INTERNATIONAL MONETARY FUND

IMF Country Report No. 26/48

UNION OF THE COMOROS

SELECTED ISSUES

February 2026

This Selected Issues paper on the Union of the Comoros was prepared by a staff team of the International Monetary Fund as background documentation for the periodic consultation with the member country. It is based on the information available at the time it was completed on January 27, 2025.

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Price: $18.00 per printed copy

International Monetary Fund
Washington, D.C.

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UNION OF THE COMOROS

SELECTED ISSUES

January 27, 2026

Approved By
The African Department

Prepared By Al-Mouksit Akim (AFR), Mehdi El-Herradi (ICD), Jiajia Gu (SPR), Martin Blumhart, Moustapha Diouf, and Jasmina Papa (all ILO)

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A. Executive Summary

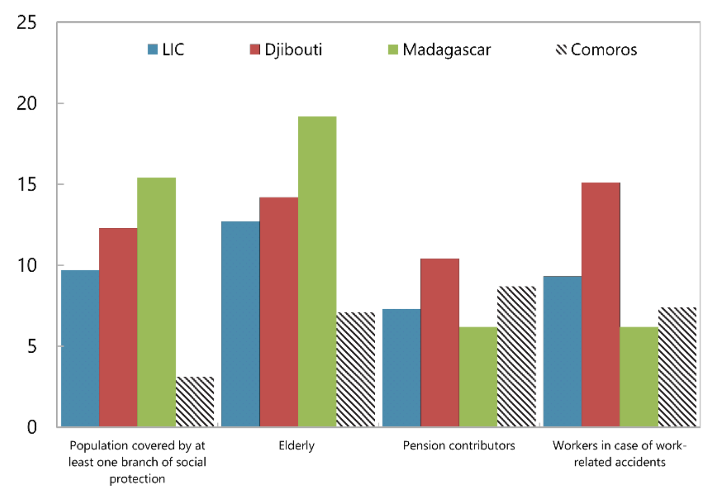
Social protection coverage is limited in Comoros, with only a small share of the population benefitting from formal safety nets. In this context, the public pension system—managed by the Caisse des Retraites des Comores (CRC)—plays an important role in providing income security to affiliated retirees and contributing to broader social stability. However, mounting financial imbalances risk undermining the system's ability to deliver on its benefit commitments. Building on actuarial analyses in collaboration with the International Labour Organization (ILO), this paper assesses the outlook of the CRC's defined benefit schemes and identifies the key sources of its financial vulnerability, particularly within the civil servants' scheme. The paper also presents a comprehensive reform strategy aimed at improving the pension system's sustainability while preserving its essential social protection function. Even under the most comprehensive combination of parametric adjustments, however, the system is projected to continue requiring some level of transitional financing over the medium term.

B. Context

1. **Social protection coverage in Comoros is among the lowest in the region**. According to the latest available estimates, only about 3 percent of the population was covered by at least one branch of the social protection system in 2022[2], a figure significantly below the 9.7 percent average for low-income countries (LIC) and regional peers (Figure 1). While coverage of pension contributors is relatively higher than in some peers, access to benefits for the elderly and other groups remains comparatively low. Several structural factors contribute to these outcomes, including the predominance of informal employment (Drissi-Bourhanbour, 2024; IMF, 2022)—estimated at 88 percent of the active population—as well as regulatory gaps and limited coordination across institutions (ILO, forthcoming). These challenges have constrained the ability of

Figure 1. SDG Indicator 1.3.1 (Selected)

(Social Protection Coverage, In Percent)



Note: Indicator 1.3.1 measures the proportion of the population receiving at least one form of social protection, among others: old-age benefits, maternity benefits, family allowances, unemployment protection, and social assistance for the most vulnerable.

Source: ILO-World Social Protection Data Dashboard, ILO (2023).

[1] Prepared by M. El-Herradi, M. Blumhart, M. Diouf, and J. Papa.

[2] Excluding health.

the broader social protection system to deliver adequate support to vulnerable segments of the population.

2. **The pension system in Comoros—the *Caisse des Retraites des Comores* (CRC)—serves as the main component of the formal safety net, providing income support to retirees and their families**. However, the CRC is facing mounting financial sustainability challenges, particularly within the civil servants' scheme, driven by a widening gap between rising benefit expenditures and a stagnating contributory base, compounded by inadequate contribution levels and weak governance. These pressures threaten the CRC's long-term financial sustainability and highlight the need for reform to support national modernization efforts and uphold international commitments, including those under the recently ratified ILO Convention No. 102.

3. **This paper contributes to the ongoing pension reform agenda in Comoros by quantifying the projected financing gap of the pension fund and examining the impact of various reform scenarios using actuarial simulations**. Based on this analysis, the paper presents a comprehensive set of policy recommendations to help improve the system's long-term sustainability. The rest of the paper is organized as follows. Section C describes the architecture of the pension system and diagnoses its primary structural vulnerability—a deteriorating demographic balance within the system. Section D outlines the methodology used in the actuarial analysis. Section E presents the core diagnosis of financial unsustainability and the projected financing needs. Section F examines the projected impact of potential parametric and package reforms. Section G summarizes the findings, proposes a set of reform options, and concludes.

C. The Pension System's Structure and Challenges

4. **The CRC administers three distinct defined-benefit schemes covering civil servants, non-civil servants (including employees in the private sector and non-civil servant public workers), and Members of Parliament (MPs).** These schemes provide protection against three types of life-cycle risks: old-age, disability, and death. The absence of accumulated reserves and the prevailing cross-financing practices mean that the system operates on a pay-as-you-go (PAYG) basis, with contributions from current workers used to cover the benefits of current retirees and administrative costs. Participation is mandatory for formal sector workers, with contributions shared between employers and employees.

5. **Each of the three CRC regimes is governed by distinct parameters that determine eligibility and benefit levels (Table 1).** The schemes for civil and non-civil servants share similar core features, including a minimum retirement age of 55 and 15 years of contributions to be eligible for a pension. The primary difference lies in the pension accrual rate—the percentage of final salary earned for each year of service, which is 2 percent for civil servants versus 1.33 percent for non-civil servants. In contrast, the scheme for MPs is significantly more generous, featuring a much shorter minimum requirement of only five years of contributions and a higher accrual rate of 5 percent. A key structural weakness across the main schemes is the short salary reference period used to calculate benefits—typically the average of the last six months—which creates distortions by inflating pension liabilities relative to the actual contribution base (ILO, IMF, 2025).

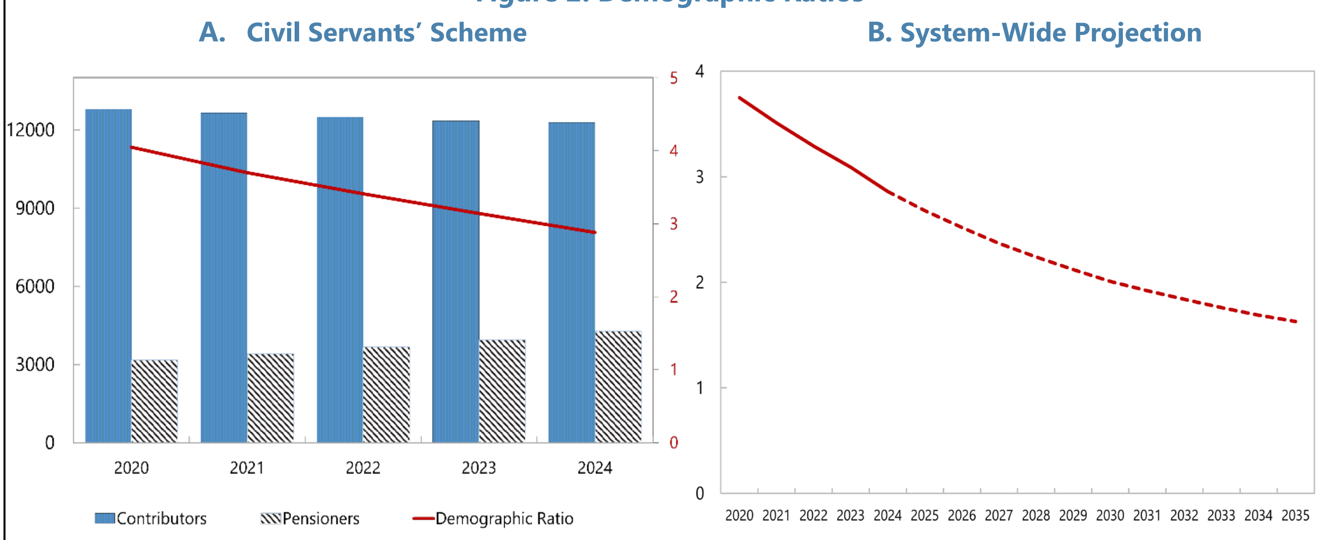
Table 1. Union of the Comoros: Key Parameters of CRC Pension Schemes

Scheme	Contribution Rate	Statutory Retirement Age	Minimum Contribution Period	Benefit Formula
Civil Servants	17% (12% employer, 5% employee)	55–65 (category-dependent)	15 years	2% × years of service × last 6 months' average salary
Non-Civil Servants	8% (5% employer, 3% employee)	55–65 (category-dependent)	15 years	1.33% × years of service × last 6 months' average salary
Members of Parliament	26% (10% employer, 16% employee)	55	5 years	5% × years of service × final parliamentary indemnity

Source: CRC, ILO and IMF.

