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A Long-term Perspective on the Fiscal Decentralization Revolution: Lessons and Future Challenges

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Abstract

This chapter focuses on the challenges and unfinished agenda with fiscal decentralization. Taking stock of the current state of work on the different dimensions of fiscal decentralization, the emphasis is on what we still do not know, to discuss where the theory and practice of fiscal decentralization would need to go in the coming decades. The main dimensions of fiscal decentralization covered include: the determinants and measurement of the extent of fiscal decentralization and the state of comparative data availability; the impact of fiscal decentralization across important dimensions of the economy and society; the state of fiscal federalism theory and the possibility of advancing toward a “third generation model” of fiscal decentralization; standing issues regarding the vertical structure of government; the critical step of assigning functional responsibilities; the difficulty with achieving sufficient autonomy in revenue assignments; the ongoing quest for improved transfer design; and the standing issues with borrowing and achieving fiscal discipline at the subnational level.

Keywords: decentralization, intergovernmental relations, fiscal federalism

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I. Introduction

Many researchers and practitioners would agree on the term of “a silent revolution” to describe the extensive institutional change process of devolution of fiscal powers that has taken place around the world in both developing and developed countries to bring “government closer to the people.”¹ Decentralization reforms have been motivated for a variety of reasons that can be encapsulated into a more efficient and leaner public sector, leading to economic growth, increased welfare, and greater accountability and democratic representation at all levels of government.²

It has been a bumpy road most of the way in many of these countries undergoing decentralization, but the citizens of many countries around the world have benefited from a closer and more accountable government. The array of political and socio-economic issues affected by decentralization reform is wide, including efficient public service delivery, growth and regional development, poverty and income distribution, macroeconomic stability and fiscal sustainability, country unity, corruption, and political representation.

Since the seminal contributions in this field were made starting with Oates (1972), the practice of fiscal federalism across the world has changed dramatically. Thus, this is an opportune time to ask what updates and innovation in fiscal decentralization theory and policy may be needed and how to get around the logjams that have long held things up in many decentralized countries.

¹ Garman et al. (2001) related that over 80 percent of the seventy-five developing countries analyzed had been undergoing some decentralization of authority, while the index of regional authority developed by Hooghe et al. (2010) showed that 70 percent of developed countries had undergone decentralization reforms since 1950.

² Some decentralization reforms have been also designed to contain centrifugal forces, ethnic conflicts, or separatist movements, and to smooth out social and political tensions by means of allowing more local autonomy.

For sure some big challenges remain for achieving the full impact of fiscal decentralization. Some of these challenges include dealing with excessive vertical fragmentation of governments operating with an inefficient scale, low administrative capacity of subnational governments, unclear assignment of functional responsibilities, too little revenue autonomy and the presence of large vertical fiscal imbalances, inefficient transfer design, or the breaking of fiscal rules and short availability of subnational credit.

In this chapter I continue and expand on the discussion started in Bahl and Martinez-Vazquez (2022) on the challenges and unfinished agenda with fiscal decentralization. I take stock of the current state of work on fiscal decentralization with emphasis on what we still do not know, in a modest attempt to discuss where the theory and practice of fiscal decentralization would need to go in the coming decades. The rest of the paper is organized as follows. Section two begins with an enquiry on the determinants and measurement of the extent of fiscal decentralization and the unsatisfactory state of comparative data available. Section three explores the progress clarifying the impact of fiscal decentralization across many dimensions of the economy and society. Section four assesses the state of fiscal federalism theory and examines the possibility of advancing toward a “third generation model.” Section five reviews some important standing issues regarding the vertical structure of government, and section six reviews the critical step of assigning functional responsibilities. Section seven discusses the difficulty with achieving sufficient autonomy in revenue assignments, while section eight reviews the quest for improved transfer design. Section nine revisits the standing issues with borrowing and achieving fiscal discipline, and section ten concludes.

II. The Determinants, Extent, and Measurement of Fiscal Decentralization

Why the determinants matter

Why do countries decentralize, or what are the determinants of decentralization? This is an area that has received a great deal of attention and perhaps it is well settled. The key force that has received most attention is diversity or heterogeneity. The heterogeneity of preferences and needs is at the heart of Oates' (1972) decentralization theorem and are fully modelled in Panizza (1999) and Arzaghi and Henderson (2005). It can be expected that countries with greater internal heterogeneity would be more prone to implement devolution processes. Intuitively, internal heterogeneity tends to increase with country size,³ and size can also be relevant if the effectiveness of central policies diminishes with distance to the center because of spatial decay. Beyond country size, heterogeneity has been approximated by ethnic, religious or cultural fractionalization (Letelier, 2005; Jilek, 2018; Pickard, 2020) and by geographical fragmentation or complexity (measured as altitude variability) (Canavire-Bacarreza et al., 2017).⁴ Other variables with weaker links to heterogeneity have not consistently been found to be significant determinants of fiscal devolution across countries. For example, urbanization and population density has been found to have a mixed impact on fiscal devolution.⁵ Some researchers have also analyzed if decentralization has behaved as a "luxury good," with richer countries affording to have more complex public administration systems (Letelier, 2005; Bahl and Nath, 1986; and

³ The significance of country size has been verified in numerous studies, including Martinez-Vazquez and Timofeev (2009), Bojanic (2020), Delgado (2021).

⁴ Here the focus is the effect of physical geography, often referred as "first nature" geography, in contrast to the "second nature" geography that accounts for agglomeration effects of economic concentration over physical space. The role of geography in modern economic thought has been rising since the 1980s when historians such as Jones (1981) and Crosby (1986) found geography and climate to be of central importance in the economic success of Europe, and Krugman and Venables (1995) added their model on the "new geography" based on the role of agglomeration effects.

⁵ With a negative impact (Delgado, 2021) or a positive one in others (Wasylenko, 1987).

Jilek, 2018). It is also generally accepted that the actual levels of decentralization may respond to historical factors such as the historical origin of the legal and political institutional framework (Jilek, 2018).

Understanding the determinants of fiscal decentralization has become important for disentangling and understanding the role it may have in many areas of economic policy such as economic growth, income redistribution and poverty, anticorruption, and others. A common problem shared by all empirical studies attempting to find impact has been the need to properly address the potential for endogeneity of decentralization and the dependent variables of interest (e.g., economic growth, etc.) by using a proper instrumental variable for decentralization.⁶ In this sense, the geography-based determinants (geographical fragmentation and size) have clear exogeneity credentials, since economic outcomes do not cause geography. This has allowed significant progress in the identification of the impact or role fiscal decentralization has played on the economy and institutions, as we will review below.⁷ On the other hand, the effect of geography on decentralization may be expected to be affected by technological change, such as improvements in physical infrastructure or communications (Lora et al., 2003). However, Canavire-Bacarreza et al. (2017) find that while the development of infrastructure (in transportation, communications, etc.) tends to reduce the effect of geography on decentralization, this effect is rather small and often statistically insignificant, meaning that the raw impact of geography appears to survive over time.

⁶ For example, while fiscal decentralization may affect economic growth, governments could resort to decentralization reforms to increase their rate of growth, fiscal discipline, or regional economic disparities, creating reverse causation. More generally, endogeneity could arise due to the simultaneous effects of omitted variables on both decentralization and some of the seemingly exogenous variables.

⁷ To note, what makes geography a good external instrument—that is being fixed by nature—it also rules out its use in certain econometric approaches such as panel estimation using fixed effects.

External shocks and the level of decentralization

One question that has accompanied the substantial worldwide trend toward more decentralized governance over the last several decades is whether decentralization needs to be rethought and recalibrated in the presence of economic crises and extreme events, such as natural disasters associated with climate change or health crises such as the recent pandemic. In fact, there has been a great deal of recent research investigating the question of how these shocks have affected the level of decentralization across countries and for how long.

The present level of decentralization in any country can be thought as the result of the interaction of a set of conventional determinants including size, geography, or ethnic and linguistic fragmentation, as well as other factors ranging from history and political forces to the level of income. All these factors tend to change slowly or not at all, and therefore we can think of them in combination yielding a long-term trend and a certain level of path dependence in the decentralization level in each country (Campbell, 2004). On the other hand, this trend could be disrupted by exogenous shocks, which may or may not trigger permanent institutional changes in the level of decentralization.

What is the empirical evidence on whether economic crises and extreme events affect the design and level decentralization?⁸ Canavire-Bacarreza et al. (2024), Bos (2012), Arnold et al. (2020) and Cadaval-Sampedro et al. (2023) find evidence of long-terms lasting expenditure recentralization following economic crises,⁹ being more pronounced in OECD countries and

⁸ Typically, several broader measures of decentralization such as by the vertical share of expenditures or revenues and the RAI (Regional Authority Index) are used. The issues with these measures are discussed further below.

⁹ These changes are beyond the expected shorter-term changes in central public spending due to automatic stabilizers and to their management of discretionary spending through better access to borrowing than subnational governments.

unitary countries (by comparison to federal countries). However, in the case of domestic borrowing crises, the effect is further revenue decentralization, maybe to empower sub-national governments to avoid similar crises (Canavire-Bacarreza et al., 2024).¹⁰ Natural disasters also lead to long-lasting decreases in decentralization, more pronounced in non-OECD countries (Cadaval-Sampedro et al., 2023). Internal armed conflicts boost decentralization across countries in the longer term (Cadaval-Sampedro et al., 2023), while external armed conflicts lead to recentralization (Serkan and Yilmaz, 2008). The discovery of natural resources has also been found to lead to centralization pressures, but less pronounced in democratic settings (Bhattacharyya et al., 2017).

