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TITLE PAGE

The LABAT Tax, a Targeted Levy on High Incomes: Inequality, Well-Being, and the Threat of Capital Flight in Sub-Saharan Africa

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Abstract

This paper examines whether a targeted tax on the top 1% of earners, the LABAT tax, can reduce income inequality while improving overall well-being in developing countries. Few studies have jointly examined targeted taxation, inequality, and well-being in the context of Sub-Saharan Africa. We develop a three-player game-theoretic framework, the State, high-income households, and the rest of the population, in which the State shifts the tax burden onto high-income households alone (LABAT tax)[1] after anticipating the tensions created by a shared tax burden. We test this framework using a quadratic model estimated by the generalized method of moments on a panel of 20 Sub-Saharan African countries between 2011 and 2021. We show that high-income households tolerate the tax up to a threshold of 32%, beyond which they can credibly threaten capital flight. Once the strategies of the other two players are accounted for, this tolerance threshold immediately rises to 36.4% (LABAT-optimal)[2], a gap of 4.4 points interpreted as the bargaining margin they are willing to concede. This result remains stable, between 34.6% and 35.2%, when re-estimated using three alternative methods. A structural break test further confirms that this tolerance threshold falls sharply, from 35.6% in countries with a more closed capital account to 29.1% in countries with a more open capital account (results in Appendix B), empirically validating the threat mechanism at the heart of the model. These findings offer policymakers a quantified benchmark for designing a tax targeted at high incomes without triggering capital flight.

Keywords: optimal taxation, game theory, capital mobility, dynamic panel (GMM), Sub-Saharan Africa, income inequality

Declarations

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[1] LABAT tax: the share of taxes on income, profits, and capital gains in total tax revenue, weighted by the share of national income held by the top 1%.

[2] LABAT-optimal is the level of the LABAT tax that improves overall well-being.

Data availability: The data supporting the findings of this study were compiled from the World Development Indicators (World Bank), the World Inequality Database, the Worldwide Governance Indicators, and the UNDP Human Development Index, all of which are publicly available. The country-level panel dataset and analysis code used to derive the results reported in this article are available from the corresponding author upon reasonable request.

Code availability: Available from the corresponding author upon reasonable request.

Authors' contributions: Both authors contributed to the study conception and design. Material preparation, data collection, and analysis were performed by Streley Paul N'nang Ndong and Stany Wen Ndong Atomodoutoume. The first draft of the manuscript was written by Streley Paul N'nang Ndong, and both authors commented on previous versions of the manuscript. Both authors read and approved the final manuscript.

MAIN TEXT

1 Introduction

The pursuit of a decent standard of living for populations (Benmoussa 2019), the reduction of income inequality (Fleurbaey 2001), and the need to mobilize new financial resources (Mogota 2021) are pushing states to rethink and diversify their tax collection mechanisms. In this context, the LABAT tax appears as a potential lever for influencing both income inequality and overall well-being. Recent work has clearly shown that taxation plays an essential role in reducing income inequality and thereby contributes to the well-being of populations. From a redistributive standpoint, it makes it possible to correct income gaps between different categories of individuals, thereby reinforcing and balancing states' social cohesion policies (Aouifi and Hanchane 2016; Dao and Godbout 2014). Likewise, the literature shows that taxation contributes to reducing income inequality and promoting well-being through progressive taxation, efficient and robust revenue collection, and the introduction of tax-funded cash transfers (Piketty 2013; Stiglitz 2012; Bourguignon 2012; Whiteford 2008). However, few studies have examined the triangular relationship between income inequality, taxation, and well-being, still less taken into account a special tax targeting a clearly defined class of individuals in the context of Sub-Saharan African countries.

This article aims to fill these gaps by showing, in particular, that the introduction of a tax called the LABAT tax, coupled with a threshold (the LABAT-optimal tax), considerably improves overall well-being in developing Sub-Saharan African countries. To this end, we draw on a theoretical framework modeled through game theory with three players (the top 1%, referred to as the wealthy; the other 99%, made up mostly of poor households; and the State), and on an empirical model with a quadratic specification (in the tax variable) estimated by GMM, using data collected from 20 Sub-Saharan African countries over the period 2011-2021.

In this game, the State first announces a general tax whose burden falls on both the wealthy and the rest of the population. Anticipating the tensions that this shared burden would create among the 99%, the State then shifts the entire levy onto the top 1% alone. Our results suggest that this shift generates tensions between the wealthy and the State: the wealthy display a spontaneous tolerance threshold estimated at 32%, beyond which the levy costs them more than it yields and pushes them to negotiate.

This threat, however, is not their only option. Aware of the possible strategies of the other two players (the State's capacity to negotiate, and the reaction of the 99% should the promised redistribution fail to materialize), the wealthy incorporate this strategic environment into their own utility calculation. Our estimates thus reveal a second, higher threshold of 36.4% for overall well-being, a gap of 4.4 points relative to their spontaneous tolerance threshold. The theoretical framework allows this gap to be interpreted as the bargaining margin the wealthy are willing to concede once this strategic interdependence is taken into account: their tolerance threshold is therefore not rigid but elastic to the social stability it helps produce. This second threshold is their true tolerance threshold: it is beyond this point that the wealthy, aware of their own market power, can credibly threaten capital flight.

This result is not specific to the GMM specification alone. Re-estimating the same quadratic relationship on overall well-being using three alternative methods (Driscoll-Kraay standard errors, fixed effects, and random effects), the turning point remains within a narrow range of 34.6% to 35.2% (mean of 34.8%, maximum deviation of 0.6 points), close to the 36.4% threshold obtained by the main model. The inverted-U nonlinearity and the location of the turning point around 35-36% therefore do not depend on the estimation method chosen, which strengthens the credibility of the identified LABAT-optimal threshold.

For this subject, we have divided the article into several parts: first a literature review, then a mathematical model based on game theory, followed by a methodology section, and finally a section devoted to results, interpretation, and discussion.

2 Literature Review

The relationship between income inequality, well-being, and taxation goes well beyond the simple speculation most often voiced by policymakers, the media, and others. To better analyze our subject, we will therefore examine the theoretical lessons on the role of taxation in the relationship between income inequality and well-being (Section 2.1), and the empirical work carried out around the world on this relationship (Section 2.2).

2.1 Theoretical lessons on the role of taxation in the relationship between income inequality and well-being

It should be recalled that states generally rely on two tools to combat inequality: public spending and taxation (Dao and Godbout 2014). Since one of the most difficult missions of the State remains its objective of maintaining a decent and healthy standard of living for the population (Benmoussa 2019), governments most often resort to taxation, in order to guarantee the MDGs (Millennium Development Goals) and the SDGs (Sustainable Development Goals), to ensure a fair redistribution of income (Benmoussa 2019). As a result, the very use of this tax policy most often creates a conflict between efficiency and equity (Dao and Godbout 2014), a conflict that, for Ramsey (1927), can be resolved theoretically through a lump-sum tax, owing to its capacity to respect efficiency by not discouraging households' (consumers') investment efforts while promoting equity, since it allows resources to be allocated to disadvantaged people, which considerably reduces inequality and, in turn, improves well-being.

Furthermore, Mirrlees (1971) categorizes the types of taxes capable of resolving this conflict. Indeed, for Mirrlees, income tax is most often used for equity purposes, in this case improving well-being, whereas consumption taxes serve efficiency purposes. Thus, taxation—more precisely, tax policy—since the hegemony of Keynesian policy is no longer a simple instrument for raising state financial resources (Jnah and Sbihi 2017), but an instrument for correcting income gaps between categories of individuals and thus promoting individuals' well-being (Fleurbaey 2001). Taxation also enables the economic, political, and social rebalancing of a country and therefore reduces inequality (Dao and Godbout 2014). For Al Aouifi and Hanchane (2016), taxation fosters better social cohesion and thereby contributes to well-being, as, by discouraging certain deviant behaviors, its use significantly reduces income inequality (Oxfam 2018).

Furthermore, Piketty (2013) and Stiglitz (2012) suggest that the implementation of several measures, such as progressive taxation, would be capable of reducing inequality and contributing to well-being. Likewise, a rise in income inequality strongly contributes to a decline in quality of life, that is, well-being (Krugman 2012; Stiglitz 2012; Sachs 2008).

However, taxation's ability to reduce income inequality depends largely on the strength of its effects on wealth redistribution (Dao and Godbout 2014). Moreover, this reduction in income inequality does not primarily stem from changes in economic structure, but rather from efficient and strong tax collection—that is, by taxing, for example, the wealthiest individuals and large corporations (Whiteford 2008). Ultimately, Rein and Miller (1972) argue that raising taxes is an insufficient approach for effectively combating inequality. Moreover, to reduce income inequality, it is essential to introduce a system of cash transfers funded, of course, by taxation (Hoeller et al. 2012). Furthermore, for Bourguignon (2012), the best tool for correcting inequality is indeed taxation, more precisely progressive income tax. However, Bourguignon (2012) also notes that raising taxes on the highest incomes is viewed as a "confiscatory" act that could discourage investment and entrepreneurship, whereas setting low rates encourages such activity and reduces the risk of fraud while maintaining tax revenue.

2.1.1 Theoretical limitations of the existing literature

Several points have been raised to highlight the theoretical shortcomings of the existing literature:

Absence of a suitable analytical framework or triangular relationship. The analytical framework presented in the literature appears fragmented, insofar as it highlights only unidirectional and partial interactions between concepts. Indeed, it is limited to examining either the link between taxation and income inequality, or the link between income inequality and well-being. In this respect, this partial approach clearly does not favor a comprehensive grasp of the interactions among the three concepts. This approach thus limits our understanding of the transmission mechanisms, in particular how taxation influences well-being through income inequality, and also how tax choices can themselves result from social behaviors and developments. However, the introduction of a game-theoretic framework with three players (**State, Wealthy, Others**) has allowed us to address this difficulty, as this game enables a complete and integrated interaction among the three concepts (**income inequality–taxation–well-being**).

