económica*, 271-302.

Bolton, P., & Roland, G. (1997). The breakup of a nations: a political economy. *Quarterly Journal of Economics, 112*(4), 1057-1090.

Brancati, D. (2006). Decentralization: Fueling the Fire or Dampening the Flames of Ethnic Conflict and Secessionism? *International Organization, 60*(3), 651-682.

Brancati, D. (2008). The Origins and Strength of Regional Parties. *British Journal of Political Science, 38*(1), 135-159.

Brancati, D. (2009). *Peace by design: Managing Intrastate Conflict through Decentralization.* New York: Oxford University Press.

Bryson, P. (2008). User Fees in Local Finance: Performance and Potential in the Czech Republic and Slovakia. *Eastern European Economics, 46*(2), 5-27.

Buchanan, J., & Faith, R. (1987). Secession and the limits of taxation: toward a theory of internal exit. *American Economic Review, 77*(5), 1023-1031.

Buchanan, J., & Tullock, G. (1962). *The Calculus of Consent.* Michigan University Press.

Bushashe, M. A., & Bayiley, Y. (2023). Fiscal decentralization and macroeconomics stability nexus: Evidence from the Sub-national governments context of Ethiopia. *Cogent Economics & Finance, 11*(2).

Cadaval-Sampedro, M., Herrero-Alcalde, A., Lago-Penas, S., & Martinez-Vazquez, J. (2025). Extreme events and the resilience of decentralised governance. *Regional Studies, 59*(1).

Cai, H., & Treisman, D. (2005). Does competition for capital discipline governments? Decentralization, globalization, and public policy. *The American Economic Review, 95*(3), 817-830.

Cai, H., Tong, Z., Xu, S., Chen, S., Zhu, P., & Liu, W. (2022). Fiscal Decentralization, Government Behavior, and Environmental Pollution: Evidence From China. *Frontiers in Environmental Science*.

Canare, T., & Francisco, J. (2019). Decentralization, Fiscal Independence, and Poverty in the Philippines. *Public Budgeting & Finance*.

Canavire-Bacarreza, G., Martinez-Vaquez, J., & Yedgenov, B. (2020). Identifying and disentangling the impact of fiscal decentralization of economic growth. *World Development*.

Canavire-Bacarreza, G., Martinez-Vazquez, J., & Yedgenov, B. (2017). Reexamining the determinants of fiscal decentralization: what is the role of geography? *Journal of Economic Geography, 17*(6), 1209-1249.

Canavire-Bacarreza, G., Salas, P. E., & Martinez-Vazquez, J. (2025). The effect of crises on fiscal and political re-centralization. *Public Finance Review, 53*(2), 169-199.

Cardoso, R. L., de Azevedo, R. R., Pigatto, J. A., Fajardo, B. d., & da Cunha, A. S. (2022). Lessons from Brazil's unsuccessful fiscal decentralization policy to fight COVID-19. *Public Administration and Development*, 106-119.

Cavalieri, M., & Ferrante, L. (2016). Does fiscal decentralization improve health outcomes? Evidence from infant mortality in Italy. *Social Science & Medicine, 164*, 74-88.

Cederman, L.-E., Simon, H., Schadel, A., & Wucherpfenning, J. (2015). Territorial Autonomy in the Shadow of Conflict: Too Little, Too Late? *The American Political Science Review, 109*(2), 354-370.

Cheema, G. S., & Rondinelli, D. A. (2007). From Government Decentralization to Decentralized Governance. In G. S. Cheema, & D. A. Rondinelli (Eds.), *Decentralizing Governance: Emerging Concepts and Practices.* Washington, D.C.: Brookings Insititution Press.

Chen, X., & Liu, J. (2020). Fiscal Decentralization and Environmental Pollution: A Spatial Analysis. *Discrete Dynamics in Nature and Society*.

Cheng, S., Fan, W., Chen, J., Meng, F., Liu, G., Song, M., & Yang, Z. (2020). The impact of fiscal decentralization on CO2 emissions in China. *Energy*.

Chhibber, P., & Kollman, K. (1998). Party Aggregation and the Number of Parties in India and the United States. *American Political Science Review, 92*(2), 329-42.

Chhibber, P., & Kollman, K. (2004). *The Formation of National Party Systems: Federalism and Party Competition in Great Britain, Canada, India and the United States.* Princeton, NJ: Princeton University Press.

Chien, S., & Zhao, L. (2015). State-Mediated Knowledge Transfer and Resource Mobility: A Case Study of China Local Government Entrepreneurship. *Issues & Studies, 51*(2), 39-78.

Cnossen, S. (2010). The Economics of Excise Taxation. (S. Cnossen, Ed.) *International Studies Program Working Paper 10-18*.

Collier, P., & Hoeffler, A. (2006). The Political Economy of Secession. In H. Hannum, & E. F. Babbitt (Eds.), *Negotiating Self-Determination.* Lanham, MD: Lexington Books.

Congleton, R. (2015). Asymmetric federalism: constitutional and fiscal exchange and the political economy of decentralisation. In E. Ahmad, & G. Brosio (Eds.), *Handbook of Multilevel Finance.* Edward Elgar Publishing Limited.

Congleton, R., Kyriacou, A., & Bacaria, J. (2003). A theory of Menu Federalism: Decentralization by Political Agreement. *Constitutional Political Economy, 14*, 167-190.

Coppedge, M., Gerring, J., Knutsen, C. H., Lindberg, S. I., Teorell, J., Altman, D., . . . Neundorf. (2023). *V-Dem Codebook v13.* Varietis of Democracy (V-Dem) Project.

Dash, R. R., & AR, A. (2022). Micro models of COVID 19 pandemic governance: Reflections on the strategies taken by two states in India. *Public Administration and Development*, 141-149.

Davoodi, H., & Zou, H. (1998). Fiscal Decentralization and Economic Growth: A Cross-Country Study. *Journal of Urban Economics, 43*(2), 244-257.

De Winter, L. (2006). In Memoriam the Volksunie 1954-2001: Death by Overdose of Success? In L. De Winter, M. Gomez-Reino, & P. Lynch (Eds.), *Autonomist Parties in Europe: Identity Politics and the Revival of the Territorial Cleavage Vol. II* (pp. 11-46). Barcelona: ICPS.

