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FISCAL DECENTRALIZATION AND LOCAL BUDGET DEFICITS IN VIET NAM: AN EMPIRICAL ANALYSIS

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Abstract

Since 1975, Viet Nam has gradually decentralized more fiscal responsibilities to local authorities. This study has two objectives: (i) to take stock of the current institutional framework for intergovernmental fiscal relations in Viet Nam, and (ii) to empirically assess the debt sustainability of local governments in Viet Nam. The empirical analysis uses two estimation methods: (i) fully modified ordinary least squares (OLS) to estimate the long-term correlations between co-integration equations, including vectors of co-integration variables, and stochastic regressor innovations; and (ii) fiscal reaction equations at the provincial level, based upon the Bohn (2008) model. The empirical results suggest that deficit levels are generally sustainable at the local level.

JEL Classification: H70, H71, H72, H74, H77

Contents

INTRODUCTION

Since 1975, Viet Nam has gradually decentralized more fiscal responsibilities to local authorities. In 1996, the first State Budget Law was promulgated, and fiscal decentralization was formally mandated. This law was then revised in 2002 and put into operation in 2004, giving more autonomy to local governments, especially at the provincial level to promote sustainable development underpinned by local preferences and economic stability, equity across provinces, efficient services delivery, and enhanced transparency and accountability in public finances.

Today, local spending accounts for just over one-half of general government spending, while local revenue accounts for over one-third of general government revenue, and just over one-half when extrabudgetary sources are included. These are significant shares when compared to other countries, particularly those at a similar level of development to Viet Nam (World Bank 2014).

This study has two objectives: (i) to take stock of the current institutional framework for intergovernmental fiscal relations, and (ii) to empirically assess the deficit sustainability of local governments in Viet Nam.

1. LOCAL GOVERNMENT SYSTEM AND FISCAL DECENTRALIZATION IN VIET NAM SINCE 1975

1.1 Local Government System

Viet Nam's local government system was established in 1945, at the same time as the Democratic Republic of Viet Nam, operating under the principle of democratic centralism. This principle created a hierarchical top-down administrative system, meaning that subordinates obey superiors, and local governments obey the central government. Today, Viet Nam has four tiers of government: (i) central; (ii) 63 provinces, including 5 major cities; (iii) 710 district-level cities, towns (in urban areas), and districts (in rural areas); and (iv) 11,145 wards and townships (in urban areas) and communes (in rural areas). Each tier of government has both legislative and executive authorities. At the central level, legislative authority rests with the National Assembly, and executive authority rests with line ministries and agencies. At the local level, each tier of government has a people's council to exercise legislative authority and a people's committee and line departments to exercise executive authority.

1.2 Fiscal Decentralization since 1975

From 1975 to 1989, Viet Nam remained a centralized fiscal and economic system. Local governments acted as an agency for the central government, and they also were assigned some limited own-source revenue including fees, charges, asset depreciation, some shared revenue including revenue from the profit of state-owned enterprises (SOEs), and taxes on agriculture and industrial activities. In 1983, the government issued a resolution to further clarify local government own-source revenue and revenue shared by local governments with the central government. Sharing rates were still determined by the central government. The central government also designed a subsidy scheme for provinces that were unable to cover their local expenditures with own-source and shared revenues.

During this period, the role played by local governments in the budget-making process grew, and the central government began considering local governments to be an integral component of the state budget. In 1989, the government implemented a resolution that regulated the spending responsibilities of and revenue sources for local governments. Under this resolution, local government revenue came from three different sources: (i) 100% of locally collected revenue (e.g., collections to cover depreciation, taxes on the slaughter of livestock, and various fees and charges); (ii) shared tax revenue with the central government (e.g., revenue from profits of central and local SOEs and industrial activities); and (iii) conditional transfers to balance local governments' budgets. Under this new arrangement, shared revenue could not be retained by local governments; thus, of 44 provinces, 14 returned additional revenue to the central government from shared revenue because their local budgets were balanced.

In 1996, to further reform the central–local government relationship, the first budget law was promulgated, coming into effect in 1997. This law outlined the spending responsibility and revenue allocations for central and local governments, and regulated the borrowing of local governments and intragovernment fiscal transfers. This law was then revised in 1998, coming into effect in 1999. Under the revised law, the lower tiers of local government (i.e., district and commune levels) were assured greater revenue and expenditure responsibilities. For example, they were to secure at least 70% of their revenue from taxes on the rights of land transfer, land and housing taxes, licensing taxes from small businesses, and agriculture taxes. This law also defined the roles of different agencies engaged in the preparation of the central budget as well as the roles of line ministries and local governments in implementation.

To give more fiscal responsibility to local governments, especially at the provincial level, the new budget law was promulgated in 2002, taking effect in 2004.[1] This law has several distinguishing features:

(i)   The central government has given local governments more autonomy. While the 1997 law established intergovernmental fiscal relationships among all tiers of government, the new law only regulates the fiscal relations between the central and provincial levels. Local governments now have autonomy in deciding the fiscal relationship among government levels within their jurisdictions.

(ii) The fiscal capacity of local governments has been strengthened. The central government now shares some types of revenues that used to be solely central government revenue sources (e.g., special consumption taxes, and gasoline and oil taxes) with local governments.

(iii) The central government also has designed some incentives for revenue efforts made by local governments.

(iv) The central government has also established a legal foundation for the adoption of formula-based intergovernmental fiscal transfers.

(v) It established budget stabilization periods of 3–5 years as determined by the National Assembly. Since 2004, there have been three stability periods: 2004–2006, 2007–2010, and 2011–2016.

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[1]   Different from many other economies, the budget law in Viet Nam not only covers the central government budget but also that of intergovernmental fiscal relations, and subnational budget management arrangements, which are usually treated separately in decentralization and local government laws. This feature reflects the country's nested budget system (World Bank 2014).

The new budget law specifies that there is a single, unified public sector budget that must ultimately be ratified by the National Assembly, implying that the National Assembly is given more power in the fiscal decentralization process. The transfer norm decision was also moved from the Ministry of Finance to the National Assembly, and is made public to sector ministries and provinces, thus improving the transparency and budget process. Moreover, the National Assembly approves not only estimates of total revenues and expenditures but also their composition.

Figure 1: Fiscal Process in Viet Nam
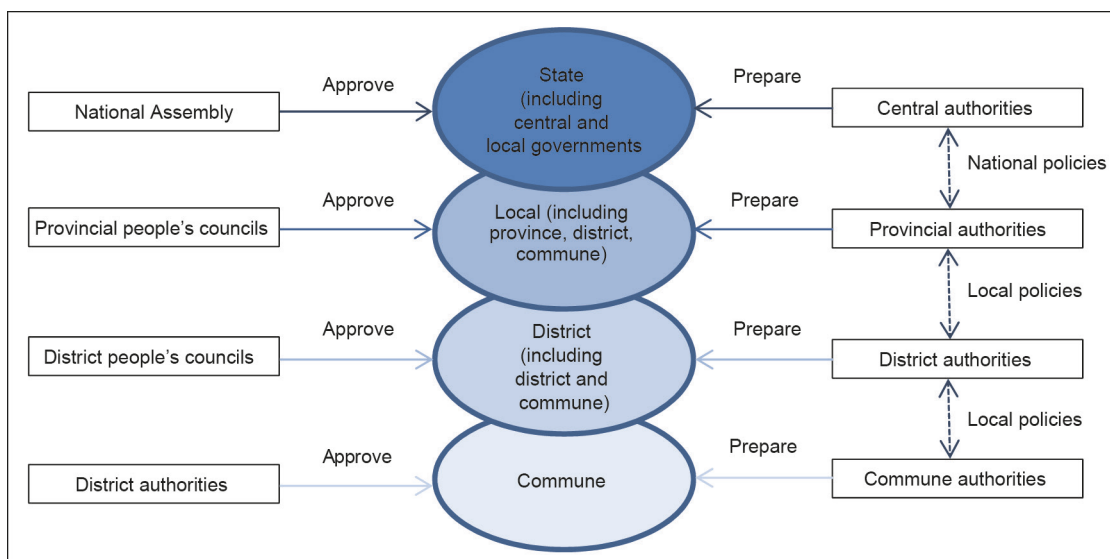
Source: World Bank (2014).

Different from other countries, the hierarchical nature of the Viet Nam fiscal system complicates the budget-making process. Although each local government has some autonomy in estimating its budget, budgets of lower-level governments are examined and approved by the higher level of government. Eventually, the outcomes of the entire process must be integrated into the single state budget. This hierarchical nature also undermines the autonomy of the lower level of governments, as their budgets are highly subject to changes and revision requests by higher levels of governments.