Lack of modeling of interactions between key actors. The literature reviewed does not account for, and indeed neglects, the modeling of strategic behaviors and conflicts of interest between key actors (**State, Wealthy, Others**). Moreover, this literature remains locked into a simplistic logic in which taxation is treated as an exogenous parameter, reducing its role to simple redistribution, without highlighting the strategic interactions between the State

and other actors. By contrast, our game-theoretic model explicitly incorporates these strategic behaviors as well as these conflicts of interest. Furthermore, this approach allows us to derive, endogenously and by mutual consent, a tax capable of improving overall well-being, imposed specifically on the **top 1% (Wealthy)**, which we call the **LABAT tax**—something the existing literature fails to bring out.

2.2 Selected empirical studies from around the world

Numerous studies over the years have sought to verify the existence of a relationship between taxation and the reduction of income inequality, assuming, of course, that this reduction in income inequality directly promotes household well-being. In particular, Cubero and Hollar (2010) conducted a study on the relationship between taxation and social spending on income distribution in Central America between 2000 and 2004, using a micro-simulation model. Their results show that regardless of whether the tax is progressive or regressive, it does not substantially reduce income inequality. Likewise, Dao and Godbout (2014) apply an econometric model using data from 34 countries over a 40-year period, from 1970 to 2010, and show that it is the total amount of tax revenue collected, rather than its particular form, that mainly reduces inequality. Furthermore, Duncan and Sabirianova Peter (2012) studied the relationship between tax progressivity and inequality using several econometric techniques over the period 1985-2005 across a panel of nearly 400 countries. They show that tax progressivity significantly reduces income inequality but not real inequality more broadly. Martinez-Vazquez et al. (2014) conducted a study across a panel of countries to test the relationship between the tax system, the structure of public spending, and income inequality, using a multivariate regression. Their results show that progressive taxation does indeed reduce inequality.

Similarly, Wanyagathi (2017), using ordinary least squares (OLS) for Kenya, examines the relationship between consumption tax and income inequality and poverty. The results show that consumption tax reduces both income inequality and poverty, as consumption tax is positively correlated with GDP per capita, and that it should be applied differently, since for the poor it must be set lower on basic necessities frequently used by low-income households. By contrast, Adam et al. (2013) conducted a reverse-causality study between income inequality and tax structure using a cross-sectional sample of 75 developed and developing countries over the period 1980-2002, relying on a simplified and testable theoretical framework supported by a robust empirical framework based on multiple specifications; this analysis emphasizes the inverse relationship between inequality and the tax system. The results show that countries with the highest income inequality tend to rely more heavily on capital taxation, thereby lightening the tax burden on labor.

Also, Abdraman and Boukar (2025) conducted a study using OLS and the generalized method of moments (GMM) on the effects of tax structure on income inequality in developing countries over the period 2000-2021. The results of this study indicate that the tax system reduces income inequality in developing countries.

Several other studies have also linked income inequality and well-being. Indeed, Cheung and Lucas (2016) examined the impact of income inequality, treating it as a moderating variable, in a sample of 2,425 regions in the United States. The results showed that rising inequality is associated with a negative combination between population well-being and average income.

Similarly, Diener and Tay (2015) conducted a study on a sample of 164 countries, divided into three analyses. The first focuses on the link between income inequality, measured by the Gini coefficient, and standard of living, measured using the Cantril (1965) scale. The second examines the predicted relationship between equality and subjective well-being. The third focuses on several changes between 2006 and 2013 in the Gini coefficient and the measure of standard of living. The findings of this extensive study reveal that a society's happiness stems from the egalitarian character it establishes.

3 Theoretical Framework: A Game-Theoretic Model

The formal model of the LABAT tax: a sequential game with imperfect information

3.1 Formal framework

3.1.1 Players and timeline of the game

The game involves three rational players, N = {J1, J2, J3}, described in Table 1.

Table 1 The players and their economic content

Player	Designation	Economic content
J1	State	Fiscal authority holding coercive power and the power to set taxes
J2	Wealthy (top 1%)	High-income households, holders of mobile capital, close to decision-making power
J3	Others (remaining 99%)	Middle- and low-income households, numerically dominated by households in extreme poverty

The timeline comprises four stages. At t = 1, J1 announces a general tax with burdens (T2, T3), and J2 and J3 react. At t = 2, J1 revises its announcement by shifting the entire burden onto J2. At t = 3, J1 opens bilateral negotiations with J2. At t = 4, an agreement fixes the burden T* and the fraction θT* actually redistributed; J3 observes the outcome and decides whether to monitor or contest.

3.1.2 Informational structure

The game is one of imperfect information: some information sets are not singletons. Three pieces of information are private. J2's type, made up of its spontaneous tolerance threshold T0 and its stability premium σ (defined in H2 and in 3.1.5), whose sum T0 + σ is its negotiated tolerance threshold beyond which J2 prefers the threat to acceptance, is private information held by J2. The political tolerance threshold ρ0—the level of insurrectionary risk beyond which J1 judges its hold on power to be compromised—is private information held by J1. The effective redistribution rate θ is not observed ex ante by J3, who only discovers it after the agreement is executed.

Each player i holds a belief μi about the parameters it does not observe, updated by Bayes' rule along the equilibrium path (Harsanyi 1967-1968). The information sets are:

I1 = J1 observes J3's action (acceptance or contestation) and J2's apparent acceptance, but not the values of T0 and σ.

I2 = J2 observes the announced tax and the contestation signals emitted by J3, but not the value of ρ0.

I3 = J3 observes the tax and its disposable income, but neither the content of the bilateral negotiation nor θ before execution. J3's information is the poorest of the three.

This structure has a direct consequence for the solution concept. A game whose information sets are not all singletons possesses no proper subgame outside the game itself: subgame perfection (Selten 1965) loses its discriminating power there. The solution concept retained is therefore Perfect Bayesian Equilibrium, which requires the sequential rationality of every action at every information set and the consistency of the beliefs that support it (Kreps and Wilson 1982). It reduces to subgame-perfect Nash equilibrium when information becomes perfect.

3.1.3 Action sets

A1 = {a11, …, a15}. a11: announce a general tax affecting both J2 and J3; a12: shift the entire burden onto J2 (raw LABAT tax); a13: keep taxation unchanged; a14: abandon the LABAT tax; a15: open negotiations with J2.

A2 = {a21, …, a24}. a21: accept the tax (conditional tolerance); a22: contest and threaten (capital flight, tax optimization); a23: accept negotiation; a24: refuse it.

A3 = {a31, a32, a33}. a31: accept the tax; a32: contest (demonstrations, boycotts, insurrection); a33: monitor the effective execution of redistribution.

3.1.4 Preferences

Let T2 and T3 denote the tax burdens borne respectively by J2 and J3, and T = T2 + T3 the total levy. The fraction θ ∈ [0, 1] of this levy is actually returned to J3 in the form of measurable social spending; the fraction (1 − θ) is captured during execution. J3's disposable well-being is then written as w3 − T3 + θT, where w3 denotes its initial level of well-being.

The State's payoff combines its hold on power and the two risks that threaten it:

$$U1 = \alpha P - \beta\rho(w3 - T3 + \theta T) - \gamma\varphi(T2) \quad (1)$$

where P ∈ (0, 1] measures the probability of remaining in power, ρ(·) the probability of insurrection, φ(·) the probability of capital flight, and α, β, γ > 0 the weights reflecting J1's priorities.

The payoff of the wealthy sets net income against the cost of the threat, corrected for the value it places on social stability:

$$U2 = Y2 - T2 - \lambda c(m)1[m] + \mu s(\rho) \quad (2)$$

where Y2 is gross income (a function of the tax burden, through the public goods and security it finances — see H2), c(m) > 0 is the cost of the threat strategy m (relocation of assets, tax restructuring, reduction of local investment), 1[m] is the indicator of its activation, s(ρ) is a social stability index decreasing in ρ, and λ, μ > 0 are the corresponding sensitivities. J2 indeed bears the negative externalities of insurrection.

The payoff of the majority sets the redistributive gain against the cost of insurrection:

$$U3 = w3 - T3 + \theta T - \kappa 1[\text{insurrection}] \quad (3)$$

where κ > 0 measures the human and economic cost of insurrection, borne by J3 itself. Notation is summarized in Table 2.

Table 2 Summary of notation

Symbol	Meaning	Symbol	Meaning
T2, T3	Tax burdens of J2 and J3	θ	Effective redistribution rate
T = T2 + T3	Total levy	T0	J2's spontaneous tolerance threshold
T*	Equilibrium burden (LABAT tax)	ρ0	J1's political tolerance threshold
ρ(·)	Probability of insurrection	Δ	J3's well-being deficit
φ(·)	Probability of capital flight	c(m)	Cost of J2's threat
s(ρ)	Social stability index	κ	Cost of insurrection for J3
w3	J3's initial well-being	α, β, γ, λ, μ	Preference weights
σ	J2's stability premium: λc(m) + μ[s(ρ0) − s(ρ)]		
T0 + σ	J2's negotiated tolerance threshold (= T*)		

3.1.5 Assumptions

H1 (political risk). ρ is decreasing and convex in J3's disposable well-being, with ρ → 1 as this well-being approaches its subsistence threshold. J1 retains power as long as ρ ≤ ρ0. It is this insurrectionary constraint, rather than majority rule, that disciplines the ruler in regimes with weak institutionalization of electoral competition (Acemoglu and Robinson 2000, 2006).

H2 (spontaneous tolerance and the exit option). J2's after-tax income, Y2 − T2, rises with T2 as long as the public goods and security financed by the tax increase its gains, then falls: it reaches its maximum at T0, J2's spontaneous

tolerance threshold, beyond which the burden costs J2 more than it yields. The exit option available to holders of mobile assets allows them to bring their effective burden back down to T0, at the cost of c(m); this cost determines the effective distribution of the tax burden (Bates and Lien 1985).

H3 (credibility of the threat). J2's threat is costly but feasible: $0 < c(m) < \infty$, and social stability has value for J2: $s(\rho 0) > s(\rho)$ as soon as $\rho > \rho 0$. However, it is only sequentially rational—and hence credible—if the burden exceeds the negotiated tolerance threshold $T0 + \sigma$ defined below: $\varphi(T2) \approx 0$ for $T2 \leq T0 + \sigma$ and $\varphi(T2) \to 1$ beyond that.

H4 (governance). θ is exogenous and reflects the quality of the institutional public spending apparatus. It is higher the more effective the oversight exercised over budget execution.