Debrun, X., Hauner, D., & Kumar, M. (2009). Independent Fiscal Agencies. *Journal of Economic Surveys, 23*(1), 44-81.

Delgado, F., & Landajo, M. (2025). Determinants of fiscal decentralization: a neural network approach for OECD countries. *Policy Studies*.

Dell' Anno, R., & Teobaldelli, D. (2015). Keeping both corruption and the shadow economy in check: the role of decentralization. *International Tax Public Finance, 22*, 1-40.

Dell'Anno, R., & Martinez-Vazquez, J. (2019). A problem with observational equivalence: Disentangling the renter illusion hypothesis. *Urban Studies, 56*(1), 193-209.

Dickovick, J., & Eaton, K. (2013). Latin America's Resurgent Centre: National Government Strategies after Decentralisation. *The Journal of Development Studies, 49*(11), 1453-1466.

Digdowiseiso, K., Murshed, S., & Bergh, S. (2022). How Effective Is Fiscal Decentralization for Inequality Reduction in Developing Countries? *Sustainability*.

Dillinger, W., Perry, G., & Webb, S. B. (2000). Macroeconomic Management in Decentralization Democracies: The Quest for Hard Budget Constraints in Latin America. In S. J. Burki, G. E. Perry, F. Eid, M. E. Freire, V. Vergara, & S. Webb (Eds.), *Annual World Bank Conference on Development in Latin America and the Caribbean, 1999: Decentralizatoin and Accountability of Public Sector: Proceedings of a Conference held in Valdivia, Chile, 1999* (pp. 85-105). D.C.: World Bank.

Dougherty, S., & de Biase, P. (2021). Who absorbs the shock? An analysis of the fiscal impact of the COVID-19 crisis on different levels of government. *International Economics and Economic Policy, 18*, 517-540.

Dougherty, S., Nebreda, A., & Mota, T. (2024). Adapting intergovermental fiscal transfers for the future: Emerging trends and innovative approaches. *OECD Working Papers On Fiscal Federalism No. 49*.

Dubois, H. F., & Fattore, G. (2009). Definitions and Typologies in Public Administration Research: The Case of Decentralization. *Int'l Journal of Public Administration, 32*(8), 704-727.

Dzigbede, K. M., Willoughby, K., & Gehl, S. B. (2020). Disaster Resiliency of U.S. Local Governments: Insights to Strengthen Local Response and Recovery from the COVID-19 Pandemic. *Public Administration Review*, 634-643.

Eaton, K. (2021). Territorial Peace WithoutTerritorial Governments:The Centralising Logic of the2016 Colombian Peace Accord. *Journal of Peacebuilding & Development, 16*(2), 194-208.

Eaton, K., & Schroeder, L. (2010). Measuring decentralization. In E. Connerly, K. Eaton, & P. Smoke (Eds.), *Making Decentralization Work: Democracy, Development, and Security.* Lynne Reinner Publishers.

Ebel, R. D., & Yilmaz, S. (2002). On the Measurement and Impact of Fiscal Decentralization. *Policy Research Working Paper 2809*.

Ehtisham, A. (1997). Assigning Expenditure Responsibilties. In T. Ter-Minassian (Ed.), *Fiscal Federalism in Theory and Practice.* International Monetary Fund.

Erkoreka, M., & Hernando-Perez, J. (2022). Decentralization: A handicap in fighting the COVID-19 pandemic? The response of the regional governments in Spain. *Public Administration and Development*.

Eyraud, L., Hodge, A., Ralyea, J., & Reynaud, J. (2020). *How to Design Subnational Fiscal Rules: A Primer.* Washington, DC: International Monetary Fund.

Faguet, J.-P. (2014). Decentralization and Governance. *World Development, 53*, 2-13.

Falch, T., & Fischer, J. (2012). Public sector decentralization and school performance: International evidence. *Economic Letters, 114*, 276-279.

Fan, C., Lin, C., & Treisman, D. (2009). Political decentralization and corruption: Evidence from around the world. *Journal of Public Economics*, 14-34.

Fatima, F., Jacoby, H., & Mansuri, G. (2016, May 31). *World Bank.* Retrieved from http://pubdocs.worldbank.org/en/764111466186379941/DecentralizingCorruption-May16.pdf

Fearon, J., & Laitin, D. (1999). Weak states, rough terrain, and large-scale ethnic violence since 1945. *Annual Meetings of the American Political Science Association.* Atlanta, GA.

Feld, L. P., Kirchgässner, G., & Schaltegger, C. A. (2004). Fiscal federalism and economic performance: evidence from Swiss cantons. *Marburger Volkswirtschaftliche Beiträge, No. 2004,20*.

Feld, L., Frey, C., Schalteger, C., & Schmid, L. (2021). Fiscal federalism and income inequality: An empirical analysis for Switzerland. *Journal of Economic Behavior and Organization*, 463-494.

Filippetti, A., & Sacchi, A. (2016). Decentralization and economic growth reconsidered: The role of regional authority. *Environment and Planning C: Government and Policy*, 1793-1824.

Fiorillo, F., Giuranno, M., & Sacchi, A. (2021). Asymmetric decentralization: distortions and opportunities. *Economia Politica, 38*, 625-656.

Fitjar, R. (2010). *The Rise of Regionalism: Causes of regional mobilization in Western Europe.* Abingdon, Oxon: Routledge.

Fredriksson, P., Mani, M., & Wollscheid, J. (2006). Environmental Federalism: A Panacea or Pandora's Box for Developing Countries? *World Bank Policy Research Working Paper 3847*.

Freire, M., Peterson, J., Huertas, M., & Valadez, M. (Eds.). (2004). *Subnational capital markets in developing countries: From theory to practice.* Washington, DC: Oxford University Press.

Fuest, C., & Kolmar, M. (2007). A theory of user-fee competition. *Journal of Public Economics*, 497-509.

Garcia-Milà, T., & McGuire, T. (2007). Fiscal Decentralisation in Spain: An Asymmetric Transition to Democracy. In R. Bird, & R. Ebel (Eds.), *Fiscal Fragmentation in Decentralised Countries: Subsidiarity, Solidarity and Asymmetry.* Edward Elgar Publishing Ltd and World Bank.

Gemmell, N., Kneller, R., & Sanz, I. (2013). Fiscal decentralization and Economic Growth: Spending versus Revenue Decentralization. *Economic Inquiry*, 1915-1931.