1.3 Modern Fiscal Decentralization in Viet Nam

1.3.1 Expenditure Decentralization

Since the new budget law, local authorities have been given more power in making decisions relating to resources allocation within their provinces, as the law defines spending functions for the central government and local governments. The central government still has the exclusive responsibility for external relations, foreign trade and foreign assistance, food safety, and drug regulation. Responsibility for all other public services is shared among the various tiers of governments.

Expenditure assignments also take into account the special character of provinces and are asymmetric across provinces. Fiscally advantaged provinces enjoy greater fiscal and administrative autonomy, while central government agencies have a more expansive role in fiscally disadvantaged provinces.

Table 1: Ratio of Decentralized Revenue to Total Expenditure
(%)

Expenditure	2007	2010	2013
Total expenditure	46.6	53.1	52.6
Development investment expenditures (including capital expenditure)	62.7	73.4	68.9
Debt services and overseas aid	15.2	9.7	6.3
Recurrent expenditure	50.3	53.5	53.7
Education	86.2	89.6	90.9
Health	79.0	80.8	84.4
Social welfare	14.0	17.9	24.5

Source: Authors' calculations using Ministry of Finance data.

Local government spending makes up an important share of total government expenditure in Viet Nam (Table 1). The share of local government spending increased from 47% in 2007 to about 53% in 2013. In 2013, local governments made up about 70% of total capital spending, since the central government's responsibility was limited to large national projects. Their share in recurrent expenditure also increased to about 54% in 2013. Except for social security functions, which still accounts for a large share of central government spending (about 75%), local governments' share of total recurrent spending in other government functions was high. For example, in 2013, local governments were responsible for 91% of total recurrent expenditure in the education sector and 84% in the health sector.[2]

At the lower levels of local government, the degree of decentralization is rather high. In many provinces, district spending constituted more than 45% of total local spending (World Bank 2014). Lower-level local governments were responsible for most of the recurrent expenditure in the education sector (75% in 2012) and health sector (60% in 2012). Uchimura and Kono (2012) and the World Bank (2014) found that the shares of rural population and the level of local capacity in provinces are important factors in explaining the level of district expenditure in local expenditure. However, the degree of capital expenditure decentralization between the provincial level and lower levels is rather limited. Only 30% of provincial total capital expenditure was implemented by the lower levels of government. This could be attributed to some concerns over efficiencies regarding capital spending at the lower levels.

Although Viet Nam has accelerated its fiscal decentralization process, there are some institutional factors that may have negative effects on the effectiveness of such decisions. First, the spending responsibilities for each level of government are still not clearly defined, thus creating unnecessary overlaps. Except for some exclusive responsibilities as previously mentioned, responsibility for all other public services is shared between the central and provincial governments, including national defense and social insurance and protection. While the local contributions for these areas are typically small, they disproportionately affect poorer provinces, and sometimes these expenses cannot be anticipated and therefore require diverting local resources from other services (World Bank 2014).

Moreover, if coordination among tiers of government is not smooth, ambiguous expenditure assignments may cause overlaps and inefficiency. The most visible overlaps are seen in the education and health sectors. For example, in the education sector, the central government and local governments co-share administering,

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[2] Viet Nam's data do not distinguish capital expenditure for the education and health sectors, so data on education and health expenditures are included in recurrent spending (World Bank 2014).

financing, managing, and delivering almost all levels of education, from pre-kindergarten to university. Such overlaps in expenditure responsibilities create a number of burdens for local government, including time and efforts to clarify respective functions for each level (World Bank 2014).

Second, although the new budget law lists spending functions for both the central and local governments, the lists are both overdetailed and vague, impacting the autonomy and flexibility of local governments. For example, they list some ambiguous functions like investment in SOEs, state economic organizations, and state financial institutions, but spending functions in certain areas may be different among provinces due to socioeconomic development conditions.

Third, the new budget law gives provinces autonomy to assign expenditure responsibilities to lower tiers of governments, which leads to substantial heterogeneity in provinces' expenditure assignments. In the first stability period, all three subnational governments were responsible for health care in 25 provinces, provincial and communal governments shared the responsibility in eight provinces, provincial and district governments shared the service responsibility in 14, and the service was the exclusive responsibility of the provincial government in 17 provinces (Le 2006).

1.3.2 Revenue Decentralization

Revenue collected in Viet Nam can be grouped into three categories: (i) central government revenue, (ii) revenue entirely retained by local governments, and (iii) revenue shared between the central government and local governments. Accordingly, shared taxes include value-added tax (VAT) (except the VAT on imported goods), corporate income tax (except some special cases), personal income taxes, taxes on profits remitted abroad (except for the petroleum industry), special consumption taxes, and gasoline and oil fees. Note that the sharing of these taxes is based on the domicile of the taxpayer, and tax rates and bases are set by the central government and are uniform throughout the country.

The sharing rate has some special features, including a new rate introduced at the beginning of each stabilization period, a uniform rate for all shared taxes, a fixed rate during a stability period, and different rates applied in different provinces. The sharing rates are established at the beginning of each stabilization period and are based upon provincial fiscal capacity. Table 2 presents the sharing rates of provinces that had rates of less than 100%.

Taxes and fees fully dedicated to provinces include taxes on land and housing, natural resources (excluding petroleum), license taxes, taxes on transfer of land-use rights, taxes on the use of agriculture land, fees on land use, land rent, revenue from leasing and sale of houses owned by the state, registration fees, and revenue from state-run lotteries, as well as various fees and charges. Of all of the revenue sources, this type of revenue is the most suitable type of own-source revenue in the standard language of fiscal decentralization. This revenue source, together with shared revenues that can be viewed as fiscal transfers, makes up decentralized revenue. They represent the core of the locally collected revenue.

The new budget law also allows provincial governments to design their own revenue assignments to districts and communes within their jurisdictions, although there are still some general principles and minimum standards that the provinces must follow. However, more autonomy in assigning expenditure responsibilities enable provinces to delineate expenditure responsibilities based upon the fiscal capacity and rural and urban characteristics of local governments.

**Table 2: Portion of Shared Provincial and Central Government
Revenues Retained by Provinces**

(%)

Province	2004–2006	2007–2010	2011–2015
Hanoi	32	31	42
Quang Ninh	98	76	70
Hai Phong	95	90	88
Vinh Phuc	86	67	60
Bac Ninh	100	100	93
Khanh Hoa	52	53	77
Ho Chi Minh City	29	26	23
Dong Nai	49	45	51
Binh Duong	44	40	44
Ba Ria–Vung Tau	42	46	44
Long An	99	100	100
Tien Giang	99	100	100
Vinh Long	90	100	100
Can Tho	95	95	91
Others	100	100	100

Source: Authors' compilation from Ministry of Finance data.

The law also includes an incentive for revenue collection at the local government level. A local government can retain up to 30% of all shared revenue actually collected in excess of the estimated amount. Further, to avoid the temptation to underestimate future shared tax revenues, the law stipulates that the excess amount retained must not exceed the difference between this year's actual revenue in shared taxes and last year's.

During 2006–2012, decentralized revenue in Viet Nam constituted about 9.6% of gross domestic product (GDP). Decentralized revenue, however, did not account for a large share of local economies in Viet Nam. In most of the provinces, decentralized revenue was equal to about 7.0% of local GDP; these provinces also retained 100% of the shared revenue that they collect. This is because some of the most potential sources of revenue, such as trade-related revenue, petroleum-related revenue, and corporate income taxes from large SOEs, accrue to the central government and not to local governments.[3]

Figure 2 presents the contribution of decentralized revenue to total revenue at the local government level. The share of revenue that is fully dedicated to provinces (i.e., own-source revenue) declined from 24.3% in 2004 to 12.6% in 2007 and further to 9.0% in 2013.[4] The share of own-source revenue and shared tax revenue also declined from 44.8% in 2004 to 30.8% in 2007, yet the share of these two sources of revenue was stable at about 30.0% of total revenue during 2007–2012. This implies a declining role of decentralized revenue in total local government revenues. Figure 2 also indicates a huge gap in the importance of these two sources between provinces with a

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[3] In 2011, despite the declining trend, trade and petroleum-related revenues are still equal to 8% of national GDP. Similarly, corporate income tax from unified accounting firms is equal to 7% of GDP (World Bank 2014).

[4] Compared to other Asian economies, this share of this own-source revenue is similar (World Bank 2014).

sharing rate of 100% and provinces with a sharing rate of less than 100%. In 2013, about 60% of total revenue of better-off provinces was from these two sources, while this figure was about 25% in poorer ones.

