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An investment case for reducing unmet need for family planning and improving maternal health outcomes in Gabon

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Abstract

This study presents an investment case for reducing unmet need for family planning and improving maternal health outcomes in Gabon between 2025 and 2030. Using the Spectrum software suite and a bottom-up costing approach, four scenarios were modelled to estimate financial requirements, health impacts, and socioeconomic returns from scaling up family planning, periconceptual, and maternal health interventions. Results show that scaling up services generates substantial health and economic gains while reducing overall system costs through lower demand for emergency obstetric care. Under the most ambitious scenario, scale-up could avert more than 15,000 unintended pregnancies, over 340 maternal deaths, and more than 2,100 child deaths, generating USD 793 million in socioeconomic benefits and a benefit-cost ratio of 63:1. Failure to scale up could result in losses of up to USD 780 million. Although short-term financing gaps remain, domestic revenue mobilisation, efficiency gains, and innovative financing mechanisms could support sustainable implementation and strengthen long-term human capital development. *(Afr J Reprod Health 2026; 30 [7s]: 39-51).*

Keywords: Reproductive Health, Maternal health financing, Family planning financing, Cost-benefit analysis, Cost of inaction analysis, Fiscal space analysis

Résumé

Cette étude élabore un dossier d'investissement visant à réduire les besoins non satisfaits en planification familiale et à améliorer les résultats en matière de santé maternelle au Gabon entre 2025 et 2030. Malgré des engagements politiques, la couverture contraceptive a diminué et la mortalité maternelle a augmenté depuis 2012. En utilisant la suite logicielle Spectrum et une approche de chiffrage ascendante (bottom-up), quatre scénarios ont été modélisés afin d'estimer les besoins financiers et les retombées socioéconomiques liés à l'intensification des interventions de planification familiale, périconceptionnelles et de santé maternelle. Dans le scénario le plus ambitieux, l'intensification pourrait éviter plus de 15 500 grossesses non désirées, 341 décès maternels et près de 2 200 décès d'enfants d'ici 2030, générant un ratio bénéfice–coût pouvant atteindre 63:1. À l'inverse, le maintien des tendances actuelles pourrait entraîner des pertes allant jusqu'à 780 millions USD en productivité non réalisée. Bien que des économies à long terme soient attendues grâce à la réduction des soins obstétricaux d'urgence, des déficits de financement à court terme subsistent. Des mesures de mobilisation des recettes nationales, des gains d'efficience et des mécanismes de financement innovants pourraient soutenir une mise en œuvre durable et renforcer le développement du capital humain. *(Afr J Reprod Health 2026; 30 [7s]: 39-51).*

Mots-clés: Financement de la planification familiale, Financement de la santé maternelle, Analyse coût-bénéfice, Analyse du coût de l'inaction, Analyse de l'espace budgétaire

Introduction

Gabon is an upper-middle-income country with an estimated population of approximately 2.6 million in 2024, characterised by one of the highest urbanisation rates in Africa and a notably young demographic profile, with around half of the population under the age of 20.[1] Despite substantial natural resource wealth and strong environmental stewardship, economic diversification remains limited, and approximately one-third of the population lives in poverty.[2] Fertility patterns also vary significantly by location, with rural fertility averaging about six children per woman compared with roughly four children per woman in urban areas.[2]

A central government objective is the achievement of "zero unwanted pregnancies." This goal underpins collaboration with the United Nations Population Fund (UNFPA), whose 2023-2027 programme aims to support national efforts to increase contraceptive prevalence by 30% by 2030[3] and raise the proportion of women whose family planning needs are met through modern methods from a baseline of 31.1% in 2012 to 45% by 2027.[4] At the same time, maternal health outcomes have deteriorated, with the maternal mortality ratio increasing from 316 deaths per 100,000 live births in 2012 to 399 per 100,000 live births in 2021; levels more consistent with low-income settings than with upper-middle-income country peers.[5]

This paper presents an investment case for strengthening reproductive health in Gabon through expanded access to family planning and maternal health services. Drawing on empirical modelling and economic analysis, it demonstrates the potential health and socioeconomic gains associated with scaling up effective interventions. The following sections describe the analytical approach, present key findings, discuss policy and financing implications, and conclude with recommendations for action.

Methods

Framework

The investment case was developed to estimate the financial resource requirements and projected health and economic benefits associated with scaling up family planning and maternal health interventions under alternative scenarios. The analysis focused on reducing unmet need for family planning and improving maternal health outcomes. Using 2025 as the baseline year and 2030 as the target horizon, the assessment aligns with the Sustainable Development Goals (SDGs) and Gabon's National Health Development Plan (NHDP) 2024-2028.[6] The investment case was structured around six complementary analytical components: situational analysis, budget analysis, costing, cost-benefit analysis, cost of inaction analysis, and fiscal space analysis. Together, these approaches provide a comprehensive assessment of investment requirements and the potential health and socioeconomic returns.

Data sources

Multiple nationally representative and validated data sources informed all model parameters. Baseline health indicators and intervention coverage were primarily drawn from the Demographic and Health Survey (DHS) 2019-2021.[7] Demographic projections were obtained from the United Nations World Population Prospects (2024).[8] Unit costs for commodities and supplies were obtained from the United Nations Population Fund Gabon and the World Health Organization (WHO) OneHealth Tool,[9,10] while fiscal parameters were derived from the publicly accessible databased from the International Monetary Fund and World Bank. Together, these sources provided the empirical foundation for the financial, demographic, and epidemiological components of the model.

Situation analysis

A situation analysis was conducted to ensure that the investment case reflected Gabon's reproductive health context and the main drivers of family planning gaps and maternal health concerns. Evidence from the DHS 2019-2021 indicates that besides high knowledge and awareness of contraception among women of reproductive age (>95%), modern contraceptive coverage decreased from 24% in 2012 to 17% in 2021, with only 43% of demand for family planning met.[5] Key drivers identified include limited family planning choice at service delivery points as well as poor service integration of post-partum and post-abortion care.[5,11]

The NHDP 2024-2028 set an ambitious target to reduce the maternal mortality ratio (MMR) from 252 deaths per 100,000 live births in 2020 to 129 deaths by 2028. However, the latest DHS survey reported a rise in Gabon's MMR over time, with a marked increase from 316 deaths per 100,000 live births in 2012 to 399 in 2021, despite these strategic commitments. The main causes of maternal deaths include haemorrhage (29%), eclampsia (24%), infections (10%), abortions (8%), ectopic pregnancy (5%), uterine rupture (5%), and indirect causes (19%).[5] In total, 11 maternal health and two periconceptual interventions, and a range of modern contraceptive methods were selected for

costing and impact estimation, reflecting both clinical effectiveness and alignment with national health strategies.