6. **The system's demographic foundation is rapidly eroding.** The sustainability of a PAYG system is highly sensitive to the demographic balance between active contributors and pensioners—a balance that is deteriorating sharply in Comoros, posing the main structural challenge to the CRC's sustainability (Figure 2).[3] This decline is particularly significant in the civil servants' scheme, where the demographic ratio— a measure that reflects the number of contributors per beneficiary—dropped from 4.1 in 2020 to just 2.9 in 2024 (Figure 2, panel A). The system-wide demographic ratio shows a similar decline over the same period, as long-term projections point to mounting pressure, with the ratio expected to fall from 2.9 in 2024 to only 1.6 by 2035 (Figure 2, panel B).

Figure 2. Demographic Ratios



Source: ILO from estimates based on aggregate data provided by the CRC.

[3] The period covered is limited to the most recent years, due to concerns about the reliability of the data.

7. This adverse demographic trend is driven by a combination of factors affecting both the number of contributors and beneficiaries. A primary driver is the stagnant contributory base, which is particularly constrained in the public sector by recurrent hiring freezes (D'Harcourt, 2019). The contributory base is further limited by difficulties in expanding coverage among non-civil servants, including low enforcement of mandatory registration and weak compliance. At the same time, rising life expectancy—albeit less pronounced than in other regions—is gradually increasing the average duration of retirement, while declining fertility rates are contributing to a growing demographic dependency ratio, both of which add long-term pressure on the system. Despite these unfavorable demographic and economic developments, the main technical parameters of the system—retirement age, minimum length of service, and accrual rate—have remained unchanged. The combination of these weaknesses has created an important financing gap, which is evaluated in section E.

D. Methodology

8. The analysis presented in this document is based on a financial sustainability study conducted at the request of the Comorian authorities. A full report, entitled "Report to the Comoros Pension Fund – Sustainability Study" (ILO, forthcoming), has been submitted to the authorities. This source document provides a more detailed analysis consistent with professional standards for actuarial reporting.

9. The financial sustainability study was developed using a multipronged, tailored approach involving data collection, technical exchanges, and on-site visits. Targeted requests were sent to the CRC to obtain key datasets required for modelling. These efforts were complemented by field visits and ongoing technical discussions, which clarified current management practices and informed the refinement of assumptions.

10. Despite the constructive involvement of the teams, significant gaps remain in the Fund's administrative data. Key member information—such as date of birth, gender, and contribution history—is often missing or inconsistent, highlighting weaknesses in the Fund's information system. Discrepancies also exist between internal data sources, and the financial statements are unaudited. To address these issues, substantial data reconstruction was carried out using best-estimated assumptions to provide a coherent basis for analysis. Supplementary data was also sourced directly from the Ministry of Civil Service to help fill the gaps.

11. The study was conducted using a scheme-by-scheme approach prior to consolidation into a single framework. The three schemes managed by the CRC—for civil servants, members of Parliament, and non-civil servants—were analyzed separately, although the Fund's management and financial statements typically present aggregated results. This disaggregated analysis offers clearer insight into the specific dynamics of each group, highlights internal imbalances, and identifies adjustment levers unique to each scheme. The final consolidation provides a comprehensive assessment of the system's overall financial sustainability.

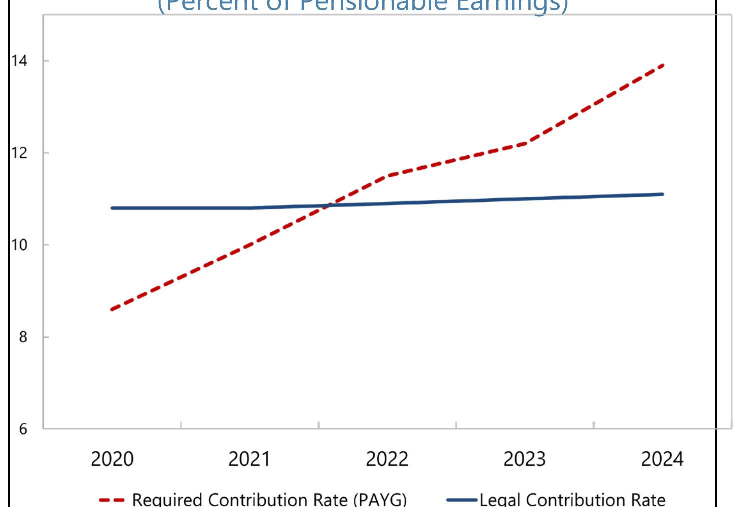
12. Projection methods were chosen based on the quality of data available for each scheme. For the civil servants' scheme, which had relatively more complete data, a cohort-based projection was conducted using the actuarial modelling tool developed by the International Labor Organization (ILO) to assess the financial sustainability of pension systems. For the other two schemes, projections relied on aggregate assumptions applied to average headcounts and cash flows, calibrated using observed financial flows from recent years. All assumptions are fully documented in the full report, in line with established reporting standards.

13. The results of the financial sustainability study should be interpreted as indicative estimates, reflecting underlying structural trends. Ongoing data limitations preclude the use of precise point estimates. The primary aim of the results presented below is to illustrate the sources of imbalance, quantify their magnitude, and support informed decision-making. Key recommendations of this report include improving data quality — particularly individual member records — conducting external audits of the financial statements and strengthening the monitoring of key pension system indicators.

E. Financial Assessment and Outlook

14. The CRC's financial position has deteriorated in recent years, leading to significant liquidity pressures and intensifying sustainability risks. In 2024, the system recorded a deficit of over KMF 118 million, reflecting a shift whereby expenditures—including benefits and administrative costs—now systematically exceed ordinary contribution revenues. The *de facto* PAYG nature of the system and the absence of reserves mean that any imbalance directly leads to a cash deficit, threatening the timely payment of benefits. The growing gap is illustrated by the divergence between the system's average legal contribution rate and its PAYG required rate— the theoretical rate that must be applied to insured wages each year to finance all benefits and administrative costs from the same period (Figure 3). While the legal rate has remained broadly stable, the required rate has risen steadily, surpassing the legal threshold in 2022. This crossover marked a critical turning point: since then, ordinary contributions have no longer sufficed to meet annual obligations, resulting in liquidity shortfalls and, in some cases, delays in pension payments. The situation underscores the system's vulnerability to demographic pressures and its limited capacity to self-correct under current parameters.

Figure 3. Average Legal Contribution Rate vs. Required PAYG Rate
(Percent of Pensionable Earnings)



Note: The CRC's legal contributory rate is calculated as the weighted average of the individual schemes' contribution rates, with weights corresponding to each scheme's pensionable earnings

Source: ILO calculations.

Figure 4. CRC: Net Result Under Alternative Scenarios, 2020–2024
(KMF x 1000)

Source: ILO calculations.

15. To address growing liquidity pressures, the CRC has become reliant on exceptional and temporary support to meet its payment obligations. In addition to increasing the civil servants' contribution rate from 14 percent to 17 percent in January 2025, two mechanisms have been mobilized: first, the gradual clearance of the government's past unpaid contribution arrears[4]; and second, ad-hoc budget support provided on a discretionary basis to cover payment shortfalls when the CRC was unable to pay pensions, including two large disbursements of KMF 548 million in 2022 and KMF 527 million in 2024 to cover pension payments to civil servants and MPs. In the absence of these exceptional measures, the CRC's annual deficit would have exceeded KMF 1.3 billion in 2024—more than ten times the headline figure (Figure 4). While these transfers have mitigated immediate payment disruptions in recent years, they remain an unpredictable and unsustainable solution.