Figure 2: Share of Decentralized Revenue in Total Local Government Revenue (%)
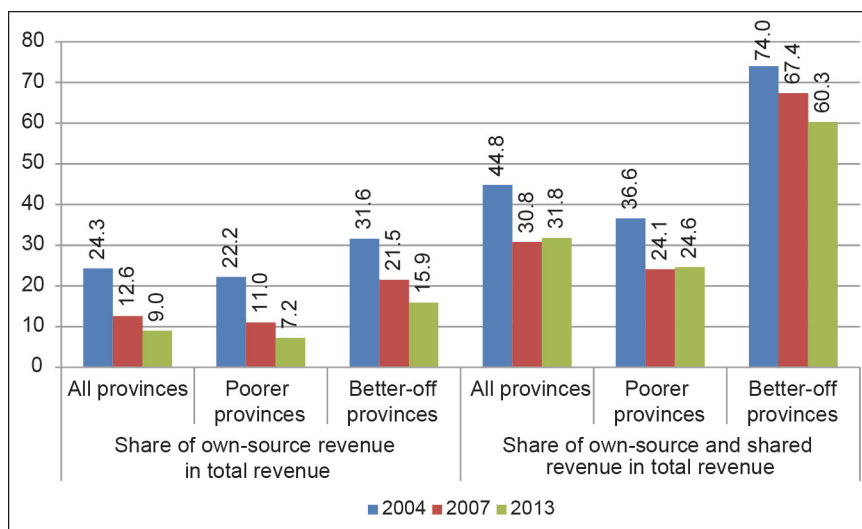
Source: Authors' calculations using Ministry of Finance data.

Despite efforts to give more power to local governments to raise their revenue, several obstacles continue to limit the size of local government own-source revenue. First, there are two concerns about the shared revenues. On one hand, the sharing rate is set to take into account differences in fiscal capacity. However, in reality, sharing rates are determined through negotiations between central and local government authorities, and thus could lead to suboptimal outcomes due to poor revenue forecasts and differing negotiating capacity (World Bank 2014). The other concern relates to the fairness of the system. The shared revenues in Viet Nam are split, based on where revenues are actually collected rather than where the tax is incurred. This raise questions concerning the fairness of the system, especially for the VAT and corporate income tax (e.g., if a firm operates in one province, and its headquarters are in another province).

Second, some regulations hinder the autonomy that the central government gives to provincial authorities. For example, with regard to fees and user charges, provincial authorities can only set the charges and fees for 19 of 63 items, while the Ministry of Finance has the authority to set the fees and user charges of the remaining items. This partly explains why only about 11% of own-source revenues were collected from fees and charges (World Bank 2014). Another regulation is related to the share of resources allocated to the commune level: (i) communes and townships receive at least 70% of revenues from a tax on transfer of land-use rights, land and housing taxes, the license tax on individuals and individual households, and registration fees for land and housing; and (ii) townships and cities receive at least 50% of revenues from registration fees, excluding registration fees for land and housing. Such sources of revenue cannot be reallocated among communes, which has caused vertical imbalances among communes. While many communes and townships cannot absorb the minimum stated shares of resources, other communes cannot raise adequate resources to meet their spending needs. This can lead to inefficient spending or regular carryovers in surplus jurisdictions, and poorer services delivery in deficit jurisdictions (World Bank 2014).

Third, the lack of minimum standard guidelines for services provision leads to heterogeneity in responsibility sharing across provinces. For example, some provincial governments retain all revenue from taxes on natural resources, while subprovincial governments (i.e., districts and communes) in other provinces are fully or partly entitled to this tax, depending on business ownership. Sharing rates of a revenue source may even vary among districts within a province. For example, in 2008, the sharing rates for land and house registration fees ranged from 13% to 38% among 24 districts in Ho Chi Minh City.

1.4 Intergovernmental Fiscal Transfers

While revenue-sharing arrangements help reduce vertical fiscal imbalances, intragovernment fiscal transfers aim to reduce horizontal fiscal imbalances and to achieve national targets and objectives. At the lower levels of government, revenue sharing and transfers are also used to address vertical and horizontal imbalances across districts. There are two types of transfer program in Viet Nam: unconditional balancing transfers and targeted transfers.

Viet Nam currently adopts two formulas to calculate balancing transfers, one to calculate recurrent spending needs and one to estimate capital spending needs. The formulas are based on transfer norms, which are assigned based on particular criteria, including population, development, geographic area, and number of district administrative units. After subtracting the decentralized revenues (including shared revenues), the remaining amount is covered by the balancing transfer. Because such formulas are determined before each stability period,[5] balancing transfers are highly predictable, as they are fixed in nominal terms over each stability period.

At the provincial level, there are allocation norms for spending estimates for districts across 19 categories of expenditure, mostly various functional areas of spending such as education, health, and economic services. For each functional area, a per capita allocation norm is based on geographic location (e.g., urban, plain areas, mountainous areas, and highlands and islands).[6]

Table 3 presents the share of each revenue source in total expenditure. On average, there has been no significant change in the role of each source of revenue in total expenditure, except for the other sources (including local government borrowing). Decentralized revenue (including own-source revenue and share revenue) still accounts for 65% of total expenditure, while total transfers (including balancing transfers and targeted transfers) account for about 40% of total expenditure, implying the increasing importance of shared revenues in local government revenue given the decline in the share of own-source revenue in total local government revenue.

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[5]   In the second stability period, per capita norms were assigned in 14 sectors. The norms took into account the geographic locations of the population within a province. Higher norms were established for those living in remote or mountainous areas, and even higher ones were created for those who live in the highlands or on islands to take into account the input price differences, economies of scale, and number of vulnerable populations.

[6]   For example, for the health sector, urban areas are allocated VND105,600 per person per year, whereas mountainous areas are allocated VND1,986,880 person per year. This recognizes different costs of services delivery across different geographic areas.

Table 3: Source of Revenue for Expenditure
(%)

	Decentralized Revenue/ Total Expenditure	Balancing/Total Expenditure	Transfer/Total Expenditure	Other Sources
All provinces				
2007	65	22	21	27
2010	64	15	24	44
2013	66	23	18	37
Poorer provinces				
2010	31	19	28	7
2013	29	29	20	2

Note: Decentralized revenue includes the own-source revenues and shared revenue.
Source: Authors' calculation using Ministry of Finance data.

There is a wide gap in the role of each revenue source in expenditure between better-off provinces and poorer ones. In poorer provinces, total transfers still account for about 50% total expenditure, while decentralized revenue makes up only 30%. Table 3 shows that while better-off provinces have a large fiscal surplus (i.e., their revenue is always much higher than their expenditure), poorer provinces do not have enough resources for their spending, even after receiving intergovernmental transfers. This greatly increases the pressure on these provinces to run budget deficits.

Figure 3: Budget Deficits over Time and the Role of Fiscal Transfers
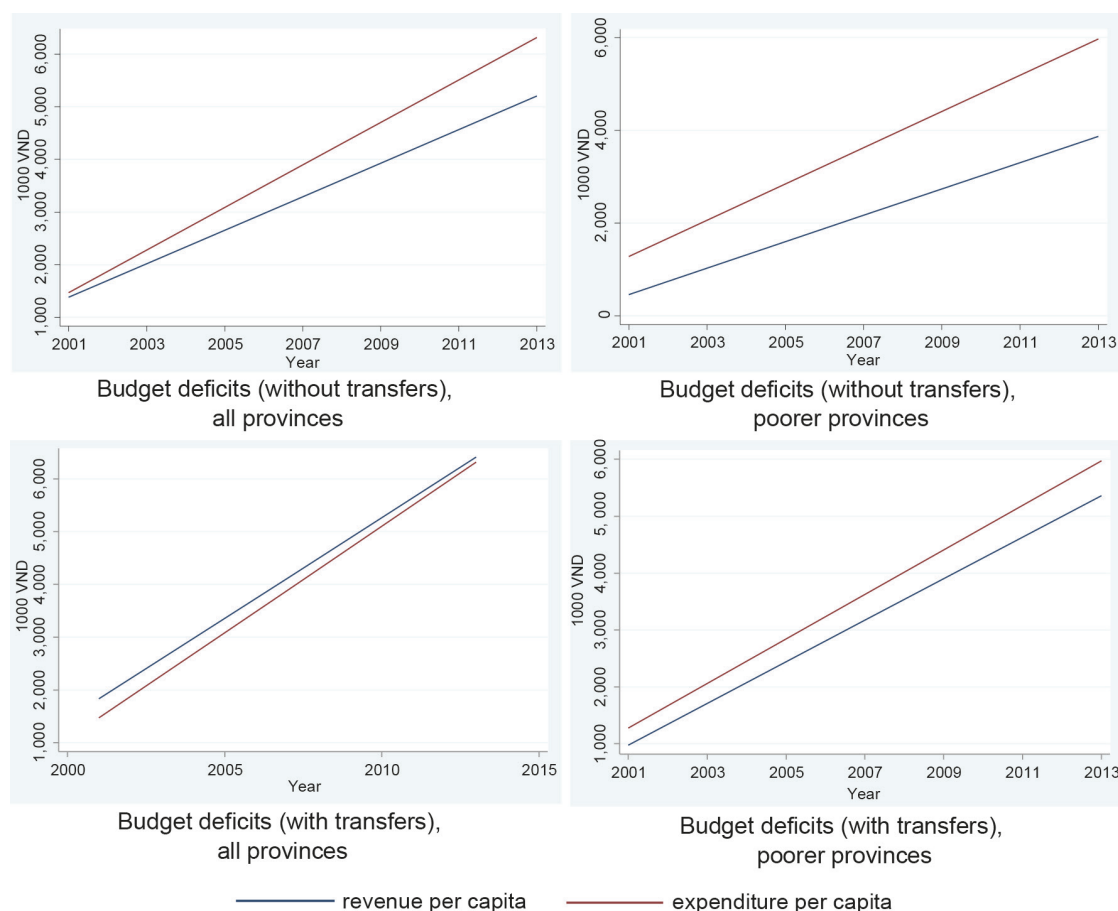
Source: Authors' calculations using Ministry of Finance data.