These long-term effects of crises and shocks suggest the need to consider certain crises and shocks as part of the conventional lists of the determinants of fiscal decentralization. However, a common caveat to this empirical literature is the multidimensionality of fiscal decentralization and the empirical difficulties of measuring the decentralization level in a comprehensive way, including both quantitative and qualitative aspects of multilevel governance. These issues are considered next.

The complexity of measuring the level of decentralization

Decentralization is about the empowerment of the people through the empowerment of their local and regional governments representing them (Bahl and Bird, 2018). This empowerment has at least three main dimensions: fiscal, administrative, and political (Rodden, 2004). Each of these dimensions involves qualitative aspects of autonomy: discretion on revenue and expenditure

¹⁰ These latter authors also find an alignment of the impact along political and fiscal dimensions of subnational autonomy.

decisions, policy and managerial autonomy, and independence on assuming government powers. And each of these three main dimensions in turn have a multitude of different attributes.

The challenges involve data availability, their quality, and conceptual issues. In practice, how decentralization is defined and measured can result in widely differing empirical results (Liu et al., 2012; Voigt and Blume, 2012). Given this complexity it is not feasible to construct an index fully capturing the different aspects of fiscal decentralization. It is much preferable to identify them separately (Martinez-Vazquez and Timofeev, 2010b; Blochliger, 2015).¹¹

The still most-used data on fiscal decentralization is likely the IMF's Government Finance Statistics (GFS). The GFS data have been published since 1986 for 75 countries, initially on a cash-basis, and changed to accrual-basis in 2001. A common criticism of the GFS dataset is that it does not reflect the fiscal autonomy of the subnational governments to generate revenues or to decide how to spend these revenues. In that sense, the most often used measure of fiscal decentralization based on these data—the subnational government share of total government expenditures—is quite incomplete. Other issues with this dataset include the lack of detail on intergovernmental transfers, spotty reporting on local governments, or reporting shared revenues as own subnational revenues. The OECD fiscal decentralization data has made significant progress on reporting subnational autonomy on the revenue side (OECD, 1999; Blöchliger and Nettley, 2015). However, these data are only available for 38 countries from 1995 to 2018 (OECD, 2020).

There have been several notorious efforts to develop comprehensive datasets of fiscal decentralization. Ivanyna and Shah (2014) constructed an aggregate decentralization index,

¹¹ See Poniatowicz et al. (2024) from a recent attempt to simultaneously measure the degree of fiscal, administrative, and political decentralization across OECD countries.

which accounts for several aspects of fiscal and administrative autonomy; however, their data are only available for the mid-2000s and have not been updated. Baskaran and Feld (2013) developed time series data for OECD countries. Other composite indices of decentralization developed by Stegarescu (2005), Martinez-Vazquez and Timofeev (2009), and Gu (2012) shared the main problem of lack of continuity, and more importantly, the fact that no single composite can capture all the relevant dimensions of decentralization, thus leading to a loss of important information.

The most significant development in recent years in the measurement of fiscal decentralization is the Regional Authority Index (RAI) developed by Hooghe et al. (2016) initially covering 96 countries from 1950, and it continues to be updated. This dataset incorporates the multidimensional aspect of decentralization at the regional level and covers many political, fiscal, and institutional aspects of decentralization. The RAI builds information around two main concepts: self-rule and shared rule. Self-rule measures the capacity of the regional government to function autonomously. It evaluates self-rule on institutional depth, policy scope, fiscal autonomy, borrowing autonomy, and representation. Shared rule evaluates the co-dependence of regional governments to determine national decisions, and considers law making, executive control, fiscal control, borrowing control, and constitutional reform. Regional governments are scored on these dimensions, and the scores are added into two composite scores for self-rule and shared rule. Beyond the relative arbitrariness involved in adding the scores, an important issue with the RAI is that it does not capture the local level of government. In this regard, the Local Autonomy Index (LAI) developed by Ladner et al. (2015) covers seven dimensions of local autonomy, providing greater weights to organizational autonomy, political discretion, and fiscal autonomy. However, the LAI is limited to 39 European countries from 1990 to 2014.

A lot of the data efforts have been focused on fiscal decentralization and much less so political decentralization. Basic information has been available on whether a country is a federation or a unitary state and whether sub-national officials are elected or appointed (Fan et al., 2009). More recently, Hankla et al. (2019) have collected data on the different degrees of democratic decentralization and national party integration for 135 countries from 1975 to 2019, and Coppedge et al. (2021) developed the V-Dem dataset offering information on the extent to which subnational governments (local and regional) are able to operate without restrictions from unelected actors, covering 202 countries from 1989 to 2020.

Significant progress has been made in broadening the definition of fiscal decentralization, but the results still fall short of a data set and indicators that incorporate the multidimensional aspect of fiscal, administrative and political decentralization at the regional and local levels. There is much work to be done here. Bahl and Martinez-Vazquez (2022), echoing earlier discussion by Ebel and Yilmaz (2003), argue that responsibility for developing and managing a decentralization data set fulfilling the conditions described above would need to be with an international agency that has a mandate to encourage best fiscal practice and monitor the finances of governments, and that a joint activity of the World Bank and the IMF would seem to be the best way to establish this database.

III. Progress Clarifying the Impact of Fiscal Decentralization

Decentralization reform has been adopted or enhanced in many countries in recent decades with the promise of many benefits, from greater efficiency and regional equity to promoting better governance and political stability. But has it actually delivered?

The fundamentals: Greater efficiency and accountability

As stated in Oates' (1972) decentralization theorem, given some conditions (mainly, absence of externalities and economies of scale), decentralized governance can achieve greater levels of efficiency in the allocation of public resources. This caters to the main driver of decentralization, the presence of heterogeneity in preferences and needs. This greater efficiency in public service provision can be enhanced through the mobility and sorting of the population in decentralized governments (Tiebout, 1956). *Testing of the Tiebout model has been an intrinsic, fundamental part of fiscal federalism in the United States* (Fischel, 2006), although not so in many other developed and developing countries around the world that have undergone decentralization processes. Perhaps the reason has been much less pronounced levels of households' geographical mobility and, *although an enhancer, mobility and household sorting* for decentralization to yield greater efficiency in public resource allocation.

In fact, it could be argued that a heterogeneous delivery of services achieved by any decentralized expenditure scheme could also be implemented by a centralized government. This has been interpreted to mean that the efficiency argument under decentralization generally requires some additional assumptions. A common accepted assumption is that subnational governments are either more efficient at collecting information about preferences or better able to get local constituents to reveal such information (Tanzi, 2000; Lockwood, 2002; and Besley and Coates, 2003). Many other analysts have argued that accountability plays a key role for efficient delivery and that decentralization is an optimal way to create incentives for politicians to pay attention to differences in voters preferences optimizing the provision of public goods (Seabright, 1996). Politicians would be willing to modify their objectives to satisfy preferences of their constituencies at the local level, since that would help them in re-elections. However,

there are additional assumptions that could be required for decentralization to yield greater accountability. In particular, it has been well accepted among decentralization experts that the importance of tax revenue autonomy in fiscal decentralization design lies precisely in fomenting greater accountability by subnational government officials.

To date perhaps the most significant development is that although a very large empirical literature has developed testing the derivative implications of greater efficiency, information, and accountability in faster economic growth, and many other macro dimensions and governance quality, such as the presence of corruption, less research has been conducted on the presence of those fundamentals. Although the claims of the greater efficiency, better information, and greater accountability of decentralized systems are routinely made in the fiscal decentralization literature, those claims have not been solidly backed by sound empirical findings, perhaps except for efficiency. There is much more work to be done regarding accountability and information issues (Boadway and Shah, 2009; Bahl and Martinez-Vazquez, 2022).¹²

On the efficiency dimension, as noted above, Oates' (1972) theorem predicts a greater allocative efficiency of decentralized service delivery, but it is mute about production efficiency except for excluding the presence of economies of scale; that is, whether decentralized delivery can minimize production costs. Strict testing for allocative efficiency would require previous knowledge of voters' preferences, but that information is not generally available. Thus, the empirical tests have been indirect by either analyzing the quality and quantity of service

¹² To note, using opinion surveys, a growing number of studies find increased citizen satisfaction with decentralized delivery of public services (Diaz-Serrano and Rodríguez-Pose, 2015) and trust in government-related institutions (Ligthart and van Oudheusden, 2015).

outcomes, the expenditure composition of subnational budgets, or the opinion surveys of voters regarding decentralized versus centralized service delivery.

Because education and health are among the most important types of decentralized services (OECD, 2013), a lot of the testing has focused on those two services having measurable outcomes. The overwhelming majority of empirical studies find that positive effects of decentralization on education outcomes—for example, Faguet (2004) for Bolivia and Faguet and Sánchez (2014) for Colombia. The findings for health services also show the virtuous effects of decentralization, although generally less robust; for example, in OECD countries (Jiménez-Rubio, 2011a,b).