16. The pension system's financial imbalance is primarily driven by the public sector schemes, as the non-civil servants' scheme remains the only one generating a surplus. Scheme-level analysis reveals significant and persistent deficits in both the civil servants' and MPs' schemes. The civil servants' scheme—the largest in terms of beneficiaries and expenditure—recorded a deficit of KMF 274 million in 2024[5], while the MPs' scheme posted a KMF 69 million deficit, despite its relatively smaller size. In both cases, legal contribution rates fall well short of the level needed to ensure financial balance. In the civil servants' scheme, the PAYG required contribution rate reached nearly 22 percent of salaries in 2024, compared to the 14 percent legal rate in effect during the period (Annex Figure 1, panel A). The gap is even wider in the MPs' scheme, where the required rate exceeded 75 percent against a legal rate of just 26 percent (Annex Figure 1, panel B).

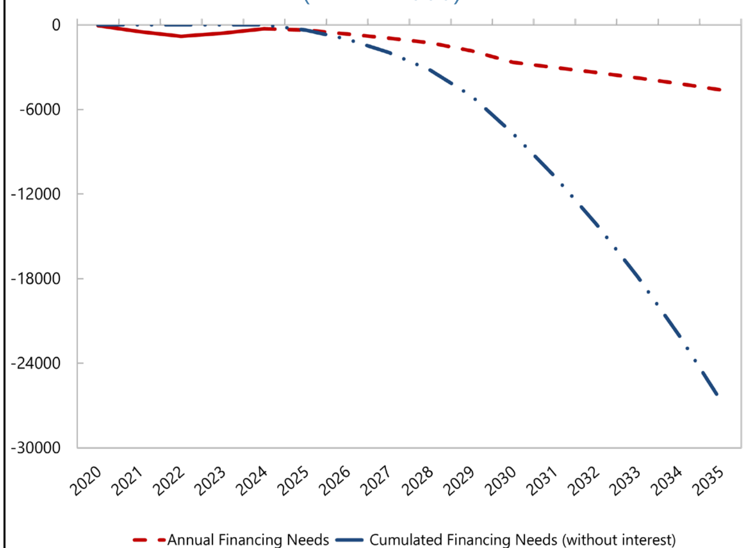
[4] The government began settling arrears on unpaid contributions in 2023 through monthly transfers of KMF 60 million, with outstanding payments expected to continue until 2029.

[5] This figure represents the theoretical deficit of the scheme. The shortfall would have been significantly larger—over KMF 1.4 billion in 2024—without exceptional state support, including ad-hoc budget transfers and the gradual clearance of past contribution arrears (see Annex Figure 2).

17. The CRC's consolidated financial management masks a system of informal cross-subsidization that has become increasingly unsustainable. Surpluses generated by the non-civil servants' scheme are currently used to partially offset the large deficits of the civil servants' and MPs' schemes. Although not formally embedded in the legal framework, this practice prevents the non-civil servants' scheme from building reserves for its eventual maturity phase. Moreover, this cross-financing mechanism has reached its limit: the surplus from the non-civil servants' scheme is no longer sufficient to offset the rising deficits in the public sector schemes. As the following paragraphs will show, continued reliance on these diminishing surpluses is not a sustainable solution and is expected to further exacerbate the CRC's overall financing gap in the years ahead.

18. Actuarial projections confirm that the civil servants' scheme is on an unsustainable trajectory and accounts for the bulk of the CRC's future financing needs. To isolate the drivers of this imbalance, scheme-specific financial projections were produced, using the ILO-Pension model for the civil servants' scheme to ensure a more precise diagnosis of sustainability risks. The projection horizon (2025–2035) was selected to capture the impact of demographic pressures and policy inertia, while limiting uncertainty associated with longer-term forecasts. The baseline scenario assumes no policy changes, a stable contributor base —reflecting recent civil service recruitment patterns—and a rising number of pensioners as the scheme matures. Under these assumptions, the ratio of contributors to pensioners declines from 3.8 in 2025 to 2.2 by 2035, illustrating mounting dependency pressures. This trend translates into a rapidly growing financing gap, with the scheme's annual deficit increasing from KMF 364 million in 2025—despite the recent increase in the legal contribution rate—to KMF 4.6 billion by 2035, and cumulative financing needs reaching KMF 26.6 billion over the projection horizon (Figure 5). As a result, the PAYG required contribution rate is projected to rise from 22.5 percent in 2025 to nearly 38 percent by 2035, well above the statutory rate of 17 percent (Annex Figure 4, panel A).

Figure 5. Civil Servants' Scheme Financing Needs, 2020-2035
(KMF x 1000)



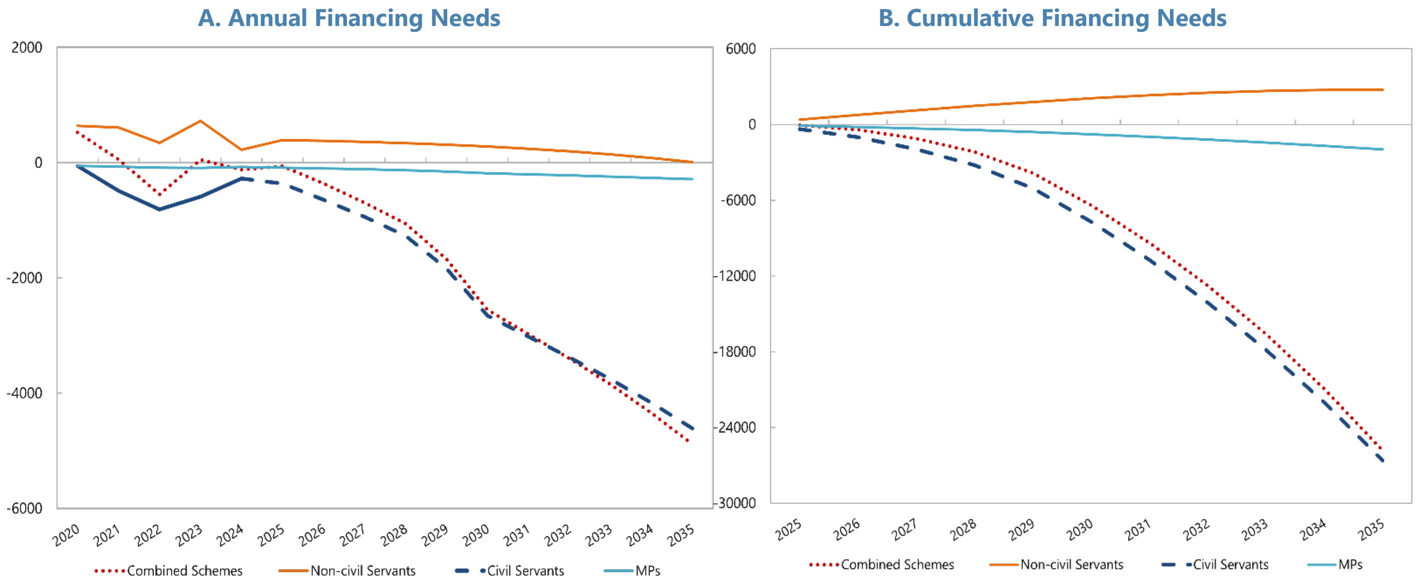
Note: Projections start as of 2025.
Source: ILO calculations.

19. Although smaller in scale, the MPs' scheme contributes to the overall imbalance through a significant structural deficit. The scheme is characterized by a very limited contributor base—fewer than 35 active MPs depending on the legislature —and a growing number of beneficiaries. The scheme's annual deficit is projected to grow from KMF 86 million in 2025 to nearly KMF 290 million by 2035 (Figure 6, panel B). While the scheme accounts for less than 6 percent of the CRC's total projected financing gap by 2035, its persistent imbalance adds to the vulnerability of an already underfunded system and raises broader concerns around fairness and transparency across contributors.

