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Impact of intergovernmental transfers on non-tax revenue mobilization: evidence from Togo.

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Abstract

This paper examines the impact of intergovernmental transfers, namely the Local Authorities Support Fund (FACT) on the mobilization of non-tax revenue (NFR) by Togolese municipalities. It is based on secondary data covering the period 2020-2024 with a sample of 62 municipalities. Econometric random-effects model estimation techniques were used. The results show that the overall FACT allocation does not have a significant effect on NFR mobilization. However, the differentiated effect of the FACT components reveals that the investment allocation has a positive and significant impact. A 1% increase in this allocation leads to an average increase of 1.116% in net financial resources (NFR), while the operating allocation has a negative and insignificant effect. Furthermore, population and geographic location significantly influence NFR. These results suggest reallocating and increasing investment allocations towards productive projects.

Keywords municipalities; intergovernmental transfers; non-tax revenue; Togo.

Résumé :

Dans un contexte de décentralisation marqué par une faible autonomie financière des collectivités territoriales, l'État togolais a mis en place le Fonds d'Appui aux Collectivités Territoriales (FACT) afin de soutenir le fonctionnement et l'investissement des communes. La présente étude s'inscrit dans ce cadre et vise à analyser l'effet du FACT sur la mobilisation des RNF des communes togolaises. Elle s'est appuyée sur des données secondaires collectées auprès du ST-CG-FACT et de la DDCL, couvrant la période 2020-2024 avec un échantillon de 62 communes. Les techniques d'estimation des modèles économétriques à effets aléatoires ont été utilisées. Les résultats montrent que la dotation globale du FACT n'exerce pas d'effet significatif sur la mobilisation des RNF. Toutefois, l'effet différencié des composantes du FACT révèle que la dotation d'investissement a un effet positif et significatif. Une augmentation de 1 % de cette dotation entraînant une hausse moyenne de 1,116 % des RNF, tandis que la dotation de fonctionnement présente un effet négatif et non significatif. Par ailleurs, la population et la localisation géographique influencent significativement les RNF. Ces résultats suggèrent de réallouer et d'accroître les dotations d'investissement vers les projets productifs.

Mots clés: Décentralisation; collectivités territoriales; transferts intergouvernementaux; autonomies financières; recettes non fiscales.

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Introduction

For more than three decades, the administrative structure of the majority of African states has moved towards decentralization. According to Smoke (2006), globally, decentralization has become the dominant mode of governance for local authorities in many democratically advanced countries. It is implemented to enhance the efficiency of wealth distribution within a country. Indeed, the African Union defines decentralization as *"the transfer of powers, responsibilities, capabilities, and resources from the national level to all subnational levels of government in order to strengthen the capacity of subnational governments to promote citizen participation and the delivery of quality services* " (AU, 2014).

In Togo, the 1992 Constitution enshrined the principle of decentralization in Article 141, which stipulates that the Togolese Republic is organized into territorial entities in accordance with this principle, while respecting national cohesion. These territorial entities include municipalities, prefectures, and regions. The creation of any new entity is governed exclusively by law. This provision was reinforced by the Constitution of May 6, 2024, whose first article affirms that " *the organization of the State is decentralized."* Initiated by the Constitution of October 14, 1992, this process was finally implemented with the 2019 elections through the establishment of municipal councilors. A number of laws have been passed to regulate this policy, with the aim of authorizing territorial entities to assume various responsibilities and to bring decision-making closer to the people. These laws are: Law of February 11, 1998, Law No. 2007-011 of March 13, 2007 relating to decentralization and local freedoms, successively amended by Law No. 2018-003 of January 31, 2018, Law No. 2019-006 of June 26, 2019, Law No. 2021-020 of October 11, 2021 and Law No. 2022-011 of July 4, 2022.

The decentralization process in place in Togo subdivides the territory into two types of local authorities: the region and the municipality, each endowed with legal personality and financial autonomy [1]. Decentralization can be approached from various perspectives. Administrative, functional, political, structural, and financial decentralization are all facets of decentralization. Among these various aspects, financial decentralization stands out due to its pervasiveness. Referring to the allocation of public resources and the organization of financial relations between the state and decentralized local authorities (Yatta, 2009), it encompasses the definition of local authorities' own resources, the definition of resources shared between the state and local authorities, and the financial transfer from the state budget to the budgets of local authorities

[1]Article 2 of Law No. 2019-006 of June 26, 2019 relating to decentralization and local freedoms

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(Yatta, 2000). Financial decentralization strengthens the autonomy of local authorities by providing them with the necessary means to finance their public services and local development projects [2].