An important way in which government accountability may be promoted in decentralized settings is through yardstick competition (Besley and Case, 1995); imperfectly informed local residents may use information on government performance in nearby jurisdictions as a yardstick or benchmark to evaluate their own government's performance (tax burdens, quality of services, etc.), and this may lead local officials to closely monitor their neighboring jurisdictions. There is solid supporting empirical evidence of mimicking among neighboring jurisdiction (e.g., Heyndels and Vuchelen, 1998; Solé-Ollé, 2003; Allers and Elhorst, 2005), and that voters use information from neighboring jurisdictions to decide whether to re-elect incumbent politicians (e.g., Revelli, 2003; Vermeir and Heyndels, 2006; Bosch and Solé-Ollé, 2007).

In terms of expenditure composition, a common finding is that decentralization leads to relatively higher spending on social sectors, such as education and health, with respect to other functions (Arze et al., 2016). In the case of infrastructure, fiscal decentralization imposes significant intergovernmental coordination challenges regarding planning, regulation, spending, financing, and especially maintenance. However, the most common finding is that

decentralization yields better quality, lower costs, and perhaps increased spending on infrastructure (Frank and Martinez-Vazquez, 2015).

The greater impact: How much design matters

The large popularity and rapid spread of fiscal decentralization processes across developing and developed countries has led to policymakers and researchers to ask whether decentralizing could support, or instead be a hindrance to, other important economic goals in the policy agenda of these countries such as faster economic growth, better income distribution and lower poverty, greater macroeconomic stability, or improved governance with lower rates of corruption. A large literature has developed identifying potential theoretical linkages and empirically testing the statistical significance of those relationships.

Most of this research on the impact of fiscal decentralization has been based on panel data across developed and developing countries and less on country case studies. The quality and reliability of research outcomes have been somewhat compromised, especially at the early stages, by the measurement and data availability on fiscal decentralizations, as just discussed above. However, more recent studies have generally overcome these issues by using multiple measures of decentralization, including the RAI. Another significant handicap, again especially with earlier studies, affecting the quality and reliability of research outcomes was the presence of endogeneity of fiscal decentralization with outcomes of interest. For example, decentralization may help economic growth, but countries may embark on deeper decentralization reforms seeking to bring more economic growth. This issue has been sufficiently addressed in more recent work by using appropriate instrumental variables, such as country size or the geographic fragmentation index (Canavire-Bacarreza et al. 2017).

Thus, after a long period of often conflicting research outcomes raising more questions than providing answers, a general optimistic picture has been emerging that across many dimensions of the economy and governance, well-designed fiscal decentralization has been working as positive force in helping achieve better outcomes. The quality of decentralization design is paramount. This is important to emphasize because many decentralized systems still suffer from incompleteness in important dimensions. For example, where large vertical fiscal imbalances and lack of subnational revenue autonomy exist, and that is a very common problem, as discussed further below, final outcomes cannot be expected to turn out to be positive ones. In the following paragraphs, we review some of the most recent empirical evidence across selected dimensions based on previous surveys (Bahl and Bird, 2018; Martinez-Vazquez et al., 2017; and Boadway and Shah, 2009).

Economic growth: The presumption that decentralization may have a positive impact on economic growth is based on the dynamic reinterpretation of the static proposition that decentralization enhances economic efficiency (Oates, 1993). In addition, there may be other indirect effects through the positive impact of decentralization on other socio-economic variables, such as macro stability and governance quality which also positively affect economic growth (Martinez-Vazquez and McNab, 2003). This is perhaps the topic on the potential impact of decentralization that has received more attention in empirical literature. Early on the findings were mixed but preponderantly showing a positive effect (e.g., Gemmell et al., 2013).

Nevertheless, there are good substantial reasons to expect some diversity of results including difficult to capture jurisdictional heterogeneity, political and administrative dimensions not being properly considered, or even accounting for local business climate (Filippetti and Sacchi, 2016; Sobel et al., 2013). There are also statistical reasons, such as the data and estimation techniques

used in the different studies. In this latter category, a common problem of the earlier literature was to ignore the potential endogeneity of fiscal decentralization with economic growth. In a recent paper, Canavire-Bacarreza et al. (2020) attempt to settle this issue by using the “geographic fragmentation index” (GFI) and country size as instrumental variables, which are strong and consistent instruments for fiscal decentralization, and find robust results for the positive impact of decentralization on economic growth.

Government size: This question on the impact of decentralization on governments size goes back to Brennan and Buchanan’s (1980) Leviathan hypothesis, in which fiscal competition within decentralized systems would cause governments to hold down their tax and expenditure budgets. Others have argued the opposite because of generally increased governance costs. Empirically, some studies have found of smaller government size (e.g., Rodden, 2003), but others have not. It turns out that this is an area where decentralization design is paramount. Higher revenue decentralization, making subnational governments more responsible for their own financing, generally leads to smaller size of the whole public sector; however, simply higher expenditure decentralization leads to larger government size (Golem, 2010). Governments’ political ideology, not surprisingly, also seems to play a role, with left-wing administrations leading to increased public spending (Baskaran, 2011). If one views size by the level of public employment, most studies (e.g., Martinez-Vazquez and Yao, 2009) find that decentralization generally leads to increases in total public employment. However, these findings do not necessarily mean that decentralization is more inefficient than centralization. These changes may simply be responding to a change in the basket of services desired by voters (or budget composition, as we saw above) that use more labor-intensive production technologies (such as education and health).

Macro stability and fiscal sustainability: There has been a longstanding debate on whether fiscally decentralized countries are inherently more economically unstable. The fiscal federalism orthodoxy from Musgrave (1959) and Oates (1972) reserves macro stabilization policy as an exclusive responsibility of central/federal governments, implying, at least indirectly, that fiscally decentralized systems could weaken the ability of central authorities to attain macro stability.¹³ And indeed, it has been shown that decentralized systems can be more exposed to soft budget constraints issues, borrowing abuses, and bailouts, or common pool and moral hazard problems (e.g., Goodspeed, 2017; Rodden et al., 2003). These views were dominant in the policy advice of international institutions, such as the IMF and the World Bank for many years and were expanded on by several influential contributions (Prud'homme, 1995; Tanzi, 2006).¹⁴

However, those early fears about the dangers of fiscal decentralization were not backed by robust empirical evidence (Roden, 2002; Baskaran, 2010; Presbitero et al., 2014; Bartolini et al., 2017). Indeed, a consensus has been building up that the impact depends heavily on design; particularly decentralization systems that incorporate sufficient subnational revenue autonomy (absence of vertical imbalances) and strong fiscal rules regarding sub-national deficit and borrowing authority, can contribute to the fiscal stability of a country. As an example, Lago-Peñas et al. (2020) using a panel of countries from 1995 to 2014, which covers both a boom period of worldwide economic growth and a severe bust stage of the Great Recession, find that higher levels of fiscal decentralization have a beneficiary effect on macro-fiscal performance, but that positive impact erodes rapidly especially with the level of vertical fiscal imbalance (lack of subnational revenue autonomy), and to a lesser extent in the absence of subnational borrowing

¹³ To note, many authors have argued in different ways that devolving some functions for macroeconomic policy to sub-national governments could promote stability (e.g., Gramlich 1993; Shah, 1994; Rodden and Wibbels, 2002).

¹⁴ McLure (1995) minimized those claims.

and other fiscal rules.¹⁵ On more concrete dimensions of macro stability, the impact of fiscal decentralization on the level of inflation appears to be benign when subnational governments get adequate tax autonomy (Martinez-Vazquez and McNab, 2003; Baskaran, 2012), and higher levels of decentralization also reduce the level of structural (as opposed to cyclical) unemployment (Akalbeo et al., 2023).

Here again we see the importance of decentralization design, and particularly the role of adequate subnational revenue autonomy. The presence of high vertical fiscal imbalances (VFI) undermines fiscal discipline by motivating local governments to further expand their expenditures (e.g., Stein, 1999; Jin and Zou, 2002), by lowering tax effort (e.g., Jin et al., 2017), and consequently, leading to larger deficits (e.g., de Mello, 2000; Eyraud and Lusinyan, 2013).

Income distribution, poverty, and regional disparities: Many countries are (or have been) simultaneously implementing policies aiming to reduce income inequality and poverty, and at the same time they have been pursuing decentralization reforms; thus, it is important to understand how these two policy processes interact with each other and their compatibility (e.g., Galasso and Ravallion, 2005). Fiscal decentralization may affect income distribution and poverty directly and indirectly. For the latter, there are a myriad ways through which it may take place, for example, the impact of decentralization on growth, macro stability, size and quality of government, and so on. Directly, fiscal decentralization can affect income distribution and poverty by how, for example, it modifies expenditure composition.¹⁶ The benefits of local public

¹⁵ Ter-Minassian (2007) pioneered the systematic study of subnational borrowing and fiscal rules, but only a few empirical works have examined their effectiveness, generally obtaining mixed results. (Rodden, 2002; de Mello, 2005; Foremny, 2014; Martinez-Vazquez and Vulovic, 2017).