Gerring, J., & Thacker, S. C. (2004). Political Institutions and Corruption: The Role of Unitarism and Parliamentarism. *British Journal of Science*, 295-330.

Giannetti, M., Liao, G., You, J., & Yu, X. (2021). The Externalities of Corruption: Evidence from Entrepreneurial Firms in China. *Review of Finance*, 629-667.

Glaeser, E. (2005). The political economy of hatred. *Quarterly Journal of Economics, 120*, 45-86.

Goodspeed, T. (2002). Bailouts in a Federation. *Internatioanl Tax and Public Finance*, 409-421.

Grazzini, L., Lattarulo, P., Macchi, M., & Petretto, A. (2020). Asymmetric Decentralization: Some insights for the Italian case. *Politica economica*, 63-69.

Green, E. (2010). Patronage, District Creation, and Reform in Uganda. *St Comp Int Dev, 45*, 83-103.

Grossman, G., & Helpman, E. (1996). Electoral Competition and Special Interest Politics. *The Review of Economic Studies, 63*(2), 265-286.

Guo, S., Pei, Y., & Xie, Z. (2022). A dynamic model of fiscal decentralization and public debt accumulation. *Journal of Public Economics*.

Gupta, J. (2010). A history of international climate change policy. *Wiley Interdisciplinary Reviews: Climate Change*, 636-653.

Gupta, S., Davoodi, H., Alonso-Terme, R. (2003). Does Corruption Affect Income Inequality and Poverty. *Economics of Governance, 3(1), 23-45*.

Gurr, T. (2000). *People versus States: Minorities at Risk in the New Century.* Washington DC: United States Institute of Peace Press.

Hale, H. (2008). *The Foundations of Ethnic Politics: Separatism of States and Nations in Eurasia and the World.* Cambridge, UK: Cambridge University Press.

Hanif, I., Wallace, S., & Gago-de-Santos, P. (2020). Economic Growth by Means of Fiscal Decentralization: An Empirical Study for Federal Developing Countries. *SAGE Open, 10*(4).

Hankla, C. R. (2009). When is Fiscal Decentralization Good for Governance? *Publius*, 632-650.

Hankla, C. R., Martinez-Vazquez, J., & Ponce-Rodriguez, R. A. (2019). *Local Accountability and National Coordination in Fiscal Federalism: A Fine Balance.* Northampton, Massachusetts: Edward Elgar Publishing.

Harbers, I. (2010). Decentralization and the development of nationalized party systems in new democracies: Evidence from Latin America. *Comparative Political Studies, 43*(5), 606-627.

Harguindeguy, J.-B. P., Cole, A., & Pasquier, R. (2019). The variety of decentralization indexes: A review of the literature. *Regional & Federal Studies*.

Hawari, A., Alyasa, F., Akbar, M. R., & Sihaloho, E. D. (2024). Fiscal Decentralization in Indonesia: Does it Curb the Quality of Environment? *Journal of Economics Research and Social Sciences, 8*(1).

Hechter, M. (2000). *Containing Nationalism.* Oxford: Oxford University Press.

Helland, E., & Whitford, A. (2003). Pollution incidence and political jurisdiction: evidence from the TRI. *Journal of Environmental Economics and Management*, 403-424.

Hernandez-Trillo, F. (2016). Poverty Alleviation in Federal Systems: The Case of Mexico. *World Development*, 204-214.

Hooghe, L., Marks, G., Schakel, A., Chapman, S., Niedzwiecki, S., & Shair-Rosenfield, S. (2016). *A Postfunctionalist Theory of Governance. Volume I: Measuring Regional Authority.* Oxford: Oxford University Press.

Horowitz, D. (1985). *Ethnic groups in conflict.* Berkeley: University of California Press.

Huang, B., Wu, J., & Ye, L. (2022). Fiscal decentralization, intergovernmental mobility, and the innovativeness of local governments' policy response in COVID-19: Evidence from China. *Public Administration and Development*.

Huber, B., & Runkel, M. (2009). Tax competition, excludable public goods, and user charges. *International Tax and Public Finance, 16*, 321-336.

Hummel, C.-A., & Seiferling, M. (2015). Income Inequality, Fiscal Decentralization, and Transfer Dependency. In B. Clements, R. A. de Mooij, & S. Gupta (Eds.), *Inequality and Fiscal Policy.* Internaitonal Monetary Fund.

Hung, N., & Thanh, S. (2022). Fiscal decentralization, economic growth, and human development: Empirical evidence. *Cogent Economics & Finance, 10*(1).

Hussain, S., Hali, S., Ahmad, R., Iqbal, S., & Iftikhar, H. (2021). Fiscal decentralization and poverty alleviation: A case study of Pakistan. *Poverty & Public Policy*, 139-154.

Huynh, D., Tosun, M. S., & Yilmaz, S. (2020). All-of-government response to the COVID-19 pandemic: The case of Vietnam. *Public Adminnistration and Development*.

Ivanyna, M., & Shah, A. (2014). How Close Is Your Government to Its People? Worldwide Indicators on Localization and Decentralization. *Economics: The Open-Access, Open Assessment E-Journal, 8*.

Iqbal, N., & Nawaz, S. (2017). Fiscal Decentralization and Macroeconomic Stability: Theory and Evidence from Pakistan. *Pakistan Journal of Humanities and Social Sciences, 5*(1).

Jütting, J., Kauffmann, C., McDonnell, I., Osterrieder, H., Pinaud, N., & Wegner, L. (2004). Decentralization and Poverty in Developing Countries: Exploring the Impact. *OECD Development Center Working Paper No. 236*.

Jacqmin, J., & Lefebvre, M. (2021). Fiscal decentralizationa nd the performance of higher education institutions: the case of Europe. *Empirica, 48*, 743-758.

Jalil, A., Harun, M., & Mat, S. (2012). Macroeconomic instability and fiscal decentralization: An empirical analysis. *Prague Economic Papers*.

Jametti, M., & Joanis, M. (2010). Determinants of Fiscal Decentralization: Political Economy Aspects. *Institute d'Economia de Barcelona Working Paper 2010/7*.

Ji, X., Umar, M., Ali, S., Ali, W., Tang, K., & Khan, Z. (2021). Does fiscal decentralization and eco-innovation promote sustainable environment? A case study of selected fiscally decentralized countries. *Sustainable Development*, 79-88.