20. Without reform, the overall system's financial position is projected to deteriorate rapidly over the coming decade, with system-wide deficits widening year after year. While the system is projected to be nearly balanced in 2025—due to arrears clearance and the surplus from the non-civil servants' scheme—the annual deficit is expected to exceed KMF 4.8 billion by 2035 (Figure 6, panel A). Cumulatively, the financing requirement over the period 2025–2035 is projected at over KMF 25.2 billion (Figure 6, panel B). This cumulative deficit, calculated excluding interest and despite the positive contributions of the non-civil servants' scheme, underscores the urgent need for both parametric and structural reform of the CRC. The next section evaluates the impact of potential reform scenarios based on actuarial simulations.

Figure 6. CRC's Schemes Projected Financing Needs

(KMF Million)



Source: ILO and IMF staff calculations.

F. Reform Options and Impact Analysis

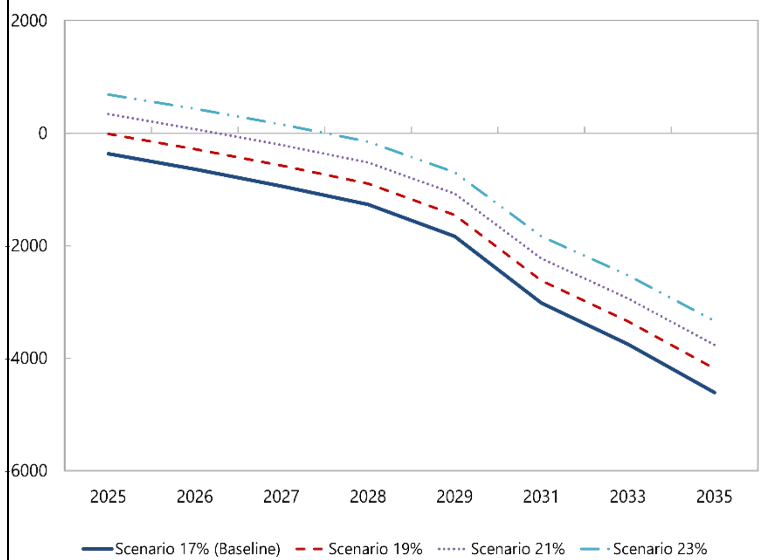
21. This section evaluates the financial impact of reform scenarios on the pension system's long-term sustainability. Simulations rely on the ILO-Pension model in combination with scheme-level data and focus primarily on the civil servants' scheme—the largest and most structurally imbalanced— where data availability permits detailed projections. For this scheme, the analysis first assesses the individual impact of key parametric reforms, such as changes to the retirement age, accrual rate, and salary reference period. It then examines the combined effects of reform packages to evaluate their joint impact on system sustainability. Reform options for the non-civil servants' and MPs' schemes are discussed more qualitatively, reflecting current data limitations.

These simulations offer important insights into the trade-offs and potential fiscal gains from reform and serve as the foundation for the next section's policy recommendations.

22. Raising the legal contribution rate would help slow the deterioration of the system's finances but would not suffice to restore sustainability on its own. The baseline scenario assumes that the statutory contribution rate for civil servants remains at 17 percent. Alternative simulations show that increasing this rate to 19, 21, or 23 percent would meaningfully reduce the projected financing gap. For example, raising the statutory rate to 23 percent by 2035 lowers the cumulative financing need over the projection period from KMF 26.6 billion to KMF 13.8 billion (Figure 7). However, the required PAYG contribution remains well above the statutory rate throughout the projection horizon—reaching 38 percent by 2035 (Annex Figure 3, panel A).

Figure 7. Civil Servants' Scheme - Financing Needs Under Different Contribution Rates

(KMF Million)

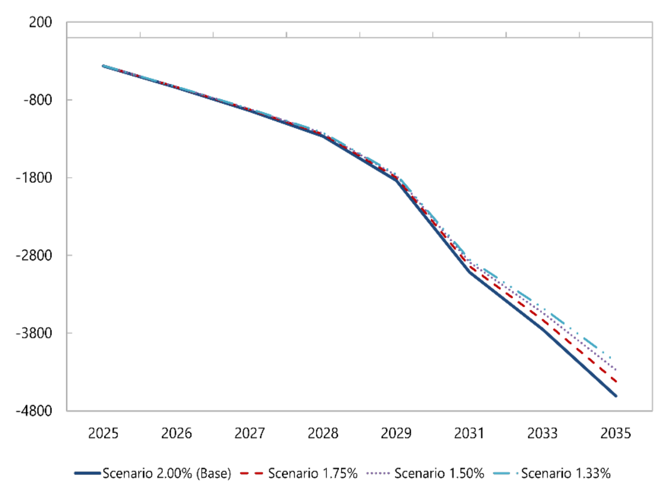


Source: ILO calculations.

23. Adjusting the accrual rate could strengthen the system's long-term financial position, though its impact materializes only gradually. Actuarial simulations assess the effect of reducing the accrual rate for civil servants starting in 2026, from the current 2 percent to lower levels—such as 1.75 or 1.33 percent, the latter aligning with the minimum standard under ILO Convention 102, which Comoros ratified in 2022. Because the reform preserves acquired rights and applies only to future accruals, the short-term impact is limited. Over time, however, the gains become more significant: lowering the accrual rate to 1.33 percent reduces the cumulative financing need from KMF 26.6 billion to KMF 24.9 billion by 2035 (Figure 8). While not sufficient to restore balance on its own, this measure could meaningfully contribute to long-term sustainability when paired with other reforms.

Figure 8. Civil Servants' Scheme - Financing Needs Under Different Accrual Rates

(KMF Million)

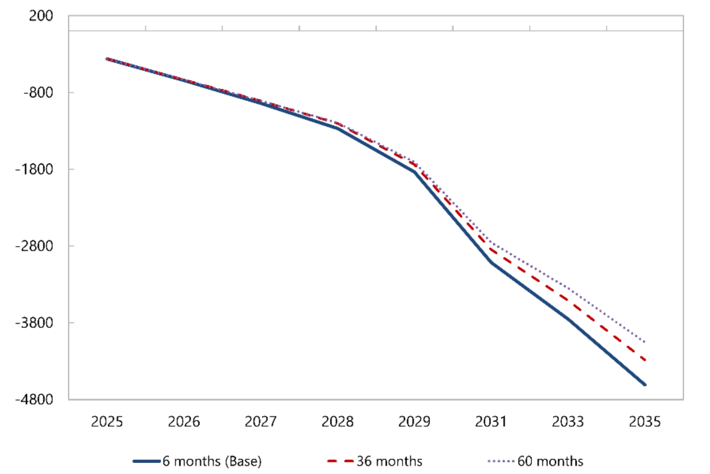


Source: ILO calculations.

24. Extending the salary reference period for pension calculations not only strengthens the scheme's financial sustainability but also enhances its equity. Under current rules, pensions are calculated based on the average of the last six months of salary—a method that tends to inflate lifetime earnings due to end-of-career wage increases. Simulations suggest that gradually extending this period to 60 months would reduce the cumulative financing need by KMF 2.5 billion by 2035 (Figure 9). Similarly to the accrual rate reform, gains take time to materialize as the new calculation method is phased in for successive cohorts of new retirees. In addition to improving sustainability, a longer reference period would also reduce distortions and improve the alignment between lifetime contributions and benefits. Although the adoption of a fully indexed career-average salary—a widely recommended best practice—was not simulated due to data limitations, a gradual shift in that direction would represent a meaningful step toward greater fairness and long-term sustainability.

Figure 9. Civil Servants' Scheme - Financing Needs Under Different Salary Reference Periods

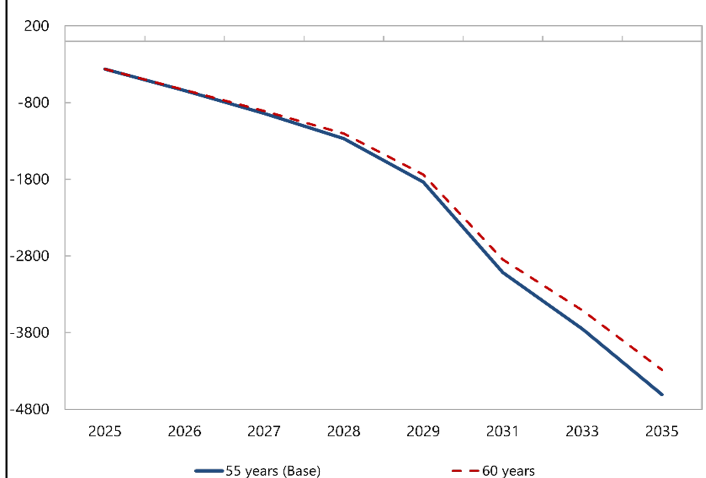
(KMF Million)



Source: ILO calculations.