¹⁶ We have seen above that, for example, that fiscal decentralization leads to higher shares of some welfare spending programs (i.e., basic healthcare and primary schools), which may be assumed to be progressive (Arze del Granado et al., 2005).

services might be pro- poor because local governments can better identify the targets of opportunity (families in need, slum upgrading, and so on) and because they work to increase access to essential services such as water and sewer, education, and health.

On the empirical work looking for a direct link with income distribution, Von Braun and Grote (2002), Lindaman and Thurmaier (2002), Sepúlveda and Martínez-Vázquez (2011) and others find that fiscal decentralization has a positive effect on the Gini coefficient, especially when the relative size of the government sector in the economy is large and the quality of governance index is high.¹⁷ As for the impact of decentralization on poverty, the empirical evidence is a bit more mixed. For example, Crook and Manor (1998), Crook and Sverrisson (2001), Galasso and Ravallion (2005), Bardhan and Mookherjee (2003) and Sepúlveda and Martínez-Vázquez (2011) find positive reductions in poverty, while West and Wong (1995) and Ravallion (1999) observe lower public spending in poor areas, which can lead to increases in poverty levels.

Other studies have examined the links between decentralization and regional economic disparities. A priori, decentralization may enhance disparities reflecting differences in institutional capacities and socio-economic endowments across regions (Zhang, 2006), or the lesser political voice of poorer regions (Rodríguez-Pose and Gill, 2005; Besley and Ghatak, 2003).¹⁸ But decentralization may reduce disparities because of higher transparency and strong fiscal equalization system (Béland and Lecours, 2010). Finally, numerous empirical studies have found a general reduction in territorial disparities (Shankar and Shah, 2003; Rodríguez-Pose and

¹⁷ But there are exceptions, for example Sacchi and Salotti (2014a).

¹⁸ Tax decentralization combined with low levels of central equalization transfers can lead to enlarged inequalities in citizens' access to public service and levels of economic development.

Gill, 2005 among many others, including country case studies).¹⁹ No surprise, here again decentralization design matters. The positive effects tend to depend on the presence of solid fiscal redistribution systems and the quality of governance institutions (Lessman, 2012; Kyriacou et al., 2013), and also the country's wealth and how large existing disparities are to begin with.²⁰

Corruption, shadow economy, social capital and other governance issues: The level of public sector corruption is generally seen as a main indicator of the quality of governance. What is the impact of decentralization on corruption? This question has attracted a great deal of attention in the fiscal federalism literature over the past several decades. A priori, decentralization may reduce corruption because of enhanced accountability and competition among local governments (Weingast, 1995) or because it yields higher levels of information and transparency (Seabright, 1996; Boadway and Shah, 2009).²¹ On the other hand, decentralization may weaken monitoring and audit mechanisms (Tanzi, 1995; Prud'homme, 1995), or corruption may be more likely by the simple arithmetic that there will be a larger number of officials exposed to clientelist opportunities and interest group capture by local elites (Shah, 1999; Bardhan and Mookherjee, 2000).

Remarkably, by far the dominant findings in the empirical literature is that decentralization generally lessens corruption (Fisman and Gatti, 2002; Arikian, 2004; Ivanyna and Shah, 2011; Altunbas and Thornton, 2012). In a related matter, and given those findings about corruption, it

¹⁹ One notable exception is the case of China, where for some time central authorities would have appeared to trade off regional equality for faster economic growth (Qiao et al., 2008).

²⁰ Countries can also introduce asymmetric systems recognizing the special needs of some poorer regions (Bird and Ebel, 2007).

²¹ Political institutions may also matter. For example, Shrestha et al. (2022) find that corruption in decentralized systems is lower when party institutions themselves are decentralized from national control, thus putting the decision to nominate and elect local leaders in the hands of local electors.

is easier to understand the also very robust empirical findings that decentralization significantly shrinks the size of the shadow economy (Buehn et al., 2013; Dell'Anno and Teobaldelli, 2015).

Several researchers have focused on the relationship between fiscal decentralization and “social capital.” For example, Lago and Lago-Peñas (2010) find that decentralization encourages more collective action; they also find that those living in decentralized countries are more trustful of political institutions. In a similar vein, de Mello (2004) finds that citizens in decentralized countries are more pro-voice than those living in centralized countries. On the other hand, concerning tax morale, the empirical evidence provided by Gütz et al. (2005) and Lago-Peñas and Lago-Peñas (2010b) shows that people’s propensity to pay taxes, especially of those in relatively richer regions, is lower in decentralized systems when the system implements a strong interregional fiscal equalization program.

Decentralization has also been found to have not so positive effects on some other aspects of general governance. For example, Colombo and Martinez-Vazquez (2019) examine the impact of fiscal decentralization on both public investment in innovation and the intensity of basic research, which are subject to interregional knowledge spillovers. They find that decentralization leads to a lower level of public spending on innovation, and to a lower share of basic research in government R&D budget. This means that fiscal decentralization should be accompanied by measures to compensate for the otherwise potential decreases in innovation spending.

Impact on political institutions and outcomes: Researchers also have studied the potential impact of decentralization on some important dimensions of politics. One issue is whether granting more power to subnational governments would contribute not only to increased turnout in subnational elections, but also lower participation in national elections. Blais et al. (2011) find no hard evidence supporting those conclusions after using a large panel of countries for over three

decades. A second issue studied is whether decentralization affects the degree of the political party system nationalization—which measures the extent to which parties compete with similar strength across subnational geographic units. Except for a few country instances, Lago-Peñas and Lago-Peñas (2011) find no robust relationships between decentralization and the nationalization of party systems. One last issue has been about the potential role played by decentralization, including asymmetric models, as remedies to avoid the breakup of nations (Alesina and Spolaore, 1997; Martinez-Vazquez, 2007). The available empirical evidence again does not provide strong support for this conjecture; in fact, markedly asymmetric regional treatments could further fan separatist impetus and alienate those being marginalized (Kymlicka, 1998; Curtice, 2006; Bird and Ebel). Given the increasing pressure for asymmetric arrangements in fiscal federalism across many countries, this is an area that deserves considerably more research in the future.

IV. Fiscal Federalism Theory: Advancing toward a Third-generation Model?

The original theory of fiscal federalism and intergovernmental fiscal relations that became known as First Generation Fiscal Federalism (FGFF) is based on the seminal contributions of Tiebout (1956), Musgrave (1959), Oates (1972), and Olson (1969), among others. The case for decentralization is based on the principle that the devolution of tax and expenditure authority yields greater public sector efficiency. This was formalized in Oates' (1972) decentralization theorem, which states that in the absence of large economies of scale and externalities, and the presence of diverse preferences and needs, the provision of public services by a decentralized government structure will lead to greater efficiency and increased citizen welfare. The intuition is that subnational governments can exploit their information advantages and greater flexibility in service delivery to better satisfy citizens' needs and preferences. This theoretical model has

been extensively expanded on by numerous analysts in the different aspects of decentralization design, and it has been applied in decentralization reforms over many decades across the world with the support of multilateral international organizations, bilateral donors, and other policy advisers.

The Second Generation Fiscal Federalism (SGFF) model (Weingast, 1995, 2007, 2009) represents an important extension of the classical FGFF. The most radical departure is that while FGFF studies the performance of decentralization under the assumption of benevolent social planners, the SGFF, borrowing from social choice theory (Brennan and Buchanan, 1980) assumes government officials are selfish, and their behavior is in response to the fiscal and political incentives they face. Understanding those incentives and responses may help explain the reality of the country being analyzed, what is feasible, and why reforms may not yield the expected results. The design of tax assignments and transfers can produce different fiscal incentives for subnational officials, for example leading to soft budget constraint issues, lack of fiscal discipline and low tax efforts. The SGFF model also highlights the impact of political incentives, as in the case of the “tragic brilliance mechanism” where central governments keep centralized control by basically only supporting subnational governments of the same political color and hurting the rest, and the importance of paying attention to the administrative capacity of subnational governments, if decentralization is to succeed. In addition, local elites may have incentives to sabotage decentralization to preserve the status quo or use their new resources and powers to increase corruption and rents. In short, even though SGFF does not significantly advance the design agenda for fiscal decentralization, it does bring out the explicit need to consider the role of incentives and other behavioral issues not only in the design, but also in in or understanding of the performance of decentralized systems.

A large second generation literature has developed highlighting political and fiscal institutions working under imperfect information and subnational officials pursuing their own objectives, which are distinct from that of the “society” as a whole (Oates, 2005). For example, Seabright (1996) views local elections as incomplete contracts where some information is not verifiable. Limiting government size through competition might come at the price of starting a “race to the bottom” with slashed taxes and service provision levels, leading to an inefficient provision of public goods (Wilson, 1986; Zodrow and Mieszkowski, 1986).

Where do we stand at the present time in the theory of decentralization? While it is widely recognized that decentralized governance has three main dimensions—fiscal, administrative and political—and that all three play important interdependent roles in bringing desired outcomes, in truth we still lack a unified model that brings together those three dimensions exploiting their relatedness and interconnections. Unfortunately, research has continued to be in silos.