Jimenez-Rubio, D. (2011). The impact of decentralization of health services on health outcomes: evidence from Canada. *Applied Economics, 43*(26), 3907-3917.

Jimenez-Rubio, D. (2011). The impact of fiscal decentralization on infant mortality rates: Evidence from OECD countries. *Social Science & Medicine, 73*, 1401-1407.

Jin, Y., & Rider, M. (2020). Does fiscal decentralization promote economic growth? An empirical approach to the study of China and India. *Journal of Public Budgeting, Accounting & Financial Management, 34*(6), 146-167.

Joumard, I., & Konsgrud, P. (2003). Fiscal Relations Across Government Levels. *OECD Economic Studies No. 36, 2003/1*.

Khan, S. (2013). Decentralization and Poverty Reduction: A Theoretical Framework for Exploring the Linkages. *International Review of Public Administration*, 145-172.

Khan, S., Ali, S., Dong, K., & Li, R.Y.M., (2021). How does fiscal decentralizaiton affect CO2 emissions? The roles of institutions and human capital. *Energy Economics, 94*, 105060.

Kim, D-R. (2011). Do local policy networks deter the race to the bottom in environmental regulation? The case of South Korea. (2011). *Environment and Plannic C: Government and Policy, 29,* 1037-1053.

Kim, Y., & Jeong, Y. A. (2022). The role of local governments in South Korea's COVID-19 response. *Public Administration and Development*, 120-128.

Knutsen, C., Gerriing, J., & Skaaning, S. (2016). Local Democracy and Economic Growth. *The Varieties of Democracy Institute Working Paper Series 2016:39*.

Kunce, M., & Shogren, J. F. (2007). Destructive interjurisdictional competition: Firm, capital and labor mobility in a model of direct emission control. *Ecological Economics, 60*(3), 543-549.

Kydland, F. E., & Prescott, E. C. (1997). Rules Rather than Discretion: The Incosistency of Optimal Plans. *Journal of Political Economy, 85*(3), 437-491.

Kyriacou, A., & Roca-Sagales, O. (2024). Fiscal Decentralization and Health Care Access and Quality: Evidence from Local Governments around the World. *Publius: The Journal of Federalism, 54*(2), 313-338.

Kyriacou, A., Muinelo-Gallo, L., & Roca-Sagales, O. (2017). Regional inequalities, fiscal decentralization and government quality. *Regional Studies, 51*(6), 914-957.

La Porta, R., Lopez-de-Silanes, F., & Vishny, R. (1999). The quality of government. *Journal of Law, Economics and Organization, 15*, 222-279.

Ladner, A., Keuffer, N., & Baldersheim, H. (2025). Local autonomy around the world: the updated and extended Local Autonomy Index (LAI 2.0). *Regional & Federal Studies, 35*(2), 163-185.

Lago, M., Lago-Peñas, S., & Martinez-Vazquez, J. (2024). On the effects of intergovernmental grants: a survey. *International Tax and Public Finance*.

Lago-Peñas, S., Martinez-Vazquez, J., & Sacchi, A. (2020). Fiscal stability during the Great Recession: putting decentralization design to the test. *Regional Studies, 54*(7), 919-930.

Lake, D., & Rothchild, D. (2005). Territorial Decentralization and Civil War Settlements. In P. Roeder, & D. Rothchild (Eds.), *Sustainable Peace: Power and Democracy after Civil Wars.* Ithaca, New York: Cornell University Press.

Lele, G. (2019). Asymmetric Decentralization and the Problem of Governance: The Case of Indonesia. *Asian Politics & Policy, 11*(4), 544-565.

Lessmann, C. (2012). Regional inequality and decentralization: an empirical analysis. *Environment and Planning A, 44*, 1363-1388.

Lessmann, C., & Markwardt, G. (2010). One Size Fits All? Decentralization, Corruption, and the Monitoring of Bureaucrats. *World Development*, 631-646.

Letelier, L. (2005). Explaining Fiscal Decentralization. *Public Finance Review, 33*(2), 155-183.

Levi, M., & Hechter, M. (1985). A Rational Choice Approach to the Rise and Decline of Ethnoregional Political Parties. In A. Tiryakian, & R. Rogowski (Eds.), *New Nationalism of the Developed West* (pp. 128-146). Boston, MA: Allen & Unwin.

Li, L., & Chan, R. (2017). Contesting China's Engagement with Neoliberal Urbanism: An Overview of The Evolving Policy and Mismatches in Urban China. *Asian Education and Development Studies, 6*(1), 44-56.

Li, X., Younas, M. Z., Andlib, Z., Ullah, S., Sohail, S., & Hafeez, M. (2021). Examining the asymmetric effects of Pakistan's fiscal decentralization on economic growth and environmental quality. *Environmental Science and Pollution Research*, 5666-5681.

Li, Y. (2018). Asymmetric Decentralization, Intergovernmental Transfers, and Expenditure Policies of Local Governments. *Frontiers of Economics in China, 13*(2), 223-248.

Ligthart, J., & Oudheusden, P. (2017). The Fiscal Decentralization and Economic Growth Nexus Revisited. *Fiscal Studies*, 141-171.

Lijphart, A. (2012). *Patterns of Democracy.* New Haven, Connecticut: Yale University Press.

List, J., & Gerking, S. (2000). Regulatory federalism and environmental protection in the United States. *Journal of Regional Science*, 453-472.

List, J., & Mason, C. (2001). Optimal Institutional Arrangements for Transboundary Pollutants in a Second-Best World: Evidence from a Differential Game with Asymmetric Players. *Journal of Environmental Economics and Management*, 277-296.

Litvack, J., Junaid, A., & Bird, R. M. (1998). *Rethinking deventralization in developing countries.* Washington D.C.: World Bank.

Liu, L., & Li, L. (2019). Effects of fiscal decentralization on the environment: new evidence from China. *Environmental Science and Pollution Research*, 36878-36886.

Liu, L., & Webb, S. (2016). Laws for Fiscal Responsibility for Subnational Discipline: International Experience. *Applied Economics and Finacne*.

Liu, L., Ding, D., & He, J. (2019). Fiscal decentralization, Economic growth, and Haze pollution decoupling effects: A simple model and evidence from China. *Computational Economics*, 1423-1441.