Budget analysis

The budget analysis component examined health sector financing in Gabon, with a specific focus on the allocation and utilisation of resources for sexual and reproductive health. A comprehensive review of national budget data and financing sources was conducted to identify trends, funding gaps, and potential fiscal opportunities. The analysis assessed allocations across recurrent and capital expenditures and differentiated between domestic government, private sector, and donor financing. These findings were benchmarked against international commitments, including the Abuja Declaration, to identify constraints and inform opportunities for strengthening reproductive health financing.

Costing and scenario modelling

A bottom-up, ingredient-based costing approach was applied to estimate the resources required to scale up reproductive health interventions between 2026 and 2030. Intervention costs were calculated by multiplying the target population and population in need by the intended coverage level and the annual cost per person. Cost inputs included drugs and consumables, medical equipment, health worker time, and inpatient and outpatient service costs, based on World Health Organization (WHO) standard guidelines. Unit costs were sourced from the WHO OneHealth Tool[10] and validated against local price data where available. The Spectrum software suite (version 6.42), including DemProj, the Lives Saved Tool (LiST), and FamPlan, was used to ensure internal consistency across demographic projections, health outcomes, and financial estimates, generating a comprehensive assessment of the investments required to achieve national reproductive health targets.[10]

In total, 11 maternal health and two periconceptual interventions, and a range of modern contraceptive methods were selected for costing and impact estimation, reflecting both clinical effectiveness and alignment with national health strategies. Programme and health system costs, including training, supervision, logistics, infrastructure, monitoring and evaluation, transportation, communication, media, outreach, advocacy, and community health worker training, were modelled as a proportion of direct intervention costs. Incorporating these components ensured that the investment estimates captured both service delivery requirements and the broader system strengthening necessary for effective implementation.

Four scenarios were developed to support the costing and impact analyses. The base case assumes continuation of current trends through 2030. Scenario 1 models a moderate linear increase in the modern contraceptive prevalence rate (mCPR) from 17.3% to 25.5% by 2030, equivalent to an annual increase of 1.6 percentage points, with all other interventions maintained at base case levels. Scenario 2 assumes a more ambitious scale-up of mCPR to 33.6% by 2030, representing an annual increase of 3.3 percentage points, while other interventions remain unchanged. The 2030 family planning targets were derived through linear extrapolation of the 2028 target specified in the NHDP 2024-2028, with the Scenario 1 target defined as the midpoint between the baseline and Scenario 2 target. Scenario 3 combines the mCPR scale-up of Scenario 2 with moderate expansion of emergency obstetric care interventions. Scenario 4 builds on Scenario 3 by additionally scaling up selected periconceptual interventions; post-abortion care and ectopic pregnancy case management.

Cost-benefit analysis

The cost-benefit analysis quantified the socioeconomic returns associated with scaling up reproductive health interventions between 2025 and 2030. Health outcomes were projected using the Spectrum platform to estimate the direct effects of expanded interventions on unintended pregnancies, maternal and child deaths, child stunting, and disability-adjusted life years (DALYs) averted. Expanded access to modern contraceptives was projected to reduce unintended pregnancies and, consequently, maternal and child mortality as well as child stunting. Additional scale-up of periconceptual and emergency obstetric care services was expected to further reduce maternal

and child deaths. Collectively, these health gains contribute to improved life expectancy, reduced disease burden, and enhanced population wellbeing.[13]

Spectrum outputs were used to estimate DALYs averted, calculated in Excel using standard life expectancy at age of death and cause-specific ratios of years lived with disability to years of life lost (YLD/YLL) derived from the Global Burden of Disease 2021 database. The human capital approach was applied to monetise health gains by valuing lifetime productivity. Deaths averted were converted into monetary benefits by assigning a value equivalent to 1.5 times GDP per capita to each life-year saved (i.e. DALY averted) during 2023-2030.[14] Child stunting cases averted were monetised by estimating future productivity gains associated with improved cognitive development, based on expected income, productive years, and gross national income per capita.[15] Benefit-cost ratios were calculated by comparing total estimated benefits with total investment costs under each scenario.

Cost of inaction analysis

A cost-of-inaction analysis was conducted to estimate the economic consequences of maintaining current levels of investment in reproductive health. The cost of inaction was calculated by comparing the incremental monetised economic benefits generated under each scale-up scenario relative to the base case, minus the net present value of the additional costs associated with implementation. This approach quantified the economic losses resulting from failure to scale up interventions.

Fiscal space analysis

The fiscal space analysis applied the United Nations fiscal space framework to assess Gabon's capacity to sustainably finance reproductive health interventions.[16] Five potential avenues for expanding fiscal space were examined: improvements in health system efficiency, increased domestic revenue mobilisation, innovative financing mechanisms, deficit financing, and improved utilisation of external financing. Quantitative estimates were derived from national budget statements, Ministry of Health expenditure data, and relevant official publications and open-access databases maintained by multilateral institutions. Scenario modelling was used to project potential additional resources for the health sector through 2030 under alternative fiscal policy assumptions, enabling identification of feasible financing options that would maintain fiscal sustainability.

Stakeholder engagement and validation

Stakeholder engagement and validation were integral to ensuring the robustness, credibility, and contextual relevance of the investment case. A participatory approach was adopted, involving the UNFPA, the sole procurer of family planning commodities to the Ministry of Health in Gabon, through collaboration with both the country and regional offices, and headquarters. The process included inception meetings and formal validation workshops during which stakeholders reviewed key data inputs, modelling assumptions, and preliminary findings. Feedback from these consultations informed iterative refinements to the analytical approach and ensured alignment with national reproductive health priorities and policy frameworks. This consultative process strengthened transparency, fostered stakeholder ownership, and enhanced the feasibility and policy relevance of the final recommendations.