Figure 3 presents fiscal gaps among provinces. Before transfers, budget deficits seem to widen over time. Deficits seem, however, to be driven by budget deficits in poorer provinces where the revenue per capital is much lower than the expenditure per capita and the growth of expenditure per capital is higher than that of revenue per expenditure. After transfers, on average, there is a slight fiscal surplus. In poorer provinces, fiscal deficits, however, are still observed, indicating a growing vertical imbalance across provinces. In 2012, more than 58% of provinces that had 100% retained revenue could only finance less than 20% of decentralized expenditure, while the corresponding figure for 2007 was about 46%. This is due in part to the rise in spending responsibilities assigned to local authorities and inelasticity of 100% retained revenue with respect to nominal GDP (World Bank 2014).

At the lower levels of government, imbalances are more severe within provinces than across provinces. In many provinces, by the end of 2011, more than 75% of district expenditure was covered by other sources of finance rather than 100% retained revenue. Similarly, in many districts, less than 12% of district core spending was covered by 100% retained revenue in 2011, while this figure was around 20% in 2006. This is partly due to an increase in spending responsibility decentralization (World Bank 2014).

The system of central targeted transfers to local authorities is conditional grants through which the central government aims to achieve socioeconomic development targets. There are two types of target programs: national target programs (NTPs) and other target transfers (i.e., conditional transfers).

NTPs aim to accelerate progress toward national sociodevelopment objectives, covering a wide range of objectives aimed at poverty, education, health, livelihoods, rural development, culture, energy use, and climate change. The Ministry of Finance and Ministry of Planning and Investment have overall responsibility for financing decisions and monitoring across all NTPs. Line ministries, which are assigned key roles in developing NTPs, are responsible for budget allocations to and oversight of NTPs. Various line ministries may also be involved if NTPs cover more than one sector. Currently, there are 16 NTPs.

Other target transfer programs cover a wide range of objectives including capital investment, infrastructure investment, and economic development programs in specific regions. Although during last decade this type of target transfer became less important, it still accounted for about 25% of local spending during 2006–2011, suggesting that local authorities are less dependent on nondiscretionary resources.

Local governments are responsible for proposing activities and implementing associated programs at the local level. They prepare proposals, then discuss them with central government agencies, who in turn submit the financial proposal, including allocation to provinces, to the Ministry of Finance and Ministry of Planning and Investment. Implementation must follow regulations set out by the central government agencies. The allocation of NTP resources is based on a set of eligibility criteria in relevant Prime Minister's decisions and accompanying circulars, which mainly constitute socioeconomic indicators.

In general, Viet Nam's intragovernment fiscal transfer system works effectively to reduce fiscal disparities across jurisdictions. The final distributions of expenditures per capita both across and within provinces are fairly equalized (World Bank 2014). Nonetheless, there are some institutional issues that may hinder the effectiveness of such a system. First, the transfer amount is determined in the first years of a stability period and remains constant in nominal terms over the whole period. For some richer

provinces, local revenue increases could cover such shortages in real terms, but some poorer provinces suffer from the loss in real terms.

Second, there are some weaknesses in the transfer norms. For example, in the education sector, the norms use the number of school-aged children instead of enrolled pupils, discouraging provinces that have low rates of school enrollment from increasing enrollment rates. Third, there are some incentive problems due to the right to have full responsibility for resources allocation within assigned resources at the provincial level. While most provinces use national transfer norms for allocating recurrent expenditure, some provinces design their own, creating incentive issues. For instance, while central norms for health are based on population, norms adopted in some provinces are based on permanent health care staff or physical endowment, thus encouraging district health sectors to expand their staff or benefiting disproportionately those places that are already better equipped, and/or creating incentives to maintain inefficient health care facilities (Le 2006). Management costs could also increase due to diversified sources of funding for NTPs. Around 56% of funding for all NTPs during 2012–2013 came from central authorities, 26% from local authorities, 5% from external donors, 4% from borrowing, and 9% from community contributions (World Bank 2014). Each NTP may comply with some financial management rules and procedures.

Fourth, there is a huge gap between estimated budgets and realized budgets. It is estimated that the realized budget is usually 175% larger than the estimated one, implying a lack of predictability in NTPs (World Bank 2014), ultimately impacting fiscal management. Further, it puts pressure on local government budgets and leads to a proliferation of unfunded mandates. In fact, many local government authorities claim that national programs and policies are not always accompanied by adequate or timely financing (World Bank 2014). Under such cases, local governments either stop implementing NTPs or use their limited resources to implement the programs and seek reimbursement later.

Fifth, targets set in NTPs are ambiguous, and targets and resourcing are misaligned. A number of local authorities have argued that the targets set in NTPs are too ambitious and do not take into account costs and fiscal sustainability at the local government level (World Bank 2014). Moreover, funding is also not conditional on outputs under the programs. In addition, capital projects developed under NTPs lack operations and maintenance resources, hurting the sustainability of the NTP targets.

Six, it is difficult for local authorities to coordinate so many target programs, partly because the number of programs is high, and national and even subnational steering committees are ineffective. The total number of target transfer schemes is 44, and the number of programs is even higher if province-level target programs are taken into account. The targets set out in such programs overlap (World Bank 2014). Meanwhile, the ineffectiveness of national, and in some cases subnational, steering committees that have been established to help coordinate NTP planning and budgeting have resulted in fragmentation and weak monitoring and evaluation.

In summary, the revenue side of subnational government budgets remains, in many respects, highly centralized. The tax rates and bases of taxes, both shared and exclusive to subnational government, are determined centrally. Provinces do, however, have the authority to set rates for a few local charges and fees and to determine how to allocate their revenues within their jurisdictions. Furthermore, despite the new budget law, some provinces use mechanisms contrary to the law, suggesting that de facto decentralization is somewhat greater than legally sanctioned.

1.5 Local Government Borrowing

Local borrowing has emerged as an important topic in Viet Nam, particularly for provinces that are unable to satisfy their capital spending needs through existing local revenue and transfers. The current system is geared to redistributing locally collected revenues, the bulk of which is contributed by a handful of provinces such as Ho Chi Minh City, Hanoi, and Binh Duong, and have highlighted significant infrastructure financing deficits.

The new budget law and Public Debt Management Law 2009 stipulate the golden rule (i.e., provincial governments cannot borrow to meet recurrent expenditures). Borrowing is solely for capital investment projects that can generate returns to service debt. These laws also place a ceiling on local outstanding debt at 30% of a province's annual capital budget, except for Hanoi and Ho Chi Minh City, where the ceiling is set at 100% of the annual capital budget. The government's public debt management strategy, 2012 set a ceiling of 3% of GDP for all local government debt and a ceiling of 65% of GDP for total public and publicly guaranteed debt including local debt.