Figure 10. Civil Servants' Scheme - Financing Needs Under a Different Retirement Age

(KMF Million)

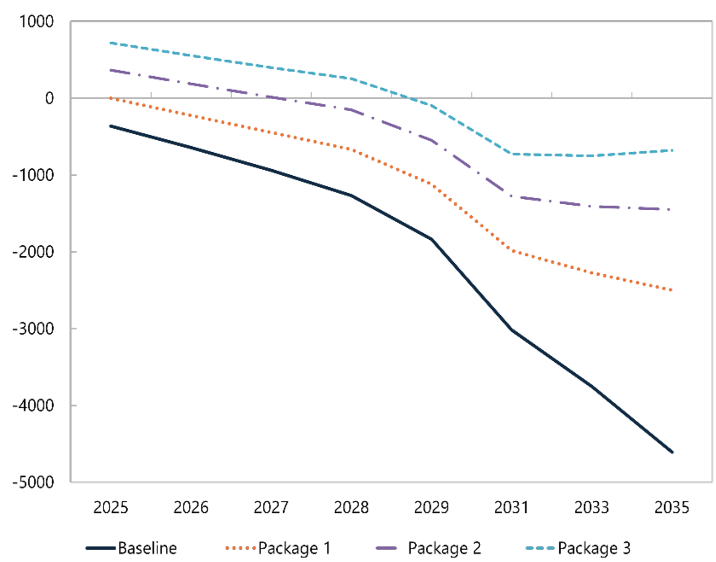


Source: ILO calculations.

25. Gradually increasing the minimum retirement age could enhance the CRC's long-term sustainability, although its financial impact within the projection horizon remains limited. Under the baseline scenario, the minimum retirement age remains fixed at 55 years. The reform scenario assumes a gradual increase of six months per year starting in 2026, reaching 60 years by 2035. Because the reform applies only to new retirees, its effects accumulate slowly, with limited near-term gains. Nevertheless, the measure would reduce the average duration of benefit payments and help mitigate demographic pressures over time—particularly in a context where financial constraints limit the scope for contribution increases. Simulations show that the cumulative financing need declines modestly—from KMF 26.6 billion to KMF 25.1 billion—by 2035 (Figure 10). While phased implementation is essential for social acceptability, raising the retirement age remains an important instrument for restoring the system's long-term financial balance.

26. A comprehensive package approach, combining several adjustments simultaneously, is necessary to place the civil servants' scheme on a sustainable path. Simulations assess the cumulative impact of three combined reform packages that integrate changes to the contribution rate, accrual rate, salary reference period, minimum retirement age, and population coverage. The assumptions underpinning each package are detailed in Annex Table 1, with each scenario reflecting a progressively more ambitious reform trajectory. The results indicate that reform packages can significantly reduce the projected financing gap and slow the rise in the PAYG required contribution rate. For instance, the most ambitious package (Package 3), which includes, among others, a 2-percentage points annual increase in population coverage and aligns the accrual rate with the ILO minimum standard, reduces the cumulative financing need by over 90 percent, from KMF 26.6 billion to KMF 2.5 billion by 2035 (Figure 10). Under this scenario, the PAYG required contribution rate stabilizes near 28 percent by 2035, compared to nearly 38 percent in the baseline scenario (Annex Figure 5). While no package fully eliminates the need for transitional support, these simulations underscore the scale of adjustment required and highlight the importance of complementary institutional and administrative reforms to strengthen the system's governance, equity, and long-term sustainability. This means that even the most ambitious reform package does not restore full financial balance and that some residual financing need persists through at least 2035.

Figure 11. Civil Servants' Scheme - Financing Needs Under a Different Reforms Packages
(KMF Million)



Source: ILO calculations.

27. Simulations also indicate that isolated parametric adjustments to the MPs' scheme would be insufficient to restore its financial sustainability. Even sizable increases in the statutory contribution rate—from 26 percent under the baseline to 44 percent—fail to reduce the structural deficit (Annex Figure 6, panel A). In this context, a more comprehensive structural solution—such as transitioning the scheme to budgetary financing or integrating it under the civil servants' regime with differentiated parameters—may be needed to ensure long-term sustainability while safeguarding equity across schemes.

28. While the non-civil servants' scheme is currently in surplus, its long-term sustainability is not guaranteed. Under the baseline scenario, the statutory contribution rate of 8 percent generates a cumulative surplus over the projection horizon (Annex Figure 6, panel B). The economic and demographic assumptions used reflect limited expansion of the contributory base, which is consistent with recent trends. Nevertheless, a negative shift in demographic or economic conditions—including population ageing, slower formal job creation, or declining contribution compliance—could rapidly erode the current surplus. Conversely, effective policies—such as extending coverage and improving contribution recovery—could unlock the scheme's full potential for sustained surplus generation. Policy efforts and close monitoring will be essential to preserve financial soundness over time, with cross-financing practices representing a key factor affecting the scheme resilience.

G. Policy Recommendations and Concluding Remarks

29. The three CRC schemes face specific challenges, requiring differentiated and targeted reforms for each of them. The civil servants' scheme is structurally in deficit and accounts for most of the medium-term financing requirements, driven by a rapidly deteriorating demographic ratio and unchanged parameters that no longer reflect current conditions. The MPs' scheme is in a critical and unsustainable state, characterized by a very small contributory base and particularly generous benefits, resulting in a structural deficit that cannot be addressed without comprehensive reform. In contrast, the non-civil servants' scheme currently generates a surplus; however, this surplus is used to offset deficits in the other schemes, limiting its capacity to build reserves and preparing for future demographic shifts. These findings underscore the need for a reform strategy tailored to the specific trajectory and parameters of each scheme.

30. A coherent package of parametric reforms is needed to meaningfully improve the sustainability of the civil servants' scheme. Restoring the Fund's financial balance will require adjustments to key parameters, such as the minimum retirement age, wage reference period, and accrual rates. The retirement age increase could be phased in gradually to preserve social stability, while changes to accrual rates and reference periods should be applied prospectively to protect accrued rights. This combination of technical adjustments is a critical step toward strengthening the long-term sustainability of the scheme. Nevertheless, even such a package would not fully eliminate medium-term deficits, underscoring the importance of complementary financing and governance measures.

31. The future of the MPs' scheme requires an explicit political decision. Its structural deficit and demographic imbalance make autonomous financing technically impossible. Its continuation in the current form therefore depends on the willingness of other schemes to finance it through cross-subsidies. Clear direction is needed on whether the scheme should operate with dedicated funding, be integrated as a complementary component of another scheme, or be financed through a specific budget allocation. This decision—extending beyond the actuarial domain—will clarify the State's financial responsibility and ensure continuity of benefits.

32. **Strengthening contribution collection and maintaining active membership in the non-civil servants' scheme is an immediate priority**. Persistent weaknesses—particularly in the private sector—in both payment collection and compliance with mandatory affiliation are weakening the Fund's liquidity. Enhancing oversight, improving confidence in the system, alongside more effective collection mechanisms, and reducing arrears—currently estimated at nearly KMF 2 billion—would help secure short-term resources and reinforce the scheme's sustainability.

33. **Formalizing budget transfers should be a priority to stabilize the Fund**. Recent experience has demonstrated that the absence of a clear framework for government financial support leads to ad hoc and unpredictable interventions, worsening the Fund's cash flow constraints. Establishing a formal request mechanism, integrated into the Fund's budget process, would increase the likelihood of continuity in benefit payments and enhance the credibility of the system. It would also provide the predictability needed to support the gradual implementation of reforms and short-term financial stabilization.

34. **Clear definition of financing for each scheme is essential from the outset**. The current lack of separation in financial flows among schemes leads to implicit transfers that obscure the reality of imbalances and hinder effective decision-making. Establishing separate and transparent accounting for each scheme would allow for precise identification of financing needs and enable targeted parameter adjustments. Such transparency is also critical for determining whether an explicit inter-scheme financing mechanism should be introduced, maintained, or discontinued in the interest of fairness and overall sustainability.