Ethical considerations

This study did not involve the collection of primary data from individuals and did not include clinical, behavioural, or personally identifiable information. All analyses were based on secondary data sources that are publicly available or routinely generated through government systems. Although the methodology incorporated participatory consultations, participants contributed in their official institutional capacities. As no personal data were collected and no human-subject research procedures were undertaken, formal ethical approval was not required. Participation in consultations was voluntary and conducted in accordance with government protocols. No individual-level data were recorded, and no identifiable opinions or quotations are reported. The study was conducted in line with international

ethical standards for policy research, ensuring respect for participants, transparency, and confidentiality.

Results

Financing landscape

High debt-servicing costs, inefficient public expenditure, and constrained domestic revenue mobilisation have reduced the Gabonese government's fiscal space in recent years, limiting investment in priority sectors such as health. This constraint is reflected in significant volatility in the Ministry of Health and Social Affairs (MoHSA) budget between 2020 and 2024. Although the nominal MoHSA budget increased from USD 275 million in 2020 to a peak of USD 345 million in 2021 (10% of the national budget), it subsequently declined to USD 217 million in 2024 (5% of the national budget).[17–21] These allocations remain well below the 15% Abuja Declaration benchmark, indicating limited prioritisation of health within overall public spending.[17-21]

The composition of the MoHSA budget is heavily weighted toward recurrent expenditure, particularly personnel costs, which accounted for 36-55% of total spending between 2020 and 2024. Expenditure on goods and services, which covers operational inputs such as utilities, supplies, and service delivery support, peaked at USD 143 million in 2021 but declined sharply to USD 31 million in both 2023 and 2024, constraining routine facility operations. Transfers remained relatively stable at USD 19-25 million, while investment spending rose temporarily to USD 60 million in 2022 (25% of the total budget), the only year characterised by significant capital investment, before declining again to USD 41 million in 2024 (19% of total spending).[17-21]

Private health expenditure remains substantial, particularly household out-of-pocket (OOP) payments, which ranged from USD 45 to USD 49 per capita and represented 19-23% of current health expenditure (CHE) between 2019 and 2022.[22] This exceeds the WHO's 15% threshold for financial protection. The Gabonese National Health Insurance and Social Guarantee Fund (Caisse Nationale d'Assurance Maladie et de Garantie Sociale, CNAMGS) covers childbirth-related services for insured populations but does not include family planning services or commodities.[23] External financing for health remains limited and volatile, peaking at USD 57 million in 2020, likely due to COVID-19-related support, before declining to USD 21 million in 2022, when it accounted for only 4% of CHE.[22]

Government spending on reproductive and maternal health has increased in nominal terms but declined in relative priority within public health expenditure. Public spending on reproductive health rose from USD 62 million in 2019 to USD 74 million in 2022, yet its share of domestic government health expenditure decreased from 22% to 19%. Maternal health spending followed a similar trend, increasing from USD 52 million to USD 60 million while its proportional share fell from 18% to 16%. Expenditure on unspecified reproductive health needs also increased modestly but remained minimal overall.[22]

Financing needs and gaps

Under the base case scenario (status quo) an estimated USD 177 million is required to sustain the reproductive health services included in this analysis between 2025 and 2030 (USD 25.1–34.2 million annually), comprising approximately USD 25 million for family planning and USD 151 million for emergency obstetric care (Figure 1). Compared with the base case, total implementation costs are lower in Scenarios 1 (moderate scale up of family planning) at USD 174 million (USD 25.1–33.2 million annually), generating savings of around USD 3 million. The total cost of implementation further decreases in Scenario 2 (ambitious scale up of family planning) to USD 167 million (USD 25–30.7 million annually) between 2025 and 2030, generating savings of around USD 10 million. Scenario 3 (Scenario 2, plus scale up of emergency obstetric care) also produces cost savings relative to the base case, although smaller than Scenario 2, with a total cost of USD 169 million (USD 25–31.5 million annually). Finally, Scenario 4 (Scenario 3, plus scale up of periconceptual care) increases costs relative to Scenario 3 but remains below the base case, with a total cost of USD 172 million (USD 25–32.5 million annually).

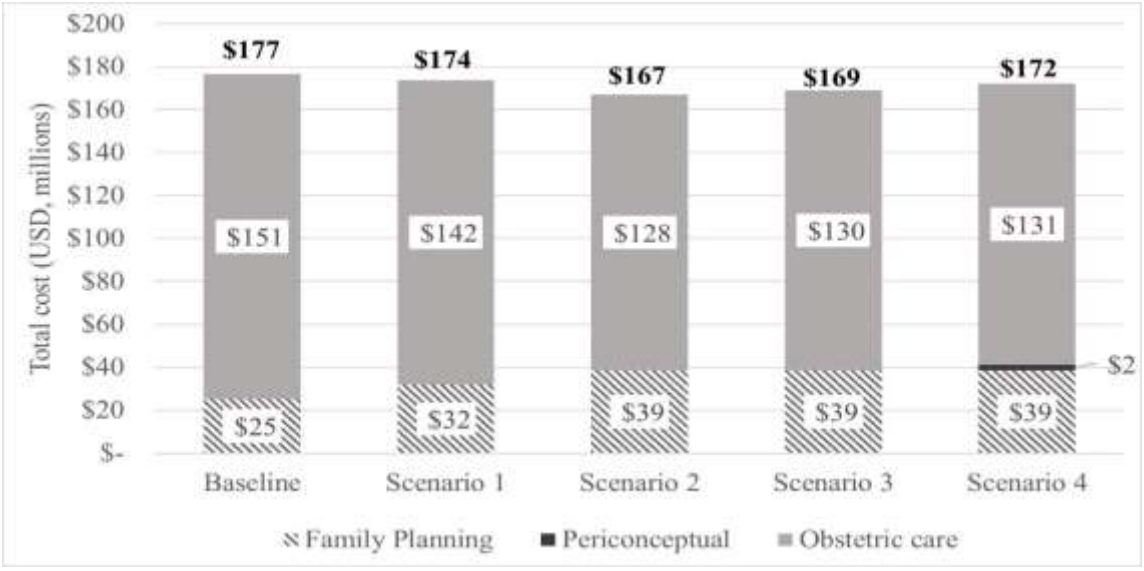


Figure 1: Required total investment to scale up reproductive health interventions under different scenarios, 2025-2030 (in USD millions)