For example, most of the literature on fiscal decentralization assumes that there is enough or adequate administrative capacity. But in reality that is not the case in many situations and countries. And when the lack of administrative capacity is identified as an issue, as is the case in the SGFF, the solution is to simply call for training and capacity building by central authorities, with little or no explanation for how the decentralization design would need to be adapted under those conditions.²²

There has also been little integration of political decentralization with fiscal and administrative decentralization. However, some recent studies have shown the significant potential of

²² In practice some countries like Peru or Northern Macedonia have undergone decentralization reforms in the last two decades using a “graduation” system by allowing full decentralization powers to be exercised by only those jurisdictions that demonstrated adequate administrative capacity. But overtime that conditionality was abandoned for political and other reasons.

integrating in a more comprehensive model both political and fiscal decentralization institutions. For example, Hankla et al. (2019) and Ponce-Rodriguez et al. (2018, 2020) explore how political party structures can condition the impact of decentralization in democracies. Specifically, they study the interaction of two political institutions such as democratic (de)centralization (whether a country has fiscally autonomous and elected local governments) and political party (non)integration (whether power over local party leaders flows upwards through party institutions,²³ for example by controlling the nomination of local candidates), and how the presence of both party integration and democratic decentralization allows building a “strong decentralization theorem”—expanding on Oates (1972)—where the decentralized provision of public services dominate centralized provision even in the presence of inter-jurisdictional externalities.²⁴

Some other contributions have been made highlighting the importance of political institutions in shaping fiscal decentralization outcomes but have stopped short of providing an integrated model. For example, Besley and Coate (2003) show that Oates’ decentralization theorem may not be necessarily compatible with the electoral incentives of local politicians; Lockwood (2008) studies whether the decentralization theorem holds when collective choices are made by majority rule and lobbying; Bordignon et al. (2008) look at the effects of lobbying and greedy officials on the efficient provision of local services.

²³ Other authors have highlighted in the past the relevance of political party integration. Riker (1964) saw decentralized parties as the driver of democratic decentralization and protector of federalism; Wibbels (2005) argued that the presence of centralized parties facilitates the efforts of national leaders to push sub-national governments into market reforms; Hicken, Kollman, and Simmons (2015) find that nationalized party systems lead to improved public goods provision.

²⁴ In an empirical paper Enikolopov and Zhuravskaya (2007) did also find that fiscal decentralization produces better outcomes in the presence of party integration.

A more comprehensive model of decentralized governance should look beyond the integration of the fiscal, administrative and political dimensions of decentralization to understand the net fiscal incidence of subnational budgets (benefits received versus taxes paid) across the residents of each jurisdiction (Martinez-Vazquez, 1982) and thus help explain their voting behavior (Martinez-Vazquez, 1981), or the differences in behavior by homeowners and renters (Martinez-Vazquez, 1983).

V. Vertical Structure of Government

The most prominent feature of the vertical structure of government is the number of tiers or levels of government differs across countries, with the apparent main determinant being the size and area of the country. The most common is to observe three tiers of government, but many smaller countries have only two and some other countries have up to five tiers. The hierarchical vertical flow of power and control also differs across countries, with local governments being more dependent on the intermediate level, the states, in federal systems, while it is more common among unitary countries to adopt a bifurcated system, where local government relate directly with the central government and not with the intermediate level, regional or provincial governments. This latter type of arrangement seems to respond to fears of abandonment, neglect or even abuse of local governments by their regional governments—as in the experience of countries in transition in Eastern Europe. There has been not much research effort so far in understanding the vertical structure of government and integrating it within the general theory of fiscal federalism.

However, one aspect that has received much more attention is the issue of subnational government fragmentation. In explaining the different levels of local government fragmentation observed across countries Gómez-Reino and Martínez-Vázquez (2013) identify the long shadow

or the “dead hand” of history (the result of colonial legacies, geography or ethnic and linguistic fragmentation), but also the presence of a higher number of tiers of government and strong contemporaneous preferences for political accountability.

As early highlighted in Oates’ (1972) decentralization theorem, there continues to be a strong perception that size matters in the efficient delivery of local public services. The most recent evidence points to the modest jurisdictional size of 10,000 residents at the threshold for no further reductions in the average cost of production of most public services (Gómez-Reino et al., 2023). It is from that perspective that many countries around the world have engaged in aggressive forced jurisdictional consolidation programs because they perceive to have inefficient vertical government structures due to their high level of jurisdictional fragmentation.

The main declared objective of jurisdictional consolidation programs has been to achieve economies of scale, thereby reducing production costs of local and regional public services. On the critics’ side, it has been argued that policy strategies involving forced amalgamation can result in lost representation and accountability and that, therefore, other strategies need to be followed to address the issues raised by local government fragmentation. The results of forced amalgamation programs in northern European countries and in other countries around the world have run short of expectations in terms of cost savings (Fox and Gurley-Calvez, 2006; Blom-Hansen et al., 2016).

Without using forced consolidation program, the international practice offers several policy options to circumvent the added costs of smallness in municipal size without incurring into the potential costs of lost representation. Voluntary consolidation or amalgamation of local government units can be an alternative, although these programs tend to lack effectiveness given the reluctance of local officials. Other institutional options have been successfully implemented

in other countries including the creation of local government associations or inter-municipal consortia, as well as the privatization of some services with potentially large economies of scale, such as water or transportation services (Lago-Peñas and Martínez-Vázquez, 2013).

Metropolitan areas present a special important case of the role of cooperation to address the need for taking advantage of economies of scale and externalities where smaller fragmented local governments coexist in economically integrated urban areas. In this case the most desirable model of metropolitan governance could be a two-tier system, embedding a metropolitan authority together with existing local units, both elected and accountable to their respective constituencies, but unburdening the metropolitan authority from redistribution concerns and relying for that purpose on a nationwide equalization grant system (Bahl, 2013; Martínez-Vázquez and Muñoz, 2018).

VI. The Critical Step of Assigning Functional Responsibilities

Quite likely the most critical step in fiscal decentralization design is the assignment of functional expenditure responsibilities (Bahl and Martínez-Vázquez, 2006). Getting that step wrong or incomplete can seriously handicap the entire system. Only when the question of “who does what” is answered can the system of intergovernmental finance (revenue assignments, transfers and borrowing) be put in place logically. However, many decentralization systems born with the “original sin” of lack of or incomplete expenditure assignments; the reluctance to state a clear and transparent assignment may have several explanations, including ignorance, avoiding the difficulties or perhaps simply imitating other countries like older federations like the US where those assignments are not clearly spelled but nevertheless the system has managed to function. Several principles of expenditure assignments have been added through time in the fiscal federalism literature, which can be quite instrumental in arriving at a clear and transparent

assignment of expenditure responsibilities (Martinez-Vazquez et al., 2006; Boadway and Shah, 2009; Bahl and Bird, 2016). First, the “*correspondence*” principle simply states that the geographical dimension of the benefits received from a service should match the geographical dimension of the level of government responsible for its provision (Olson, 1969), provided that large economies of scale or externalities are present (Oates, 1972). Second, the “*subsidiarity*” principle states that the responsibility for services that can be provided at different levels should be assigned at the lowest possible level of government compatible with the size of the “benefit area” associated with those services.²⁵ This also works as a default clause for the assignment of residual (not explicitly assigned) and any new functions. Third, efficient service provision is generally enhanced by making use of the “*benefit*” principle of service finance: wherever possible, utilizing fee structures and issuing service charges to service users; it contributes to recovering the costs of provision, helps reveal users’ demands and preferences for services, and reduces congestion by rationing demand. Fourth, the principle of “*affordability*” considers whether subnational authorities have enough resources to adequately deliver the service and expenditure responsibilities to be assigned to them; it highlights the interdependence of expenditure assignments with the other three pillars of fiscal decentralization. Fifth, the principle of “*capacity*” puts the focus on whether subnational governments are administratively and technically capable of delivering the service function assigned; this may call for sequenced devolution, and sometimes this issue is addressed by differentiating between obligatory versus discretionary or voluntary responsibilities or by imposing compulsory minimum standards and other forms of expenditure rules or mandates. Last, the principle of “*coordination*” among the

²⁵ Introduced by The *European Charter of Subnational Governments*, but see also Oates and Schwab (1996) and Oates and Portney (2001).

different levels of government is needed for any system of expenditure assignments to work smoothly; no explicit assignment can ever be detailed enough to preempt the need for coordination and dialog among the different levels of government.

By applying the above principles sometimes, it is feasible to arrive at “exclusive” assignments, which are desirable because they to more transparency and accountability. But more often the assignment leads to concurrent or shared responsibilities. In this case clarity of assignments requires the explicit assignment to different tiers of the main attributes of the expenditure function (regulation or norming, financing, and implementation). Unfortunately, this latter almost never happens. And given the importance of concurrent responsibilities, it means that many decentralized systems suffer from unclear expenditure assignments.

What is most important is to achieve an explicit, clear, and stable assignment of expenditure responsibilities. A “single best” assignment does not exist , and other relevant factors, such as the nature of the state (federal versus unitary), available technologies, citizens’ preferences, and traditions and history often affect final choices in assignments. Nevertheless, there are countries where those other factors, like history, still override the basic principles and get some of their assignments completely wrong. For example, China still assigns all social security programs including pensions, unemployment insurance and income support schemes at the local level (city- and county-level governments) (Liu et al., 2015). Another common challenge is instability of shifting of responsibilities with each year’s budget.