We further denote $\Delta = \rho{-}1(\rho 0) - w3$, J3's well-being deficit, that is, the minimum additional well-being required to bring the insurrectionary risk below the threshold $\rho 0$.

We likewise denote $\sigma = \lambda c(m) + \mu[s(\rho 0) - s(\rho)] > 0$, J2's stability premium, that is, what J2 gains by avoiding conflict (the exit cost spared and the value of preserved social stability), and $T0 + \sigma$ its negotiated tolerance threshold. J2 spontaneously tolerates any burden $T2 \leq T0$; between T0 and $T0 + \sigma$, it accepts the burden only in exchange for the stability the agreement preserves, that is, by conceding σ beyond its spontaneous tolerance.

3.2 Solving the game

The game is solved by backward induction over the four stages, with beliefs updated by Bayes' rule at each information set reached.

Stage 4 (agreement and execution). An agreement fixes the burden T* borne by J2 and commits to the redistribution of θT. *J3, who observes execution, plays a33 as long as the promised well-being materializes and reverts to a32 otherwise. Monitoring therefore makes deviation by J1 costly and supports its commitment to redistribute. No player has an incentive to deviate unilaterally once T* satisfies the conditions set out below.

Stage 3 (negotiation). J2 compares the payoff associated with the agreement, $Y2 - T^* + \mu s(\rho 0)$, with that of the executed threat, $Y2 - T0 - \lambda c(m) + \mu s(\rho)$, with $\rho > \rho 0$: by exiting, J2 brings its effective burden back to T0 (H2), but bears the cost of its threat and the persisting instability. It prefers the agreement if and only if $T^* \leq T0 + \sigma$: between T0 and $T0 + \sigma$, the stability premium compensates for the excess burden and J2 concedes σ beyond its spontaneous tolerance; beyond $T0 + \sigma$, the threat becomes its best response. For $T^* \leq T0 + \sigma$, negotiation dominates: J2 plays a23 then a21. J1 prefers negotiation to maintaining a12, since the threat places it in the face of $\varphi \to 1$, and it sets T* at the highest level J2 accepts, $T^* = T0 + \sigma$: U1 increases with T* as long as $\varphi(T) \approx 0$, *since ρ decreases with J3's disposable well-being, $w3 + \theta T$*, and falls sharply once T* exceeds $T0 + \sigma$.

Stage 2 (full shift). Shifting the entire burden onto J2 raises T2 beyond $T0 + \sigma$: the payoff from the threat exceeds that of acceptance. By H3, the threat a22 is then credible and becomes J2's best response. J1 then finds itself subject to both constraints simultaneously: none of its unilateral actions (a12, a13, a14) maximizes U1, which makes opening negotiations, a15, optimal.

Stage 1 (general announcement). J3, whose well-being is already close to the subsistence threshold, suffers an uncompensated loss T3 and plays a32, pushing ρ above $\rho 0$. J2 initially accepts, because the initial burden remains below T0 and because it itself fears the externalities of insurrection. Anticipating stage 2, J1 announces the tax knowing it will have to negotiate.

Definition 1 (LABAT-optimal tax). A burden T is LABAT-admissible if it simultaneously satisfies: (i) $\theta T \geq \Delta$, redistribution closes J3's well-being deficit; (ii) $T \leq T0 + \sigma$, J2's participation constraint is respected; (iii) $\rho(w3 + \theta T) \leq \rho 0$, insurrectionary risk falls below the political threshold; (iv) $\varphi(T) \approx 0$, the risk of capital flight is negligible. The LABAT-optimal tax, denoted T*, is the highest of the admissible burdens.

Proposition 1 (existence). The set $\Omega = \{T \geq 0 : \theta T \geq \Delta \text{ and } T \leq T0 + \sigma\}$ of LABAT-admissible burdens is non-empty if and only if $\theta(T0 + \sigma) \geq \Delta$. It then admits a greatest element, $T^* = T0 + \sigma$.

Proof. Condition (i) is equivalent to $T \geq \Delta/\theta$ for $\theta > 0$. Combined with (ii), it defines the interval $\Omega = [\Delta/\theta, T0 + \sigma]$, non-empty if and only if $\Delta/\theta \leq T0 + \sigma$, that is, $\theta(T0 + \sigma) \geq \Delta$, whose greatest element is $T0 + \sigma$. By H1, (i) implies (iii); by H3 and stage 3, (ii) implies (iv). For $\theta = 0$, $\Omega = \emptyset$ regardless of $T0 + \sigma$.

The existence condition thus does not depend on the tax rate as such, but on the product of the contributive capacity the wealthy agree to concede ($T0 + \sigma$) and the quality of governance. A State that does not effectively redistribute (low θ) has no level of tax capable of defusing the insurrectionary constraint without exceeding the wealthy's negotiated tolerance threshold, whatever the magnitude of the levy.

Proposition 2 (equilibrium). When $\theta(T0 + \sigma) \geq \Delta$, the profile Σ^* = (a11, a12, a15, T*; a21, a22, a23, a21; a32, a32, a32, a33), together with beliefs updated by Bayes' rule, constitutes a Perfect Bayesian Equilibrium of the game, in which* $T = T0 + \sigma$. This outcome, the highest in Ω, is supported by J3's monitoring strategy, which makes non-redistribution costly for J1.

Proof (sketch). Sequential rationality is verified at each information set by the backward induction above. Off the equilibrium path, J2's threat is supported by H3 for any burden exceeding $T0 + \sigma$, and J3's contestation by the fact that, for $\theta T < \Delta$, the payoff associated with a32 exceeds that of a33. J1's beliefs about $(T0, \sigma)$ and J3's beliefs about θ are consistent with the observed actions, with no information set reached requiring an arbitrary belief.

3.3 Robustness and comparative statics

Proposition 3 (comparative statics). On $\Omega = [\Delta/\theta, T0 + \sigma]$, the minimum burden compatible with social peace, Δ/θ, is strictly decreasing in the quality of governance θ and strictly increasing in the well-being deficit Δ. The LABAT-optimal tax $T^* = T0 + \sigma$ is strictly increasing in the spontaneous tolerance T0, in the value μ that J2 attaches to social stability, and in the exit cost c(m). The width of the interval, $T0 + \sigma - \Delta/\theta$, increases with θ, T0, μ, and c(m).

Three lessons follow. An improvement in governance reduces the levy required to achieve a given level of social peace: governance and tax pressure are substitutes. A worsening of initial inequality, which raises Δ, shifts the minimum burden upward and can empty Ω of content. Finally, greater capital mobility, which lowers the exit cost c(m), reduces the premium σ and hence $T^* = T0 + \sigma$: the interval closes from its upper bound, which Appendix B tests.

The stability of the equilibrium further requires four explicit conditions. C1, J2's threat must remain costly but feasible: if c(m) becomes prohibitive (capital controls, low asset mobility), the threat loses its credibility (σ, and hence T^*, rises with c(m)) and J1 can ignore the wealthy's participation constraint. C2, redistribution must be effective: this is the condition $\theta > \Delta/(T0 + \sigma)$, which corruption can break and which a fourth actor (civil society, an independent press, a supreme audit institution) helps to guarantee. C3, the thresholds T0 and $T0 + \sigma$ must be stable: a recession that compresses Y2 lowers them and can empty Ω. C4, J3 must have minimal information on budget execution, without which monitoring a33 is inoperative and J1's commitment ceases to be credible. Table 3 summarizes these breakdown scenarios and Table 4 the equilibrium profile, stage by stage.

Table 3 Equilibrium breakdown scenarios

Scenario	Trigger	Outcome predicted by the model
Non-credible threat	Prohibitive c(m): J2 cannot exit	J1 can raise T*, since T0 + σ rises with c(m); the equilibrium holds as long as θT* ≥ Δ*, but weakens if J3 observes no improvement
Capture of the levy	θ falls below $\Delta/(T0 + \sigma)$	$\Omega = \emptyset$: J3 detects the lack of redistribution (a33) and reverts to a32; return to insurrectionary risk
Economic shock	The recession lowers T0, σ, and Y2	Renegotiation is necessary; T^* must be indexed to an indicator of J2's income
Entry of a fourth actor	External oversight of budget execution	θ rises: Ω widens and the credibility of J1's commitment increases

Table 4 Equilibrium profile by stage

Stage	J1 (State)	J2 (Wealthy)	J3 (Others)	Outcome

Stage	J1 (State)	J2 (Wealthy)	J3 (Others)	Outcome
1. Announcement	a11: general tax	a21: conditional acceptance	a32: contestation	$\rho > \rho 0$
2. Shift	a12: full burden on J2	a22: credible threat	a32: active waiting	Double constraint
3. Negotiation	a15: opening	a23: acceptance	a32: latent contestation	Bilateral bargaining
4. Agreement	$T^* = T0 + \sigma$ (maximum of Ω)	a21: pays $T^* = T0 + \sigma$	a33: monitoring	Perfect Bayesian Equilibrium

3.4 Scope and limits of the framework

The proposed framework departs from the canonical decisive-voter model (Meltzer and Richard 1981), in which the level of the levy results from the gap between mean and median income under majority rule. Here, it is not the vote but the threat (of insurrection on J3's side, of capital flight on J2's side) that determines the equilibrium tax—an assumption better suited to the economies included in the empirical section.

Three limitations should be made explicit. First, the functions ρ, φ, c, and s are specified only by their monotonicity properties; moving to a full analytical resolution requires giving them a functional form and characterizing the sharing of the bargaining surplus, for instance by means of a Nash bargaining solution or an alternating-offers protocol. Second, T0, σ, and $\rho 0$ are treated as exogenous parameters, whereas over time they depend on financial openness and the political regime; their endogenization is a natural extension. Finally, the game is played once, which rules out reputation effects; a repeated version would allow the accumulation of redistributive credibility to be captured and would bring the framework closer to the transition mechanisms studied by Acemoglu and Robinson (2000).

Finally, let us clarify what the empirical section identifies. The framework predicts three quantities: the spontaneous tolerance T0, the negotiated tolerance $T^* = T0 + \sigma$, and the lower bound Δ/θ. Estimating the same turning point τ^* on the index of the wealthy, and then on the overall index, identifies the first two and their gap σ; the lower bound Δ/θ is not estimated there.