These findings indicate that, across all four scenarios, scaling up family planning, periconceptual, and maternal obstetric interventions can achieve national coverage targets by 2030 while generating overall cost savings from 2026 onward. Savings arise primarily from reductions in unintended pregnancies, which lower demand for emergency obstetric care and offset additional investments required for intervention scale-up, even when obstetric and periconceptual services are expanded. In effect, reduced obstetric care utilisation can finance increased investment in family planning and, under Scenario 4, both family planning and periconceptual interventions. However, upfront financing for family planning scale-up will likely be required before savings materialise, creating short-term fiscal pressures. Budget rigidity and programme-specific funding structures may further limit the reallocation of realised savings, while planning and budget cycle constraints could delay their capture and redeployment, particularly during the early years of implementation.

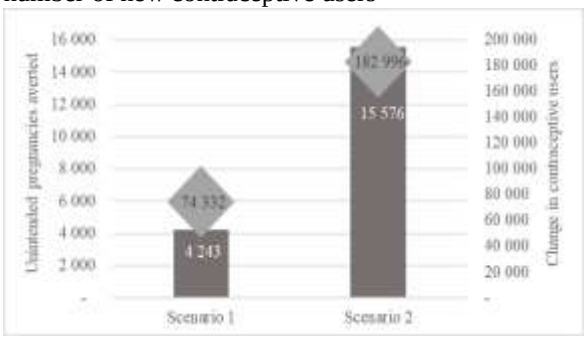
Health benefits

The modelling results indicate substantial improvements in health outcomes across all four investment scenarios. Under Scenario 1, modest increases in modern contraceptive uptake are projected to avert 74,332 unintended pregnancies, 99 maternal deaths, and 857 deaths among children under five (Figure 2). In addition, an estimated 9,355 cases of child stunting would be prevented as a result of reduced pregnancies. Scenarios 2-4 generate progressively larger health gains, with unintended pregnancies averted increasing further; Scenario 2 alone is projected to avert nearly 15,576 additional cases between 2025 and 2030. Maternal and child deaths averted also rise across scenarios, increasing from 214 maternal and 2,059 child deaths in Scenario 2 to 341 maternal and 2,195 child deaths in Scenario 4 over the same period. Stunting cases averted peak at 22,469 in Scenario 2 but decline in Scenarios 3 and 4. This reduction is likely explained by expanded obstetric care coverage, which improves survival among some children who remain at risk of stunting.

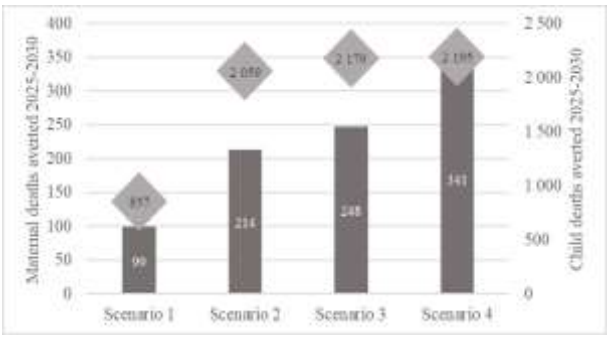
Economic benefits

Scaling up reproductive health interventions generates substantial economic returns across all scenarios. Under Scenario 1, investments in family planning are projected to generate approximately USD 312 million in economic benefits, corresponding to a benefit-cost ratio (BCR) of 58:1. These gains arise from reductions in maternal and

Panel 2A: Number of pregnancies averted and number of new contraceptive users



Panel 2B: Number of maternal and child deaths averted



Panel 2C: Number of stunting cases averted

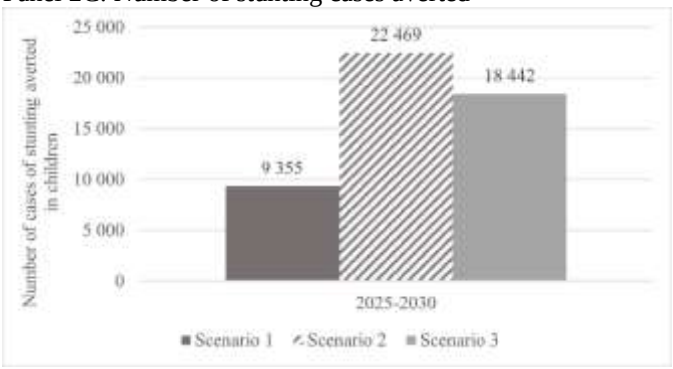


Figure 2: Projected changes in access and outcome indicators under different scenarios compared to the base case, 2025-2030

child mortality, avoided productivity losses, and savings associated with reduced demand for obstetric care. Under Scenario 2, total economic benefits increase to an estimated USD 730 million, with a BCR of 69:1. Scenario 3 produces additional incremental gains, reaching more than USD 780 million and a BCR of 73:1, indicating that each dollar invested in reproductive health could yield up to USD 73 in socioeconomic returns between 2025 and 2030. Scenario 4 generates the largest absolute benefits, with combined investments in family planning, obstetric care, and periconceptual services producing USD 793 million in economic gains; however, the BCR declines slightly to 63:1, reflecting the comparatively lower value-for-money associated with periconceptual interventions (Figure 3).

Economic losses

Failure to scale up reproductive health interventions would result in substantial economic losses. Between 2025 and 2030, the cost of inaction is estimated at approximately USD 310 million under Scenario 1, USD 720 million under Scenario 2, USD 770 million under Scenario 3, and USD 780 million under Scenario 4 (Figure 4). These losses correspond to approximately 14% to 35% of GDP, respectively. The projected economic burden reflects forgone productivity, reduced labour force participation, and the long-term economic consequences associated with maternal and child mortality and morbidity.

