

Financing Equity: Using Money Transfer Levies to Fund Teacher Retention Allowances in Cameroon's Priority Education Zones

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ABSTRACT

Sub-Saharan African education systems face severe funding constraints driven by public debt, inflation, rapidly expanding demographic pressures and insecurity. In Cameroon, this crisis has contributed to an unprecedented brain drain of qualified educators from Priority Education Zones (ZEPs). Primary and secondary school teachers are increasingly relocating to major urban centres or migrating abroad due to unsustainable baseline wages. Adopting a qualitative method design that includes, tax data analysis, policy reviews, and interviews with officials from the Ministries in charge of Finance, Economy, Basic and Secondary Education, Posts and Telecommunications, Public Service and Administrative Reform, parliamentarians, Regional and Local Authorities, and Technical and Financial Partners, this study explores an innovative domestic resource mobilization mechanism focused on spatial equity. It investigates how dedicated fiscal levies on Cameroon's expanding digital financial sector specifically mobile money operators can sustainably finance a weighted "School Vulnerability Index," used to provide targeted monthly salary top-up allowances for teachers in ZEPs. Preliminary models suggest that a micro-levy of 6 CFA francs on digital money transfers could generate substantial ring-fenced revenue capable of supplementing teacher salaries without increasing national debt pressures. This research bridges the gap between private sector windfall gains and urgent public sector workforce needs. It also produces a practical policy brief and a roadmap to amend the national finance law. By offering a sustainable and replicable blueprint for domestic education financing, this model demonstrates how Sub-Saharan African countries can leverage the growth of financial technology to protect educational quality and stabilize their teaching workforce in vulnerable regions.

Keywords: spatial equity, teacher retention, money transfer operators, Priority Education Zones, School Vulnerability Index, top-up allowance.

1. INTRODUCTION AND BACKGROUND

Sub-Saharan Africa is experiencing unprecedented demographic growth, with rapidly expanding school-age populations placing increasing pressure on already constrained public finances. Across the region, governments face significant challenges in mobilizing sufficient domestic resources to ensure equitable access to quality education while meeting broader development priorities (African Development Bank, 2023; UNESCO, 2024). The situation is particularly acute in Cameroon, where growing enrollment rates, fiscal limitations, and competing budgetary demands continue to strain the education sector. Despite sustained efforts by the government and development partners, financing gaps persist in basic and secondary education. Recent studies by Tchamyoun (2023a), Ndzi and Ngwa (2022), and the Ministry of Basic Education (MINEDUB, 2024) highlight the growing mismatch between educational needs and available public resources. Teacher remuneration, infrastructure development, instructional materials, and professional development programs remain underfunded, affecting the quality and effectiveness of educational delivery.

One of the most pressing challenges facing Cameroon's education system is the increasing migration of qualified teachers and education professionals. The phenomenon, often described as "brain drain," has intensified in recent years due to economic pressures, limited career advancement opportunities, and the attractiveness of employment conditions abroad (Asongu & Nwachukwu, 2022; Tchindjang, 2023). The departure of experienced educators reduces instructional quality, increases teacher shortages, and undermines efforts to achieve national education goals. Traditional public financing mechanisms have struggled to generate the resources required to improve teacher welfare and provide competitive incentives capable of retaining skilled personnel within the country.