35. **A tripartite dialogue is essential to define a coherent package of reforms**. The success of pension reform hinges on close consultation between the government, employers, and employee representatives. This dialogue will help build consensus on necessary parametric changes and financing arrangements, while accounting for economic and social constraints. Early and inclusive stakeholder engagement will enhance the legitimacy of the reforms and facilitate their implementation.

36. **Ongoing administrative modernization and digitalization are essential**. Strengthening information systems and digitizing processes will improve data reliability and enhance Fund governance. These efforts should be accompanied, where possible, by the regular preparation of official, audited financial statements to ensure transparency and support evidence-based decision-making. Investments in administrative capacity will also improve the accuracy of contribution and benefit tracking, allow actuarial monitoring, and help restore trust among members and institutional partners.

37. **The legal framework must be revised to anchor reforms on a sustainable footing**. The current legislative basis, largely inherited from outdated texts, no longer meets the needs of a

modern pension system and is often cited as a source of current imbalances. Legal reform is necessary to clarify institutional responsibilities, embed necessary parametric adjustments, and provide an appropriate framework for financing mechanisms. Updating the legal foundation is essential to ensure the durability of reforms and reinforce the system's long-term credibility.

38. The Fund's sustainability is important to the country's social and economic stability. Ensuring long-term pension financing is not solely an actuarial issue—it is a core element of social protection and national cohesion. Reforming the CRC will help safeguard retirees' incomes, rebuild trust in institutions, and contribute to broader state modernization efforts. It will also support the Comoros in fulfilling its international commitments, especially regarding the recently ratified ILO Convention No. 102.

39. Strong political and institutional commitment is essential to implement the reforms. Carrying out the technical recommendations will require clear support from national authorities and close coordination among all stakeholders. Beyond parametric reforms, the CRC's transformation will depend on a modernized legal framework, improved governance, and sustained political will. Only under these conditions can the Fund be stabilized, and the country advance its broader social protection agenda, both domestically and internationally.

References

Drissi-Bourhanbour, L. 2024. Union of the Comoros, Selected Issue Paper: Costing and financing of social development goals (SDG) in Comoros. IMF Country Report No. 2024/005.

D'Harcourt, J. 2019. Les régimes des retraites des Comores: Étude de soutenabilité et scénarios d'évolution. AFRITAC South, April. International Monetary Fund.

International Monetary Fund. 2022. IMF Engagement on Pension Issues in Surveillance and Program Work. IMF Technical Notes and Manuals 2022/004. Fiscal Affairs Department and Strategy, Policy, and Review Department.

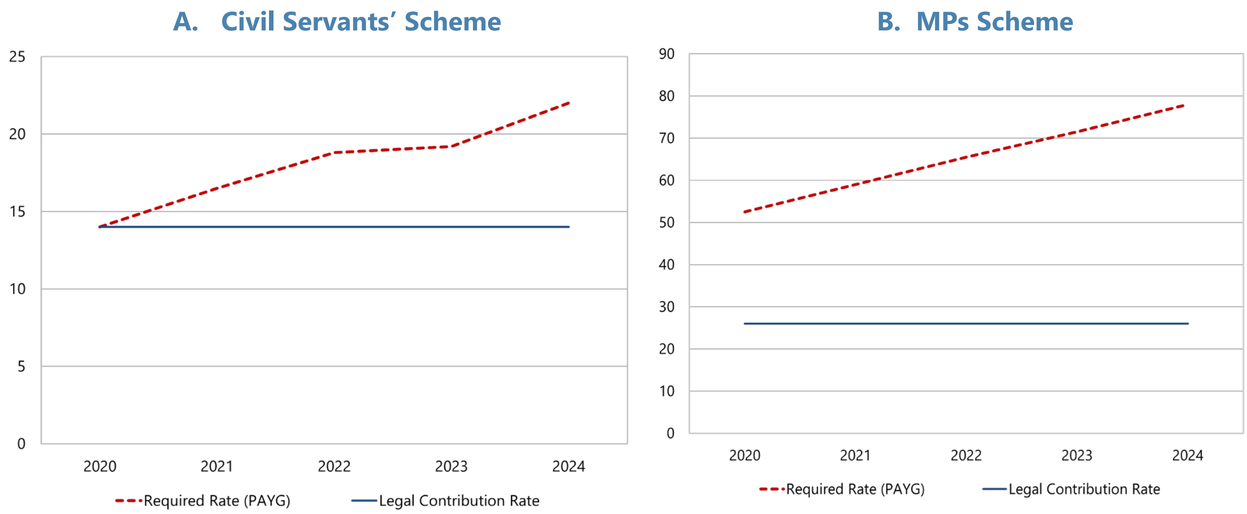
International Monetary Fund, 2025. Union of the Comoros: Fourth Review under the Extended Credit Facility Arrangement and Request for Modification of Performance Criteria—Staff Report. IMF Country Report No. 2025/186.

International Labour Organization. Forthcoming. Rapport à la Caisse des Retraites des Comores: Étude de Soutenabilité. Geneva: International Labour Organization.

Appendix I. Pension Reform in Comoros

Figure 1. Legal Contribution Rate vs. Required PAYG Rate

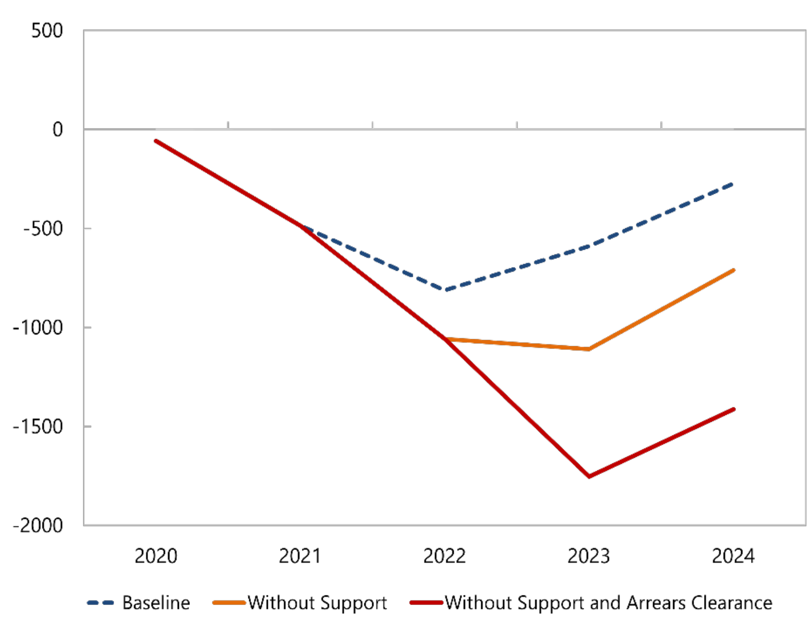
(Percent of Pensionable Earnings)



Source: ILO calculations.

Figure 2. Civil Servants Scheme - Net Result, 2020–2024

(KMF x 1000)

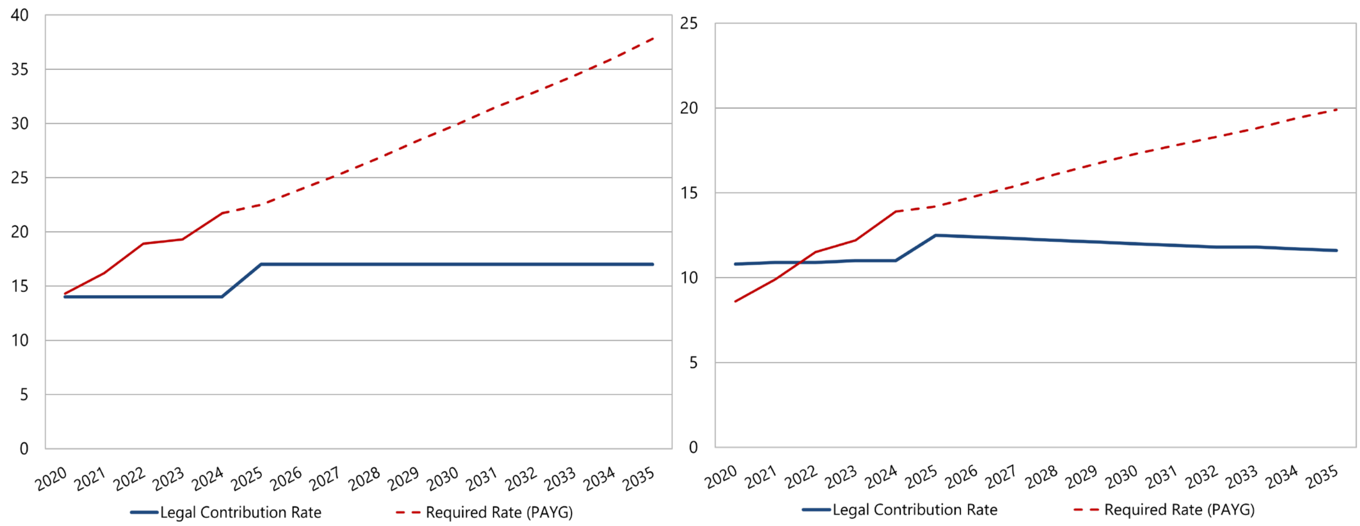


Source: ILO and IMF staff calculations.