Financing options

Despite all scale-up scenarios generating overall cost savings relative to the base case, upfront investments in family planning and periconceptual care will likely be required, as savings from reduced emergency obstetric care may not materialise immediately or be easily reallocated across programmes. This section therefore examines feasible financing options to close the projected

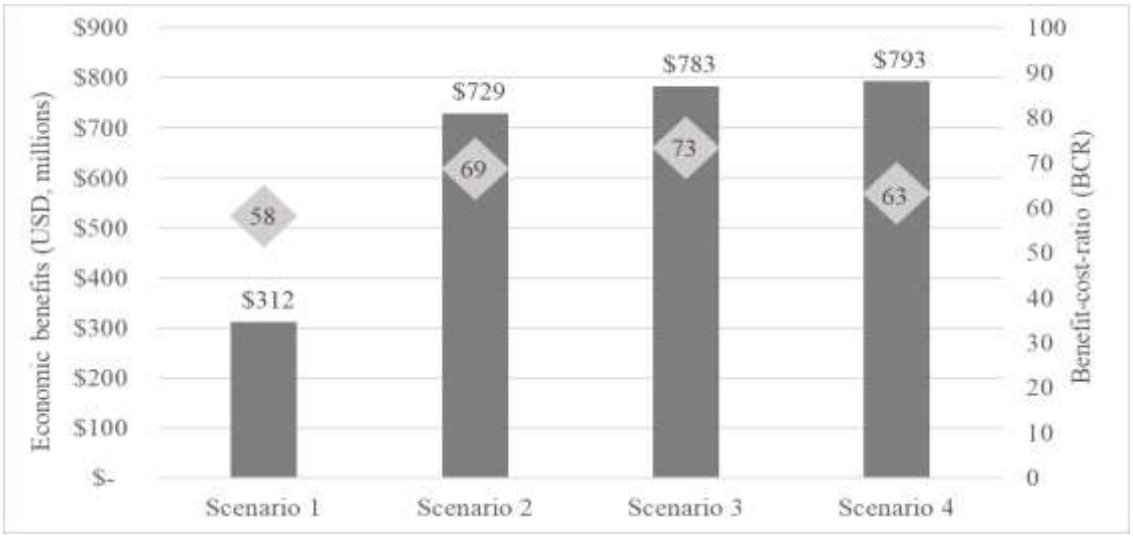


Figure 3: Projected economic benefits of reproductive health investments under different scenarios in Gabon, 2025-2030 (in USD millions and BCR)

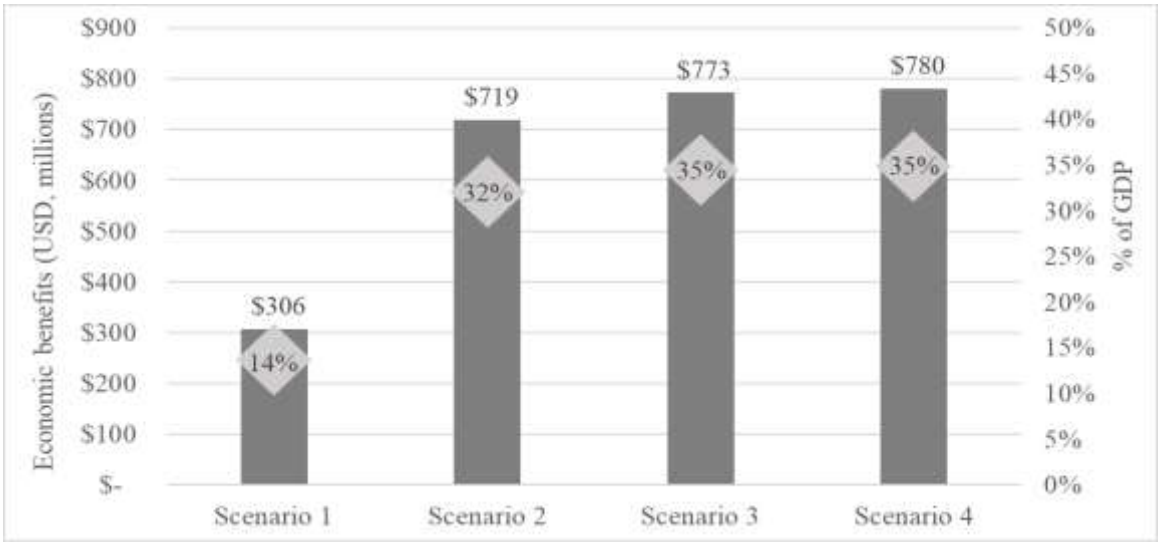
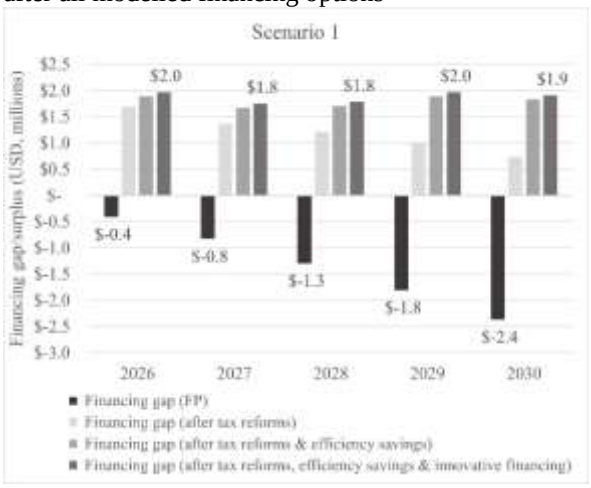


Figure 4: Projected economic losses from inaction in reproductive health, 2025-2030 (total loss in USD millions and as a % of GDP)