Liu, Y., Martinez-Vazquez, J., & Wu, A. (2017). Fiscal decentralization, equalization, and intra-provincial inequality in China. *International Tax Public Finance, 24*, 248-281.

Lobao, L., & Kraybill, D. (2009). Poverty and Local Governments: Economic Development and Community Service Provision in an Era of Decentralization. *Growth and Change, 40*(3), 418-451.

Lublin, D. (2012). Dispersing Authority or Deepening Divisions: Decentralization and Ethnoregional Party Success. *Journal of Politics, 74*(4), 1079-1093.

Lublin, D. (2014). *Minority Rules: Electoral Systems, Decentralization and Ethnoregional Party Success.* Oxford: Oxford University Success.

Lucas, A. (2016). Elite Capture and Corruption in two Villages in Bengkulu Provinces, Sumatra. *Human Ecology*, 287-300.

Machin, R. (2023). UK local government experience of COVID-19 Lockdown: Local responses to global challenges. *Local Economy*, 80-91.

Madhoo, Y., & Nath, S. (2014). Beneficiary charges: The Cinderella of subnational finance. In R. Bird, & J. Martinez-Vazquez (Eds.), *Taxation and Development: The Weakest Link?* (pp. 364-402). Northampton, MA: Edward Elgar Publishing.

Madiès, T., Rota-Grasiozi, G., Tranchant, J.-P., & Trépier, C. (2018). The economics of secession: a review of legal, theoretical, and empirical aspects. *Swill Journal of Economics and Statistics, 154*(19).

Mainali, R., Tosun, M. S., & Yilmaz, S. (2021). Local response to the COVID-19 pandemic: The case of Nepal. *Public Administration and Development*.

Martinez-Lopez, D. (2021). Subnational borrowing and bailouts: When the federal government looks at the votes (differently) and its borrowing matters. *Journal of Public Economic Theory*, 609-633.

Martinez-Vazquez, J. (2002). Asymmetric Federalism in Russia: Cure or Poisoin. *International Studies Program Working Paper 03-04*.

Martinez-Vazquez, J. (2024). A Long-term Perspective on the Fiscal Decentralization Revolution: Lessons and Future Challenges. *International Center for Public Policy Working Paper 24-16*.

Martinez-Vazquez, J. M., & Vaillancourt, F. (2006). Revenues and Expenditures in an Intergovernmental Framework. In R. Bird, & F. Vaillancourt (Eds.), *Perspectices on Fiscal Federalism.* Washington DC: The World Bank.

Martinez-Vazquez, J., & Civelek, Y. (2019). Subnational Government Debt Governance: Lessons from Non-Asian Emerging Economies. *International Center for Public Policy Working Paper 19-07*.

Martinez-Vazquez, J., & McNab, R. M. (2003). Fiscal Decentralization and Economic Growth. *World Development*, 1597-1616.

Martinez-Vazquez, J., & McNab, R. M. (2005). Fiscal Decentralization, Macrostability and Growth. *Andrew Young School of Policy Studies, Internaitonal Studies Program Working Paper No. 05-06*.

Martinez-Vazquez, J., & Timofeev, A. (2009). Decentralization Measures Revisited. *International Studies Program Working Paper 09-13*.

Martinez-Vazquez, J., & Timofeev, A. (2010). Choosing between centralized and decentralized models of tax administration. *International Journal of Public Administration, 33*(12-13), 601-619.

Martinez-Vazquez, J., & Vulovic, V. (2016). How Well Do Subnational Borrowing Regulations Work? *ADBI Working Paper Series No. 563*.

Martinez-Vazquez, J., Lago-Pen˜as, S., & Sacchi, A. (2016). Impact of Fiscal Decentralization: A Survey. *Journal of Economic Surveys*, 1-35.

Massetti, E., & Schakel, A. (2013). Ideology matters: Why decentralisation has a differentiated effect on regionalist parties' fortunes in Western democracies. *European Journal of Political Research, 52*, 797-821.

Massetti, E., & Schakel, A. (2017). Decentralisation Reforms and Regionalist Parties' Strength: Accomodation, Empowerment or Both? *Political Studies, 65*(2), 432-451.

McGarry, J., & O'Leary, B. (2009). Must Pluri-national Federations Fail? *Ethnopolitics, 8*(1), 2-25.

McKinnon, R. (1997). EMU as a Device for Collective Fiscal Retrenchment. *American Economic Review*, 227-229.

McLure, C., & Martinez-Vazquez, J. (2000). *The Assignment of Revenues and Expenditures in Intergovernmental Fiscal Relations.* Washington, DC: World Bank Institute.

Meguid, B. (2008). *Party competition between unequals: Strategies and electoral fortunes in Western Europe.* Cambridge: Cambridge University Press.

Melnyk, L., Sineviciene, L., Lyulyov, O., Pimonenko, T., & Dehtyarova, I. (2018). Fiscal Decentralization and Macroeconomic Stability: The Experience of Ukraine's Economy. *Problems and Perspectives in Management, 16*(1).

Mo, P. H. (2001). Corruption and Economic Growth. *Journal of Comparative Economics*, 66-79.

Molina, A. (2018). *Environmental pollution and fiscal decentralization. On the role of institutions.* Retrieved from https://lup.lub.lu.se/student-papers/search/publication/8945500

Monogan III, J., Konisky, D., & Woods, N. (2017). Gone with the wind: Federalism and strategic location of air pollution. *American Journal of Political Science*, 257-270.

Morgan, J. (2018). Political Decentralization and Party Decay in Latin America. *Latin American Research Review, 53*(1), 1-18.

Muñoz, J., & Tormos, R. (2015). Economic Expectations and Support for Secession in Catalonia: Between Causality and Rationalization. *European Political Science Review, 7*(2), 315-341.

Musgrave, R. (1959). *The Theory of Public Finance.* New York: McGraw-Hill.

Musgrave, R. (1969). Theories of fiscal federalism. *Public Finance*, 521-32.

Musgrave, R., & Musgrave, P. (1989). *Public Finance in Theory and Practice.* New York: McGraw-Hill.

Neudorfer, B., & Neudorfer, N. (2014). Decentralization and Political Corruption: Disaggregating Regional Authority. *Publius: The Journal of Federalism, 45*(1), 24-50.