Another problematic area in expenditure assignments that is worth mentioning area is the potential crowding out between levels of government sharing a responsibility, for example social welfare. A prime example is the passage of the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) in 1996 which devolved responsibility for the design of welfare

programs from the federal to state governments in the U.S. The overall result was a reduction of the protection received by the most vulnerable households and increasing differences in benefit levels across states with a general degradation of benefits (Ayala et al., 2022).

Nevertheless, we should expect a good assignment to change over time in response to technological innovations, significant changes in the costs of provision, and especially because of new challenges. Prominent cases of the latter include the need to fight climate change through decarbonization and adaptation programs and addressing the consequences of other extreme events like the recent pandemic.

The challenge of climate change deserves especial attention (Martinez-Vazquez, 2021; de Mello and Martinez-Vazquez, 2022). Many countries around the world are behind the task of the multilevel assignments of responsibilities developing a comprehensive strategy to fight climate change. As a first step, the correspondence principle to the geographical scope of the externality can be applied (Alm and Banzhaf, 2012). However, subnational governments must have the capacity to monitor and sanction polluters and be able to afford the necessary expertise.

Controlling individual strategic behavior and corrupt practices are also required. And at any rate, strong institutions for policy coordination will be needed.

Assignments should also differ for the broad categories of decarbonization and adaptation activities. Although externalities favor centralized assignments for decarbonization, for example “cap and trade” programs, still many activities that have a local dimension, such as urban transport, housing construction codes, and land use regulations, have clear impacts on GHG emissions.

In the case of adaptation activities, the risks and consequences of climate change-related disasters tend to be more localized and for example require local regulations on land-use planning and zoning that avoids construction or use of areas at high risk of flooding, developing and preparing contingent response plans for climate disaster emergencies, or improving infrastructure to better handle flooding or other climate change-related risks. In these cases, the availability of central government support funds can lead to *moral hazard* issues. Other problems in general expenditure assignments may be present. Including political-economy considerations (e.g. who get credit for disaster assistance), and free riding or common pool problems (de Mello, 2000).

There are three general models followed in the international practice. First, in some countries, national target setting by the central government is followed by further allocation of targets to sub-national governments for implementation (Belgium, China). Second, other countries are more explicit in sharing and coordinating responsibilities among different levels of government (India, France, Germany, Colombia). Third, in other countries, like the Netherlands, Brazil, United States, and Canada, regional and local governments play a leading role in the design and implementation of climate change policies.

Some other problematic areas in expenditure assignments exist in more traditional areas. One of those areas is managing the assignment of responsibilities for capital infrastructure and especially the issue of its proper maintenance. Properly managing the subnational dimension of public infrastructure emerges as one of the key challenges in fiscal decentralization. Regardless of the level of decentralization all countries face the question about multi-level coordination and provision of infrastructure, and given the localized nature of most infrastructure, the territorial dimension cannot be obviated (Frank and Martinez-Vazquez, 2015). How countries tackle this challenge varies extremely, and while in some countries 90 percent of public investment is

executed by subnational governments, in others it does not reach 10 percent. Often, the lack of clear assignments and coordination across levels lead inefficiencies in management and execution and achieving low “value for money.” Infrastructure gaps are often very significant across subnational units (horizontal gaps), particularly in the developing world. However, in fiscal equalization theory and practice, infrastructure gaps have received little explicit consideration, and without a proper conceptual framework, policies addressing infrastructure gaps have typically involved just ad hoc practices and solutions (Martinez-Vazquez and Timofeev, 2015).

Among these challenges involving public infrastructure, perhaps the most significant one is achieving a proper level of maintenance of the stock of public infrastructure. Maintenance spending is vital to ensure the durability, function and safety of infrastructure assets. There appear to be multiple reasons for the lack of proper maintenance spending, from political economy considerations where officials favor new projects over maintenance, the “ribbon cutting syndrome” (Rioja, 2003), to fiscal stress (Bumgarner et al., 1991). Given that increasing responsibilities for public infrastructure investment have been decentralized worldwide, an important question is whether decentralization itself contributes to this problem of lack of adequate maintenance, or instead works as a remedy or part of the solution. Chen and Martinez-Vazquez (2024) find that both fiscal and political decentralization lead to increases in public spending on road maintenance; we have still no knowledge of their impact on maintenance in other areas of public infrastructure. Perhaps fiscal competition generates additional incentives for subnational governments to raise infrastructure maintenance spending to attract new residents and businesses (Keen and Marchand, 1997).

VII. The Difficulty with Achieving Sufficient Autonomy in Revenue Assignments

There is, surprisingly, still some disagreement on this issue, but subnational revenue autonomy is at the core of well-designed and effective fiscal decentralization. The critical assumption behind the general claim of greater efficiency with decentralized governance rests on the premise subnational authorities are more knowledgeable, responsive, and accountable to citizens' needs and preferences. We have seen above that so far there is still little direct evidence of these claims, especially regarding greater accountability. But at the same time there is considerable agreement among experts in decentralization that the increased accountability associated with decentralization can only be assured when subnational governments have an adequate level of autonomy and discretion in raising their own revenues. Otherwise, there is no need to bother about revenue assignments.

The intuition behind it is simple. Subnational authorities are likely to spend their resources more responsibly and efficiently when they need to incur the political costs associated with raising own revenues; resources received from transfers suffer from the "common pool problem," and local officials will spend less efficiently and responsibly.

Beyond rendering higher levels of accountability, adequate revenue assignments (that is, the absence of vertical fiscal imbalances) has some other important benefits. Among them, the hardening of the budget constraint (if more is to be spent, more has to be asked from voters) also leads to enhanced budget and overall fiscal responsibility and higher levels of tax revenue effort by subnational governments (Jia et al., 2021).

How much subnational revenue autonomy is needed is not a settled issue. At a minimum, subnational authorities must have revenue autonomy at the margin; that is the ability to raise additional revenues through their own taxes and fees (McLure, 1998, 2000; Bird, 2000;

Martinez-Vazquez, 2015). The design of revenue assignments—level, autonomy and composition—needs to follow an explicit sequence; the known dictum of “finance should follow function” means that that the design of revenue assignments should only come after expenditure needs are known after performing the assignment of expenditure responsibilities (Bahl and Martinez-Vazquez, 2006).

However, the broad international reality is that most decentralized systems show little or, more generally, insufficient subnational government revenue autonomy, or the presence of significant vertical fiscal imbalances (VFI). Quite certainly, the optimal VFI is not zero because of the different marginal social costs of public funds at the different levels of government. However, VFIs tend to be much larger for a variety of reasons. One common explanation is political economy incentives for central authorities to retain taxes for patronage and control reasons, and subnational officials’ preference for transfers over own revenues and the associated political costs. Another reason for low tax effort could be the strategical interactions among subnational governments attempting to lure businesses and wealthier residents from other jurisdictions by competitively lowering their taxes in a process commonly described as a “race to the bottom” (Wilson, 1999; Martinez-Vazquez and Liu, 2014; Martinez-Vazquez et al., forthcoming). One last reason is uncertainty about how subnational government tax autonomy should be exercised and the inherent difficulty of selecting what taxes can be assigned at the subnational level: the “tax assignment problem” (McLure, 1998).

There are multiple trade-offs in the design of revenue assignments. The design is informed by the different criteria subnational taxes should meet, including significant revenue potential, high elasticity or buoyancy, adaptability to the benefit principle, an even geographical distribution of tax bases, fairness and equity in the distribution of tax burdens, low administration and

compliance costs, high visibility to facilitate accountability, and acceptance by officials and the public. Undesirable features to avoid include high inter-jurisdictional mobility of the tax bases, high sensitivity of revenues to the business cycle, or high potential for the exportability of tax burdens (Martinez-Vazquez, 2015; Bahl and Bird, 2018).

There are also some practical considerations to follow in the design of revenue assignments. First, a closed list of subnational taxes is preferable to open lists to avoid nuisance and distortionary taxes. Second, co-habitation of tax bases is generally preferable to exclusive tax bases to share the use of buoyant tax bases. Third, subnational revenue autonomy is best provided by allowing the setting of tax rates rather than tax bases because harmonized bases reduce compliance and enforcement costs.

How about the administration of subnational taxes? Deciding which level should oversee the administration of subnational each tax should be based on pragmatic considerations regarding information, scale and other comparative advantages (Ebel and Taliercio, 2005; Martinez-Vazquez and Timofeev, 2010a). It is important to realize that even if some subnational taxes are best administered by the central tax administration, they still can remain subnational-determined taxes. A significant potential disadvantage of centralized solutions is that central tax administrations may not have adequate incentives to try to properly collect the subnational taxes.

No tax meets all the desirable attributes and avoids the negative ones for subnational assignment. In practical terms we can select from the better ones and avoid the worse ones. In the first category, the generally agree best tax is the property tax (Bahl et al., 2008, 2010; Bahl and Martinez-Vazquez, 2008; Martinez-Vazquez and Sepulveda, 2012). Other good sources include fees and charges of different kinds under the benefit principle, vehicle and transportation taxes; certain excises taxes; personal income tax in a separate or piggyback form, and local business

taxes, including business license fees. Subnational taxes on natural resources can be added, especially when resources are geographically evenly distributed (McLure, 1996; Andrian et al., 2024). In the negative list, the corporate income tax (CIT) stands out because of its highly volatile base and because there is no good way to geographically apportion this tax. Arguably, the biggest dilemma in tax assignments is the value-added tax (VAT) as a potential subnational tax (Bird and Gendron, 1998, 2000). Canada's experience shows that a subnational VAT is possible alongside a central or federal VAT, but other country experiences also show the difficulties involved.