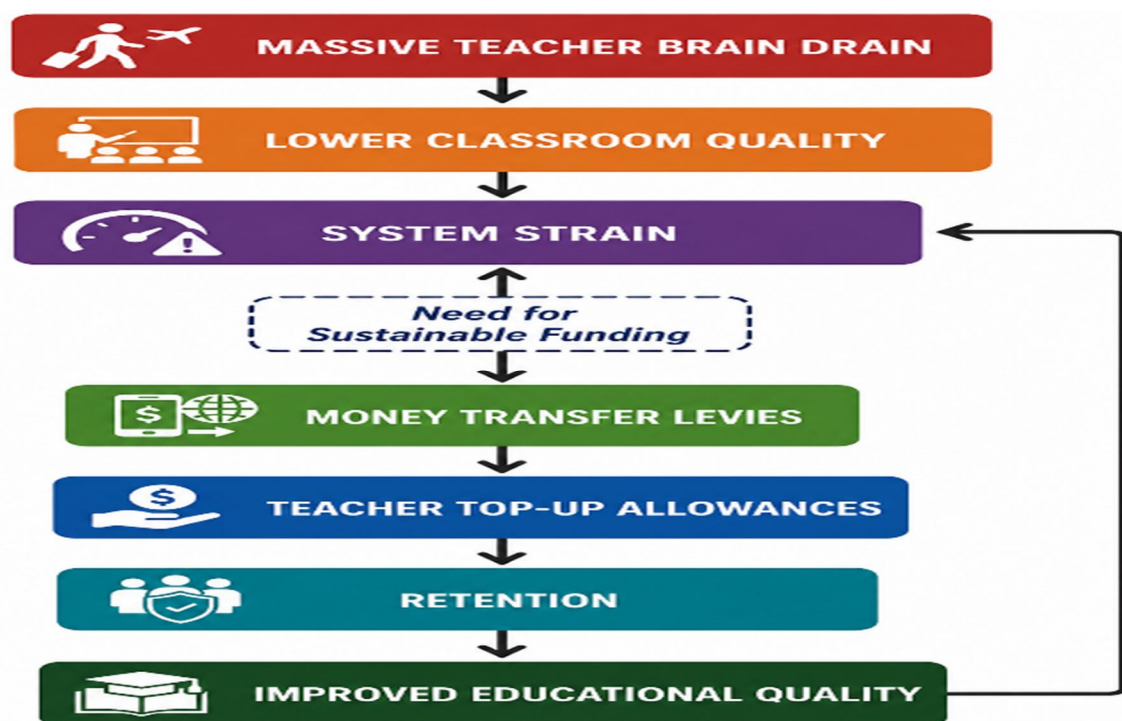
In response to these challenges, there is growing recognition of the need for innovative domestic resource mobilization strategies that can supplement conventional education financing. Recent research on public finance in Cameroon emphasizes the importance of diversifying revenue sources and leveraging emerging sectors of the economy to support social investments (Fomba & Ndzi, 2023; BEAC, 2024 and Engozo'o, 2025b). Among these sectors, digital finance has emerged as one of the fastest-growing components of the national economy. The rapid expansion of mobile money services, electronic payments, fintech platforms, and money transfer agencies has transformed financial inclusion and generated substantial transaction volumes across the country. According to recent reports from the Bank of Central African States (BEAC, 2024) and the Central African Banking Commission (COBAC, 2024), Cameroon is among the leading mobile money markets in Central Africa, with millions of active users conducting daily transactions through operators such as MTN Mobile Money and Orange Money. This growth presents an opportunity to explore innovative financing mechanisms capable of generating sustainable resources for education without imposing excessive burdens on households.

This article therefore proposes the establishment of a dedicated education financing mechanism funded through modest levies on selected digital financial transactions and money transfer services. The revenues generated would be allocated transparently to support salary top-ups and incentive schemes for teachers in basic and secondary education, particularly those serving in underserved

and disadvantaged areas. By linking the dynamism of the digital finance sector to educational development, the project seeks to provide an innovative, equitable, and sustainable approach to strengthening teacher retention, improving educational quality, and advancing Cameroon's human capital development agenda.

Cameroon's public education system is increasingly unable to retain its trained teaching workforce. Low salaries, rising inflation, and persistent currency pressures have made teaching positions financially unsustainable for many educators. Consequently, a growing number of primary and secondary school teachers are leaving the country in search of better-paying employment opportunities abroad (Engozo'o, 2026a). At the same time, the national education budget remains heavily constrained. A significant proportion of education expenditure is devoted to recurrent and operational costs, leaving limited fiscal space for salary enhancements, performance incentives, or other retention measures. This ongoing loss of qualified teachers undermines the quality of teaching-learning transactions, increases student-to-teacher ratios, disrupts learning continuity, and threatens the overall effectiveness of the education system. Addressing this challenge requires more than temporary external assistance. While international support can provide short-term relief, Cameroon needs a sustainable and domestically generated funding mechanism capable of improving teacher compensation, strengthening workforce retention, and reducing the ongoing brain drain. Without such measures, the country risks a continued erosion of human capital in the education sector, with long-term consequences on educational quality and national development.

Figure 1: Conceptual Framework for Transfer Levies to Fund Teacher Retention Allowances in Cameroon



This framework illustrates how a sustainable financing mechanism, such as money transfer levies, could generate resources for teacher top-up allowances, thereby improving teacher retention, reducing brain drain, and ultimately enhancing the quality and stability of Cameroon's education system. It is important to ask the following questions: how does dedicated fiscal levy on money transfer companies sustainably finance teacher retention allowances in Cameroon? What is the total potential revenue of a Cfa 6 francs levy on domestic and international money transfers in Cameroon? What legal, legislative, and institutional frameworks are required to safeguard these funds and ensure their direct allocation to teachers? Moreover, what level of top-up allowance would be sufficient to significantly reduce teachers' intention to migrate or move to urban areas?