Subject to these caveats, the central result stands: under conditions of high inequality and capital mobility, the very existence of a stable redistributive tax is conditioned by the quality of governance, not by the stated ambition of the levy. This is the proposition the empirical section of this article examines on a panel of twenty Sub-Saharan African countries observed from 2011 to 2021.

4 Methodology

4.1 Sample and data sources

We work with a panel of 20 Sub-Saharan African countries observed from 2011 to 2021, that is, 220 country-year observations. The composition of the panel was constrained by data availability. The sample is heterogeneous, as the stylized facts will show: it includes resource-rich economies (Angola, Gabon, Equatorial Guinea, DRC, Zambia), countries affected by security or political crises (Burkina Faso, Mali, Burundi, Mozambique), and more diversified economies (Botswana, Mauritius, Ghana, Côte d'Ivoire). Splitting it into subgroups would leave few countries in each; we therefore keep the full panel and let individual effects absorb unobserved heterogeneity (Section 4.4).

Table 5 summarizes the variables, their definitions, and their sources. Descriptive statistics appear in Appendix A.

Table 5 Variables, definitions, and sources

Variable	Definition	Source	Role
Bien_etre_Global, Bien_etre_Fortunes	Scores of the first principal component (Section 4.2)	Authors' calculations	Dependent
labatImpot	Taxes on income, profits, and capital gains (% of tax revenue)	WDI	Interest (level and square)

Variable	Definition	Source	Role
top1_income	Share of national income held by the top 1%	WID	PCA component
Inflation	Inflation, consumer prices (annual %)	WDI	PCA component
Unemployment	Unemployment, total (% of total labor force, ILO modeled estimate)	WDI	PCA component
fbcf	Gross fixed capital formation (% of GDP)	WDI	PCA component
idh	Human Development Index (0 to 1)	UNDP	PCA component
stab_pol	Political stability and absence of violence	WGI	PCA component
CroissanceduPIBparhabitant	Annual GDP per capita growth (%)	WDI	Control
ouverture_commerciale	(Exports + imports) as % of GDP	WDI	Control
urbanisation	Urban population (% of total population)	WDI	Control
depenses_sante	Health expenditure (% of GDP)	WDI	Control

Note: WDI = World Development Indicators (World Bank); WGI = Worldwide Governance Indicators; WID = World Inequality Database.

4.2 Construction of the well-being indices

The theoretical section's game features three actors: the State, the wealthy, and the others. We therefore needed a measure of well-being for each, plus an aggregate measure, and none exists as such in international databases. We constructed them using principal component analysis (PCA), which provides a weighting derived from the data rather than fixed a priori (Filmer and Pritchett 2001; Nardo et al. 2008). This choice has a counterpart: PCA only weights the variables it is given, and their selection remains a theoretical judgment on our part, which we justify index by index.

PCA is conducted on the correlation matrix, that is, on standardized variables, which makes quantities expressed in different units (percentages, indices bounded between 0 and 1, governance scores) comparable. It is applied to the pooled panel (220 observations) rather than year by year, so that the scores are comparable across countries and over time, while remaining relative to our sample. They are centered on zero; a positive value indicates well-being above the panel mean, a negative value below it. We retain the first component. Since its sign is arbitrary, we check it against economic logic and reverse it if necessary, so that each index increases with well-being. Calculations were performed in Stata 17 (commands pca then predict, score). Table 6 summarizes the composition of each index.

Table 6 Composition and results of the PCA

Index	Variables (expected effect on well-being)	Variance of 1st component	Weight of 1st component
Others (99%)	top1_inv (+), Inflation (−), Unemployment (−)	50.72%	0.696; −0.677; −0.242 (after sign reversal)
Wealthy (top 1%)	top1_income (+), fbcf (+)	56.34%	0.707; 0.707
State	idh (+), stab_pol (+)	87.37%	0.707; 0.707
Global	Others, Wealthy, State (+)	57.44%	0.697; 0.680; 0.227

Note: top1_inv = 1 − top1_income. Weights = eigenvectors of the first component; those of the "others" index are given after multiplication by −1.

Others index (99%). It combines three components of the material well-being of ordinary households: the share of national income that escapes the top 1% (top1_inv), inflation, which erodes purchasing power, and unemployment,

which reduces labor income. The latter two enter with an expected negative effect. The raw first component (50.72% of variance) came out with signs all opposite to those dictated by economic logic; we multiplied it by −1.

Wealthy index. It combines the income share captured by the top 1% and gross fixed capital formation, retained as a proxy for the investment environment from which holders of productive assets benefit. With two variables, PCA reduces to the simple average of the two standardized variables, each weighted 0.7071 by construction. Their correlation is moderate ($r \approx 0.13$) and the first component captures only 56.34% of their joint variance. This index should therefore be read as the average of two dimensions, rather than as the measure of a well-identified common factor.

State index. It combines the human development index and political stability, which describe the level of development and the institutional environment within which the State performs its functions. The two variables are strongly correlated ($r \approx 0.75$) and the first component captures 87.37% of their variance, the best result among the four indices.

Global index. It results from a PCA on the three preceding indices (57.44% of variance). The weights are 0.697 for the others, 0.680 for the wealthy, and only 0.227 for the State: the global index primarily tracks the two social dimensions, with the institutional dimension varying somewhat independently. Two clarifications for interpretation. The others and wealthy indices both use top1_income, with opposite signs, so their relationship contains a mechanical component. In addition, the global index inherits the limitations of each of the three indices that compose it.

4.3 Variable of interest and control variables

The variable of interest is the LABAT tax, denoted labatImpot. The theoretical model concerns the burden T* borne by the wealthy, but we lack an annual series of effective tax rates for the top 1% in these countries. We therefore construct the indicator in two steps. We start from the share of taxes on income, profits, and capital gains in total tax revenue (IMPOT), which measures the weight of direct, equity-oriented levies (Mirrlees 1971) relative to consumption taxes. We then weight it by the share of national income held by the top 1% (TOP1), so as to retain only the fraction of this tax effort that targets the wealthy:

$$LABAT_{it} = IMPOT_{it} \times TOP1_{it} \tag{4}$$

IMPOT is expressed as a percentage of total tax revenue (0-100 scale) and TOP1 as a fraction of national income (0-1 scale, i.e., 0.10 for 10% of income held by the top 1%); no further rescaling is applied. This construction rests on an assumption we openly acknowledge: the burden of direct taxes falls on the top 1% in proportion to its share of national income. The indicator therefore rises when taxation relies more heavily on income and capital, and when the top 1% concentrates a larger share of income. It is a proxy, not an effective rate: it does not target the top 1% exclusively, since it includes taxes on employees' income and on corporate profits, which can weigh heavily in resource-rich economies (oil and mining companies).

We also introduce the square of IMPOT rather than that of the composite indicator as a whole: labatImpot2 is constructed as $TOP1 \times IMPOT^2$, so that the quadratic form applies to the tax rate at a given TOP1, rather than to labatImpot itself. Propositions 1 and 3 of the theoretical framework define a bounded interval $[\Delta/\theta;\ T0 + \sigma]$ of burdens compatible with social peace and the wealthy's participation; beyond $T0 + \sigma$, the threat of capital flight becomes credible. A nonlinear specification is how we seek to recover this upper bound in the data.

Four control variables complete the specification: GDP per capita growth, which captures the cycle and the level of resources; trade openness, which measures exposure to external shocks (commodities in particular); urbanization, which reflects economic structure and the weight of the informal sector; and health expenditure, which acts directly on well-being.

4.4 Estimation strategy

We estimate a dynamic panel model:

$$BEit = \alpha + \rho BEi,t-1 + \beta 1\ TOP1 \times IMPOTit + \beta 2\ TOP1 \times IMPOT2it + X'\gamma + \mu i + \varepsilon it \quad (5)$$

where BEit is the well-being index (global or of the wealthy) of country i at date t, X the vector of the four controls, μi the individual effect, and εit the error term. The lag of the dependent variable reflects the expected persistence of these indices.

Three reasons lead us to system GMM. First, the time dimension is short (T = 11) relative to a modest number of countries (N = 20), a setting in which the fixed-effects estimator is biased in the presence of a lagged dependent variable (Nickell 1981). Second, labatImpot is likely endogenous: tax structure affects well-being, but a country's level of wealth and stability can also change its tax structure, as considered in the literature on reverse causality between inequality and taxation (Adam, Kammas, and Lapatinas 2015). Finally, when series are persistent, lagged levels are weak instruments for the equations in differences; the Blundell and Bond (1998) estimator adds equations in levels, instrumented by lagged differences, and corrects this shortcoming (Arellano and Bond 1991; Arellano and Bover 1995). It assumes that changes in the instruments are uncorrelated with individual effects, an assumption we examine using the Hansen test.

We treat labatImpot and its square as endogenous; the controls are treated as exogenous. Estimation is carried out with the xtabond2 command (Roodman 2009) in two steps, with the collapse option to limit instrument proliferation. This risk is real with only 20 countries: an excess of instruments can overfit the endogenous variables and weaken the power of the Hansen test. The number of instruments retained is reported below each results table and must remain below the number of groups. In two-step estimation, standard errors are corrected following Windmeijer (2005) to account for the downward bias characteristic of this procedure.

The validity of the model rests on two tests reported below each table: the second-order autocorrelation test on residuals in differences (Arellano and Bond 1991), which checks for the absence of serial correlation in the errors, and the Hansen overidentification test (1982), which addresses the joint validity of the instruments. In both cases, failing to reject the null hypothesis is the desired outcome. The model uses 200 observations (20 countries × 10 years), the lag of the dependent variable causing the loss of one year per country.

The optimal threshold corresponds to the vertex of the parabola, expressed in IMPOT tax-rate points:

$$\tau^* = -\beta 1 / 2\beta 2 \quad (6)$$

An inverted-U relationship requires $\beta 1 > 0$, $\beta 2 < 0$, and a turning point located within the observed range of IMPOT (minimum 10.31; maximum 50.26; mean 26.63; standard deviation 7.75, over 220 observations). The standard error of τ^* is obtained using the delta method. We call the LABAT-optimal threshold the value of τ^* estimated on the global index. Estimated on the wealthy index, the same quantity measures their spontaneous tolerance threshold T0 (H2); the gap between the two estimates measures the stability premium σ, that is, the concession the wealthy accept beyond T0.