By linking local development to global challenges, particularly those related to sustainability, local development is a crucial issue for municipalities in Togo, as in many developing countries. Economic, social, and environmental challenges are exacerbated by factors such as poverty and climate change. In this context, intergovernmental transfers appear as potential tools implemented by most African countries to address these challenges. According to Dahlby (2001), these transfers can neutralize the effect of inter-jurisdictional fiscal externalities that occur when one state's fiscal adjustments affect the tax behavior of others.

It is with this in mind that Togo established a mechanism for transferring funds to local authorities called the Local Authority Support Fund (FACT) [3]. This fund aims to compensate for the transfer of powers, mobilize financial resources, and support development initiatives financed by local authorities [4]. It enables the transfer and mobilization of the financial resources necessary for local authority development; ensures additional means for the exercise of their powers; finances their institutional strengthening; harmonizes financing procedures; and corrects existing imbalances [5]. By granting local authorities' financial autonomy, the State encourages them to adopt a dynamic of accountability and transparent management (Oates, 1993). It is therefore a preferred avenue for development that motivates local authorities to make greater efforts in mobilizing their own resources and broadening the tax base to meet local authority expenditures (Kezazy et al., 2024).

From an economic perspective, the effect of intergovernmental transfers on the mobilization of non-tax revenue by local authorities remains ambiguous. Indeed, intergovernmental transfers can make local authorities less responsible for mobilizing their own resources through several mechanisms, namely: financial dependence; crowding-out effects; and lack of incentives (Masaki, 2018). Local authorities, being overly dependent on transfers (subsidies), reduce their motivation and may also perceive less incentive to develop strategies for collecting local

[2] Local development is defined as an integrated process that harnesses the potential of a territory to meet the needs of local populations, while taking into account social, economic and environmental constraints.(Pike, Rodríguez-Pos, & Tomaney, 2006)
[3] Article 2 of Decree 2019-130/PR of October 9, 2019, sets out the organizational and operational procedures of FACT.
[4] AMLALO MS "DECENTRALIZATION UNDERWAY IN TOGO" March 2007.
[5] Article 2 of Decree 2019-130/PR of October 9, 2019, sets out the organizational and operational procedures of FACT.

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revenue. In this regard, Bahl & Linn (1992) emphasize that in most developing countries, a high dependence on intergovernmental transfers reduces the responsibility of local governments in their fiscal decisions and local tax efforts. These subsidies can discourage local authorities from taxing (increasing) citizens' tax payments, etc. (Zhuravskaya, 2000). However, according to Martinez-Vazquez & Rider, (2006) a strong dependence of local authorities on transfers is likely to induce a lack of budgetary discipline.

In a context of limited budgetary constraints, reliance on matching transfers can mitigate the expected outcomes of fiscal decentralization and thus reduce local revenue mobilization. Studies by authors such as Buettner & Wildasin (2006), Bradford & Oates (1971), and Mogues & Benin (2012) on intergovernmental transfers support the view that transfers in the form of grants have a negative impact on local revenue mobilization. However, some local governments in Africa lack institutional capacity in local tax collection (resource mobilization) and rely heavily on central government subsidies to stay afloat (Shah, 2006).

Although these subsidies have negative effects on local revenue mobilization, the literature shows that some studies contradict this assertion. Bengono et al. (2023) demonstrate that the annual amount of allocations transferred to municipalities contributes to increased local revenue in Cameroon and is far from discouraging the mobilization of their own revenue. In Tanzania, intergovernmental subsidies improve local revenue mobilization, and the positive effect of budgetary transfers on local revenue collection appears to be more pronounced in rural districts (Masaki, 2018).

To our knowledge, there is no study which has addressed this aspect in the case of Togo. Little attention has been paid to the effects of the Local Authorities Support Fund (FACT) on the mobilization of local revenue. It is therefore important to conduct this study in Togo by analyzing how FACT transfers can influence the mobilization of non-tax revenue by municipalities. Our study is thus useful because it addresses the following fundamental question: what is the effect of the Local Authorities Support Fund on the mobilization of non-tax revenue by municipalities in Togo? Specifically: i) What is the effect of the overall allocation of the Local Authorities Support Fund on the mobilization of non-tax revenue by municipalities in Togo? ii) What is the effect of the components of the Local Authorities Support Fund on the mobilization of non-tax revenue by municipalities in Togo?

Thus, the main objective of our study is to analyze the effect of the Local Authorities Support Fund on the mobilization of non-tax revenues by Togolese municipalities.

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This general objective is broken down into two specific objectives, namely: - Examine the effect of the overall allocation of the Local Authorities Support Fund on the mobilization of non-tax revenues by municipalities in Togo; - Analyze the effect of the components of the Local Authorities Support Fund on the mobilization of non-tax revenues by municipalities in Togo.