Table 4: Summary of Different Sources and Types of Local Borrowing

Type of Borrowing	Regulations	Constraints
Local government bonds	Both the amount and rate of borrowings are controlled. The amount is monitored under a threshold, the rate is kept below a ceiling fixed by the Ministry of Finance, and procedures are adopted that apply for issuing government bonds.	Still underdeveloped, as only few provinces/cities can access bond markets; ceiling rates determined by the Ministry of Finance, and this results in undersubscription as rates to investors are unattractive; lack of transparency
Loans from commercial banks	Not controlled	Difficult and costly channel, as commercial banks reluctant to lend because lack of proper collateral
Borrowing from the State Treasury	Borrowings from provincial treasury are permitted for infrastructure projects that are allocated from the budget, the amount is monitored under a threshold, and the provincial budget deducted if repayments are late.	12 months for projects that are allocated from the state budget, short term borrowing for cash management purpose, uniform borrowing fee, most preferable type of borrowing for local governments given the low costs and streamlined approval process, will reduce as Treasury Single Account introduced
Borrowing from development banks (Viet Nam Development Bank and Viet Nam Social Policy Bank)		Limited in scope, as developmental investment of local authorities and export-oriented projects of state-owned enterprises and other economic organizations credit to the poor and other policy beneficiaries
Onlending	All external onlending is through the center.	Quantum depends on the overall official development assistance available to Viet Nam, also graduating from the highly concessional loans in the medium term

Source: Adapted from the 2002 Law and Public Debt Management Law.

Local authorities have a variety of debt-financing options available, including the domestic capital market (i.e., local bonds and loans from commercial banks), the State Treasury, development banks, and onlending from the central government of external funds (Figure 4).

Figure 4: Composition of Local Debt, 2006–2012
(%)

Year	Other	State Treasury	Onlent central govt. loan	Vietnam Bank for Development	Local bond
2006	4.8	0.1	33.2	25.9	36.0
2007	7.4	0.7	43.4	22.3	26.2
2008	12.0	1.5	41.8	21.7	23.0
2009	14.4	2.6	30.8	22.5	29.7
2010	17.0	3.9	21.2	27.5	30.4
2011	2.6	30.8	13.8	16.9	35.9
2012	2.3	8.4	21.7	29.4	38.3
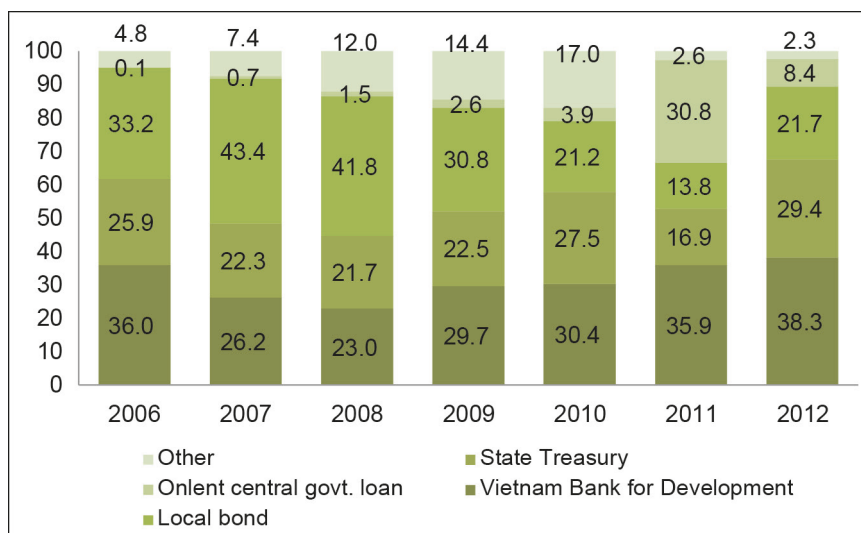
Source: Ministry of Finance (cited in World Bank 2014).

Such borrowing is monitored closely by the Ministry of Finance. Due to the borrowing ceilings imposed under the new budget law, local authorities can also turn to other forms of borrowing, such as local infrastructure development funds and overseas development assistance (as onlent by central government), which are not subject to the same limits. Local governments do not have direct access to financing from the central bank. In terms of administrative procedure, provincial borrowings are subject to various approval procedures depending on the utilization of fund and instruments, as stipulated by Public Debt Management Law 2009 and other secondary regulations. In general, all borrowings have to be inspected and approved by the Ministry of Finance and other central government agencies where applicable.

Thus, borrowing by local authorities remains very low. During the past 10 years, subnational debt was kept below 3% of GDP and financed only 4% of development expenditures. However, in 2011, around 13 provinces exceeded their outstanding debt stock limits of 30% of annual capital budget. Debt in some provinces was twice as high as the limit (World Bank 2014).

Although nearly all provinces have engaged in some form of debt financing, the 10 largest borrowers represented more than two-thirds of subnational borrowing in 2012 (Figure 5). The total subnational debt was also concentrated in these cities (42% of total local debt in 2012), but even within this group, Ho Chi Minh City dominated, accumulating 38% of the total local debt (World Bank 2014) (Box).

Figure 5: Share of Local Government Debt by Province
(%)
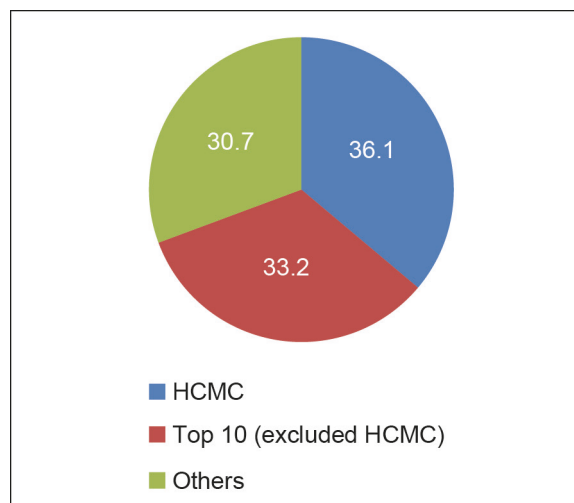
HCMC = Ho Chi Minh City.

Source: Authors' calculation using Ministry of Finance data.

Debt Sustainability in Ho Chi Minh City

Ho Chi Minh City is the largest economic hub in Viet Nam, with relatively strong local revenue mobilization. More than half of local financing (inclusive of new debt flows) comes from decentralized revenues. The ratio of decentralized revenue to local recurrent expenditure averaged around 200% during 2006–2011. Of total expenditure, capital investment made up 40%–50% during 2006–2011. The city's budget deficit is low, at about 0.1% of its gross domestic product (GDP), and borrowing is also low. By the end of 2013, total outstanding debt from bond issuances was an estimated VND11.6 trillion, equal to 1.5% of local GDP and 49.0% of the capital budget in 2013. The average interest rate was 7% for 3-year maturity, 6% for 5-year maturity, and 5% for 10-year maturity.

Two ratios are used as measures of debt burden: (i) Ho Chi Minh City debt stock to GDP (threshold of 25% to assess solvency); and (ii) Ho Chi Minh City debt service to local revenue (threshold of 25% to assess liquidity). The thresholds are benchmarks and not strict ceilings.

For the baseline scenario, it is assumed that, in the medium term, economic indicators used in estimations (i.e., GDP growth, inflation, revenue and expenditure growth, and interest rate) are lower than during 2006–2011 but they will return to their 2006–2011 levels in the long term. Under this scenario, city debts can be viewed as sustainable, with a manageable debt stock–GDP ratio. However, city authorities should recognize liquidity pressures and the growing share of interest payments in total recurrent spending.

Liquidity pressure would be more obvious if a low scenario occurs. In this scenario, growth slows to 5% per year over the medium term and gradually stabilizes to below the historical average of 8% over the long term, decentralized revenue growth falls by nearly one-third, and expenditures remain the same. Debt service requirements are likely to crowd out recurrent expenditures. The debt service–revenue ratio exceeds the threshold for almost the entire projection period; consequently, the golden rule will be broken over the long term.

Under a scenario that economic conditions become more favorable than the baseline scenario (e.g., a higher growth rate, higher revenue, and expenditure growth), the city would more than meet its capital spending needs and maintain sustainable levels of debt with stronger growth and revenue mobilization.

Source: World Bank (2014).

The ratio of local government borrowing to total local government revenue was 4.0% in 2007 and 2.4% in 2012. According to the World Bank (2014), local government borrowing tended to be higher in more developed, more fiscally autonomous, and more fiscally sustainable provinces. A higher borrowing level was also associated with a higher share of spending in local expenditure. Therefore, although borrowing levels are generally low, they seem consistent with the level of local development, capital spending needs, and fiscal sustainability trends.