4.5 Preliminary tests and robustness

Three checks precede estimation. Collinearity is examined through pairwise correlations (the strongest, in absolute value, is 0.50, between urbanization and health expenditure, below the 0.8 threshold) and through variance inflation factors, all below or equal to 2.01. Stationarity is tested using the Levin, Lin, and Chu (2002) test and the Fisher-type test of Maddala and Wu (1999), whose null hypothesis is the presence of a unit root. Finally, the Breusch and Pagan (1980) Lagrange multiplier test is used to verify that the variance of individual effects is not zero, in other words, that a pooled model without individual effects would be misspecified.

Table 7 summarizes all the tests used, before and after estimation.

Table 7 Tests used, null hypothesis, and expected reading

Test	Null hypothesis	Desired result	Reference
Pairwise correlations,	Not applicable (usual threshold: |r| <	No strong	Not applicable

Test	Null hypothesis	Desired result	Reference
VIF	0.8)	collinearity	
Levin-Lin-Chu	Unit root common to all countries	Rejection	Levin et al. (2002)
Maddala-Wu (Fisher)	Unit root in all countries	Rejection	Maddala and Wu (1999)
Breusch-Pagan (LM)	Zero variance of individual effects	Rejection	Breusch and Pagan (1980)
AR(2) in differences	No second-order autocorrelation	Non-rejection	Arellano and Bond (1991)
Hansen	Valid instruments (overidentification)	Non-rejection	Hansen (1982)

The robustness of the threshold is tested by re-estimating, for the global index, the same quadratic relationship using three methods: Driscoll and Kraay (1998) standard errors, fixed effects, and random effects. These estimators are static and do not address endogeneity; they therefore do not validate a causal effect, but they show whether the sign of the two coefficients and the location of the turning point hold outside the GMM framework. Driscoll and Kraay standard errors are robust to cross-sectional and temporal dependence, but their properties hold for large T; with T = 11, we read them as a complementary check.

5 Results, Interpretation, and Discussion

5.1 Stylized facts: well-being and income concentration over the study period

Over the period 2011-2021, this panel of 20 Sub-Saharan African countries is structurally heterogeneous: it combines, on the one hand, oil- and mining-rich economies such as Angola, Gabon, Equatorial Guinea, the Democratic Republic of Congo (DRC), and Zambia, and, on the other, states affected by security, political, or social crises such as Burkina Faso, Mali, Burundi, Mozambique, and Malawi, as well as relatively more diversified and better-governed economies such as Botswana, Mauritius, Cabo Verde, Ghana, and Côte d'Ivoire, along with small economies dependent on tourism, external transfers, or regional economic integration, such as Eswatini, Lesotho, and Mauritius. This heterogeneity is essential for understanding the shape of the three curves: it means that the same international shock is neither transmitted nor absorbed identically across countries and social groups.

The graph (Fig. 1) should be read as the relative evolution of three standardized indicators. The blue curve measures the well-being of "others"; the red curve represents the well-being of the wealthy; the green curve represents the share of national income held by the top 1%. The latter does not measure overall inequality but rather income concentration at the top of the distribution. It indirectly reflects the concentration of economic wealth, insofar as top-1% individuals often hold businesses, financial assets, real estate, and rights to oil and mining rents. However, the distinction must be maintained between income, a flow received over a period, and wealth, a stock of accumulated assets.



Fig. 1 Evolution of the well-being of "others" (99%), the well-being of the wealthy (top 1%), and the share of national income held by the top 1%, 2011-2021 (standardized indicators). Blue curve: well-being of others; red curve: well-being of the wealthy; green curve: share of national income held by the top 1%

5.1.1 The 2011-2014 phase: extractive growth and income concentration (post-super-cycle period)

The period 2011-2014 corresponds to the end of the commodity super-cycle. High prices for oil, copper, and several minerals sustained export revenues, profits, and capital income in the panel's resource-rich economies. Angola, Gabon, and Equatorial Guinea still benefited at this time from substantial oil revenues, while Zambia and the DRC benefited from mineral dynamics, notably copper and other extractive products.

This phase is reflected graphically in a joint rise in the well-being of the wealthy, shown by the red curve, and the income share held by the top 1%, shown by the green curve. The wealthy are better positioned to benefit from rising profits, dividends, oil and mining rents, export revenues, real estate, public procurement, and financial activities. The rise of the green curve thus indicates that income gains are becoming more concentrated among the wealthiest 1%.

The well-being of others, shown by the blue curve, remains below or close to its average at the start of the period, despite an improvement from 2013 onward. This situation indicates that the favorable effects of growth spread only partially to ordinary households. In countries such as Burkina Faso, Mali, Burundi, or South Sudan, political, security, and institutional fragilities already limit households' ability to benefit from regional growth. Populations depend more heavily on labor income, agriculture, the informal economy, and public spending, which benefit less directly from extractive rents.

Thus, the 2011-2014 period corresponds to relatively concentrated growth: the three curves do not progress at the same pace. The well-being of the wealthy and the share captured by the top 1% rise more sharply than the well-being of others. This pattern suggests that income drawn from rents and capital is increasingly concentrated at the top of the distribution.

5.1.2 The 2015-2016 turning point: commodity shock and social divergence

The 2015-2016 turning point is the clearest moment on the graph. The collapse of oil and copper prices from late 2014 onward triggered a sharp slowdown in several African economies dependent on natural resources. Oil, in particular, lost about 57% of its value between June 2014 and January 2015, sharply reducing revenues for exporting countries.

Angola, Gabon, and Equatorial Guinea, heavily dependent on oil, experienced a contraction in export and budget revenues. Zambia, dependent on copper, faced declining mining revenues, strong pressure on its currency, and macroeconomic difficulties. The DRC, although endowed with significant mineral resources, also remained exposed to the volatility of international commodity prices.

This phase is captured by the collapse in the well-being of others in 2016. The blue curve reaches its lowest level. Ordinary households are particularly affected by declining employment, contraction of informal activities, reduced public investment, payment delays, rising cost of living, and inflation linked to currency depreciation. Populations generally have neither sufficient savings nor diversified assets to sustainably absorb this type of shock.

Conversely, the red curve of the well-being of the wealthy falls more moderately and remains positive in 2016. This relative resilience can be explained by asset ownership, wealth, business holdings, capital income, and a greater capacity to diversify income sources. This does not directly imply that elites transferred their capital abroad: such a hypothesis would require specific data on capital flows and foreign holdings. However, the graph is consistent with the idea that wealthy households have more effective protection mechanisms than ordinary households.

At the same time, the income share held by the top 1% reaches a maximum. The rise in the green curve means that incomes at the top of the distribution hold up relatively better than incomes of the rest of the population. The peak for the top 1% therefore does not necessarily mean that the wealthiest are getting richer in absolute terms during the crisis; it may also mean that their incomes decline less sharply than those of other social groups.

This is the clearest signal of an asymmetric absorption of the shock: the same external shock—falling oil, copper, and mineral prices—affects ordinary households far more strongly than capital holders and groups at the top of the distribution. The blue curve plunges, the red curve holds up relatively well, and the green curve reaches its peak. This pattern is consistent with weak diffusion of economic and social protection mechanisms in resource-rich economies.

5.1.3 The 2017-2019 phase: recovery and relative rebalancing

The 2017-2019 recovery was driven by a partial rebound in economic activity, a relative stabilization of commodity prices, and the contribution of the panel's more diversified economies, such as Botswana, Mauritius, Ghana, Côte d'Ivoire, and Cabo Verde.

This period is characterized by a strong rise in the well-being of others. The blue curve rises from 2017 onward and reaches its maximum level in 2019. This improvement is consistent with a recovery in employment, higher labor income, and stronger activity in services, agriculture, trade, tourism, infrastructure, and certain non-extractive sectors. It may also reflect a relative improvement in social transfers or in states' capacity to fund public spending after the adjustment phase.

Botswana, Ghana, Côte d'Ivoire, Mauritius, and Cabo Verde may contribute to this dynamic, as their economies rest, to varying degrees, on a more diversified productive base than that of purely resource-rich economies. Botswana has relatively strong institutions despite its historical dependence on diamonds. Ghana benefits from agriculture, services, trade, and certain extractive activities. Côte d'Ivoire relies in particular on export agriculture, services, and investment dynamics. Mauritius and Cabo Verde derive a significant share of their income from services, tourism, and international activities.

At the same time, the well-being of the wealthy, shown by the red curve, gradually deteriorates, while the income share held by the top 1% declines. This decline in the green curve reflects a relative reduction in income concentration at the top. It may mean that labor income and the income of ordinary categories are rising faster than that of the top 1%. It may also reflect declining profits, dividends, and rents in the extractive, financial, or real estate sectors.

The most cautious interpretation is therefore one of relative rebalancing: the decline in concentration within the top 1% coincides with a notable improvement in the well-being of other categories. It should not be inferred that the decline in the well-being of the wealthy is, by itself, the cause of the improvement for others. The more plausible mechanism is that growth more firmly grounded in employment, wages, non-extractive sectors, and distributive policies can improve the well-being of ordinary households while reducing the relative income share captured by the top 1%.

5.1.4 The 2020-2021 shock: health crisis and "K-shaped" recovery

The Covid-19 shock in 2020 once again reverses the dynamic. The halt in global tourism, mobility restrictions, the contraction of trade, declining investment, and disrupted supply chains hit open economies dependent on services particularly hard.

Mauritius and Cabo Verde, a significant share of whose activity depends on international tourism, are directly exposed to the collapse in visitor arrivals. Eswatini and Lesotho are particularly vulnerable to the South African recession, border restrictions, migrant worker remittances, and declining regional trade. In Eswatini, remittances recorded by TEBA fell by 34% between January and March 2020 compared with the same period in 2019.

In resource-rich economies, the health shock compounds commodity volatility and budget constraints. Zambia defaulted on its sovereign debt in November 2020 after failing to pay a bond coupon, compounding financial tensions already linked to debt, currency depreciation, and dependence on copper. Angola, Gabon, Equatorial Guinea, and the DRC also remained exposed to falling global demand and uncertainty in natural resource markets.

On the graph, the well-being of the wealthy drops sharply in 2020, while the well-being of others also declines and remains below its average. The decline in the well-being of the wealthy is consistent with the temporary collapse of profits, financial returns, tourism activity, real estate, trade, and certain extractive sectors. The simultaneous decline of the green curve means that the income share captured by the top 1% is shrinking.