1.1. Framing the Crisis and the Opportunity

1.1.1. The Macroeconomic Context: Fiscal Constraints and Structural Rigidity in Education Financing

Cameroon's education sector operates within a highly constrained macroeconomic environment characterized by persistent fiscal pressures, rising public debt, and limited fiscal space for new public investments. Recent analyses of public finance in Cameroon indicate that debt servicing and recurrent expenditures continue to absorb a growing share of national revenues, leaving little room for structural reforms or expansionary social spending (MINFI, 2023; INS, 2024). Within the education sector, the budgetary structure is heavily skewed toward rigid operational costs, particularly salaries and administrative expenditures. Empirical evidence suggests that approximately 91% of domestic education spending is absorbed by non-discretionary recurrent costs, leaving minimal fiscal flexibility for infrastructure development, teacher incentives, or pedagogical innovation (MINEPAT, 2022). This rigidity limits the government's capacity to respond to regional disparities in teacher allocation or to introduce differentiated incentives for underserved zones. Nguemkam (2022) and Ndzi (2023) argue that this structural imbalance reflects a broader governance challenge: a system where wage obligations expand faster than fiscal revenues, crowding out investment in human capital quality. As a result, the education system faces a paradox of "high spending, low effectiveness," particularly in rural and disadvantaged regions.

1.1.2. The Local Teacher Crisis: Workforce Drain from ZEPs

A critical manifestation of this fiscal rigidity is the growing teacher workforce drain from ZEPs. These zones largely rural, remote, or economically vulnerable have historically depended of state deployment policies to ensure equitable teacher distribution. However, recent trends show increasing teacher mobility toward urban centers such as Yaounde, Douala, and regional capitals. According to field-based studies conducted in Cameroon by Tambo (2021) and Ndzi (2023), teachers cite unsustainable baseline wages, difficult working conditions, and lack of incentive differentials as primary drivers of migration from ZEPs. In many rural schools, the absence of hardship allowances and inadequate housing further accelerates turnover. The consequences are severe and multidimensional:

- Overcrowded classrooms in urban areas due to teacher concentration;
- Teacher shortages in rural and border regions;
- Declining foundational learning outcomes, especially in literacy and numeracy;
- Widening regional inequalities in educational attainment.

At the end of the primary cycle, learning outcomes remain below the expected minimum proficiency thresholds for two-thirds of students. Specifically, one out of two students has trouble in reading and mathematics by the time they finish primary school (PASEC 2019). Corroborating these findings, a 2022 World Bank study shows that 72% of late primary age children cannot read and understand a short story, compared to a 58% average for income-comparable countries.

In the same vein, MINEDUB (2022) and Fonkoua (2023) highlight that pupils in underserved zones are significantly more likely to experience multi-grade teaching or prolonged teacher absenteeism, both of which negatively affect learning achievements. This situation undermines national efforts toward inclusive education and equitable human capital development. Ngassa (2024) emphasizes that the teacher attrition crisis is no longer purely administrative but has become a structural development challenge, directly affecting productivity and long-term economic competitiveness.

1.1.3. The Technological Opportunity: Digital Finance as an Untapped Fiscal Base

Despite fiscal constraints, Cameroon has experienced remarkable growth in its digital financial ecosystem, particularly through mobile money platforms such as MTN Mobile Money, Orange Money, and Express Union Mobile. These platforms now represent one of the fastest-expanding financial infrastructures in the country, with millions of active users and high transaction volumes across urban and rural areas. According to ART (2023) and BEAC (2024) reports, mobile money transactions in Cameroon have grown exponentially over the past decade, becoming a dominant channel for everyday payments, remittances, and informal sector transactions. This rapid digitalization presents a significant yet underutilized domestic revenue mobilization opportunity. Ndzi (2023) and Ewane (2024) argue that the digital financial ecosystem could serve as a new fiscal frontier through carefully designed micro-levies, platform-based solidarity contributions, or transaction-linked education funds. Such mechanisms would diversify education financing beyond traditional tax revenues, which are already under pressure. Importantly, the mobile money sector is characterized by:

- High transaction frequency;
- Broad population coverage (including rural households);
- Low marginal cost of taxation/levy collection;
- Strong integration into informal economic activity.

1.1.4. Innovative Fiscal Solution: A Digital Education Solidarity Levy

Building on the above context, an innovative fiscal mechanism can be proposed: a Digital Education Solidarity Levy (DESL). This mechanism would involve a very small, automatically deducted micro-contribution on mobile money transactions (Cfa 6 francs), jointly administered by

telecom operators and the Ministry of Finance. The funds would be ring-fenced into a Teacher Equity and Retention Fund (TERF) dedicated to:

- Hardship allowances for teachers in ZEPs;
- Rural housing and relocation incentives;
- Recruitment of additional teachers for underserved areas;
- Digital teaching infrastructure in rural schools.