This study contributes, from a scientific and academic perspective, to filling the gap in the literature on the relationship between intergovernmental transfers and resource mobilization in the Togolese context. It will offer an empirical analysis of the actual effects of support funds to local authorities on municipal revenues and will identify the structural and institutional factors influencing subsidies in local resource mobilization. From a political and local governance perspective, the study will provide evidence-based data to public decision-makers to assess the effectiveness of financial decentralization policies and the transfer of funds to local authorities. Thus, it contributes to improving municipal financial management and to the development of municipalities in Togo.

The remainder of this article is organized as follows: Section 1 presents the institutional framework for financing local authorities in Togo. Section 2 presents the literature review; Section 3 focuses on the methodology. Section 4 presents the results and discussion. Finally, Section 5 presents the conclusion and policy recommendations.

1. Institutional framework for financing local authorities in Togo

1.1.Legal and institutional framework for decentralization in Togo

Decentralization in Togo is based on a legal framework that has been progressively strengthened since 1992. The initial law establishing the legal framework for decentralization in Togo, in accordance with constitutional provisions, is Law No. 98-006 of February 11, 1998. It instituted an administrative organization of the territory that merged the elements of decentralization through a systematic and hierarchical territorial division, retaining the previous categories but modifying the legal regime applicable to them. This law was revised by Law No. 2001-005 of March 12, 2001, and subsequently by Law No. 2007-011 of March 13, 2007, concerning decentralization and local freedoms. This law was subsequently amended by Law No. 2018-003 of January 31, 2018, and then by Law No. 2019-006 of June 26, 2019, [6]which strengthened the decentralization mechanism by establishing a municipal system across Togo. The process was further consolidated by several major reforms, including the full municipalization of the territory in 2017, the creation of regions, and the constitution of May 6,

[6]Alain R. & Caroline P.: Legal and institutional framework in Togo, March 2023. Pp2

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2024. Based on this framework, the 2019 municipal elections led to the effective establishment of 117 municipalities distributed across 39 prefectures and 5 regions. These municipalities are headed by general secretaries who coordinate municipal services and contribute to improving municipal services for citizens. The Ministry of Territorial Administration is responsible for implementing the decentralization process.

1.2.Local taxation in Togo

In Togo, local taxation is the primary source of revenue for local authorities. Since the implementation of decentralization reforms, including the municipalization announced in 2019, the Togolese government has strengthened the role of municipalities by establishing municipal councils tasked with development powers and ensuring the management of municipal affairs. Law No. 2018-003 of January 31, 2018, amended by Law No. 2007 on Decentralization and Local Freedoms, established a distribution of resources between the central government and local authorities. This distribution is based on three types of resources: local revenue collected by municipalities through taxes, duties, and fees; shared revenue collected by the state, a portion of which is reserved for municipalities; and state transfers, including the FACT (Local Authority Tax Fund [7]).

1.3.Legal and institutional framework of FACT in Togo

The FACT (Local Authorities Finance Fund) is a public financial organization with legal personality and financial autonomy [8]. According to Decree No. 2019-130/PR, which establishes the organization and operation of the FACT in Togo, it is intended for local authorities. The FACT's mission is to mobilize financial resources for the development of local authorities while contributing to the correction of imbalances between them through an equalization system. First amended in 2018, the FACT harmonizes local authority financing procedures and ensures the mobilization of financial resources to enable local authorities to assume the costs resulting from the transfer of responsibilities. It became operational in 2020. The State intervenes directly to finance municipalities through this fund.

1.4.FACT Mobilization

According to Article 14 of Law No. 2019-130/PR, which establishes the organizational and operational procedures of the FACT (Local Authorities Development Fund), this fund is financed by national resources and contributions from technical and financial partners (TFPs)

[7] https://finances.gouv.tg/journees-des-communes-decentralisation-financiere-et-mobilisation-de-ressources-locales-enjeux-et-perspectives-pour-les-collectivites-locales-togolaises/?utm
[8] According to Decree No. 2019-130/PR establishing the organizational and operational procedures of FACT (Article 2)

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based on agreements established between these partners and the government. National resources consist of annual state allocations as defined by the Finance Law; tax revenues (comprising the portions levied by the Togolese Revenue Authority (OTR) on certain types of revenue and transferred to the FACT); financial resources (from ministries, intended to offset the costs associated with transferred or shared responsibilities); and other financial support (aid, donations, and various contributions). Contributions from Technical and financial partners are intended to finance projects undertaken by local authorities.

The management of the FACT (Local Authorities Development Fund) is governed by control mechanisms ensured by the State. Financial transfers to local authorities are authorized by the chair of the FACT management committee, while the Treasury makes the resources available to the municipalities. Each year, the FACT management committee determines the weighting of the fund's various components, including the basic, equalization, and performance grants. FACT resources are divided into operating grants, intended to cover the current expenses of local authorities, and investment grants, earmarked or unearmarked, aimed at financing local development projects.