However, this decline in concentration at the top should not be interpreted as an improvement in inequality in favor of the rest of the population. Indeed, the well-being of others also remains negative. The 2020 situation may therefore correspond to a generalized crisis in which the incomes of the wealthiest decline, but ordinary households still bear the most severe consequences in terms of employment, consumption, access to healthcare, food security, and poverty.

The slight rebound in 2021 in the well-being of the wealthy and the top-1% share, while the well-being of others remains negative, is consistent with a "K-shaped" recovery. The rebound in commodity prices, the gradual recovery of financial, commercial, and extractive activities, and asset revaluation may first benefit capital holders. Ordinary households, particularly in Angola, Gabon, Equatorial Guinea, Zambia, the DRC, Eswatini, Lesotho, Mali, Burkina Faso, and Mozambique, may remain affected for longer by job losses, inflation, declining informal income, and weak social protection systems.

The central stylized fact is the following:

In this heterogeneous panel of Sub-Saharan African countries, external shocks are not absorbed uniformly. The trough in the well-being of others in 2016, associated with the peak in the income share held by the top 1%, suggests that commodity-related shocks can heighten relative income concentration when ordinary households are the first to be hit by declining employment, real income, and public spending. Conversely, the 2017-2019 period suggests that productive diversification, more effective governance, and better diffusion of growth can be accompanied by an improvement in the well-being of others and a reduction in income concentration at the top.

5.2 Pre-estimation tests

5.2.1 Correlation and multicollinearity

Table 8 Pairwise correlation test

Variables	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**

Variables	(1)	(2)	(3)	(4)	(5)
(1) GDP per capita growth	1.000				
(2) Trade openness	−0.038	1.000			
(3) Urbanization	−0.192	0.130	1.000		
(4) Health expenditure	−0.006	0.420	−0.502	1.000	
(5) labatImpot	−0.122	−0.011	−0.022	0.015	1.000

Table 8 presents the results of the correlation test, an essential preliminary step for detecting potential multicollinearity problems, that is, an excessively strong correlation between two or more of the model's explanatory variables. Such a problem makes estimated coefficients unstable, inflates their standard errors, and thus weakens their statistical significance, while complicating the interpretation of each variable's individual effect.

Our pairwise correlation test shows that this risk can be ruled out: all coefficients obtained, in absolute value, remain strictly below the critical threshold of 0.8 generally used in the literature. We therefore retain all explanatory variables in the model specification.

Table 9 Multicollinearity test (variance inflation factors, VIF)

Variable	VIF (global index)	VIF (wealthy index)
Health expenditure	2.01	2.01
Urbanization	1.74	1.74
Trade openness	1.50	1.50
GDP per capita growth	1.08	1.08
labatImpot	1.02	1.02

The VIF multicollinearity tests (Table 9) confirm the absence of multicollinearity in our specified models, corroborating the results of the pairwise correlation test. VIF values are generally below 3, which rules out multicollinearity.

5.2.2 Stationarity

Table 10 Stationarity test (order of integration)

Variable	Levin-Lin-Chu	Maddala-Wu
GDP per capita growth	I(0)	I(0)
Health expenditure	I(0)	I(0)
Trade openness	I(0)	I(0)
Urbanization	I(0)	I(0)
labatImpot	I(0)	I(0)
Bien_etre_Fortunes	I(0)	I(0)
Bien_etre_Global	I(0)	I(0)

In the pre-estimation tests, we tested the stationarity of our various variables using two tests; the tests show that our variables are stationary in levels (I(0)) (Table 10).

5.2.3 Panel versus time series: Breusch-Pagan test

Table 11 Breusch-Pagan (Lagrange multiplier) test: p-values

Model	p-value
Global	0.0000

Model	p-value
Wealthy	0.0000

The Breusch-Pagan (Lagrange Multiplier) test systematically and highly significantly rejects the null hypothesis of no individual variance component for the well-being indicators ($p < 0.001$; Table 11). This result unambiguously confirms the relevance of panel modeling over pooled OLS, justifying the use of the system GMM estimator employed in this study.

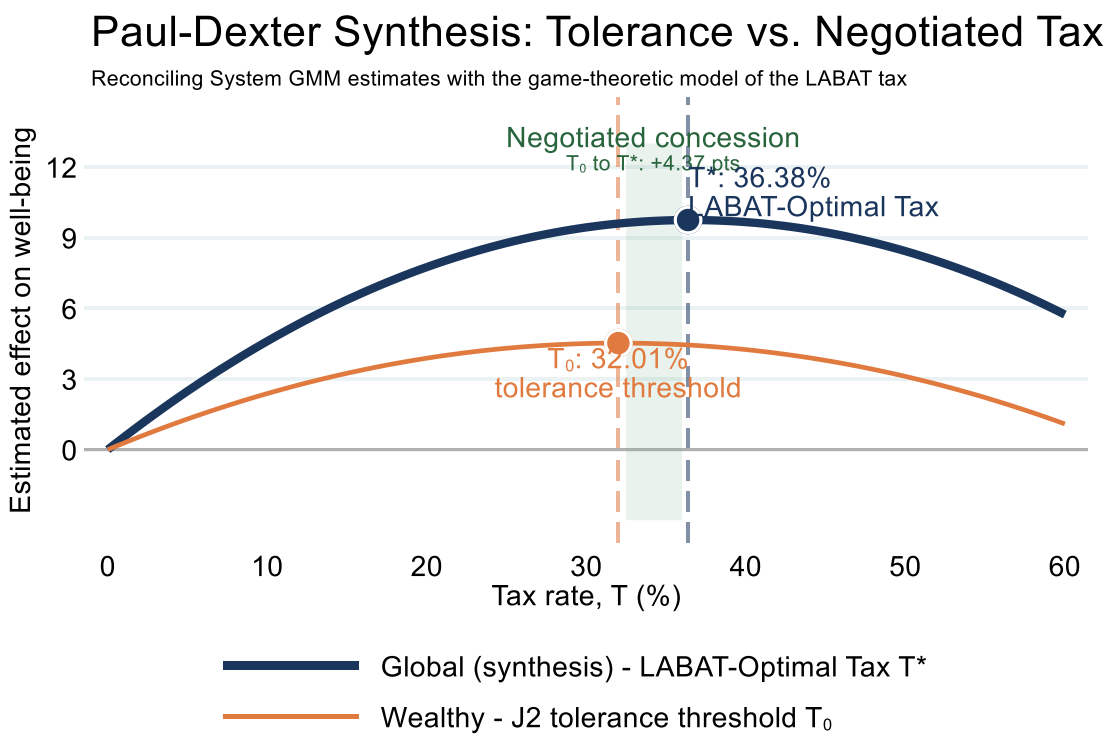
5.3 System GMM estimation (main model)

Table 12 presents the estimates of the main model for the global well-being index and for that of the wealthy; Fig. 2 provides the corresponding graphical representation.

Table 12 Determinants of well-being — System GMM (main model)

	Global	Wealthy
L.Bien_etre_Global	0.5636***	
	(0.1705)	
L.Bien_etre_Fortunes		0.7349***
		(0.0873)
labatImpot	0.5336**	0.2822***
	(0.2398)	(0.0944)
labatImpot2	−0.0073**	−0.0044**
	(0.0036)	(0.0017)
GDP per capita growth	0.0059	0.0188
	(0.0080)	(0.0115)
Trade openness	−0.0001	−0.0005
	(0.0020)	(0.0017)
Urbanization	0.0025	−0.0014
	(0.0028)	(0.0016)
Health expenditure	0.0208	0.0037
	(0.0136)	(0.0100)
Constant	−1.7761**	−0.6971***
	(0.7686)	(0.2695)
Observations	200	200
Groups	20	20
Threshold τ*	36.38	32.01
Standard error (delta)	3.07	3.82
z (delta)	11.85	8.37
p-value (delta)	0.000	0.000
AR(2) p-value	0.848	0.802
Hansen p-value	0.156	0.493

Note: standard errors in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. L.: variable lagged one period.



T_0 marks the point where Wealthy's own income-based welfare (top1 income share, investment) peaks: beyond it, deviant behaviour (capital flight, tax avoidance) becomes individually rational.
T* marks the negotiated LABAT-Optimal Tax: Wealthy accept a burden above T_0 because the value they place on social stability, $\mu s(\rho_0)$, offsets the additional cost.
Source: author's calculations based on system GMM estimates.

Fig. 2 Spontaneous tolerance threshold of the wealthy (T0 = 32.01%) and LABAT-optimal tax (T* = T0 + σ = 36.38%): summary of system GMM estimates. The shaded area represents the stability premium σ conceded in the negotiation (+4.37 points). Source: authors' calculations based on system GMM estimates

5.4 Economic interpretation and implications of the results

The results show that the LABAT tax has an effect on overall well-being (Table 12). Indeed, an increase in its level progressively improves collective well-being up to a maximum at 36.4% (Fig. 2). This level, which corresponds to the point that maximizes overall well-being, is referred to as **LABAT-optimal**[3]. It represents the optimal combination of the share of taxes on income, profits, and capital gains in total tax revenue, on the one hand, and the income share held by the wealthiest 1%, on the other.

At this threshold, the gains associated with reduced inequality, income redistribution, and the mobilization of public resources outweigh the potential economic costs of taxation. The 36.4% level therefore does not necessarily correspond to a statutory tax rate applied directly to wealthy taxpayers, but to the optimal level of the composite LABAT tax indicator. It reflects the best balance between the State's capacity to levy a share of the income, profits, and capital gains concentrated at the top of the distribution, and the need to preserve incentives to invest, save, and undertake entrepreneurial activity.

[3] LABAT-optimal is the level of the LABAT tax that improves overall well-being.

Beyond 36.4%, an increase in the LABAT tax leads to a decline in overall well-being; it is also beyond this level that, according to the theoretical framework, the wealthy's threat of capital flight becomes credible. This decline suggests that the disincentive effects of taxation then outweigh the redistributive benefits. Excessive tax pressure can, in particular, encourage tax optimization and evasion, favor capital mobility, reduce private investment, and limit entrepreneurial activity. The result thus indicates that an effective redistribution policy does not consist in indefinitely increasing the contribution of the wealthy, but in seeking a level of levy compatible with both social justice and economic efficiency.