This approach aligns with public finance innovation literature emphasizing earmarked digital taxation mechanisms for social sectors (Ewane, 2024; MINFI, 2023). Such a mechanism has three major advantages: revenue diversification without overburdening traditional taxpayers, automatic collection efficiency via digital platforms and direct linkage between digital economic growth and education equity.

The teacher workforce drain in Cameroon, particularly from ZEPs, reflects a deeper structural imbalance in public education financing. With over 90% of education spending locked in rigid recurrent costs, the system lacks flexibility to address regional disparities and teacher motivation challenges. However, the rapid expansion of digital finance platforms offers a transformative opportunity. By leveraging mobile money ecosystems through a carefully designed Digital Education Solidarity Levy, Cameroon can mobilize new domestic resources to stabilize teacher distribution and improve educational equity.

2. MODEL AND METHODOLOGY

The proposed innovative financing mechanism for education in Cameroon is grounded in a fiscal simulation model designed to ensure transparency, predictability, and macroeconomic feasibility. Rather than relying on arbitrary taxation levels, the model uses observed digital transaction data to simulate potential revenue outcomes under different levy structures. This approach aligns with contemporary public finance methods that emphasize evidence-based fiscal planning and digital economy analytics (Ndzi, 2023; Touna Mama, 2022).

2.1 . The Fiscal Simulation Model

The fiscal simulation model is built on the principle that digital financial transactions constitute a reliable proxy for economic activity in the informal and formal sectors. In Cameroon, the rapid expansion of mobile money services has generated large-scale transactional datasets, which can be leveraged for fiscal forecasting. Data sources consist of transaction volume reports from mobile money operators, aggregated financial flow statistics from regulatory authorities such as the ART and periodic reports from the Ministry of Finance and telecom sector disclosures

These datasets allow for the construction of a transaction-based revenue estimation model, where total expected revenue (R) is determined by the total number of transactions (T) levy per transaction (L) Thus:

$$R = T \times L$$

2.2 . Levy Scenarios and Revenue Projections

The model evaluates multiple policy scenarios to determine optimal fiscal efficiency and social acceptability: Shared Levy Model (CFA 6 per transaction)

- CFA 3 charged to the mobile money operator;
- CFA 3 charged to the transaction initiator.

This model distributes the fiscal burden between users and service providers, reducing resistance while maintaining revenue stability. Operator-Burden Model (CFA 6 francs fully charged to operators)

- CFA 6 francs entirely borne by mobile money operators;
- No direct charge to users.

This model maximizes administrative simplicity but may increase pressure on service providers.

2.3 . Simulation Logic and Forecasting Approach

The fiscal simulation encompasses:

- Daily transaction averages;
- Seasonal fluctuations in digital payments;
- Elasticity of demand for mobile money services;
- Behavioral response to transaction costs.

Research highlights that mobile money usage remains relatively price inelastic at low levy thresholds, meaning small transaction fees are unlikely to significantly reduce usage (Ewane, 2024; Nkengafac, 2023). This strengthens the viability of the proposed CFA 6 francs levy. By applying the analysis, the model generates monthly revenue forecasts, annual fiscal projections and Sensitivity analysis under varying transaction growth rates.

2.4 . Scientific Rigour and Policy Relevance

The methodological strength of this model lies in its empirical grounding in real transaction data, scenario-based forecasting approach, transparent fiscal logic and adaptability to digital economy growth trends. According to Fongang (2022), digital taxation models in emerging economies must balance revenue efficiency with financial inclusion. This simulation framework therefore ensures that fiscal innovation does not undermine access to mobile financial services, while still generating predictable education financing streams.

Table 1: Core Variables and Data Indicators for the School Vulnerability Index

Variable Symbol	Indicator	Definition and Measurement	Equity Purpose
G_r	Geographical Remoteness	Distance (in kilometers) from the school to the nearest paved national road, major urban center, or educational supply hub.	Rewards teachers who accept postings in physically isolated and hard-to-reach rural areas.
S_e	Insecurity and Shock Exposure	A categorical index ranging from 0 to 3 that measures exposure to conflict, insecurity, or recurrent climate-related shocks (e.g., flooding in the Far North Region or socio-political crises in the North-West and South-West Regions).	Compensates teachers for heightened personal, professional, and operational risks associated with vulnerable locations.
D_f	Gender Disparity Index	Measured using the female student dropout rate or the Gender Parity Index (GPI) within the school's catchment area.	Provides additional incentives for teachers serving in areas where girls' education is most vulnerable, thereby supporting gender equity in education.
P_r	Poverty Rate in the subdivision	The Multidimensional Poverty Index (MPI) score of the municipality, subdivision, or division where the school is located.	Compensates for the limited capacity of poor communities to provide local educational support through Parent-Teacher Associations (PTAs) and other community contributions.
S_d	STEM Deficit Ratio	The ratio of vacant STEM teaching positions or non-specialist-led STEM instructional hours to the total number of required STEM teaching hours in the school.	Directs higher financial incentives toward scarce STEM specialists in order to reduce shortages and prevent talent migration from underserved areas.