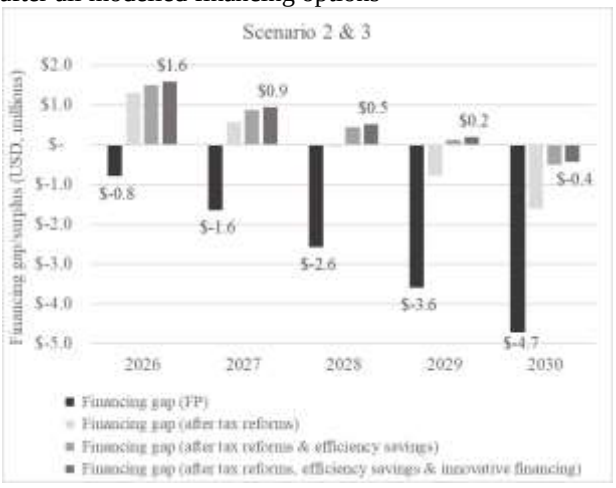
funding gap for family planning and periconceptual interventions, ranging from USD 41,000 to USD 2.4 million under Scenario 1, USD 80,000 to USD 4.7 million under Scenarios 2 and 3, and USD 94,000 to USD 5.5 million under Scenario 4 between 2026 and 2030, independent of savings generated through reduced obstetric care utilisation. Potential financing sources include domestic revenue mobilisation through tax reforms, efficiency gains, and innovative financing mechanisms.

A strategic recalibration of Gabon's tax policy could simultaneously expand fiscal space and advance public health objectives. Current excise tax levels remain below international benchmarks, limiting both revenue and health gains.[24] Tobacco taxes account for approximately 40% of retail prices, compared with the WHO recommendation of at least 70%; increasing the total tax burden to 60-70%[25] could generate an additional 0.15% of GDP annually while improving health outcomes, particularly among lower-income

Panel 5A: Scenario 1 funding gap/surplus after all modelled financing options



Panel 5B: Scenario 2 and 3 funding gap/surplus after all modelled financing options



Panel 5C: Scenario 4 funding gap/surplus after all modelled financing options

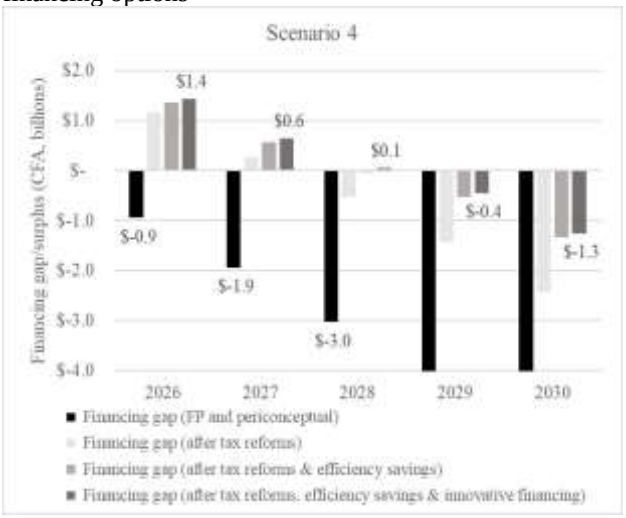


Figure 5: Funding gap/surplus after all modelled financing options

populations. Alcohol taxation reforms, including harmonised import rates, removal of implicit subsidies on local beer, and indexation of specific excises to inflation, could yield around 0.3% of GDP annually.[26] Increasing the current 5% ad valorem tax on sugar-sweetened beverages to an effective burden of about 20%, ideally through a sugar-content-based excise, could raise an additional 0.05-0.1% of GDP per year.[27] In addition, allocating 2% of receipts from the Contribution Spéciale de Solidarité (CSS) to a protected family planning sub-account could generate approximately USD 7 million cumulatively by 2030. Collectively, a feasible reform package could mobilise around 0.5% of GDP annually (approximately USD 100 million); allocating just 0.5% of these additional revenues to family planning would generate roughly USD 2.5 million between 2026 and 2030.

Efficiency gains also represent a significant source of fiscal space. A 2024 civil service audit identified approximately 13,000 irregular payroll entries, including retirees and duplicate salary claims, with estimated savings of 8 billion XAF per month (96 billion XAF annually), equivalent to roughly USD 160 million or 0.8% of GDP.[28,29] At

the same time, allocative inefficiencies within the health sector constrain outcomes, with prevention spending declining from 38% of the health budget in 2020 to 16% in 2024, reflecting a costly hospital-centred model of care. Rebalancing expenditure toward preventive services through Gabon's Program-Based Budgeting framework could generate additional fiscal space without requiring new resources. Reallocating just 5% of the approximately USD 217 million health budget from curative to preventive programmes would redirect about USD 11 million annually toward interventions such as family planning. Assuming 0.5% of additional efficiency gains are allocated to family planning, these reforms could generate approximately USD 0.60 million per year between 2026 and 2030.

Innovative financing could further complement domestic efforts. Gabon has issued approximately 187 million sovereign carbon credits under the REDD+ ART-TREES standard, representing a potentially valuable but currently underutilised public asset. Even at a conservative valuation of USD 10 per credit, the portfolio represents approximately USD 1.87 billion (around 9% of GDP).[30] Embedding a modest "social dividend" in future credit sales, such as earmarking 5% of gross revenues to a Human Capital Trust Fund for maternal and child health, could link climate financing directly to health outcomes. For example, a pilot sale of 5 million credits at USD 10 each would generate USD 50 million, with a 5% allocation providing USD 2.5 million; allocating 5% of this amount to family planning would generate approximately USD 0.08 million annually between 2026 and 2030.

Aggregating all modelled financing options would fully eliminate the projected funding gap under Scenario 1, generate near-complete coverage under Scenarios 2 and 3 with only a small residual shortfall by 2030, and substantially reduce gaps under Scenario 4. Overall, domestic revenue mobilisation remains the most sustainable pathway to expanding fiscal space, supported by efficiency reforms and innovative financing. Early actions could include ring-fencing CSS revenues for family planning commodities, redirecting payroll savings toward reproductive health staffing, and establishing a protected "Contraceptive Security" budget line within the MoHSA. Tax reforms could be implemented within 2–3 years, while innovative financing mechanisms such as a "Carbon for Health" initiative could generate additional resources over the medium term.