Thus, the gap between the wealthy's spontaneous tolerance threshold (32%) and the LABAT-optimal threshold (36.4%) can be interpreted as the concession the wealthy make in negotiating with the State. The spontaneous tolerance threshold corresponds to the level of levy beyond which the contribution costs the wealthy more than it yields them: their well-being reaches its maximum there. After negotiation, however, they can concede a further 4.4 points, in exchange for the social stability the agreement preserves: this is the stability premium σ of the theoretical framework. Their tolerance threshold is then set at 36.4%. This new threshold is in fact the one beyond which the threat of capital flight becomes credible: as long as the levy does not exceed it, the wealthy prefer the agreement to the threat; beyond it, the threat becomes their best response. It coincides with the LABAT-optimal threshold, which maximizes overall well-being. The gap between the two thresholds therefore represents the margin available to the State for increasing the contribution of the wealthy while maintaining their adherence to the fiscal pact.

This negotiation does not rest solely on the balance of power between the State and wealthy taxpayers. It can also be explained by a shared interest in preserving social and economic stability. Wealthy taxpayers may accept a level of levy above their initial tolerance threshold when they understand that this contribution helps reduce social tensions, fund public services, and strengthen national cohesion. Strong income concentration can indeed fuel discontent among other social groups, particularly modest households, the middle class, and disadvantaged populations.

When such grievances find no institutional response, they can increase political and social instability, create uncertainty, and undermine property rights and investment. Moreover, accepting a tax effort beyond the initial tolerance threshold may thus be rational for the wealthy themselves. By contributing more, they can help maintain a more stable social environment, essential to the security of their assets, the continuity of their activities, and the profitability of their investments. This is not to suggest that the wealthy abandon their private interests, but rather to consider that they may trade off the immediate cost of a higher tax contribution against the potential cost of insurrection, political instability, or a lasting deterioration in the business climate.

From this perspective, the LABAT-optimal threshold can be presented as a socially negotiated compromise. The State obtains additional resources and reduces inequality, while wealthy taxpayers preserve an economic and political environment favorable to their investments. The LABAT tax thus appears not only as a redistribution mechanism, but also as an instrument for stabilizing the social contract.

5.5 Robustness tests

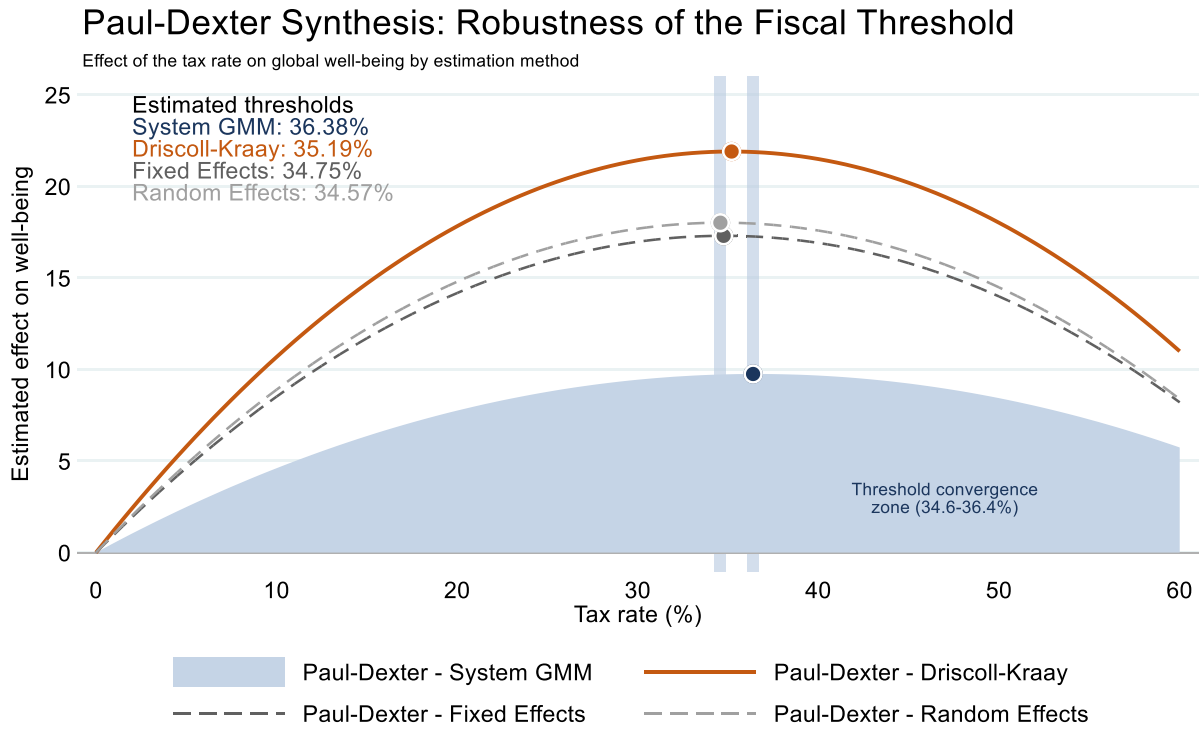
The robustness strategy relies on re-estimating the nonlinear relationship between the tax and overall well-being using three alternative methods, namely Driscoll-Kraay standard errors, fixed effects, and random effects. The econometric objective here is to verify that the existence and location of the turning point in the relationship between labatImpot and well-being do not depend on a particular estimation method. The results (Table 13) are particularly consistent: across all three specifications, the coefficient on labatImpot remains positive and significant at 1%, while the coefficient on labatImpot2 remains negative and significant at 1%, consistently confirming the concavity of the relationship. Above all, the estimated thresholds are very close to one another: 35.19 with Driscoll-Kraay, 34.75 with fixed effects, and 34.57 with random effects. Their average is 34.84, with a maximum deviation of only 0.62 points, or about 1.8% of the mean, reflecting strong stability of the turning point. Relative to the 36.38 threshold obtained in the main system GMM model, the robustness estimates are slightly lower, with gaps of roughly 3.3% to 5.0%, but all remain in a very close range, around 35%. The robustness strategy therefore does not call into question the central result of the main model: the turning point in the tax-well-being relationship is stable around 35-36%, regardless of the estimation method used. Econometrically, this closeness of thresholds is an important element supporting the robustness of the identification of the nonlinearity and the location of the turning point, rather than a result specific to system GMM.

Table 13 Robustness results : global well-being

	(1)	(2)	(3)
	Driscoll-Kraay	**Fixed effects**	**Random effects**
GDP per capita growth	0.0163**	0.0012	0.0090
	(0.0055)	(0.0090)	(0.0093)
Trade openness	0.0030	−0.0027	0.0052*
	(0.0031)	(0.0038)	(0.0030)
Urbanization	0.0052	−0.0903***	−0.0112*
	(0.0030)	(0.0160)	(0.0063)
Health expenditure	0.0297	0.0097	−0.0337
	(0.0238)	(0.0294)	(0.0277)
labatImpot	1.2452***	0.9947***	1.0396***
	(0.1132)	(0.0892)	(0.0873)
labatImpot2	−0.0177***	−0.0143***	−0.0150***
	(0.0025)	(0.0016)	(0.0016)
Constant	−4.1074***	1.3864*	−2.6027***
	(0.2626)	(0.8374)	(0.4666)
Observations	220	220	220
Threshold τ*	35.19	34.75	34.57

Note: standard errors in parentheses. * p < 0.10, ** p < 0.05, *** p < 0.01.

Fig. 3 presents these results graphically.



Dots mark the LABAT-Optimal Tax for each estimation method.
Source: author's calculations based on system GMM, Driscoll-Kraay, fixed-effects and random-effects estimates.

Fig. 3 Robustness of the tax threshold: effect of the tax rate on overall well-being by estimation method (system GMM, Driscoll-Kraay, fixed effects, random effects). The points indicate the LABAT-optimal tax obtained with each method. Source: authors' calculations based on these estimates

5.6 Economic policy recommendations

Public authorities should establish the LABAT tax as a progressive instrument for taxing the high incomes, profits, dividends, financial income, and capital gains held by the wealthiest taxpayers. The 36.4% level, identified as the LABAT-optimal threshold, should serve as a benchmark for guiding tax policy, but should not be applied mechanically as a uniform rate. The reform should take into account the negotiated tolerance threshold of wealthy taxpayers, beyond which their exit threat becomes credible, in order to avoid an excessive reaction in the form of fraud, tax evasion, or capital transfer. The objective would be to progressively bring the level of the levy closer to the LABAT-optimal threshold through transparent fiscal negotiation, in exchange for clear commitments from the State regarding the use of revenue, the stability of tax rules, and the protection of productive investment.

The State should avoid simultaneously increasing taxes that mainly burden non-wealthy households. In particular, the introduction or increase of a uniform housing tax could reduce the purchasing power of modest households and the middle class, especially when the tax is not adjusted for income, property value, or ability to pay. The LABAT tax could then serve as a more equitable alternative to part of this taxation, by shifting the tax effort toward income, profits, and capital gains concentrated at the top of the distribution. If a housing tax is maintained to fund local governments, it should be accompanied by exemptions, allowances, income-based caps, and deferred payment mechanisms for vulnerable households.

Revenue from the LABAT tax should be allocated primarily to reducing inequality and preserving social cohesion. It could fund education, health, social protection, housing, infrastructure, vocational training, and economic inclusion programs. Part of the resources should also be used to compensate local governments in the event of a reduction in the housing tax, in order to maintain the quality of local public services. This visible and transparent allocation of revenue is essential to ensure the reform's acceptability among ordinary households and wealthy taxpayers alike.

The reform should be accompanied by a genuine fiscal pact between the State and wealthy taxpayers. This could rest on an increased contribution from the wealthiest, but also on the stability of the legal framework, budgetary transparency, the fight against corruption, the protection of property rights, and the productive use of tax revenue. This approach would make it possible to transform the LABAT tax into an instrument of collective responsibility rather than an exclusively punitive measure. Wealthy taxpayers could agree to exceed their initial tolerance threshold if they observe that their contribution reduces social tensions, protects their investments, and contributes to the country's economic stability.