Neyapati, B. (2004). Fiscal decentralization, central bank independence and inflation: a panel investigation. *Economic letters, 82*, 227-230.

Novi, C., Piacenza, M., Robone, S., & Turati, G. (2019). Does fiscal decentralization affect regional disparities in health? Quasi-experimental evidence from Italy. *Regional Science and Urban Economics*.

Nursini, N., & Tawakkal. (2019). Poverty alleviation in the context of fiscal decentralization in Indonesia. *Interdisciplinary approach to Economics and Sociology, 12*(1), 270-285.

Oates, W. (1972). *Fiscal Federalism.* Edward Elgar Pub.

Oates, W. (1990). Decentralization of the public sector: An overview. In R. Bennet (Ed.), *Decentralization, local governments, and markets* (pp. 43-58). Oxford University Press.

Oates, W. (1993). Fiscal decentralization and economic development. *National Tax Journal, 46*(2), 237-243.

Oates, W. (1997). On Environmental Federalism. *Virigina Law Review, 83*(7), 1321-1329.

Oates, W. (1999). An Essay on Fiscal Federalism. *Journal of Economic Literature, 37*(3), 1120-1149.

Okonkwo, O. N., & Godslove, E. K. (2015). Fiscal decentralization and Nigerian macroeconomic performance and economic stability. *International Journal of Economics and Finance, 7*(2).

Ozmen, A. (2014). Notes to the Concept of Decentralization. *European Scientific Journal, 10*(10).

Panizza, U. (1999). On the determinants of fiscal centralization: Theory and evidence. *Journal of Public Economics, 74*, 97-139.

Paschoalotto, M. A., Lopes, J. E., de Loiveira, P. H., & Harros, P. P. (2022). Performance of Subnational Governments in the COVID-19 Pandemic: An Analysis of the Public and Private Health Services in Brazil. *Brazilian Administration Review*.

Pauly, M. (1973). Income redistribution as a local public good. *Journal of Public Economics, 2*, 35-58.

Phan, C. T., Jain, V., Purnomo, E., Islam, M., Mughal, N., Guerrero, J., & Ullah, S. (2021). Controlling environmental pollutionl: dynamic role of fiscal decentralization in CO2 emission in Asian countries. *Environmental Science and Pollution Research*, 65150-65159.

Pietrovito, F., Pozzolo, A., Resce, G., & Sciala, A. (2023). Fiscal decentralization and income (re)distribution in OECD countries' regions. *Structural Change and Economic Dynamics, 67*, 69-81.

Plekhanov, A., & Singh, R. (2007). How Should Subnational Government Borrowing Be Regulated? Some Crosscountry Evidence. *IMF Staff Papers, 53*(3), 426-452.

Podesta, F. (2017). The economic impact of the Friuli-Venezia Giulia autonomy: a synthetic control analysis of asymmetric Italian federalism. *The Annals of Regional Science, 58*, 21-37.

Posner, D. (2004). The Political Salience of Cultural Difference: Why Chewas and Tumbukas Are Allies in Zambia and Adversaries in Malawi. *American Political Science Review, 98*(4), 529-545.

Prud'homme, R. (1995). The dangers of decentralization. *The World Bank Research Observer, 10*(2), 201-220.

Qian, Y., & Roland, G. (1998). Federalism and the Soft Budget Constraint. *American Economic Review, 88*(5), 1143-1162.

Qian, Y., & Weingast, B. (1997). Federalism as a Commitment to Preserving Market Incentives. *The Journal of Economic Perspectives, 11*(4), 83-92.

Qiao, Y., Martinez-Vazquez, J., & Xu, J. (2008). The trade-off between growth and equity in decentralization policy: China's experience. *Journal of Development Economics*, 112-128.

Que, W., Zhang, Y., & Liu, S. (2018). The spatial spillover effect of fiscal decentralization on local public provision: Mathematical application and empirical estimation. *Applied Mathematcis and Computation*, 416-429.

Ramirez, E. E., & Castillo, M. F. (2022). The Conflicts for the COVID-19 Pandemic Management in Mexico: An Analysis of Intergovernmental Relations. *Public Organization Review*.

Ramirez, J., Diaz, Y., & Bedoya, J. (2017). Property Tax Revenues and Multidimensional Poverty Reduction in Colombia: A Spatial Approach. *World Development, 94*, 406-421.

Rao, M. (2002). Poverty Alleviation under Fiscal Decentralization. In M. Rao, *Development, Poverty and Fiscal Policy. Decentralization of Institutions* (pp. 278-298). New Delhi: Oxford University Press.

Ricart-Hugeut, J., & Sellars, E. (2023). The Politics of Decentralization Level: Local and Regional Devolution as Substitutes. *World Politics, 75*(2), 353-389.

Rodden, J. (2002). The dilemma of fiscal federalism: Grants and fiscal performance around the world. *American Journal of Political Science, 46*(3), 670-687.

Rodden, J. (2004). Comparative Federalism and Decentralization: On Meaning and Measurement. *Comparative Politics, 36*(4), 481-500.

Rodden, J. (2006). *Hamilton's paradox: The promise and perils of fiscal federalism.* New York: Cambridge University Press.

Rode, M., Pitlik, H., & Mas, M. (2018). Does Fiscal Federalism Deter or Spur Secessionist Movements? Empirical Evidence from Europe. *Publius, 48*(2), 161-190.

Rodriguez-Pose, A., & Ezcurra, R. (2010). Does decentralization matter for regional disparities? A cross-country analysis. *Journal of Economic Geography, 10*(5), 619-644.

Rodríguez-Pose, A., & Gill, N. (2004). Is there a global link between regional disparities and devolution? *Environment and planning A: Economy and space, 36*(12), 2097-2117.

Rodríguez -Pose, A., & Vidal-Bover, M. (2023). Decentralisation, unfunded mandates and the regional response to the COVID-19 pandemic. *Regional Studies, 59*(1).

Roller, M., & Schmidheiny, K. (2016). Effective Tax Rates and Effective Progressivity in a Fiscally Decentralized Country. *CESifo Working Paper NO. 5834*.

Rompuy, P. (2020). Does subnational tax autonomy promote regional convergence? Evidence from OECD countries, 1995-2011. *Regional Studies*.

Rondinelli, D. A., Nellis, J. R., & Cheema, G. S. (1983). Decentralization in Developing Countries: A Review of Recent Experience. *World Bank Staff Working Papers Number 581*.