Discussion

The investment case for Gabon demonstrates that scaling up reproductive and maternal health services is not only a public health priority but also a strong economic and fiscal imperative. Expanding family planning and maternal health interventions could avert more than 15,000 unintended pregnancies, over 340 maternal deaths, and approximately 2,100 child deaths by 2030, while reducing pressure on emergency obstetric services and strengthening long-term human capital formation and economic productivity.

The analysis shows that achieving national targets for mCPR and scaling up periconceptual and emergency obstetric care under the most ambitious scenario (Scenario 4) could generate close to USD 800 million in socioeconomic benefits by 2030, equivalent to a BCR of 63:1. Scenario 3, which scales up family planning and emergency obstetric care without additional periconceptual interventions, yields slightly lower total benefits (around USD 780 million) but a higher return on investment, with a BCR of 73:1. These findings highlight that while broader service packages generate greater absolute gains, differences in cost-effectiveness across interventions influence overall returns.

A critical finding is the self-financing nature of family planning investments. Across all scenarios, total implementation costs remain below the base case despite expanded coverage. This apparent paradox is explained by reductions in unintended pregnancies, which substantially decrease demand for high-cost emergency obstetric care. However, realising these savings in practice may be constrained by budget rigidity within Gabon's financing system, as reductions in hospital-based expenditure do not automatically translate into available resources for contraceptive procurement and service delivery.

The financing analysis suggests that Gabon has domestic fiscal space to close short-term

funding gaps without relying heavily on external aid. Reprioritising expenditure toward reproductive health is essential to reverse its declining share within the national health budget. Strategic tax reforms, civil service payroll optimisation, and reallocating resources from curative to preventive care could mobilise sufficient resources to largely close financing gaps for family planning and periconceptual interventions. Under Scenarios 3 and 4, however, modest shortfalls re-emerge toward the end of the projection period, suggesting that medium-term savings from reduced obstetric care demand, as projected in the modelling, will be important for sustaining financing over time.

From a policy perspective, prioritising high-impact, cost-effective interventions will be essential. Given its higher return on investment, Scenario 3 (scaling up modern contraceptive coverage combined with emergency obstetric care) may represent a pragmatic entry point for immediate scale-up, allowing the Ministry of Health to demonstrate early fiscal and health gains. Achieving these outcomes will, however, require targeted efforts to increase mCPR, such as through community-based service delivery, targeted outreach, and strengthened supply chains for contraceptives.

At the same time, institutional mechanisms must be developed to ensure that efficiency gains are retained within the health sector. Collaboration between the Ministry of Health and the Ministry of Finance will be necessary to establish more dedicate funding for family planning, for example through establishing a protected "Contraceptive Security" budget line within the health budget. Furthermore, establishing flexible funding arrangements to allow transfer of savings from obstetric care to family planning. For example, enabling facilities that realise savings from reduced maternity caseloads to reinvest those resources into local family planning services. Without such mechanisms, there is a risk that savings will be absorbed into general expenditure rather than redirected toward high-impact reproductive health interventions.

These findings underscore the need for policy reforms that position reproductive health as a strategic public investment supported by predictable and sustained financing. Strengthened prioritisation and resource allocation will be critical to reversing current trends in reproductive health indicators and improving broader health and socioeconomic outcomes in Gabon.

Strengths and limitations

This study has several notable strengths. By adopting a comprehensive analytical framework that integrates six complementary components (situational analysis, budget analysis, costing, cost–benefit analysis, cost of inaction analysis, and fiscal space analysis), the study provides holistic assessment of both the resource requirements and the economic returns associated with scaling up reproductive and maternal health interventions.
The use of the robust Spectrum modelling suite further strengthens the internal validity and consistency of the projections, while also enhancing comparability with similar analyses conducted in other settings. Lastly, the study goes beyond identifying financing gaps by proposing actionable and contextually relevant domestic financing strategies, thereby increasing the policy relevance of the findings.

Despite these strengths, several limitations should be considered when interpreting the results. Reliance on secondary data introduces uncertainty due to reporting gaps, particularly at subnational levels, and potential inconsistencies in measurement. Model assumptions regarding intervention costs, effectiveness, and fiscal conditions may not fully capture future realities, and some key data sources were not recent, with several inputs dating back to 2021. Limited availability of detailed government expenditure data also constrained assessment of allocative efficiency within reproductive health spending. In addition, human capital valuation methods may not fully capture broader social and intergenerational benefits specific to the Gabonese context. Nonetheless, stakeholder consultations strengthened contextual relevance and increased confidence in the findings. Future research would benefit from more granular gender- and equity-focused analyses, as well as integration of climate and environmental considerations to better reflect local development dynamics.

Conclusion

This investment case provides strong evidence for increased investment in, and evidence-based scale-up of, reproductive health services to achieve national targets. Despite all modelled scenarios generating overall cost savings, additional fiscal space will likely be required in the short term to finance the expansion of family planning interventions. A combination of targeted tax reforms, payroll efficiency gains, and a modest "social dividend" from carbon credit sales, together with the medium-term reallocation of savings from reduced obstetric care demand, could enable Gabon to fully finance a comprehensive reproductive health package. To advance toward the national objective of "zero unwanted pregnancies" and improved maternal health outcomes, policy commitments must be translated into concrete fiscal action, positioning reproductive health as a core pillar of Gabon's health system strengthening and long-term human capital development.

Data availability

Inquiries can be directed at the corresponding author.

Contribution of authors

E. Smith drafted the manuscript and led the cost and cost-benefit analyses, including interpretation of findings. Dr. S. Torres Rueda and Y. Bio Tchané contributed to the design of methods and interpretation of results. L. Kekana led the budget analysis and its interpretation, while Dennis Alga led the fiscal space analysis and interpretation. Dr. P. Keba, Dr. L. Joudane and M. Cummins led the conceptualization of the study and contributed interpretation and validation of results. Dr. P. Keba also supported collection and provision of essential data for analyses. All authors contributed to revising and editing the manuscript and approved the final version for submission.