Figure 3. Projections of Legal Contribution Rate vs. Required PAYG Rate

(Percent of Pensionable Earnings)

A. Civil Servants' Scheme | **B. System-wide**

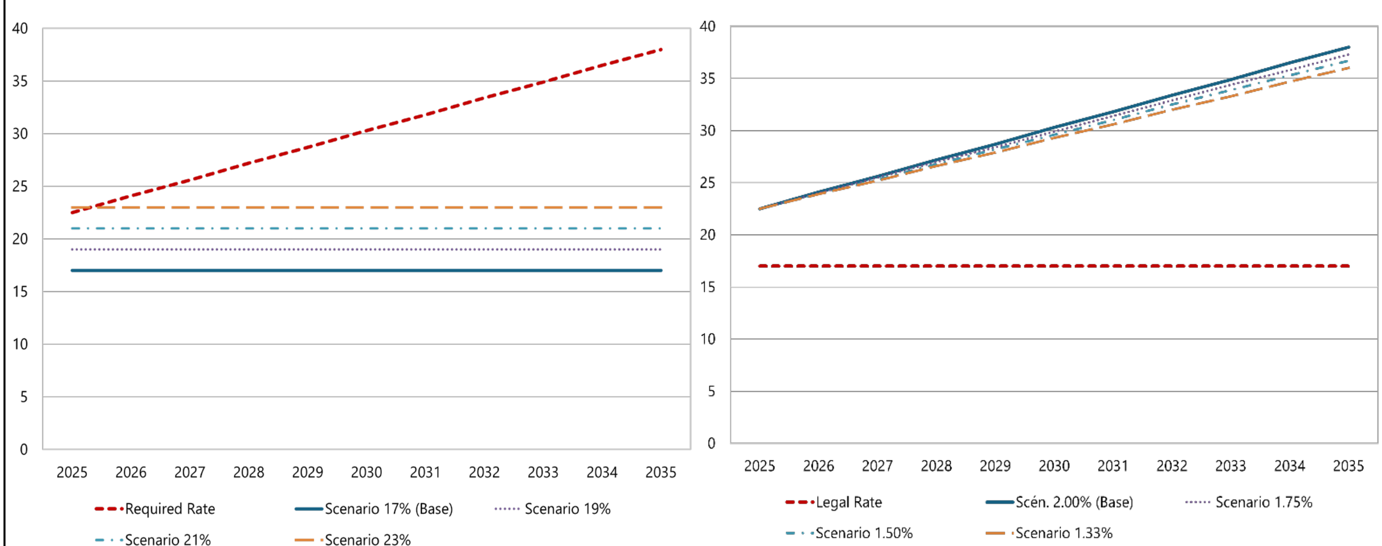


Source: ILO calculations.

Figure 4. Required Contribution Rates Under Different Reforms, 2025–2035

(Percent of Pensionable Earnings)

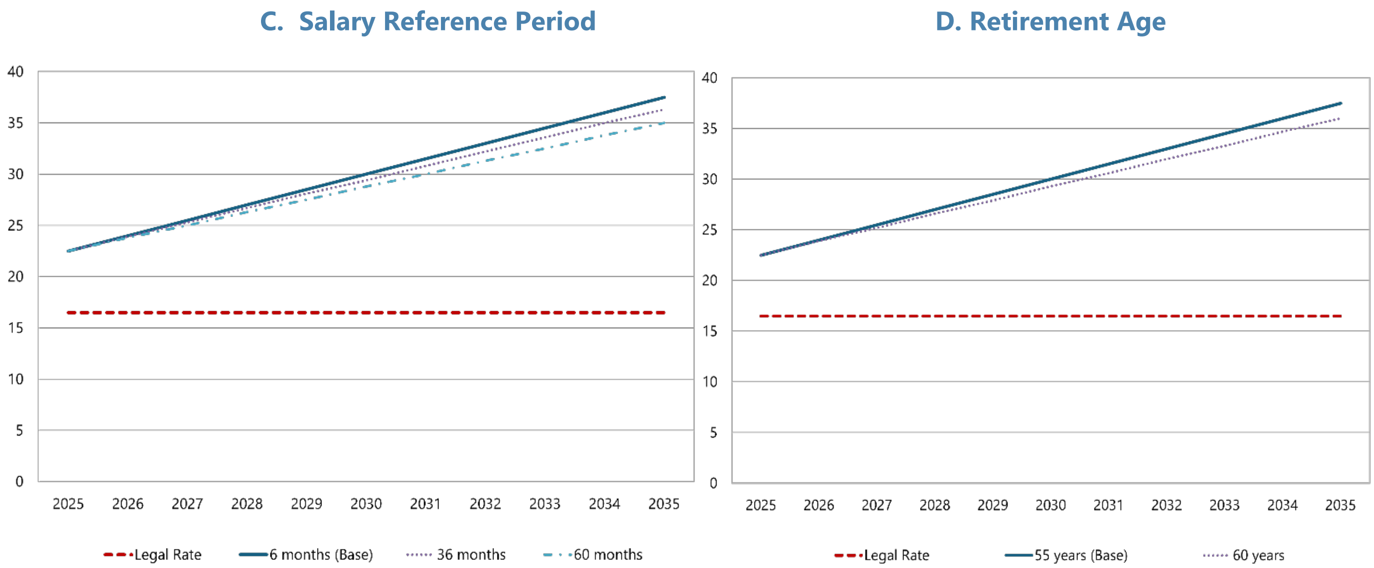
A. Contribution Rate | **B. Accrual Rate**



Source: ILO calculations.

Figure 4. Required Contribution Rates Under Different Reforms, 2025–2035 (continued)

(Percent of Pensionable Earnings)



Source: ILO calculations.

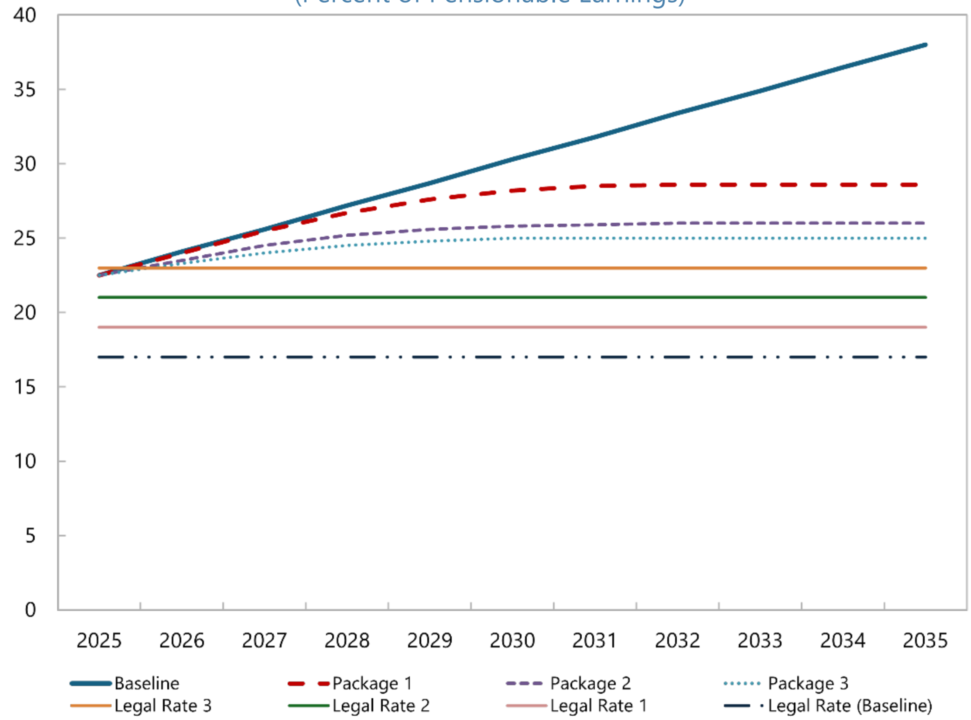
Table 1. Union of the Comoros: Summary of Reform Scenarios

Scenario	Population Growth (%)	Contribution Rate (%)	Accrual Rate (%)	Reference Salary (months)	Minimum Retirement Age (years)
Baseline	0.00	17.00	2	6	55
Package 1	1.00	19.00	1.75	36	60
Package 2	2.00	21.00	1.5	36	60
Package 3	2.00	23.00	1.33	60	60

Source: ILO calculations.