Sacchi, A., & Salotti, S. (2014a). The asymmetric nature of fiscal decentralization: theory and practice. *MPRA Paper 54506, University Library of Munich, Germany*.

Sacchi, A., & Salotti, S. (2014b). The effects of fiscal decentralization on Household Income Inequality: Some Empirical Evidence. *Spatial Economic Analysis, 9*(2), 202-222.

Safi, A., Wang, Q., & Wahab, S. (2022). Revisiting the nexus between fiscal decentralization and environment: evidence from fiscally decentralized economies . *Environmental Science and Pollution Reseaerch*, 58053-58064.

Salmon, P. (1987). *Decentralization as Incentive Scheme.* Institut de mathématiques économiques (IME).

Sambanis, N., & Milanovic, B. (2011). Explaining the demand for sovereignty. *WP 5888, Policy Research Working Paper*.

Sambanis, N., & Milanovic, B. (2014). Explaining regional autonomy differences in decentralized countries. *Comparatice Political Studies, 47*(13), 1830-1855.

Sanogo, T. (2019). Does fiscal decentralization enhance citizens' access to public services and reduce poverty? Evidence from Côte d'Ivoire municipalities in a conflict setting. *World Development, 113*, 204-221.

Saxena, S. (2022). *How to Manage Fiscal Risks from Subnational Governments.* International Monetary Fund.

Schneider, A. (2003). Decentralizatioin: Conceptualizatioin and Measurement. *Studies in Comparative International Development, 38*(3), 32-56.

Seabright, P. (1996). Accountability and decentralization in government: An incomplete contracts model. *European Economic Review*, 61-89.

Sepulveda, C., & Martinez-Vazquez, J. (2011). The consequences of fiscal decentralization on poverty and income inequality. *Environment and Planning C: Government and Policy*, 321-343.

Sevindik, I., Tosun, M. S., & Yilmaz, S. (2021). Local Response to the COVID-19 Pandemic: The Case of Indonesia. *Sustainability*.

Shah, A. (2004). Fiscal Decentralization in Developing and Transition Economics: Progress, Problems, and the Promise. *World Bank Policy Research Working Paper 3282*.

Shahzad, S., & Yasmin, B. (2016). Does Fiscal Decentralization Matter for Poverty and Income Inequality in Pakistan? *The Pakistan Development Review, 55*(4).

Shan, S., Ahmad, M., Tan, Z., Adebayo, T. S., Li, R., & Kirikkaleli, D. (2021). The role of energy prices and non-linear fiscal decentralization in limiting carbon emissions: Tracking environmental sustainability. *Energy*.

Sharma, C. (2025). Does fiscal federalism prevent or provoke secessionist conflicts? The Autonomy-Equalization Conundrum and the promise of concessionary federalism. *Political Science*.

Shenk, J. (2023). Does conflict experience affect participatory democracy after war? Evidence from Colombia. *Journal of Peace Research*, 985-1001.

Shi, Y., Chang, C., Jan, C., & Hao, Y. (2018). Does economic performance affect officials' turnover? Evidence from municipal government leaders in China. *Qual Quant*, 1873-1891.

Shleifer, A., & Vishny, R. W. (1993). Corruption. *The Quarterly Journal of Economics*, 599-617.

Shon, J., & Cho, Y. (2020). Fiscal Decentralization and Government Corruption: Evidence from U.S. States. *Public Integrity, 22*(2), 187-204.

Siburian, M. (2020). Fiscal decentralization and regional income inequality: evidence from Indonesia. *Applied Economics Letters, 27*(17), 1383-1386.

Siburian, M. (2022). The link between fiscal decentralization and poverty - Evidence from Indonesia. *Journal of Asian Economics*.

Siburian, M. (2024). Fiscal decentralization and corruption: a case of Indonesia. *Applied Economics Letters, 31*(1), 87-90.

Sigman, H. (2005). Transboundary spilloers and decentralizatoin of environmetnal policies. *Journal of Environmental Economics and Management*, 82-101.

Sima, M., Liang, P., & Qingjie, Z. (2023). The impact of fiscal decentralization on economic growth: A comparative analysis of selected African and OECD countries. *Heliyon*.

Singh, R., Bhattacharjee, S., & Nandy, A. (2024). Fiscal decentralization for the delivery of health and education in Indian states: An ongoing process is more desirable than a policy shift. *Journal of Policy Modeling, 46*, 254-271.

Smoke, P. (2014). Why theory and practice are different: The gap between principles and reality in subnational revenue systems. In *Taxation and Development: The Weakest Link?* (pp. 287-325). Northampton, MA: Edward Elgar Publishing.

Smoke, P. (2015). Rethinking Decentralization: Assessing challenges to a popular public sector reform. *Public Admin. Dev., 35*, 97-112.

Smoke, P. (2023). Fiscal Decentralization and Subnational Government Investment in Developing Countries: The Case for Increasing Subnational Borrowing and Commercial Debt. *International Center for Public Policy Working Paper 23-22*.

Smoke, P., & Cook, M. (2022). *Administrative Decentralization and Climate Change: Concepts, Experience, and Action.* Washington, D.C.: The World Bank.

Smoke, P., Alvarez, D. G., Munoz, A. F., & Radics, A. (2022). The Role of Subnational Governments in the COVID-19 Pandemic Response: Are there Opportunities for Intergovernmental Fiscal Reform in the Post-Pandemic World? *Inter-American Development Bank, Discussion Paper No. IDB-DP-953*.

Song, J., Geng, L., Fahad, S., & Liu, L. (2022). Fiscal decentralization and economic growth revisited: an empirical analysis of poverty governance. *Environmental Science and Pollution Research*, 28020-28030.

Sorens, J. (2012). *Secessionism: Identity, Interest, and Strategy.* McGill-Queen's University Press.

Sorens, J. (2015). Secession Risk and Fiscal Federalism. *Publius: The Journal of Federalism, 46*(1), 25-50.

Sorens, J. (2016). Secession Risk and Fiscal Federalism. *Publius: The Journal of Federalism, 46*(1), 25-50.

Sow, M., & Razafimahefa, I. (2018). Fiscal Decentralization and the Efficiency of Public Service Delivery. In J. Kim, & S. Dougherty (Eds.), *Fiscal Decentralization and Inclusive Growth.* OECD Fiscal Federalism Studies, OECD publishing, Paris/KIPF, Seol.