2.5. Conceptual Formula

The total top-up allowance (T_i) allocated to a teacher serving in a particular school and financed through the money transfer levy fund can be formulated as follows :

$$T_i = B_a \times (1 + [w_1 * G_r + w_2 * S_e + w_3 * D_f + w_4 * P_r + w_5 * S_d])$$

Where:

- B_a : The baseline national teacher top-up allowance (CFA 35,000 francs);
- w_1, w_2, w_3, w_4, w_5 : Statistical weights assigned by policymakers to prioritize specific equity goals.

2.5.1. Normalization Requirement

To ensure comparability across indicators, all five variables (G_r, S_e, D_f, P_r and S_d) must be normalized to a decimal scale between 0 and 1 before plugging them into the equation;:

0 = Lowest level of vulnerability or need.

1 = Highest observed level of vulnerability or need.

Thus:

$$0 \leq G_r, S_e, D_f, P_r, S_d \leq 1$$

2.5.2. School Vulnerability Index (SVI)

The composite School Vulnerability Index (SVI) is calculated as:

$$SVI = w_1 G_r + w_2 S_e + w_3 D_f + w_4 P_r + w_5 S_d$$

For policy simplicity, the weights may be calibrated as such:

$$0 \leq SVI \leq 2$$

where:

SVI = 0 indicates a school facing minimal structural disadvantages and teachers will consequently receive a CFA 35,000 francs monthly top-up allowance.

SVI = 2 represents the highest level of educational vulnerability and therefore qualifies for the maximum teacher incentive (CFA 105,000 francs).

Under this framework, the teacher top-up allowance becomes

$$T_i = B_a \times (1 + SVI)$$

Consequently:

A teacher in a low-vulnerability school ($SVI = 0$) receives the baseline allowance (B_a).

A teacher in a school with the maximum vulnerability score (SVI = 2) receives up to three times the baseline allowance:

$$T_i = B_a \times (1 + 2) = 3B_a$$

This formula ensures that financial incentives are distributed according to measurable educational inequities, thereby promoting fairness, teacher retention, and improved educational outcomes in Cameroon's most disadvantaged communities.

2.6. Legal and Institutional Feasibility Analysis

Financial innovation must operate within existing legal and institutional frameworks. Consequently, the study incorporates a qualitative legal feasibility assessment to evaluate whether the proposed financing mechanism complies with Cameroon's public finance regulations and administrative structures. The analysis is guided by the provisions of Law No. 2018/012 of 11 July 2018 relating to the fiscal regime of the state and other public entities. Particular attention is given to budget earmarking mechanisms, special funds management, fiscal transparency requirements, and intergovernmental financial transfers. Semi-structured interviews are conducted with key stakeholders from:

- The Ministry of Finance (MINFI);
- The Ministry of Basic Education (MINEDUB);
- The Ministry of Secondary Education (MINESEC);
- The Ministry of Public Service and Administrative Reform (MINFOPRA);
- Regional and Local Authorities (RLAs);
- Teacher unions and professional associations;
- Development partners involved in education financing.

Forty (40) key informants were purposively selected based on their expertise and involvement in educational planning and financial governance. Interview guides focused on administrative feasibility, budgetary sustainability, revenue collection mechanisms, accountability safeguards, political acceptability, and potential implementation barriers.

Data were analysed using thematic content analysis. Emerging themes were coded and categorized to identify areas of institutional convergence and divergence. This approach follows recommendations by Tchouassi (2023) and Njong (2022), who emphasize the importance of stakeholder engagement in public policy innovation within Cameroon's governance environment. The legal feasibility component is essential for ensuring that the proposed financing mechanism is not merely economically viable but also administratively implementable within existing state structures.

3. RESULTS

This section demonstrates the financial sustainability and operational feasibility of the proposed DESF through empirical evidence derived from Cameroon's rapidly expanding mobile money ecosystem. Consistent with recent studies on domestic resource mobilization in Cameroon (Tchamyu, 2023b; Njoya & Nguimkeu, 2024; Fonkeng, 2024), the findings reveal that digital financial transactions represent an underutilized yet highly sustainable source of education financing capable of supporting teacher welfare without increasing public debt or imposing significant fiscal pressure on households.