The allocation of the FACT (Local Government Allocation Fund) is determined annually by a joint interministerial decree of the Ministry of Territorial Administration and the Ministry of Finance, in accordance with the allocation criteria proposed by the ST-CG-FACT (General Secretariat for Local Government Allocation Funds). The criteria used for this allocation vary depending on the nature of the grants and are based on the principles of fairness and performance. The fund is divided into three components (the basic lump-sum allocation, the equalization allocation, and the performance allocation), as presented in Table1 below.

The basic lump-sum grant is allocated uniformly to all municipalities, aiming to guarantee a minimum level of funding for each local authority. The equalization grant, on the other hand, aims at territorial rebalancing. Its distribution takes into account objective criteria such as population size, area, and the poverty index for each municipality. Finally, the performance grant is designed to encourage local authorities to improve their governance and the quality of their services. It is based on a percentage of mobilized resources distributed according to performance criteria, namely: the use of FACT grants, budget execution, the holding of treasury committee meetings, the deadlines for submitting budget documents, and the holding of municipal council meetings.

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Table 1: FACT Allocation Criteria

Years	Basic lump sum allocation	Equalization grant			Performance grant
		Population	Area	Poverty index	
2020	40%	20%	20%	20%	-
2021	20%	10%	10%	60%	-
2022	10%	10%	10%	70%	-
2023	10%	10%	10%	70%	-
2024	8%	10%	10%	70%	2%

Source: Author, based on data from ST-CG-FACT

2. Literature review

2.1. Theoretical framework

❖ The theory of fiscal federalism

The theory of fiscal federalism forms the central theoretical basis for the analysis of local finances and financial decentralization. Developed by Musgrave (1959) and Oates (1972), it rests on the idea that the distribution of powers and financial resources among the different levels of government improves the effectiveness of public action. According to Musgrave, the state performs three essential functions: resource allocation, income redistribution, and macroeconomic stabilization. In a decentralized context, some of these functions, particularly the allocation of local public goods and services, are more effectively carried out by local authorities, as they have a better understanding of the specific needs of their populations. Within the framework of this study, the FACT (Local Authorities Finance Act) is presented as a financial redistribution mechanism designed to strengthen the budgetary capacities of Togolese municipalities. In theory, these transfers enable local authorities to finance investments, improve their administrative capacities, and consequently, strengthen their ability to mobilize net financial resources.

❖ Public Choice Theory

Public choice theory offers an alternative interpretation of public finance by incorporating the strategic behaviors of policymakers. Developed by Buchanan and Tullock, and subsequently applied to intergovernmental transfers by Gordon and James, Khemani (2003), and Rodden (2002), this approach posits that public actors pursue individual objectives, such as maximizing political power or securing reelection. From this perspective, the allocation of financial transfers to local authorities is not solely based on economic or social criteria, but can also be influenced by political, institutional, or electoral considerations. Transfers can thus be used as instruments

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of political redistribution, without necessarily strengthening local economic capacity. In the case of the FACT (Local Authority Finance and Taxation), this theory suggests that financial allocations can be differentiated between municipalities, regardless of their performance in mobilizing local and regional resources. Furthermore, receiving regular transfers can reduce the incentive for local authorities to improve their own resource mobilization efforts, particularly when the transfers are perceived as a given.

❖ **The theory of dependence on transfers**

The theory of transfer dependence, known as the " Flypaper" theory The "fly-swatting effect,[9]" developed by Arthur (1975) and further developed by Hines and Thaler (1995), posits that intergovernmental transfers tend to "stick" to local public spending rather than stimulate the mobilization of local own resources. According to this theory, local authorities prefer to use transferred resources to finance their current or investment expenditures rather than increase local tax revenue. This situation can lead to a substitution between transfers and own-source revenue, thus reducing the incentive for local authorities to mobilize non-tax revenue (NTR). In the context of Togolese municipalities, receiving FACT allocations can create a form of budgetary dependence. This dependence can limit local initiatives aimed at broadening the NTR base, improving collection, or diversifying non-tax revenue sources. This theoretical framework is essential for understanding empirical results that do not necessarily confirm the hypothesis of a positive effect of transfers on own-source revenue.

2.2.Empirical framework

2.2.1. Intergovernmental transfers: increasing local own revenue

Empirical analysis of intergovernmental transfers clearly shows that they contribute to increased local revenue. This positive effect of transfers on local revenue is more pronounced in rural areas (Masaki, 2018). According to Bird & Slack (2004), Boadway & Flatters (1982), and Wildasin (1983), transfer mechanisms can provide efficiency gains by internalizing budgetary externalities. A similar trend has been observed in Russia, showing that any change in a local government's own revenue is almost entirely offset by an opposing change in shared revenue, indicating that intergovernmental transfers serve as near-perfect substitutes for local revenue (Zhuravskaya, 2000). Resnick (2012), in his article, concluded that state transfers strengthen the capacity of local authorities to provide basic social services. As for Wildasin (1983), the characteristics of transfers are a major determinant of local revenue mobilization.