Finally, tax administrations should strengthen the identification of wealth, capital income, capital gains, and assets held abroad. Establishing a specialized unit for high-income taxpayers, improving land registries, identifying beneficial owners, exchanging information internationally, and monitoring shell companies are necessary to ensure the tax's effectiveness. A regular evaluation should measure the LABAT tax's fiscal yield, its effect on the Gini coefficient[4], its impact on purchasing power, its effect on investment, and its influence on social stability. The challenge, therefore, is not to maximize tax pressure, but to settle on a level of contribution close to the LABAT-optimal threshold—high enough to reduce inequality and mobilize resources, while remaining compatible with investment stability and adherence to the social contract.

6 Conclusion

This article has proposed a joint theoretical and empirical reading of redistributive taxation in Sub-Saharan African countries. The theoretical framework modeled the introduction of a tax aimed at improving the well-being of the 99% as a sequential game with imperfect information among three players (the State, the wealthy, and the others), in which the announcement of a shared burden transforms, under insurrectionary pressure from the others (the 99%,

[4] The Gini coefficient is a statistical indicator that measures the degree of inequality in the distribution of income, wealth, or another resource within the population.

mostly poor), into a levy concentrated on the top 1% alone. This shift opens bilateral negotiations between the State and the wealthy, whose outcome, the LABAT-optimal tax, is defined as the highest burden the wealthy agree to bear before the threat of capital flight becomes their best response.

System GMM estimation on a panel of twenty countries observed between 2011 and 2021 allowed us to empirically recover the two thresholds predicted by this framework. The well-being of the wealthy, taken in isolation, reaches its maximum at a spontaneous tolerance threshold of 32%, while overall well-being peaks at 36.4%, a gap of 4.4 points that the theoretical model interprets as the concession the wealthy agree to make once they factor social stability into their own utility calculation. This correspondence between the two thresholds—one drawn from a regression on the well-being of the wealthy, the other from an independent regression on overall well-being—constitutes the most direct empirical validation of the negotiation stage of the game. The robustness of this result was verified using three alternative estimation methods, all of which place the turning point within a narrow range around 35%, despite their assumptions being very different from those of system GMM.

In terms of public policy, these results suggest that a tax effort targeted at high incomes and capital gains, rather than a general increase in taxation, can reconcile resource mobilization with social peace, provided the burden remains within the identified tolerance interval and revenue is effectively redistributed. The LABAT-optimal threshold should not, however, be read as a uniform rate to be applied mechanically: it defines an order of magnitude, whose operational translation requires a progressive scheme, a strengthened tax administration, and redistribution whose execution is observable by the 99%—failing which the governance condition that guarantees the very existence of such an equilibrium would cease to be satisfied.

This work has limitations that we acknowledge. The labatImpot indicator remains a proxy for the tax burden actually borne by the top 1%, constructed under the assumption of proportionality between income share and direct tax share, rather than an observed effective rate. The theoretical framework also treats the thresholds $T0$, σ, and $\rho 0$ as exogenous, whereas they likely depend, over time, on the degree of financial openness and the political regime of each country. Finally, the game is solved as a one-shot game, which rules out reputation effects that a repeated version would allow us to capture. Lastly, the lower bound Δ/θ of the interval of admissible burdens is not estimated.

Three extensions seem to follow naturally. The first consists in endogenizing $T0$, σ, and $\rho 0$ to observable variables of capital mobility and political institutionalization. The second consists in refining labatImpot as data on the effective tax rate of the top percentile become available for a larger number of African countries, along the lines of the series the World Inequality Database is beginning to produce for certain advanced economies. The third consists in exploring a repeated version of the game, to examine how the State’s redistributive credibility is built, or eroded, over several negotiation cycles.

Appendix A. Descriptive statistics

Table 14 presents the descriptive statistics of the study variables.

Table 14 Descriptive statistics

Variable	Obs.	Mean	Std. dev.	Min.	Max.
Bien_etre_Global	220	0	1.313	−2.364	3.553
Bien_etre_Fortunes	220	0	1.062	−1.89	2.452
labatImpot	220	4.846	2.361	1.566	12.469
top1_income	220	0.176	0.045	0.102	0.314
Inflation	220	5.699	6.044	−3.233	30.694
Unemployment	220	8.612	7.362	1.03	35.707
fbcf	220	24.056	6.015	7.555	46.56
idh	220	0.552	0.102	0.383	0.806
stab_pol	220	−0.408	0.866	−2.339	1.104
GDP per capita growth	220	1.003	4.067	−20.894	11.337
Trade openness	220	77.327	27.95	27.963	150.209
Urbanization	220	44.045	19.155	11.562	90.788
Health expenditure	220	5.207	2.366	1.543	21.924

Appendix B. Testing the credibility of the capital-flight threat

B.1 Why this test

The article's theoretical model rests on a simple idea. The wealthiest taxpayers agree to pay more tax only for as long as they have no better option. If they can easily place their money abroad, the threat of doing so weighs on the negotiation with the State, which must then adopt a more moderate tax policy. This idea is central to the model, but it is not directly tested by the article's main estimates, which focus on the relationship between the LABAT tax and well-being. The sole purpose of this test is to verify whether this threat mechanism actually exists in the data, and to measure its magnitude. The model indeed predicts that the negotiated tolerance threshold $T^* = T0 + \sigma$ falls as the exit cost c(m) decreases (Proposition 3).

B.2 Choice of variable

To test this mechanism, we needed a variable reflecting wealthy households' capacity to move their money out of the country. The Chinn-Ito index, used here, measures the legal openness of a country's capital account. Specifically, this index indicates the extent to which a country legally permits capital transfers abroad, regardless of whether such transfers actually take place.

This choice is directly justified by the nature of the theoretical mechanism. It rests on a threat, that is, on a possibility, not on behavior already realized. A wealthy household does not need to have already transferred its money abroad for the threat of doing so to be credible in the eyes of the State. It is enough that the law allows it. The Chinn-Ito index captures precisely this legal possibility, which corresponds well to the logic of the theoretical model.

B.3 Method used

The theoretical model does not predict a gradual adjustment in the behavior of wealthy households as the capital account opens. Rather, it predicts a switch: once a certain degree of openness is reached, the exit threat becomes credible enough to change the situation. For this reason, a threshold model was chosen rather than a simple linear interaction term. The threshold model assumes the existence of two distinct regimes: one in which the capital

account remains relatively closed and wealthy households tolerate a higher tax, and one in which the capital account is more open and the same tax becomes unbearable more quickly.

In practice, the method works as follows. Each possible value of the Chinn-Ito index is tested in turn as the switch point between the two regimes. For each value tested, a country fixed-effects regression is estimated, allowing the effect of the LABAT tax on well-being to vary depending on which side of the threshold the country falls. The threshold value that best fits the observed data is then retained. Once this threshold is found, we verify that it is not due to chance using a bootstrap-type test, which repeats the same procedure hundreds of times on simulated data, to see whether such a gap between the two regimes could arise by mere statistical coincidence.

This approach relies mainly on differences observed between countries rather than on the evolution of each country over time, which is consistent with the nature of the index used, which varies little from year to year within a given country but much more across countries.

B.4 Main results

The threshold search yields a value of 0.7017 on the Chinn-Ito index, which splits the sample into two highly unequal groups. Seventeen countries fall into the more closed capital-account regime, and only three countries—Botswana, Mauritius, and Zambia—fall into the more open capital-account regime (Table 15).

Table 15 Threshold model results, full sample

Quantity	Value
Optimal threshold (gamma) on the Chinn-Ito index	0.7017
Number of countries in the closed regime	17
Number of countries in the open regime	3
Countries in the open regime	Botswana, Mauritius, Zambia
Residual sum of squares, without threshold	34.091
Residual sum of squares, with threshold	31.313
Implicit LABAT tax threshold, closed regime	35.61
Implicit LABAT tax threshold, open regime	29.07
F statistic (bootstrap test, 500 replications)	17.296
p-value (bootstrap test)	0.014

The test confirms that the break between the two regimes is not due to chance, with a p-value of 0.014. In countries with a more open capital account, the LABAT tax threshold that wealthy households are willing to tolerate falls to 29.07%, compared with 35.61% in other countries. The gap, a little over six points, is far from negligible.

B.5 Robustness tests

Two additional checks were carried out to ensure that this result does not rest on an arbitrary choice or on a single country.

The first consists in repeating the same threshold search while trimming more of the sample's extreme values (trimming parameter set at 15% and then 20%, instead of 10%; Table 16).

Table 16 Sensitivity of the threshold to the trimming parameter

Trimming	Threshold (gamma)	Residual sum of squares	Countries in the open regime
15%	0.7017	31.313	Botswana, Mauritius, Zambia (3 countries)
20%	0.1624	32.079	Botswana, Cabo Verde, Mauritius, Zambia (4 countries)

The threshold remains identical at 15% trimming. At 20%, a second switch point appears and Cabo Verde joins the open regime, but the gap between the two regimes remains of the same order of magnitude.

The second check consists in removing, one at a time, each of the three countries in the open regime, to ensure that none of them alone drives the result (Table 17).

Table 17 Robustness to the successive removal of each country from the open regime

Country removed	Threshold (gamma)	F observed	p-value	Closed-regime threshold	Open-regime threshold
Botswana	0.7017	14.42	0.033	35.62	29.26
Mauritius	0.1624	11.45	0.073	35.56	29.30
Zambia	0.7017	17.27	0.013	35.79	27.95

The result holds at the 5% significance level in two out of three cases, and remains very close to that threshold in the third case (p-value of 0.073 without Mauritius). More importantly, the gap between the two regimes never falls below six points, regardless of which country is removed. This result is therefore not driven by any single country.

B.6 What this test shows

This test provides empirical evidence of the threat mechanism at the heart of the theoretical model. It shows that a State's fiscal room for maneuver depends not only on the level of inequality but also on its capital-control policy. The threshold obtained in the closed regime, 35.61%, is, moreover, very close to the optimal threshold estimated elsewhere in the article, around 35%. This closeness is explained by the fact that the large majority of countries in the sample fall precisely within this more closed capital-account regime.

One caveat should be noted. The threshold model, in the form used here, does not correct for a possible endogeneity problem in the LABAT tax. This result should therefore be regarded as strong evidence of consistency with the theoretical mechanism, complementary to the article's main estimates, rather than as a full causal estimate.

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