3.1. Domestic Resource Mobilization Capacity

Cameroon has experienced remarkable growth in mobile money usage over the past six years. According to the Cameroon National Economic and Financial Committee (2024) and ART, (2025), mobile money transactions increased from 615 million in 2019 to 2.94 billion in 2024, representing an average annual growth rate exceeding 36%.

Table 2: Mobile Money Transaction Trends in Cameroon (2019–2024)

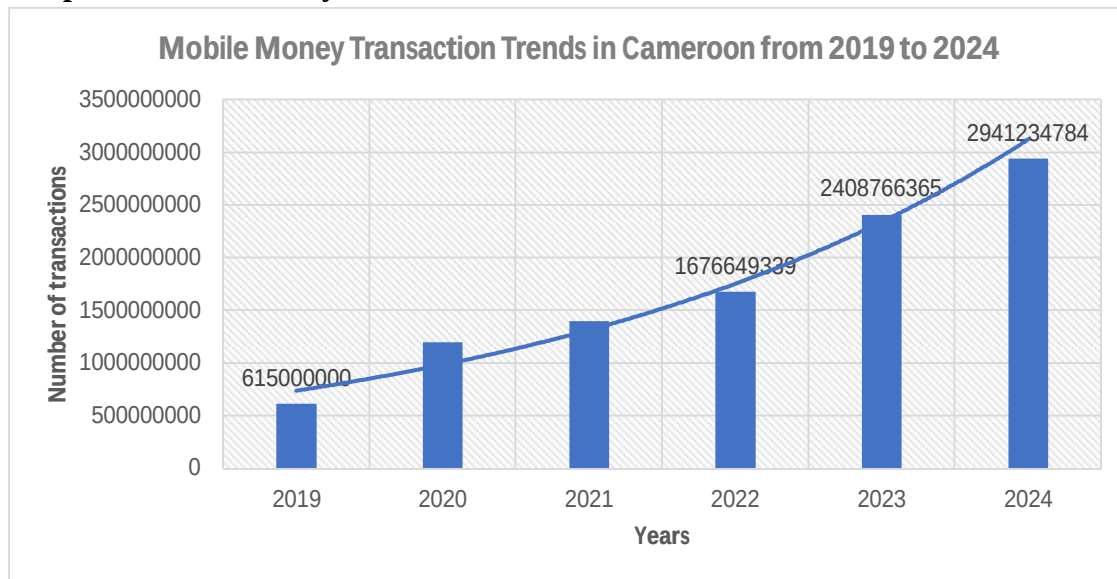
<i>Year</i>	<i>Number of transactions</i>
2019	615,000,000
2020	1,200,000,000
2021	1,400,000,000
2022	1,676,649,339
2023	2,408,766,365
2024	2,941,234,784

Sources: Cameroon National Economic and Financial Committee (2024) and BEAC (2024).

The data illustrate a sustained expansion of digital financial inclusion across urban and rural areas. This growth creates an opportunity to introduce a minimal solidarity contribution that remains practically invisible to users while generating substantial educational resources. Assuming the implementation of a micro-levy of CFA 6 on each mobile money transaction, the annual revenue generated can be calculated as follows:

$$2,941,234,784 \times \text{CFA } 6 \text{ francs} = \text{CFA } 17,647,408,704 \text{ francs}$$

The proposed mechanism would therefore generate approximately CFA 17.65 billion annually. Unlike conventional financing mechanisms that rely on increased taxation or external borrowing, this approach mobilizes domestic digital economic activity and creates a predictable funding stream dedicated exclusively to educational equity and teacher incentives. The findings support arguments advanced by Cameroonian scholars such as Tchamyu (2023c), Ndzié (2024), and Fonkeng (2024), who emphasize that digital finance could serve as a strategic instrument for financing social development priorities while strengthening fiscal sustainability.

Graph 1. Mobile Money Transaction Trends in Cameroon from 2019 to 2024

Sources: Cameroon National Economic and Financial Committee (2024) and BEAC (2024).

The upward trajectory shown in graph 1 suggests that future revenues may continue to increase as digital financial services expand. Consequently, the proposed funding mechanism possesses significant scalability and long-term sustainability.

3.2. Impact on Teacher Purchasing Power

One of the principal objectives of the proposed financing model is to improve teacher motivation and retention in ZEPs and rural communities. Assuming that approximately 30,000 primary and secondary school teachers operate within the targeted educational environments, the annual fund of CFA 17.65 billion francs could finance differentiated monthly incentive payments based on a SVI. The allocation model proposes:

- A minimum monthly top-up allowance of CFA 35,000 francs;
- A maximum monthly top-up allowance of CFA 105,000 francs for teachers serving in schools with the highest vulnerability index.