[9] According to the fly-killer effect, an increase in transfers leads to an increase in local public spending rather than an increase in the disposable income of the local population (Filimon, Romer and Rosenthal, 1982)

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In their article, Bengonol et al. (2023) emphasize that central transfers can increase local public spending, which improves the provision of public services and strengthens the accountability of local authorities. The resulting accountability, in turn, leads to greater voluntary tax compliance, which stimulates the mobilization of local revenue. Caldeira and Rota-Graziosi (2014), in their analyses, highlight a virtuous circle between central government transfers and local own revenues by using an optimal tax theory model and unconditional central transfers. According to a study of tax data in Sweden, Dahlberg et al. (2008) demonstrate that central government transfers, rather than reducing local tax revenues, increase local spending. However, recent studies have identified three channels through which central government financial support can facilitate revenue collection at the local level: budgetary expenditures, public services, and tax enforcement (Jean-Raoul, Boniface, & Simon, 2023). Intergovernmental subsidies broaden the tax base by stimulating local economies through transfer payments (Caldeira & Rota-Graziosi, 2014; Ilzetzki, Mendoza, & Végh, 2013). As Caldeira & Rota-Graziosi (2014) note, transfers can generate a virtuous circle where central subsidies increase local public spending, which improves private income and/or voluntary tax contributions, and consequently local own revenues. One of the roles that intergovernmental subsidies play is to finance the administrative operating costs of local authorities (Fjeldstad et al., 2010; Troland, 2014). Indeed, a large portion of intergovernmental transfers goes toward personal emoluments and recurring expenses (i.e., the payment of salaries and other benefits for civil servants and other administrative costs), which include the costs of hiring qualified staff and experts to administer revenue collection (Nyange, Tschirley, Nassoro, & Gaspar, 2014). This is the case in most African countries, where transfers are intended to strengthen budget management and tax administration capacities (Cochran, Bond, Sheppard, & Samuels, 2009). Given that most local governments lack robust fiscal institutions, they often rely on external transfers to fulfill their revenue collection responsibilities.

2.2.2. *Intergovernmental transfers: reduction of local own revenue*

Empirical evidence for the crowding-out effects of central government transfers is far from conclusive (Masaki, 2018). Arguments for the positive effects of central transfers on local revenue mobilization have been challenged by second-generation fiscal federalism theory (Weingast, 2009). Analysis of individual municipal tax data in the United States for the period between 1972 and 1997 shows that increased central government subsidies do indeed lead to a reduction in local revenue (Masaki, 2018). Intergovernmental transfers erode local fiscal autonomy because they can serve as substitutes for local tax revenue (Bradford & Oates, 1971;

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Buettner & Wildasin, 2006; Mogues & Benin, 2012; Zhuravskaya, 2000). To support this idea, Bradford and Oates (1971) proposed a formal theory describing how subsidies affect the performance of local budgets. They showed, under the assumption that public and private revenues are fungible, that unconditional intergovernmental subsidies free up additional resources for local governments to benefit taxpayers in the form of a lump-sum tax reduction, thereby crowding out local revenue mobilization efforts. According to Zhuravskaya (2000), local governments in Russia have no incentive to exert any tax-raising effort when transfers from higher levels of government increase: any change in a local government's own revenue is almost entirely offset by an opposing change in shared revenue, indicating that intergovernmental transfers serve as near-perfect substitutes for local revenue. Several studies show that intergovernmental transfers tend to be used for public spending rather than tax relief. This phenomenon is known as the "flypaper effect" (Rosen, 2005; Thaler, 1995), which is likely to reduce tax effort (Bird, 2010; Ter-Minassian, 1997; Weingast, 2009). Furthermore, studies have observed spillover effects from intergovernmental transfers, through which subsidies increase (Caldeira & Rota-Graziosi, 2014; Skidmore, 1999).

3. Methodology

3.1.Data collection and analysis methods

The data used in this article are secondary data from the ST-CG-FACT and DDCL surveys covering the period from 2020 to 2024, with a sample of 62 municipalities out of a total of 117, representing 53%. This sample size and period were determined by the availability of the received data. The number of municipalities included covers the entire national territory, notably the five economic regions of Togo and Greater Lomé, thus ensuring the representativeness of the sample. The collected data were analyzed using STATA version 18 for variable recoding and econometric analysis. Data cleaning was performed using Excel.