References

1. World Bank. World development indicators: Gabon population and macroeconomic data. Washington (DC): World Bank; 2024.
2. World Bank. Gabon country update, October 2025. Washington (DC): World Bank; 2025.
3. United Nations Development Programme (UNDP). Étude de la budgétisation sensible au genre au Gabon. Libreville: UNDP; 2022.
4. United Nations Population Fund (UNFPA). Executive Board of the United Nations Development Programme, the United Nations Population Fund and the United Nations Office for Project Services, 2 December 2022. DP/FPA/CPD/GAB/8. New York: UNFPA; 2022.
5. Directorate General of Statistics. Third demographic and health survey in Gabon (EDSG-III) 2019–21. Libreville: Directorate General of Statistics; 2023 Jun.
6. Ministry of Health and Social Affairs. Plan national de développement sanitaire du Gabon 2024–2028. Libreville: Ministry of Health and Social Affairs; 2023 Jul.
7. Directorate General of Statistics. Third demographic and health survey in Gabon (EDSG-III) 2019–21. Libreville: Directorate General of Statistics; 2023 Jun.
8. United Nations Department of Economic and Social Affairs, Population Division. World population prospects 2024: Standard projections [dataset]. New York: United Nations; 2024.
9. World Health Organization. OneHealth tool: Supporting integrated strategic health planning, costing and health impact analysis. Geneva: WHO; 2013.
10. Avenir Health. OneHealth manual: A system to create short and medium term plans for health services. Glastonbury (CT): Avenir Health; 2023.
11. Ministry of Health, National Health Directorate Maternal and Child Health. National roadmap for the introduction of postpartum and post-abortion family planning in Gabon. Libreville: Ministry of Health; 2024.
12. Directorate General of Statistics. Third demographic and health survey in Gabon (EDSG-III) 2019–21. Libreville: Directorate General of Statistics; 2023 Jun.
13. United Nations Population Fund (UNFPA). Investing in three transformative results: Realizing powerful returns. New York: UNFPA; 2020.
14. Stenberg, K., Axelson, H., Sheehan, P., Anderson, I., Gülmezoglu, A.M., Temmerman, M., Mason, E., Friedman, H.S., Bhutta, Z.A., Lawn, J.E., Sweeny, K., Tulloch, J., Hansen, P., Chopra, M., Gupta, A., Vogel, J.P., Ostergren, M., Rasmussen, B., Levin, C., Boyle, C., Kuruvilla, S., Koblinsky, M., Walker, N., de Francisco, A., Novcic, N., Presern, C., Jamison, D., Bustreo, F. Advancing social and economic development by investing in women's and children's health: a new Global Investment Framework. The Lancet. 2014; 383(9925), pp.1333–1354.
15. Hoddinott J, Alderman H, Behrman JR, Haddad L, Horton S. The economy ic rationale for investing in stunting reduction. Maternal & Child Nutrition. 2013;9(S2):69–82.

16. Roy R, Heuty A, Letouzé E. Fiscal space for what? Analytical issues from a human development perspective. Paper presented at: G-20 Workshop on Fiscal Policy; 2007 Jul; Istanbul. New York: UNDP; 2007.
17. Gabonese Republic. Projet de loi déterminant les ressources et les charges de l'État pour l'année 2020. Libreville: Government of Gabon; 2019.
18. Gabonese Republic. Draft law determining the resources and expenses of the State for the year 2021. Libreville: Government of Gabon; 2020.
19. Gabonese Republic. Law No. 031/2021 determining the resources and expenditure of the State for the year 2022. Official Journal of the Gabonese Republic No. 155 Bis Special. Libreville: Government of Gabon; 2022.
20. Gabonese Republic. Finance law for the year 2023. Libreville: Government of Gabon; 2023.
21. Gabonese Republic. Law No. 001/2023 determining the resources and expenses of the State for the year 2024. Libreville: Government of Gabon; 2024.
22. World Health Organization. Global health expenditure database: NHA indicators [Internet]. Geneva: WHO; 2026 [cited 2026 Mar 4]. Available from: https://apps.who.int/nha/database/viewdata/indicators/en
23. Caisse Nationale d'Assurance Maladie et de Garantie Sociale. CNAMGS care basket [Internet]. Libreville: CNAMGS; 2025 [cited 2026 Mar 4]. Available from: https://cnamgs.ga/le-panier-de-soins-de-la-cnamgs/
24. Global Center for Good Governance in Tobacco Control. Global tobacco index score [Internet]. Bangkok: Global Center for Good Governance in Tobacco Control; n.d. [cited 2026 Mar 4]. Available from: https://globaltobaccoindex.org/country/GA
25. PwC. Gabon corporate – other taxes [Internet]. London: PwC; n.d. [cited 2026 Mar 4]. Available from: https://taxsummaries.pwc.com/gabon/corporate/other-taxes
26. Economics for Health. The future of health financing in Africa: The role of health taxes [Internet]. 2025 [cited 2026 Mar 4]. Available from: https://p4h.world/app/uploads/2025/08/The-Future-of-Health-Financing-in-Africa-The-Role-of-Health-Taxes.x80726.pdf
27. Economics for Health. The future of health financing in Africa: The role of health taxes [Internet]. 2025 [cited 2026 Mar 4]. Available from: https://p4h.world/app/uploads/2025/08/The-Future-of-Health-Financing-in-Africa-The-Role-of-Health-Taxes.x80726.pdf
28. leCORPORATE. Gabon: 13,000 ghost civil servants on cash vouchers at the end of September [Internet]. 2025 [cited 2026 Mar 4]. Available from: https://le-corporate.com/gabon-13-mille-fonctionnaires-fantomes-sous-bon-de-caisse-en-fin-septembre/
29. Gabonactu. Audit of civil servants: Employees not listed on payroll slips. It's decided! [Internet]. 2024 Oct 24 [cited 2026 Mar 4]. Available from: https://gabonactu.com/blog/2024/10/24/audit-des-fonctionnaires-les-agents-non-recenses-sur-bons-de-caisse-cest-decide/
30. REDD+ Story. Gabon [Internet]. 2024 [cited 2026 Mar 4]. Available from: https://redd.unfccc.int/uploads/2_263_redd_2B_story_gabon.pdf
31. Ministry of Health. Rapid survey on emergency obstetric and neonatal care (ER SONU). Libreville: Ministry of Health; 2023.