Stegarescu, D. (2005). Public Sector Decentralisation: Measurement Concepts and Recent International Trends. *Fiscal Studies, 26*(3), 301-333.

Stegarescu, D. (2009). The Effects of Economic and Political Integration on Fiscal Decentralization: Evidence from OECD Countries. *The Canadian Journal of Economics, 42*(2), 694-718.

Stein, E. (1999). Fiscal decentralization and government size in Latin America. *Journal of Applied Economics, 2*, 357-391.

Stossberg, S., Bartolini, D., & Blöchliger, H. (2016). Fiscal decentralisation and income inequality: Empirical evidence from OECD countries. *OECD Economics Department Working Papers No. 1331*.

Su, F., Li, M., & Tao, R. (2019). Transfer-Based Decentralization and Poverty Alleviation: Evidence from Quasi-Experiment in China. *Publius: The Journal of Federalism*, 694-718.

Sun, Y., & Razzaq, A. (2022). Composite fiscal decentralisation and green innovation: Imperative strategy for institutional reforms and sustainable development in OECD countries. *Sustainable Development*, 1-14.

Swianiewicz, P. (2004). Comparing International Experiences: Emerging Markets of Local Borrowing. In *Local Government Borrowing: Risks and Rewards* (pp. 389-422). Open Society Institute.

Talabis, D. A., Babierra, A. L., Buhat, C. A., Lutero, D. S., Quindala III, K. M., & Rabajanet, J. F. (2021). Local government responses for COVID-19 management in the Philippines. *BMC Public Health*.

Tanzi, V. (1996). Fiscal decentralization: A review of some efficiency and macroeconomic aspects. In M. Bruno, & B. Pleskovic (Eds.), *Annual World Bank conference on economic development* (pp. 539-567). World Bank.

Ter-Minassian, T., & Craig, J. (1997). Control of Subnational Government Borrowing. In T. Ter-Minassian (Ed.), *Fiscal Federalism in Theory and Practice.* Washington, DC: IMF.

Thornton, J. (2007). Fiscal Decentralization and Economic Growth Reconsidered. *Journal of Urban Economics, 61*, 64-70.

Tiebout, C. M. (1956). A Pure Theory of Local Expenditures. *Journal of Political Economy, 64*(5), 416-24.

Tranchant, J.-P. (2008). Fiscal decentralization, institutional quality and ethnic conflict: a panel data analysis, 1985-2001. *Conflict, Security and Development, 8*(4), 491-514.

Treisman, D. (2000). Decentralization and Inflation: Commitment, Collective Action, or Continuity. *The American Political Science Review, 94*(4), 837-857.

Treisman, D. (2006). Explaining Fiscal Decentralisation: Geography, Colonial History, Economic Development and Political Institutions. *Commonwealth & Comparative Politics, 44*(3), 289-325.

Treisman, D. (2007). *The Architecture of Government: Rethinking Political Decentralization.* Cambridge: Cambridge University Press.

Tselios, V., & Rodriguez-Pose, A. (2024). Can decentralization help address poverty and social exclusion in Europe? *Territory, Politicsl, Governance, 12*(8), 1134-1157.

Tselios, V., Rodríguez-Pose, A., Pike, A., Tomaney, J., & Torrisi, G. (2012). Income Inequality, Decentralisation, and Regional Development in Western Europe. *Environment and Planning A, 44*, 1278-1301.

UNCDF. (2021). *Performance-based Grant Systems: Concept and International Experience.* UNCDF.

Vaillancourt, F. (2013). The administrative and compliance costs of the property tax for individuals and businesses: evidence for Canada for 2007. *National Tax Association conference.*

Vegh, C., & Vuletin, G. (2016). Unsticking the flypaper effect using distortionary taxation. *NBER Working Paper Series 22304*.

Voigt, S., & Blume, L. (2012). The economic effects of federalism and decentralization—a cross-country assessment. *Public Choice, 151*(1/2), 229-254.

von Braun, J., & Grote, U. (2002). Does Decentralization Serve the Poor? In E. A. Tanzi, *Managing Fiscal Decentralization.* London: Routledge.

Ward, B. (2020). *The Impact of Medicaid Expansion on States' Budget.* The Commonwealth Fund.

Webb, S. (2004). Fiscal Responsibility Laws for Subnational Discipline: The Latin American Experience. *World Bank Policy Research Paper 3309*.

Weingast, B. (1995). The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development. *Journal of Law, Economics, & Organization, 11(1),* 1-31

Weingast, B. (2013). Second Generation Fiscal Federalism: Political Aspects of Decentralization and Economic Development. *World Development*.

Weingast, B. R., Shepsle, K. A., & Johnsen, W. (1981). The Political Economy of Benefits and Costs: A Neoclassical Approach to Distributive Politics. *Journal of Political Economy, 89*(4), 642-664.

Wimmer, A., Cederman, L., & Min, B. (2009). Ethnic politics and armed conflict. A configurational analysis of a new global dataset. *American Sociological Review, 74*(2), 316-337.

World Bank. (2024). *How to Measure Decentralization: A Summary of the Global Literature Review on Decentralization Measurement* . Washington, D.C.: World Bank.

Xie, D., Zou, H., & Davoodi, H. (1999). Fiscal Decentralization and Economic Growth in the United States. *Journal of Urban Economics, 45*(2), 228-239.

Xin, G., & Chen, J. (2022). Decentralized governance and collective action dilemma: Sub-national governments' responses to COVID-19 in China. *Public Administration and Development*.

Yaniv, R. (2014). Fiscal Decentralization - a Survey of the Empirical Literature. *Munich Personal RePEc Archive*.

Yilmaz, S., Vaillancourt, F., & Dafflon, B. (2012). State and Local Government Finance: Why it matters. In R. Ebel, & J. Peterson (Eds.), *The Oxford Handbook of State and Local Government Finance.* Oxford University Press.

Yu, J., Zhou, L.-A., & Zhu, G. (2016). Strategic interaction in political competition: Evidence from spatial effects across Chinese cities. *Regional Science and Urban Economics, 57*, 23-27.

Zhang, T., & Zou, H. (1998). Fiscal decentralization, public spending, and economic growth in China. *Journal of Public Economics*, 221-240.