3.2.Description of the study variables and presentation of the model

The variables used to analyze the effect of the FACT (Local Authority Tax Fund) on the mobilization of non-tax revenues by Togolese municipalities are presented in Table 2 below. The data for the dependent variable (RNF) [10]represent the revenues mobilized by the municipalities themselves. These data allow us to assess local financial autonomy (Bahl & Bird, 2008; Smoke, 2013)and measure the efficiency and development of local resources. According to Faguet (2004), state resource transfers to local authorities can influence the mobilization of

[10] The RNF (National Forest Reserves) of local authorities are defined in Article 335 of Law No. 2019-006 of June 26, 2019

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RNF: they either encourage municipalities to mobilize more resources (incentive effect) or create dependency (substitution effect). In this analysis, the FACT is therefore a crucial variable for understanding the impact of grants on RNF. To better appreciate the effect of FACT on the mobilization of non-tax revenues and to avoid bias by omitting variables, the estimation of the models takes into account a number of control variables identified in the literature, namely: population size, area, construction of commercial works, tourist sites, geographical location, and the rate of urbanization. Population size helps capture the potential demand for public services and the ability to contribute (Bird & Vaillancourt, 1998). A more populated municipality could generate more non-tax revenue than a less populated one. Area is an indicator of a municipality's geographic size that can influence non-tax revenue; the larger a municipality's area, the higher the infrastructure maintenance costs. Operating grants and investment grants are state allocations transferred to municipalities to cover current expenses. They can affect non-tax revenue; they allow municipalities to strengthen their administrative management, and therefore their capacity to collect non-tax revenue (Rodden, 2002).

Table 2: Description of study variables

Variables	Variable Names	Expression	Source
Dependent variable	RNF	Non-tax revenues of municipalities	DDCL
Independent variable	DotG	Total allocation received by the municipality	ST-CG-FACT
	Dotinv	Investment allocation by municipality	ST-CG-FACT
	Dotfon	Operating grant by municipality	ST-CG-FACT
Control variable	Sittour	Number of tourist sites by municipality	DDCL
	Tpop	Population size by municipality	ST-CG-FACT
	Lgeo	Geographical location of the municipality	DDCL
	Open on Tuesday	Commercial works carried out by municipality	ST-CG-FACT
	Sup	Area by municipality	ST-CG-FACT
	IP	Poverty index by municipality	ST-CG-FACT

Source: *Author, based on data collected at ST-CG-FACT and DDCL*

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3.3.Empirical models

The empirical model in this study is inspired by the work of Epaphra & Massawe (2017), Salhi & Echaoui (2020), and Guillamon et al. (2021), who employed linear regressions with fixed effects and linear regressions with random effects. Following the work of Brun & Elkhdari (2016), Masaki (2018), Mogues & Samuel (2012), Bengono et al. (2023), and Sanogo (2019), we measure intergovernmental transfers (FACT) by the annual amount of the allocation transferred to municipality i during year t in Togo. To estimate the effect of the overall FACT allocation on municipalities' non-tax revenues, the model to be estimated is formalized as follows:

$$\boldsymbol{RNF_{it} = \beta_0 + \beta_1 DotG_{it} + \theta_i X_{it} + \mu_i + \delta_t + \epsilon_{it}} \qquad \textit{(1)}$$

In this equation (1)

RNF_{it}, represents the municipality's non-tax revenue i for the year t ;

$DotG_{it}$,Represents the total amount of the grant received by the municipality $i$on the date t ;

X_{it}, is the vector of control variables;

ϵ_{it} is the error term;

μ_i captures individual specific effects;

δ_t, captures the specific temporal effect joint to all municipalities;

$\beta_0, \beta_1 \; et \; \theta_i$ These are parameters to be estimated.

To account for the effect of the FACT components on the mobilization of non-tax revenues, we estimate the following model:

$$\boldsymbol{RNF_{it} = \beta_0 + \beta_i Z_{it} + \theta_i X_{it} + \mu_i + \delta_t + \epsilon_{it}} \qquad \textit{(2)}$$

In this model:

Z_{it}, Represents the components of the FACT, namely the investment allocation and the operating allocation.

X_{it}, is the vector of control variables.

To better analyze the effect of FACT allocations on the non-tax revenues (NTR) of Togolese municipalities, we adopted a methodological approach specific to panel data. Initially, the model was estimated using ordinary least squares (OLS). OLS is well-suited to this study because FACT allocations are decided centrally and do not depend directly on municipal revenues; they are therefore considered exogenous. There are no endogeneity issues that would necessitate more complex techniques such as 2SLS or GMM. Although dynamic GMM theoretically allows for correction of endogeneity and accounts for the persistence of non-tax revenues (NTR), it was not used in this study due to the limited sample size, the low variation

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in allocations, and instrument limitations. These latter methods are only useful if the explanatory variables are correlated with the error, in the presence of causal feedback, or in dynamic models, which is not the case in our study. However, OLS does not account for unobservable heterogeneity between municipalities, which can lead to biased estimates. This is why we then favor fixed-effects and random-effects models, which are more appropriate for panels. The choice between these two approaches is determined by the Hausman test, in accordance with the recommendations of Gujarati (2004) and Baltagi (2005). Several tests accompany the analysis to ensure the validation of the estimates. The calculation of the variance inflation factor (VIF) verifies the absence of multicollinearity between the independent variables. The stationarity test ensures the stability of the series over time. These estimation combinations allow us to obtain more robust results and clearly define the effects of FACT endowments on the mobilization of RNF.