VIII. The Quest for Improved Transfer Design

By intergovernmental transfers (or grants) we understand a collection of instruments (revenue sharing, equalization transfers, conditional block and specific grants, capital grants and performance-based grants) that can be used by central governments to close vertical and horizontal fiscal gaps in decentralized system as well as to incentivize certain spending behavior by subnational governments in the pursuit of a large array of national objectives, and representing about one-fifth of central budgets in industrial countries and a bit more than half of that in developing countries (Bahl and Bird, 2018).

Considerable progress has been made over the last decades in improving the design of the different transfers, especially with the innovation of performance-based grants.²⁶ However, as we will see in the paragraphs below significant challenges remain in areas such equalization and capital grant design. A bigger challenge is that more generally, it is quite common for central

²⁶ See, for example, Blöchliger et al., 2007; Boadway and Shah, 2007; Bird and Vaillancourt, 2007; Martinez-Vazquez and Searle, 2007, and Bahl and Bird, 2018.

governments to ignore good principles and practices in transfer design and use them instead to pursue naked political interests and objectives (Boex and Martinez-Vazquez, 2004).

There are several general mistakes that are often made in designing transfer systems. The first is the search for the best transfer system; simply put, there is no “best” grant system. What transfers instruments should be used depends on the objectives being pursued by the central government, on how other elements of the decentralization system, in particular revenue assignments, are structured, and perhaps also on political economy considerations. A second common mistake is to ignore the generally accepted design rule that each important objective should be pursued with a separate grant instrument; the pursuit of multiple objectives with a single instrument makes it difficult to disentangle their actual impact. And third, the design of grants also requires awareness of the indirect, and potentially unwanted, effects that different transfers may have on a variety of important decentralization dimensions (Rodden, 2002). In this regard, much has been written on the fly-paper effect, for example, and considerably less is known about the causal mechanism and the magnitudes involved for the effect of transfers on subnational tax revenues effort, addressing externalities, or spending efficiency and accountability. But this is an area of research that is likely to still see unsettled results, with the fly-paper effect being a sharp example in this regard; despite an extensive literature on this topic, its enduring nature continues to be subject to debate and new research (Lago et al., 2022).

In designing their transfers system policymakers generally walk along a tradeoff between unconditional general-purpose grants and conditional earmarked grants. Unconditional transfers are attractive because by allowing subnational governments to decide how best to use the funds, they strengthen fiscal autonomy and the overall decentralization system. On the other hand, conditional grants can be much more effective in leading resources to national priority areas and

to achieving programmatic objectives. And among conditional grants, block grants while guaranteeing the use of funds in a specific area they provide subnational governments with autonomy on how best to utilize the funds within that provided area. Nevertheless, more specific conditionality (ex-ante as in specific grants or ex-post as in performance-based grants) may be completely necessary and desirable when some specific objectives need to be achieved (Searle and Martinez-Vazquez, 2007). Overall, this means that there is no transfer instrument that is always superior to others; therefore, as pointed out above, it is not at all meaningful to talk about the best transfer instruments or system. The specific institutional context is key to understanding grants' design, role, and effects (Bird, 1993; Bird and Tarasov, 2004). In practice, most countries use a wide array of transfer instruments, briefly reviewed in what follows.

Revenue sharing of central government tax revenues with subnational governments is generally used to help close the vertical gap left by insufficient revenue assignments and following a devolution objective by using the derivation principle (returning revenues to the jurisdiction from where they originate). The devolution objective incentivizes and rewards those jurisdictions with dynamic economic activity and their creation of tax bases. Revenue sharing is attractive with central governments because it provides subnational governments with sizable and elastic sources of revenue without having to relinquish authority and control over those taxes. Because these are typically unconditional revenues, they increase the general fiscal capacity of the recipient subnational governments, although not their tax autonomy.

Not all central government tax revenues are equally sharable under the derivation principle. While personal income taxes and excises are perfectly suitable, corporate income tax and VAT are much less so; in addition, the corporate income tax is less suitable also because of its high volatility over the business cycle. Although there are countries that do attempt using derivation

for those taxes, the geographical distribution of sharing is often lopsided favoring the location of headquarters. In the case of the VAT, which is more stable over the business cycle, sharing is often done using the share of regional consumption in GDP or on a population basis; the latter introduces an element of equalization in revenue sharing schemes.

Equalization transfers are generally needed to deal with the presence of significant horizontal fiscal disparities. These latter arise because of regional differences in the level of economic activity and wealth which translate into fiscal disparities given the assignment of own revenues and the allocation of revenue sharing on a derivation basis. Horizontal fiscal disparities are measured by the difference in tax capacity and expenditure needs across subnational governments. Given that measure, there is no absolute accepted standard for how much those horizontal fiscal disparities should be reduced, although too little equalization can lead to inefficient fiscal migration.

A common mistake to avoid is to think of equalization grants as instruments to equalize income per capita or the level of economic development across regions; although equalization grants can contribute to those goals, these otherwise worthwhile objectives require much wider government policies. The more modest generally accepted but still very important objective for equalization grants is to allow subnational governments a similar level of access to a standard package of public services, while they exercise an average level of tax effort.

With big exception of the United States, most decentralized countries around the world have some form of an equalization transfer.²⁷ However, there is far from a consensus in practice and at

²⁷ But equalization can happen by means other than an explicit equalization grant, and the United States is an example of that (Martinez-Vazquez and Timofeev 2022). And desired equalization outcomes do not always happen in hierarchical equalization systems, where the intermediate level being equalized is supposed to do the same with the local level (Liu et al. 2017).

the theoretical level for how equalization transfers should be designed, including the determination of the pools of funds for equalization and the allocation formula or mechanism for their distribution across deserving subnational governments (Martinez-Vazquez and Searle, 2006; Boadway and Shah, 2007; Bahl and Bird, 2018).

There are in practice two quite different methodologies utilized for the determination of the pool of funds (Bahl and Wallace, 2007). The first is to use an explicit rule, such as a percent of central government revenues or (less preferably) of specific taxes, possibly as a weighted average of several past periods to add temporal stability. The second seeks flexibility and discretion for the central government and uses an annual ad hoc determination of the pool of funds. This latter approach is generally less desirable because it brings budgetary uncertainty to subnational governments and opens the possibility of a soft budget constraint. One major difference in the sourcing of the funds is that a good number of European countries used a “Robin Hood approach,” forcing richer jurisdictions to provide at least a share of the funds going to poorer jurisdictions. Although Robin Hood systems increase equalization power, they can be politically and divisive by changing the ordinality or per capita resources before and after equalization.

There are more substantial variations in practice regarding the allocation formula. However, some consensus has been building for using the “fiscal gap” approach, or the difference between expenditure needs and fiscal capacity for each subnational government, an approach that has solid foundations in public finance principles; for example, Martinez-Vazquez and Sepulveda (2019) show that the fiscal-gap model is compatible with the notion of an optimal equalization transfer program. A principal example of this approach is Australia equalization system.

Although conceptually sounder and more attractive, the computation of the “fiscal gap” can be data intensive and complex. Different methodologies can be used to arrive at good measures of

fiscal capacity and expenditure need, and several approaches exist to offset the lack of the ideal data (Boex and Martinez-Vazquez, 2006). In practice, some other countries implement some variations of the fiscal gap approach. For example, Canada implements equalization for its provinces only on the basis of differences in fiscal capacity, although differences in expenditure needs are also considered in the equalization of its northern territories; in Europe, Germany, Poland and Spain use the approach of equalizing fiscal capacity per “adjusted” population, where the adjusted population reflects differences in expenditure needs. In a good number of Latin America countries, the equalization formula is a weighted index with variables proxying expenditure needs and fiscal capacity of subnational governments.

Conditional grants, which earmark the use of funds by subnational governments in different ways, can be categorized according to the strictness of the conditionality (specific grants carry strict narrow criteria while block grants have looser conditions), by whether the conditionality is ex ante, as for most conventional conditional grants, or ex post, as in the case of performance-based grants. Furthermore, all conditional grants may or may not carry a matching clause, requiring subnational governments to also provide a part of the funds; central governments may use matching requirements for financing reasons but also to seek additionality and ownership effects among subnational governments (Searle and Martinez-Vazquez, 2006).

Internationally, the trend has been toward the consolidation of fragmented specific grants into a smaller number of block conditional grants,²⁸ and to rely more frequently on performance-based grants (Martinez-Vazquez, 2020). But those trends should not be taken as the demise of specific

²⁸ Of course, turning to block grants does not always mean more decision autonomy for subnational governments since central governments can turn, and in fact it seems they do, to regulations to exert that control (Blom-Hansen, 2009; Brosio and Piperno, 2009).

grants; they are still useful to ensure certain outcomes and objectives and they are less prone to bargaining or soft-budget issues.²⁹ Specific earmarked grants may work better where the central government has incomplete information on costs or expenditure need differences (Smart and Bird, 2009). Performance-based grants offer the potential of greater effectiveness in results concerning subnational government performance and (but perhaps less so) service delivery (Shah, 2006a). These grants link performance in pre-determined areas with access to funding the amount of funding received, and with discretion in the use of the funds. The specification of the performance measures is critical to avoid over benefiting jurisdictions with more capacity; this task is also typically diffculted by the fact that service outcomes also depend on confounding outside factors not controlled by subnational governments.