1.6 Fiscal Sustainability in Local Governments

The World Bank (2014) identified three sources of contingent liabilities in Viet Nam: public financial funds (PFFs), local SOEs, and banking sector stress.

Currently, Viet Nam has more than 30 central and local PFFs whose nature, scope, and scale of operations are diverse. Among these PFFs, only some specific central-level funds and local development investment funds have their own sources of revenue and expenditure mandates, and account for 95% of total expenditure of PFFs. The other local-level PFFs are small and operate mostly within provinces. Although most of these PFFs are dependent on either the central or local government budgets for their initial, and even operational capital (except for some funds that can mobilize revenues from beneficiaries such as health insurance and social insurance funds), their financial reports have never been incorporated into the annual budget and budget final account documents (World Bank 2014).

Currently, there are 28 operating local development investment funds (LDIFs), which could be viewed as special purpose vehicles. These LDIFs are the largest PFFs operating at the local level. Legally, they are commercially oriented state financial institutions, are allowed to raise medium- and long-term capital, and can invest in cost-recovery infrastructure projects. Their responsibility includes undertaking financial and development investments. Such types of special purpose vehicles have expanded considerably in Viet Nam and have mobilized a huge amount of funds for infrastructure investment. According to the World Bank (2014), the average annual growth rate of the operational capital of these funds was high at 40% during 2005–2011.

LDIFs also engage in short-term borrowing on a rollover basis from state-owned commercial banks (SOCBs) and other SOEs. These short-term borrowings can lead to short-term-oriented investments, potentially re-allocating LDIF capital away from long-term infrastructure development. Inappropriate borrowing by the LDIFs can also have a negative effect on the developing banking sector.

The second source of contingent liabilities in Viet Nam is local SOEs. There are 1,506 local SOEs and 982 public service enterprises. Due to their nature, these firms have easier access to commercial loans, especially from SOCBs. This has led to an increasing accumulation of debt of these firms. The World Bank (2014) estimated that more than half of about US$3.5 billion of infrastructure financing from SOCBs was made to SOEs. These firms also have easier access to onlent government external loans. For example, by 2012, public service enterprises in water management and sanitation had total debt from onlent government external loans of US$360 million (VND7.56 trillion) (World Bank 2014). By law, these firms are financially independent from the agencies that have ownership rights over the firms. Yet in reality, if SOEs and public service enterprises get into trouble, they seek the support from their agencies to coordinate the debt workout.

Local authorities in recent years have accumulated payment arrears to construction firms, which, in turn, has prevented these firms from servicing their debts and has led to growing nonperforming loans in local banking systems. According to the National Audit Agency, by the end of 2011, total debts to construction companies by local governments amounted to VND91,273 billion.[7] There were 15 provinces with payment arrears larger than 100% of planned capital expenditure. The Ministry of Finance argues that this was in part due to loose commitment controls, which led local authorities to enter into arrangements with civil works contractors without adequate budget authority.

Local government borrowing is not included in the budget balance, thus not accounted for in the local budget balance. This could be viewed as the consequence of requirements regarding maintaining a balanced budget at the local government level, and exclusion of local budget deficits in the overall state budget deficit.

Current regulations relating to subnational borrowings may not reflect the ability of the local authorities to repay debts. The World Bank (2014) argued that it is hard to figure out the long-term creditworthiness of a province when looking at figures relating to debt stock and annual capital budget. In other words, local government borrowing does not necessarily reflect local government fiscal capacity. In 2011, many provinces, including those with less fiscal capacity, had borrowing much higher than the borrowing ceiling (World Bank 2014). Another issue is that, under current regulations, local government borrowing does not cover guarantees and other contingent liabilities. This makes the figures on local government borrowing not reliable and hard to enforce.

The ceiling on local government debt does not create proper incentives for borrowers. The World Bank (2014) pointed out that the total amount of debt stock, which does not reflect the actual obligations for repaying the principal and interest, is not a good indicator since it does not reflect the actual debt burden faced by the local government. This, in turn, will cause difficulty in estimating the debt obligations in the future. In fact, compliance with debt limits in a particular year does not automatically ensure that a local authority will be able to repay its debt in the long term.

Currently, there is no formal requirement on reporting and disclosure of local debt to the public. Usually, such information is required to be reported to the Banking and Finance Department of the Ministry of Finance.[8] This limits the development of the local government bond market since private investors have little information on the local authorities and cannot assess the creditworthiness of the local government fiscal stance. Reports from local authorities, when received, are usually late and not detailed, while processing such information is time-consuming since each province has its own reporting format.

2. EMPIRICAL ANALYSIS OF DEFICIT SUSTAINABILITY IN LOCAL GOVERNMENTS

In this section, the deficit sustainability of local governments in Viet Nam is analyzed using two estimation methods. First, fully modified ordinary least squares (OLS) is used to estimate the long-term correlations between the co-integration equation, which includes the vector of co-integration variables and stochastic regressor innovations.

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[7] Tuoitre Online. 2013. Giật Mình Với 91.000 Tỉ Đồng Nợ Dọng. 9 September. Available at http://tuoitre.vn/tin/kinh-te/20130909/giat-minh-voi-91000-ti-dong-no-dong/567953.html (accessed 26 September 2016).

[8] The Public Debt Bulletin is a consolidated debt bulletin produced by the Ministry of Finance.

The panel nature of the data takes into account the cross-sectional heterogeneity at the provincial level. The analytical framework is based on Buettner and Wildasin (2006), Buettner (2009), Solé–Ollé and Sorribas–Navarro (2012), and Bessho (2016). Denoting own-source revenue as R_{it}, total local government expenditure as E_{it}, and balancing transfer as T_{it}, their relations are presented as

$$R_{it} = \alpha E_{it} - \beta T_{it} + u_{it} \text{ or } u_{it} = R_{it} - \alpha E_{it} + \beta T_{it} \tag{1}$$

If u_{it} is stationary, and if R_{it}, E_{it}, and T_{it} are integrated of order 1, then these variables are co-integrated with co-integration vector $[1,-\alpha, +\beta]$. In this case, we can estimate the above equation using the fully modified OLS for co-integrated variables. Some implications can be inferred from this test: (i) if u_{it} is stationary, then the local government fiscal deficit is not explosive in the long term; and (ii) if $\alpha > 1$, $\square$(i.e., a 1% increase in expenditure will increase revenue by more than 1%), then this will support the fiscal sustainability of local governments. To account for population differences among provinces, the above approach is also used with a vector of four variables: own-source revenue per capita, expenditure per capita, GDP per capita, and balancing transfer per capita.

Second, to further examine fiscal sustainability at the provincial level, based upon the Bohn (2008) model, this fiscal reaction equation is used:

$$Surplus_{it} = \alpha_0 + \alpha_1 Surplus_{it-1} + \alpha_2 GDPgap_{it} + \alpha_3 EXPgap_{it} + \alpha_4 BT_{it} +$$
$$X'_{it}\alpha_5 + \pi_i + \epsilon_t + \vartheta_{it} \tag{2}$$

where $Surplus_{it}$ is the primary surplus of province i at time t, $GDPgap_{it}$ is the GDP gap, $EXPgap_{it}$ is the expenditure gap, BT_{it} is the share of balancing transfer in total expenditure, X_{it} is a vector of provincial characteristics, π is fixed province effect, ϵ_t is the fixed time effect, and υ_{it} is the error term.

Surplus is calculated as the ratio of fiscal surplus to GDP. Fiscal surplus is the difference between local government revenue and local government expenditure. Balancing transfer and targeted transfer in local government revenue are not included. The GDP gap is the difference between the realized GDP and trend values of GDP or deviation of GDP from its trend.

Similar to Bohn (2008), a positive value of the GDP gap implies that the realized GDP is higher than its trend value. Similarly, the expenditure gap is the difference between the realized expenditure and its trend at the provincial level. A positive value of the expenditure gap implies that the realized expenditure is higher than its trend. Both trend values are calculated by using the Hodrick–Prescott filter using a smoothing parameter of 10,000. Therefore, the expenditure gap is expected to have a negative influence on the fiscal surplus, and the output gap variable is expected to have a positive influence on the fiscal surplus. If output is below its trend, the surplus should decrease. Similarly, if government spending is above its trend, the surplus should decrease. To examine how the fiscal deficit at the central government level may have implications for local government fiscal surplus, the share of balancing transfer in total expenditure is used. The more a province is dependent on balancing transfers, it is expected that the less fiscal surplus it will enjoy.