4. Results and discussion

Table 3: Descriptive statistics of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
lnRNF	310	17,352	1.09	14,737	20.163
lnDotG1	310	10,787	.559	9.387	11,593
lnDotinv1	310	10,551	.44	9.387	11.236
lnDotfon1	248	9.657	.363	8,557	10,389
Sittour	310	3.661	6.378	0	46
lnTpop1	310	4.053	.733	2.289	5,979
Lgeo	310	.452	.498	0	1
Open Tuesday	310	.829	1.766	0	13
lnSup	310	5.649	1.215	2.708	7.492
IP	310	57,352	10,544	28	77

Source : Author, based on data collected at ST-CG-FACT and DDCL

Table 3 above presents the descriptive statistics for the variables in our study. According to the results obtained, the average net national revenue (lnRNF) is 17.352 with a standard deviation of 1.09 and values ranging from 14.737 to 20.163, indicating the significant differences observed in the mobilization of own-source revenue between municipalities. Most municipalities generate above-average revenue, while others generate below-average revenue, reflecting socio-economic disparities. The overall allocation (lnDotG1), with an average of 10.787, a standard deviation of 0.559, and values ranging from 9.387 to 11.593, reflects the

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variation observed between municipalities. The analysis reveals that the municipality of Oti-Sud 1 receives the highest overall allocation (lnDotG1 = 11.59307), while the municipality of Danyi 2 receives the lowest (lnDotG1 = 9.386827), thus highlighting significant disparities in the distribution of financial resources among local authorities. Socio-demographic variables also illustrate indicative disparities. The results show that the number of tourist sites is moderately low (3.661). The population (lnTpop1), with values ranging from 2.289 to 5.979, reflects a higher concentration in urban areas. The number of market facilities, although low with an average of 0.829, significantly reflects the importance of these facilities in the commercial organization. The area (lnSup), with a mean of 5.649 and a standard deviation of 1.215, demonstrates that most of the municipalities are very large. The average poverty index of 57.352 suggests significant socioeconomic inequality. These results demonstrate that the municipalities studied are heterogeneous in terms of infrastructure and economy. This justifies the differentiated analysis of the RNF (Regional Natural Resources) and the allocation of grants. The results from the Hausman test, with a chi-square value of -6.497 and a p-value of 0.261, show that the null hypothesis is not rejected. Therefore, the random effects (RE) model is retained and preferred to the fixed effects model. This means that there is no evidence of a sympathetic correlation between the unobserved specific effects of the municipalities and the explanatory variables in the equations. Variables that are constant over time, such as Lgeo , can thus be analyzed. Consequently, the main economic analysis of our data will be based on the random effects model, which will allow us to account for intra-municipal variations to ensure the reliability of the results.

Table 4: Effect of the overall FACT allocation on the non-tax revenues of municipalities in Togo

VARIABLES	(1) Non-tax mobilized
Total allocation received by the municipality (logarithm)	0.008
	(0.057)
Tourist sites by municipality	0.006
	(0.008)
Population size per municipality (logarithm)	0.754***
	(0.081)

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Geographical location of the municipality	0.410***
	(0.144)
Construction of commercial works by municipality	-0.038**
	(0.016)
Area per municipality (logarithm)	-0.152***
	(0.058)
Poverty index by municipality	-0.016***
	(0.006)
Constant	15,820***
	(0.606)
Observations	310
Number of id_commune	62

***Source** : Author, based on data from ST-CG-FACT and DDCL*

According to Table 4, the results from the econometric model show that the Global Grant variable (lnDotG1) has a positive coefficient of 0.008, but this is not statistically significant. This suggests that, in the sample studied, the grants allocated to municipalities do not have a significant effect on non-tax revenue. This result may seem surprising given theoretical expectations, since, in principle, FACT grants should stimulate local capacities, strengthen budgetary flexibility, and facilitate non-tax revenue. However, several empirical studies show that in most developing countries, and particularly in sub-Saharan Africa, unconditional grants can have a substitution effect rather than an incentive effect. For example, in their study on Ghana, Morgues & Benin (2012) demonstrate that substitutions can discourage tax efforts, as municipalities reduce their collection efforts when they know they will benefit from transfers. This observation aligns with the findings of Bird & Slack (2004) and Smoke (2013) in their studies, which show that "global grant" transfers often have a limited impact on non-tax revenues if the government does not include incentive mechanisms to align transfers with resource mobilization efforts. In this regard, the empirical study suggests that such mechanisms can take several forms, including matching grants, performance-based grants, targeted conditional grants, incentive-based equalization, or a bonus and penalty system (Fjeldstad & Heggstad, 2012).