Capital grants are the least developed and more problematic area in transfers design and practice. This is likely because of its inherent higher level of complexity, and perhaps associated with that, because they have received comparatively much less attention in the theoretical literature. Because of their “lumpiness” and non-recurrent nature, the needs for capital infrastructure cannot be adequately considered in (recurrent) equalization transfers or with ordinary conditional grants. Adding to the complexity of the task is the fact that capital grants are used in the pursuit of multiple and very different objectives involving efficiency issues like externalities and equity issues like supporting jurisdictions with low self-financing and borrowing ability.

Their implementation is additionally diffculted by several policy biases, including the belief that capital expenditures are always more efficient than recurrent expenditures, the already mentioned problem of the lack of proper maintenance of existing subnational government infrastructure,

²⁹ Block grants can easily fall into the “blame game,” with subnational governments claiming too little fund availability and the central government bemoaning the poor local use of the funds (Borge and Lilleschulstad, 2009).

and imbedding of the needed capital transfers for basic service delivery with broader and less well-defined issues for regional development policy.

In practice there is little consensus on what a good design of a system of capital grants should look like. It will likely be useful to think of a capital grant system having similar instruments as those used for recurrent expenditure purposes, including a capital equalization grant, capital conditional grants with ex-ante conditionality, both specific and block nature, and capital performance-based grants. Although most countries do implement some of these instruments, there has not been enough explicit discussion. In addition, the design of the instruments would need to be adapted to the capital dimension; for example, in the case of equalization it would be more relevant to talk about financing capacity (including borrowing potential) than just fiscal capacity, and expenditure needs should recognize historical disparities in the stock of capital infrastructure (Herrero-Alcalde et al., 2012). A second set of major issues with capital grants is the process of identification of recipients. In practice this is carried out by ad hoc decisions and bilateral bargaining, by using pre-established formulas, and by using open competition processes with defined application procedures. Generally, ad hoc and more discretionary procedures are less likely to yield efficient and equitable allocations of resources; competitive processes are also likely to discriminate against jurisdictions with lower administrative capacity. Capital grants are also particularly more vulnerable to pork barrel issues and corrupted practices, additional reasons to avoid ad hoc approaches in their distribution.

IX. Borrowing and Achieving Fiscal Discipline

All decentralized systems need to address the issue of long-term financing for the capital infrastructure expenditure needs of subnational governments. This is so because, typically, a considerable share of capital infrastructure investment responsibilities is assigned to the

subnational level (Frank and Martinez-Vazquez, 2015). But, how is this financed? Beyond the use of subnational governments' current savings and capital transfers received from the central government, the best practical solution is for subnational governments to borrow the necessary funds. The design of this last pillar of fiscal decentralization involves both demand and supply issues. While demand issues have received a great deal of attention in research and policy focus, the supply side has received less attention. While borrowing by subnational governments can become undisciplined and threaten macroeconomic stability, on balance it seems fair to conclude that in reality there is too little borrowing at the subnational level, especially in developing countries (Smoke, 2023).

Starting with the demand side issues, first it is important to highlight that subnational borrowing leads to both enhanced efficiency and equity. It is efficient because it allows subnational governments to make large lump-sum payments to acquire the necessary infrastructure in a way that is not generally possible by using current savings. Borrowing is also equitable because it allows subnational governments to match the timing of consumption of the services with periodic debt service payments. Having one generation of taxpayers pay for capital equipment, with later generations consuming the services that infrastructure provides (or the reverse), would not be fair. Subnational borrowing is often perceived as full of fiscal risks, and the past experiences of countries like Argentina and Brazil confirm those potential dangers. Several factors create adverse incentives for subnational governments not only to overspend and under-tax, but also to borrow excessively, leading to fiscal imbalances and macroeconomic instability (Ter-Minassian, 2007). Such factors include moral hazard risks, the common pool problem, and design weaknesses such as low tax autonomy and large vertical imbalances. There are also other political economy incentives at work, by overborrowing subnational officials can increase

spending and engage in ribbon cutting, while passing on the costs to future officials and generations of taxpayers.

Thus, ensuring disciplined and responsible subnational borrowing behavior generally requires more than good decentralization design. It also requires explicit rules, monitoring, and oversight regarding subnational debt. Most countries have adopted subnational government fiscal rules, which generally represent institutional constraints on policymakers' decision-making discretion. The main objective of the rules is to allow subnational government flexibility with responsible borrowing and at the same time prevent undisciplined behavior. Borrowing and fiscal rules used internationally range from the most restrictive, as in the "administrative approach"—with central authorities controlling subnational borrowing through debt ceilings, prohibitions on external borrowing or prior approval of conditions for any new debt—to the least restrictive, the "market-based approach" where central authorities rely on financial markets to regulate and restrict subnational borrowing (Ter-Minassian and Craig, 1997). In between those two extremes, there are several other approaches including: the "cooperative approach," where rules are determined through negotiations and dialog between the central and subnational governments; the "rule-based approach," which relies on clearly stated ex-ante rules that subnational governments need to follow when they borrow regarding debt ceilings or limits on total borrowing or ceilings on debt service expenditure (for principal and interest); the "golden rule" (funds can only be used to finance investment on infrastructure); rules on who can be a lender; rules on whether or not lenders can be foreign entities; and so on. In practice, the "rule-based approach" is the most used. One problem with rules approach is that it can be inflexible in financial crises. Another problem is what to do when, as is often the case, they are broken (Martinez-Vazquez and Vulovic, 2017). Several countries have introduced supporting institutions for monitoring spending and borrowing

behavior and helping maintain fiscal discipline; the most prominent is the “fiscal councils.” There is increasing evidence that fiscal councils, where they have more independence and authority, can have positive persuasion effects in improving fiscal discipline and overall performance. Another way to prepare for fiscal crises is the creation of “rainy day funds.” They can be thought of as some sort of self-insurance for subnational governments by creating fund reserves as a percentage of ordinary budget revenues. These are common in the United States at the state level, but they have not spread to other countries (Goodspeed, 2016).

On the supply side, the main question is whether there are enough funds and lenders available for the large credits needs of subnational governments. The two general common forms of credit-based financing are bond issuance and borrowing from financial intermediaries. There is no intrinsic superiority to either of these instruments. Direct borrowing from private commercial banks and other financial institutions, international lending programs, bond issues, and the creation of local government development funds are all valid and desirable alternatives.

Bond issues are often out of reach to subnational governments because of the lack of capital market development.³⁰ An alternative is the creation of a public financial intermediary or a financial intermediation program that allows all local governments, especially those with no direct access to capital markets, to borrow based on selective banking criteria. An advantage of this approach is the lower cost of borrowing for smaller governments by spreading the risks among them. This approach also allows combining technical development assistance with lending activities. But the creation of public financial good intermediation programs carries risks, such as using soft loans for political objectives rather than applying strict lending banking

³⁰ See Martell et al. (2021)

criteria, thus it is important they function according to general financial intermediary guidelines. Another alternative that has received increased attention and scrutiny is the use of public-private partnerships (PPPs). Still future research will be needed on alternative innovative capital financing instruments for subnational governments around the world.

X. Conclusion

For decades “ a silent revolution” has taken place with extensive institutional change and devolution of fiscal powers around the world in both developing and developed countries to bring “government closer to the people.” It has been a bumpy road, but as a result the citizens of many countries around the world have benefited from a closer and more accountable government with more efficient public service delivery, higher economic growth and regional development, improvements in income distribution and poverty reduction enhanced macroeconomic stability and fiscal sustainability, stronger country unity, less corruption, and more political representation, among other benefits.

However, substantial obstacles to decentralization still remain in many countries (Martinez-Vazquez and Vaillancourt, 2010). Just to mention a few, there is still excessive jurisdictional fragmentation at the lowest level in many countries and it is less than clear how to deal with it; too frequently decentralization processes are set to fail because of low administrative capacity among subnational governments; many decentralized systems are still handicapped by persistent unclear assignment of responsibilities and too little revenue autonomy, leading to large vertical fiscal imbalances; there is still considerable confusion on how to improve inefficient transfer systems; and too often fiscal rules regulating subnational borrowing are broken while and the short availability of subnational credit in many countries still limits much needed investment in infrastructure.

The aim of this chapter has been to ask what kind of updates and innovation in theory and policy are needed going forward, and how to get around the logjams that have long held things up in achieving successful decentralization in many countries around the world. Further work will be needed in several areas that have been highlighted in this chapter. These include the measurement of decentralization and its determinants plus the role of persistent external shocks; the long-term impact of fiscal decentralization on the economy, society and governance; the need to advance the theory of fiscal federalism toward a “third generation” model that better integrates the insights of administrative and political decentralization with fiscal decentralization; more innovative ways to address the problem of excessive subnational government fragmentation; and last, how to further refine the design and implementation of the four classical pillars of fiscal decentralization

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