Instead of using data compiled by provinces due to missing data (i.e., some provinces do not publish their fiscal data in some years), data consolidated by the Ministry of Finance are used. These data, however, do not categorize expenditure and revenue items at the provincial level. To account for different fiscal capacities, in some

estimations, the sample is divided into two groups: (i) provinces for which the share rate is 100% (i.e., poorer provinces); and (ii) provinces with sharing rates lower than 100% (i.e., better-off provinces).

To avoid spurious regressions, this study examines whether the panel data are stationary by using panel unit root tests (Levin, Lin, James–Chu 2002; Breitung 2002; Im, Pesaran, Shin 2003) and Fisher-type tests using Augment Dickey–Fuller (ADF) and Phillips–Perron (PP) tests (Maddala and Wu 1999). Levin, Lin, James–Chu (2002) and Breitung (2002) models were based on the ADF test and assumed homogeneity in the dynamics of the autoregressive coefficients for all panel units with cross-sectional independence, while Im et al. (2003); Fisher–ADF; and Fisher–PP tests allow for heterogeneity in the autoregressive coefficients for all panel members. The alternative hypothesis simply implies that some or all of the individual series are stationary. The panel unit root results are presented in Table 5.

There is a large difference in the test results. While under the assumption of homogeneity in the dynamic of autoregressive coefficients, Levin, Lin, James–Chu (2002) and Breitung (2002) show that there is no unit root in individual variables, while Im, Pesaran, Shin (2003); Fisher–ADF; and Fisher–PP tests show that all variables have unit roots at the level and no unit root at the first difference. Because the sample includes all provinces in the country, heterogeneity is surely present. Therefore, it can be concluded that there are unit roots for the data in the level and no unit root for data at the first difference.

Table 5: Panel Unit Root Test

Null Hypothesis	Unit Root (assumes common unit root process)		Unit Root (assumes individual unit root process)		
Statistics	Levin, Lin, James–Chu	Breitung	Im, Pesaran, Shin	ADF– Fisher	PP– Fisher
Level					
Local government expenditure	–5.81***	–4.30***	1.15	126.93	128.24
Local government revenue	–7.55***	–3.15***	–1.05	130.90	225.90***
Balance transfer	–17.24***	–0.35	–1.59	133.65	118.35
Local government expenditure per capita	–4.72***	–4.74***	1.84	120.46	115.58
Local government revenue per capita	–8.29***	–2.40***	–1.27	136.70	222.90***
Local GDP per capita	–4.85***	1.52	1.16	106.30	95.50
Balance transfer per capita	–19.58***	–0.55	–2.14**	138.27	134.62
First difference					
Local government expenditure	–9.28***	–2.16***	–5.66***	222.36***	666.58***
Local government revenue	–1.05	–10.01***	–3.75***	174.92***	833.69***
Balance transfer	–21.66***	–14.80***	–10.96***	337.30***	638.29***
Local government expenditure per capita	–7.14***	–2.48***	–5.67***	222.48***	688.28***
Local government revenue per capita	–0.52	–10.18***	–3.52***	169.16***	821.24***
Local GDP per capita	–13.65***	–3.55***	–4.84***	202.40***	378.90***
Balance transfer per capita	–21.94***	–14.68***	–11.33***	345.62***	641.05***

ADF = Augment Dickey–Fuller; PP = Phillips–Perron; GDP = gross domestic product.

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

After testing for unit roots, co-integration among the variables of interest is investigated. Pedroni (2000) proposed a methodology to test for panel data co-integration, which allows testing for the co-integrated relationship in four different models: model without heterogeneous trend and ignoring common time effect (M1), model without common time effect and allowing heterogeneous trend (M2), model with heterogeneous trend and allowing common time effect (M3), and model with common time effect and ignoring heterogeneous trend (M4). Pedroni (1999) showed that there are seven different statistics for the co-integration test: panel v-statistic, panel ρρ-statistic, Pedroni Panel-statistic, panel ADF-statistic, group rho-statistic, group Pedroni Panel-statistic, and group ADF-statistic. The first four statistics are known as panel co-integration statistics and are based on the within-dimension approach. The last three statistics are group panel co-integration statistics and are based on the between-dimension approach. In the presence of a co-integrating relationship, the residuals are expected to be stationary.

Table 6: Panel Co-Integration Test

Panel A: Model 1 (local government expenditure, local government revenue, balancing transfer)				
Pedroni Residual Co-Integration Test (H0: no co-integration)				
	Drift and No Deterministic Trend		**Drift and Deterministic Intercept**	
Trend Assumption	**Statistic**	**Prob.**	**Statistic**	**Prob.**
H1: Common AR coefficients (within-dimension)				
Panel v-Statistic	2.739	0.003	−1.940	0.974
Panel rho-Statistic	−2.155	0.016	2.176	0.985
Panel Pedroni Panel-Statistic	−14.653	0.000	−14.758	0.000
Panel ADF-Statistic	−4.272	0.000	−1.489	0.068
H1: Individual AR coefficients (between-dimension)				
Group rho-Statistic	2.029	0.979	5.584	1.000
Group Pedroni Panel-Statistic	−21.255	0.000	−22.822	0.000
Group ADF-Statistic	−4.316	0.000	−1.636	0.051
Kao Residual Co-Integration Test				
ADF	−5.711	0.000		
Panel B: Model 2 (local government expenditure per capita, local government revenue per capita, balancing transfer per capita, GDP per capita)				
Pedroni Residual Co-Integration Test (H0: no co-integration)				
	Drift and No Deterministic Trend		**Deterministic Intercept and Trend**	
Trend Assumption	**Statistic**	**Prob.**	**Statistic**	**Prob.**
H1: Common AR coefficients (within-dimension)				
Panel v-Statistic	−2.562	0.995	−6.334	1.000
Panel rho-Statistic	1.611	0.946	5.057	1.000
Panel Pedroni Panel-Statistic	−11.122	0.000	−14.350	0.000
Panel ADF-Statistic	−8.975	0.000	−9.160	0.000
H1: individual AR coefficients (between-dimension)				
Group rho-Statistic	5.655	1.000	8.309	1.000
Group Pedroni Panel-Statistic	−31.219	0.000	−36.478	0.000
Group ADF-Statistic	−10.967	0.000	−9.523	0.000
Kao Residual Co-Integration Test				
ADF	−7.908	0.000		

AR = autoregressive; GDP = gross domestic product; ADF = Augment Dickey–Fuller.

Note: * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Panel A of Table 6 presents the result of M2 (with time-effect and no-heterogeneous trend) and M3 (with time-effect and heterogeneous trend) co-integration. For the first vector of the variable, six statistics from the M2 co-integration test strongly reject the null-hypothesis of no co-integration in the sample. Meanwhile, only two statistics from the M3 co-integration test show a strong rejection of the null hypothesis, while two statistics show a weak rejection (at 90% confidence level). Although there are mixed results of the co-integration of the variables, it is hard to accept the null hypothesis that there is no unit root in the data.

Panel B of Table 6 reports the results of the co-integration test for the vector of four variables: expenditure per capita, revenue per capita, balancing transfer per capita, and GDP per capita. The results indicate that in both cases (with- and without-heterogeneous trends), four of the seven statistics show a strong rejection of the null hypothesis that there is no panel co-integration among the sample, so the null hypothesis of no co-integration among the four variables can be accepted.

Following Pedroni (2004), the long-term relationship between the co-integrated variable is estimated by using the fully modified OLS estimator to avoid the bias of the OLS estimator (Table 7). The fully modified OLS results indicate that the coefficients of local government expenditure in all specifications are statistically significant. The estimation results from the fully modified OLS panel estimation indicate that a 1% increase in expenditure leads to an increase of local government revenue by 1.45% (for all provinces) and 1.60% (for poorer provinces). [9] The results support fiscal sustainability in the whole sample and for the sample of poorer provinces. The estimation results also indicate that balancing transfers have a negative relationship with revenues in poorer provinces, suggesting that balancing transfers may create some incentive issues and ultimately discourage provinces in raising their revenue efforts.

The relationship between three variables is then examined by using expenditure at the local government level as dependent variables as follows:

$$E_{it} = \tau + \alpha^e R_{it} + \beta^e T_{it} + u_{it} \tag{3}$$

If α^e<1, (i.e., a 1% increase in revenue increases expenditure by less than 1%), then fiscal sustainability is supported. The results in panel B of Table 7 show that the coefficient of revenue in all specifications is lower than 1, supporting the results presented in panel A with revenue as the dependent variable.

To account for provincial heterogeneity, the long-term relationship is analyzed between four variables, revenue per capita, expenditure per capita, provincial GDP per capita, and balancing per capita, using the fully modified OLS estimator panel. The results are reported in panel C (with revenue per capita as the dependent variable) and panel D (with expenditure per capita as the dependent variable). These results support those using aggregate data. It is interesting to note that local GDP per capita does not have a statistically significant effect on revenue per capita but does have a positive and statistically significant effect on expenditure per capita.