Consequently, the system moves beyond uniform hardship allowances and adopts a performance- and vulnerability-sensitive compensation framework.

3.3. Targeted Incentives for Strategic Educational Priorities

The simulation further demonstrates the possibility of introducing targeted “super-bonuses” for categories of teachers whose presence and motivation are critical for achieving national educational goals. These categories include:

- Science, Technology, Engineering, and Mathematics (STEM) teachers;
- Female teachers deployed in rural and hard-to-reach communities;
- Teachers serving in conflict-affected regions;

- Special needs education specialists;
- School leaders managing highly vulnerable institutions.

International evidence indicates that differentiated financial incentives significantly improve teacher retention and educational outcomes in disadvantaged contexts (UNESCO, 2024; World Bank, 2024). Similar findings have been reported in Cameroon by Fonkeng (2024) and Njoya (2025), who argue that targeted incentive systems can reduce teacher absenteeism, increase motivation, and improve learning outcomes in underserved regions.

3.4. Implications for Educational Equity and National Development

The results provide strong empirical support for the feasibility of leveraging digital financial transactions as a mechanism for financing educational equity. The projected annual revenue of CFA 17.65 billion demonstrates that substantial resources can be mobilized domestically through innovative financing instruments without increasing sovereign debt. Moreover, the proposed teacher incentive structure directly addresses longstanding challenges affecting educational quality in Cameroon, particularly in rural, crisis-affected, and socioeconomically disadvantaged communities. By linking financial rewards to school vulnerability and strategic educational priorities, the model promotes a more equitable distribution of educational resources while strengthening teacher motivation, retention, and performance. The findings suggest that a Digital Education Solidarity Fund financed through a modest mobile money micro-levy could become a transformative instrument for advancing educational inclusion, teacher welfare, and sustainable human capital development in Cameroon.

4. DISCUSSION: INSPIRING ACTION AND LONG-TERM VALUE

4.1. The Spatial Equalisation Mechanism: Structural Equity through Digital Redistribution

One of the most innovative contributions of the proposed financing model lies in its capacity to operationalize spatial equity through an automatic redistribution mechanism. In Cameroon, economic activity, digital transactions, and financial services remain heavily concentrated in urban growth poles such as Yaoundé, Douala, Bafoussam, and Garoua. Consequently, wealth generated through digital commerce disproportionately accumulates in regions already endowed with relatively stronger educational infrastructure and greater fiscal capacity (Tchamyou, 2020; Nembot & Fomba, 2023). The proposed fintech micro-levy introduces a spatial equalisation mechanism that channels a fraction of this economic activity toward schools operating in geographically disadvantaged, conflict-affected, climate-vulnerable, and educationally underserved areas. Rather than relying exclusively on annual government budget allocations, which are often constrained by fiscal pressures and administrative bottlenecks, the model creates a continuous flow of solidarity-based financing linked directly to economic transactions. This mechanism aligns with principles of distributive justice and territorial equity advocated in contemporary development literature (Njoh, 2022; Nguefack-Tsague & Kamdem, 2024). By directing resources toward schools with the highest School Vulnerability Index (SVI) scores, the system recognizes that educational needs vary significantly across territories and that equal funding does not necessarily produce equitable outcomes.

Beyond educational benefits, the mechanism can generate broader socio-economic impacts. Improved teacher retention in remote and vulnerable communities contributes to stronger educational continuity, increased human capital formation, reduced rural-urban educational disparities, and greater social cohesion. Over time, enhanced educational quality in disadvantaged regions may stimulate local economic development, improve labor productivity, and reduce patterns of spatial inequality that continue to characterize Cameroon's development landscape. Thus, the proposed model moves beyond traditional notions of educational financing by transforming digital economic growth into a vehicle for territorial inclusion and social justice.

4.2. Digital Transparency through Direct-to-Wallet Governance

A recurrent challenge in public sector financing across many African countries concerns the risks of administrative inefficiencies, delayed disbursements, bureaucratic leakages, and corruption (Transparency International, 2024; Fozoh & Tamba, 2023). Teacher incentive schemes are particularly vulnerable when funds pass through multiple administrative layers before reaching intended beneficiaries. To address these concerns, the present model proposes a Direct-to-Wallet Governance framework. Under this arrangement, revenues generated through fintech micro-levies would be processed automatically through certified digital payment infrastructures and transferred directly to the mobile money wallets or verified digital accounts of eligible teachers. Cameroon possesses one of Central Africa's most dynamic mobile money ecosystems, with platforms such as MTN Mobile Money and Orange Money facilitating millions of transactions daily (BEAC, 2024). Leveraging these existing infrastructures significantly reduces transaction costs while improving transparency and traceability. The direct-to-wallet model offers several governance advantages:

- Elimination of intermediary administrative layers;
- Real-time transaction monitoring;
- Automated audit trails;
- Reduced opportunities for fund diversion;
- Faster and predictable teacher payments;
- Increased public trust in education financing mechanisms.