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Table 5: Effect of FACT components on non-tax revenue mobilization in local authorities in Togo

VARIABLES	(1) Non-tax mobilized
Investment grant received by the municipality (logarithm)	1.116***
	(0.392)
Operating grant received by the municipality (logarithm)	-0.038
	(0.233)
Tourist sites by municipality	0.007
	(0.007)
Population size per municipality (logarithm)	0.625***
	(0.103)
Geographical location of the municipality	0.376**
	(0.151)
Construction of commercial works by municipality	-0.059***
	(0.015)
Area per municipality (logarithm)	-0.225***
	(0.066)
Poverty index by municipality	-0.024***
	(0.007)
Constant	5.656**
	(2.607)
Observations	248
Number of id_commune	62

***Source:* Author, based on data from ST-CG-FACT and DDCL**

The results from Table 5, revealing a positive and highly significant coefficient (1.116) for the investment allocation (lnDotinv1), suggest that this allocation has a positive and significant impact on non-tax revenue. This can be explained by the fact that this allocation is earmarked for productive projects such as the construction of markets, bus stations, infrastructure, etc. This confirms the findings of studies conducted by Mogues & Benin (2012) and Martinez-Vazquez & Smoke (2010), which demonstrate in their analyses that investment-oriented transfers

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increase the mobilization of non-tax revenue. Conversely, the negative and non-significant operating allocation (lnDotfon1) (-0.038) indicates that this component has no effect on the mobilization of non-tax revenue. This suggests that the operating allocation has a substitution effect, reducing the incentive for municipalities to mobilize their own revenue by relying on transfers to cover current expenditures. In addition to these allocations, the control variables also play a role in the mobilization of local resources. The positive but non-significant tourism site (Sittour = 0.007) reveals that the tourism potential of municipalities does not necessarily influence the mobilization of local resources and that it contributes significantly to the mobilization of natural resources only in certain specific areas. The positive and significant population size and geographic location (0.625 and 0.376, respectively) suggest that more populated and urban municipalities mobilize more local resources.

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Conclusion

Decentralization is a key issue for governance and local development in Africa today. In Togo, this translates into the implementation of financial and institutional mechanisms designed to provide local authorities with the resources necessary to fulfill their missions. Among these mechanisms, the FACT (Local Authorities' Fund for the Development of Local Communities) plays a central role by strengthening the financial capacities of local authorities. However, the question of its impact on net financial resources (NFR) remains crucial. This article therefore addresses this issue by analyzing the effect of FACT allocations on the mobilization of NFR by Togolese municipalities. The econometric model used in this study is a random-effects panel model. The analysis is conducted over a five-year period (2020-2024) with a sample of 62 municipalities.

The results show that the overall FACT allocation has a positive but not significant effect on the mobilization of non-tax revenue. This allocation allows for the financing of certain local infrastructure, but its collection capacity remains low. This observation is explained by a crowding-out effect, whereby intergovernmental transfers reduce the incentive for municipalities to increase their own revenue. Showing a negative but not significant effect, the operating grant, essential to local authorities, also accentuates the phenomenon of dependency. This grant, primarily used to cover administrative costs and municipal staff salaries, does not have a multiplier effect on non-tax revenue. On the other hand, the investment grant has a positive and significant effect on the mobilization of municipalities' non-tax revenue. By creating an environment conducive to the expansion of economic activities, it generates more own revenue through market taxes, fees, and even the exploitation of municipal assets. Transfers targeted at investment have a greater impact on municipalities' ability to mobilize more non-tax revenue than general or operating transfers.

This study suggests that the mobilization of non-tax revenues (NTR) depends as much on transfers as on socio-economic and structural characteristics. These various factors indicate that the Local Revenue Fund (LRF), while important, requires reassessment to optimize its role as a financial lever for promoting local revenue mobilization. Based on these observations, this study suggests redirecting investment allocations towards revenue-generating projects; increasing investment allocations and reducing operating allocations; integrating a performance criterion into the allocation of LRF by granting a bonus to municipalities whose revenues increase year-on-year; and finally, granting priority access to projects financed by the State or its partners to municipalities that mobilize more of their own resources year-on-year.

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Furthermore, it is essential to support local agents in training and professionalizing the mobilization of non-tax revenues, as well as raising awareness and empowering the population regarding the importance of local revenue.

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