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[9] There is some statistical evidence indicating that the sample of better-off provinces is small for this analysis, so the estimation with the sample of better-off provinces is not carried out.

Table 7: Fully Modified Ordinary Least Squares for Co-Integration Relationship

	All Provinces		Poorer Provinces	
	Coefficient	Standard Error	Coefficient	Standard Error
Dependent variable: local government revenue				
Local government expenditure	1.453***	0.01	1.600***	0.011
Balancing transfer	0.01	0.021	−0.214***	0.023
N*T	720		588	
Adjusted R2	0.881		0.423	
Dependent variable: local government expenditure				
Local government revenue	0.671***	0.023	0.649***	0.025
Balance transfer	0.113***	0.023	0.158***	0.026
N*T	720		588	
Adjusted R2	0.281		0.337	
Dependent variable: local government revenue per capita				
Local government expenditure per capita	1.228***	0.047	1.598***	0.053
Balancing transfer per capita	−0.083*	0.048	−0.354***	0.054
Local GDP per capita	0.275***	0.041	−0.124***	0.045
N*T	718		586	
Adjusted R2	0.724		0.496	
Dependent variable: local government expenditure per capita				
Local revenue per capita	0.277***	0.054	0.373***	0.06
Balancing transfer per capita	−0.117**	0.047	−0.095*	0.056
Local GDP per capita	0.418***	0.039	0.287***	0.043
N*T	718		586	
Adjusted R2	0.579		0.767	
Dependent variable: local GDP per capita				
Local government expenditure per capita	0.172***	0.047	0.181***	0.053
Local revenue per capita	0.052	0.056	0.037	0.061
Balancing transfer per capita	−0.057	0.048	−0.067	0.055
N*T	719.00		586.00	
Adjusted R2	0.908		0.845	

GDP = gross domestic product.

Note: * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

Table 8 presents the debt sustainability analysis. Columns 1 and 2 are estimation results using the fixed-effect estimator, and columns 3 and 4 use the dynamic panel generalized method of moments (GMM) estimator. The sample in panel A consists of all provinces, and panel B includes only provinces with sharing rates of 100%.[10]

The estimation results using fixed-effects estimators suggest that for both samples (i.e., all provinces and poorer provinces), the local expenditure gap has a negative effect on the fiscal surplus, implying that a 1% increase in the gap between realized expenditure and its trend value would reduce the fiscal surplus by 0.06%–0.12% depending on the estimators. The provincial population also has a negative effect on the fiscal surplus, because more populous provinces may have to spend more to meet the demand within their jurisdiction, thus their fiscal deficit declines as the population increases. In contrast, GDP per capita has a positive effect on the fiscal surplus.

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[10] It should be noted that due to the small number of provinces with a share rate less than 100%, estimates using the fixed-effect estimator and dynamic generalized method of moments (GMM) could be inconsistent, so this type of equation for such provinces is not done.

However, unlike expectations, the local GDP gap has a negative effect on the fiscal surplus, that is, as the local realized GDP is higher than their trend values, the fiscal surplus is lower. A clear explanation for this issue does not exist; it is potentially due to an endogeneity issue.

Table 8: Budget Deficit Sustainability Analysis
(Dynamic Panel Data Analysis)

	Fixed-Effect Estimator		Panel GMM	
	Coefficient	Standard Error	Coefficient	Standard Error
Panel A: All provinces				
Lagged dependent variable			−0.096***	0.002
Local GDP gap	−0.073	0.069	0.135***	0.028
Local expenditure gap	−0.152***	0.037	−0.086***	0.006
Population (in log)	0.018	0.048	−0.233***	0.047
Local GDP per capita	0.201***	0.03	0.178***	0.019
Balancing Transfer/expenditure	0.037	0.025	−0.106***	0.012
Constant	−0.672	0.092		
No. of observation	767		531	
No. of instruments			59	
Hansen (p-value)			0.214	
1st order autoregression (p-value)			0.003	
2nd order autoregression (p-value)			0.680	
Panel B: Poorer provinces				
Lagged dependent variable			−0.025***	0.003
Local GDP gap	−0.058	0.091	0.000	0.046
Local expenditure gap	−0.123**	0.048	0.088***	0.018
Population (in log)	−0.265*	0.143	−0.200***	0.066
Local GDP per capita	0.242***	0.018	0.220***	0.034
Balancing Transfer/expenditure	−0.017	0.015	−0.074***	0.015
Constant	−0.722***	0.041		
No. of observation	624		432	
No. of instruments			48	
Hansen (p-value)			0.496	
1st order autoregression (p-value)			0.0243	
2nd order autoregression (p-value)			0.3165	

GMM = generalized method of moments; GDP = gross domestic product.

Note: * $p<0.1$, ** $p<0.05$, *** $p<0.01$.

To account for this endogeneity, third lags of dependent variables and independent variables as instrumental variables are used. The statistics from the Hansen test and first-order and second-order autoregression tests all satisfy the identification conditions for dynamic GMM specifications. The estimation results show that the fiscal surplus in the last period has a negative effect on the current fiscal surplus, ensuring that the fiscal surplus is not explosive and supports fiscal sustainability at the local level. The

estimation results obtained from dynamic GMM indicate that the local GDP gap has a positive effect on the fiscal surplus, although they do not have an economic effect for poorer provinces. While the expenditure gap has the expected sign for the specification with the whole sample, it has a positive effect on fiscal surplus for poorer provinces. This suggests that provinces that suffer from expenditure gaps may increase their efforts to increase their own-source revenues, which could help them cover gaps in expenditure and accumulate extra revenue. This, in turn, supports the previous conjecture that the balancing transfer system may discourage provinces in increasing their revenue efforts. The coefficient on the ratio of balancing transfer to total expenditure is negative and statistically significant, suggesting that the more dependent on government transfers a province is, the higher the likelihood that it will go into deficit.

3. CONCLUSIONS AND SOME POLICY IMPLICATIONS

Since the new budget law was promulgated in 2002, the fiscal responsibilities of local authorities have significantly increased; thus, local fiscal policies play a large role in Viet Nam's growth and development. To fulfill their growing role, the central government has granted local authorities more financial resources, including sharing parts of its revenue with local governments. Intergovernmental fiscal transfers have also been reformed to play an important role in mitigating vertical and horizontal fiscal imbalances.

However, several issues hinder the effectiveness and efficiency of fiscal decentralization in Viet Nam, including unclear expenditure assignments among tiers of governments, various measures and regulations that limit the autonomy of local governments in carrying out expenditure revenue management, and a lack of minimum standards for expenditure outcomes. Regarding intergovernmental fiscal transfers, although the transfer system is working fairly well, weaknesses in transfer norms, incentive problems in resources mobilization and allocation, and existence of many national and provincial targeted programs with overlapping objectives and targets also limit the efficiency of this system. Local governments are permitted to borrow in capital markets, but it seems that the fundamental foundations for local government borrowing management are weak. Lack of transparency is also observed in all aspects of fiscal decentralization.

To make the fiscal decentralization work better in Viet Nam, it is recommended that:

(i)   The central government should make expenditure assignments more explicit. It could also give up some of its responsibilities to lower tiers of governments. The central government also needs to design minimum standards of services delivery, not only to secure acceptable equality in services delivery across jurisdictions but also to provide local governments with more autonomy over resources allocation.

(ii) The central government should review its current sharing arrangements such as using separate formulas for each revenue source instead of using a common formula. The central government could further strengthen local government revenues by allowing provinces to impose surtaxes on some types of taxes such as personal income taxes and local business taxes, or by giving them more autonomy in setting fees and charges. Introducing a property tax could be considered in the longer term.

(iii)   Regarding intergovernmental fiscal transfers, some measures could be taken immediately, such as revising transfer norms, adopting a formula-based transfer system, and avoiding negotiations to mitigate incentive problems in resources allocation.

(iv)   The central and provincial governments should review the current targeted programs, including objectives and targets, and identify overlapping programs. Resources allocations for each program should be matched with the targets. In addition, financial resources for each program should be linked to outcomes.

(v)   To strengthen the current legal foundations for local government borrowing, areas that should be emphasized include having a transparent reporting system for local government debt reporting, developing a creditworthiness evaluation mechanism for local governments, and specifying a threshold on local debt stocks and debt servicing to ensure debt sustainability.

(vi)   Measures should be created that ensure fiscal accountability at the local government level.

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