Emerging evidence from digital cash transfer programmes in Africa suggests that direct digital payments significantly improve accountability and beneficiary satisfaction while reducing operational inefficiencies (Aker et al., 2023; World Bank, 2024). Integrating blockchain-inspired verification protocols and open-access reporting dashboards could enhance transparency by enabling citizens, school administrators, and oversight institutions to track disbursement flows. Such innovations would position Cameroon among the leading African countries experimenting with digitally enabled public finance governance.

4.3. Policy Uptake Roadmap: Integrating the Mechanism into Cameroon's Finance Bill

For the proposed model to achieve sustainable impact, a realistic implementation pathway is required. Rather than introducing the mechanism as a standalone educational reform, it should be embedded within Cameroon's broader fiscal modernization and digital economy agenda. A phased policy uptake roadmap is proposed:

Phase I: Technical Feasibility and Stakeholder Consultation

This phase would involve:

- Financial simulations and revenue projections;
- Regulatory assessment of fintech transaction levies;
- Consultations with educational stakeholders;
- Engagement with telecom operators and fintech companies;
- Collaboration with teacher unions and civil society organizations.

Phase II: Pilot Implementation

A pilot programme could be launched in selected priority education zones in accordance with the provisions of article 24 of decree no. 2026/00643/PM of 25 March 2026 to lay down criteria and modalities of priority education zones.

These regions face significant educational access and teacher retention challenges and therefore provide suitable contexts for testing the model.

Phase III: Legislative Integration

Following pilot evaluation, the mechanism could be formally incorporated into the national Finance Bill through:

- Amendments to digital transaction taxation provisions;
- Creation of an Education Equity Fund;
- Establishment of eligibility criteria linked to the School Vulnerability Index;
- Formalization of digital governance protocols.

This legislative approach would ensure long-term sustainability while avoiding dependence on donor-funded projects.

Phase IV: National Scaling

After successful validation, the mechanism could be expanded nationwide through partnerships involving the following stakeholders:

- The Ministry of Finance;
- The Ministry of Basic Education;
- The Ministry of Secondary Education;
- The Ministry of Public Service and Administrative Reform;
- The Telecommunications Regulatory Board;
- Fintech operators;
- Teacher trade unions;

- Civil Society Organisations;
- Parliamentarians;
- The Local Education Group (LEG);
- Development partners.

National scaling would transform the initiative from a pilot intervention into a permanent component of Cameroon's educational financing architecture.

5. CONCLUSION AND CONTINENTAL SCALABILITY

The teacher workforce crisis confronting Cameroon reflects a broader challenge affecting many countries across sub-Saharan Africa. Growing student populations, constrained public budgets, rural staffing shortages, climate vulnerabilities, and socio-political instability continue to threaten educational quality and equity across the continent. The financing model proposed in this study offers an innovative response by linking educational sustainability to the rapidly expanding digital economy. Through a modest fintech micro-levy, a vulnerability-sensitive allocation formula, and a direct-to-wallet governance framework, the model creates a transparent, equitable, and fiscally sustainable mechanism for supporting teacher retention in underserved communities. More importantly, the proposal demonstrates how digital transformation can be leveraged not merely as a technological innovation but as a tool for social redistribution and educational justice. By converting everyday digital transactions into investments in human capital, the model reimagines the relationship between economic growth and educational development. Although designed for Cameroon, the framework possesses strong continental relevance. Many African countries are experiencing similar trends, including rapid mobile money expansion, increasing digital financial inclusion, and persistent educational financing gaps. Consequently, the model offers a scalable blueprint that can be adapted to diverse national contexts while maintaining its core principles of equity, transparency, and sustainability.

If successfully implemented, Cameroon could emerge as a continental pioneer in innovative education financing, demonstrating how digital economies can be harnessed to address one of Africa's most pressing development challenges is ensuring that every child, regardless of geographic location or socio-economic status, has access to qualified, motivated, and adequately supported teachers. The proposed mechanism therefore represents more than a financing innovation; it constitutes a transformative vision for educational equity, public accountability, and inclusive development in Subsaharan Africa's digital future.

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