Figure 5. Required vs. Legal Contribution Rate Under Different Reform Packages

(Percent of Pensionable Earnings)



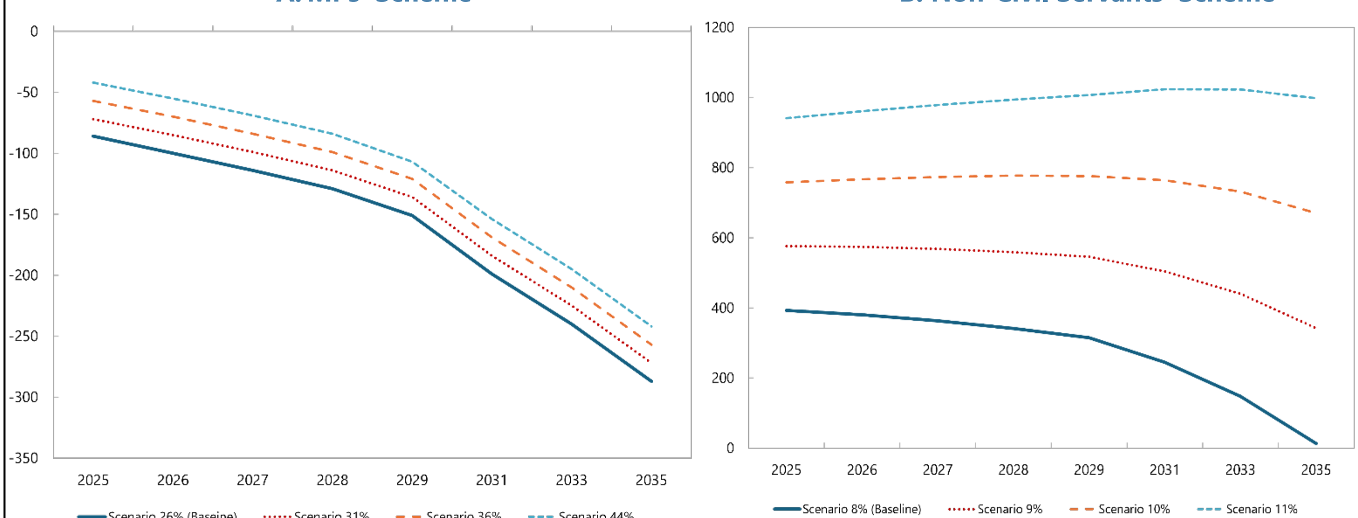
Source: ILO calculations.

Figure 6. Projected Financing Needs Under Different Contribution Rates

(KMF Million)

A. MPs' Scheme

B. Non-Civil Servants' Scheme



Source: ILO calculations.

TAX AND EXPENDITURE POLICIES IN COMOROS: DISTRIBUTIVE EFFECTS USING MICRO-SIMULATIONS[1]

A. Introduction

1. **Fiscal policy is the primary tool for governments to redistribute income consistent with socio-economic policy priorities**. In Comoros where elevated debt levels coupled with institutional fragility constrain fiscal space and the government has committed to fiscal consolidation under the ECF, it is critical that the fiscal effort is designed to minimize any adverse distributional effects over the short and medium term. This is necessary to secure the socio-political support needed to sustain a significant effort over the program horizon and beyond.

2. **Low levels of taxes and social spending in Comoros limit the redistributive impact of fiscal policies.** Fiscal policy plays a key role for income redistribution, affecting poverty and inequality through taxation and transfers. Yet, domestic revenue mobilization (DRM) in Comoros is very weak, with tax revenue averaging only 8 percent of GDP over the period 2015-2022, below the averages for Sub-Saharan Africa, Asia or even comparable small islands countries (see Appendix Figure A1). In turn, cash transfers are also poorly targeted and underfunded, further limiting the government's ability to achieve the UN's Sustainable Development Goals on reducing inequality and ending poverty by 2030.

3. **Evidence on the incidence of fiscal policies in Comoros is scant.** A poverty assessment for Comoros conducted by the World Bank in 2017 finds that both taxation and transfers as a whole reduce inequality, primarily driven by social transfers in education. However, the assessment finds that the tax system in Comoros also leads to fiscal impoverishment meaning that taxes, especially indirect taxes, increase the poverty headcount. Fiscal impoverishment is also observed in other Sub-Saharan countries including Tanzania, Togo or Zambia (Lustig et al., 2023). In the case of Comoros, the fiscal impoverishment is mostly driven by domestic consumption tax and the excise, namely the special custom duties, on rice (World Bank, 2017).

4. **This paper aims to assess the incidence of two revenue-raising fiscal policies on income distribution in Comoros.** Under the ECF, the Comorian government has committed to tax reform through streamlining exemptions and broadening major tax bases. The new Tax Policy Unit will lead medium-term reforms, including modernization of corporate and personal income taxes as well as indirect taxes. By focusing on these reforms, which are central to the country's long-term development strategy, this paper complements the existing literature on the progressivity of the overall fiscal system (World Bank, 2017). Especially, the paper analyzes the incidence of two revenue-raising options:

[1] Prepared by A.-M. Akim and J. Gu.

- Proper application of the tax code at customs which implies broadening the bases of consumption taxes, excises, and income tax prepayments. This option is motivated by an incorrect parametrization of taxes in the customs software SYDONIA.
- Removal of tax expenditures, particularly consumption tax exemptions.

5. The paper will also assess the distributional effects of removing border taxes post-WTO accession. To mitigate revenue losses following WTO accession, the government will need to consider policy options such as eliminating tax exemptions and strengthening revenue administration to enhance collection and curb tax fraud (Sawadogo and Kett, 2024). The paper will assess the distributional effects of abolishing the collection of income tax advance payments and business license taxes at the customs cordon following the WTO accession.[2]

6. Finally, the paper pays particular attention to the incidence of fuel subsidies on income distribution. It contributes to debates on the incidence of tax expenditures and fuel subsidy benefits, which remain unexplored in the context of Comoros. In 2024, financial losses[3] associated with underpricing petroleum products sold to gas stations amounted to 3.0 billion KMFs.[4] Two petroleum products were significantly underpriced relative to their average cost: kerosene for household consumption (underpriced by 19.9 percent) and diesel supplied to the state-owned electricity company SONELEC (underpriced by 12.2 percent).[5] Fuel subsidies impose substantial costs on the state-owned Comorian hydrocarbons company (SCH), the monopoly retailer of petroleum products, thus constituting a significant fiscal cost (i.e., lower tax collection and dividends from SCH, and lower consumption tax collection on fuel products). These magnitudes underscore the importance of identifying who ultimately benefits from such subsidies and their implications for equity.

B. Methodology

7. We use the Commitment to Equity (CEQ) approach to assess the distributional incidence of fiscal policies in Comoros, leveraging the 2020 household survey. Developed by Lustig et al. (2023), the CEQ method provides a comprehensive framework for analyzing the impact of fiscal policies on inequality and poverty. Using microsimulation techniques, the methodology simulates key income concepts—household income before and after taxes, social security contributions, transfers, subsidies, and in-kind benefits—to evaluate the effects of various fiscal policy instruments. This approach was previously applied to Comoros for earlier periods (Lustig et al., 2019; World Bank, 2017).

[2] Article 15 in the 2024 Initial Budget Law.

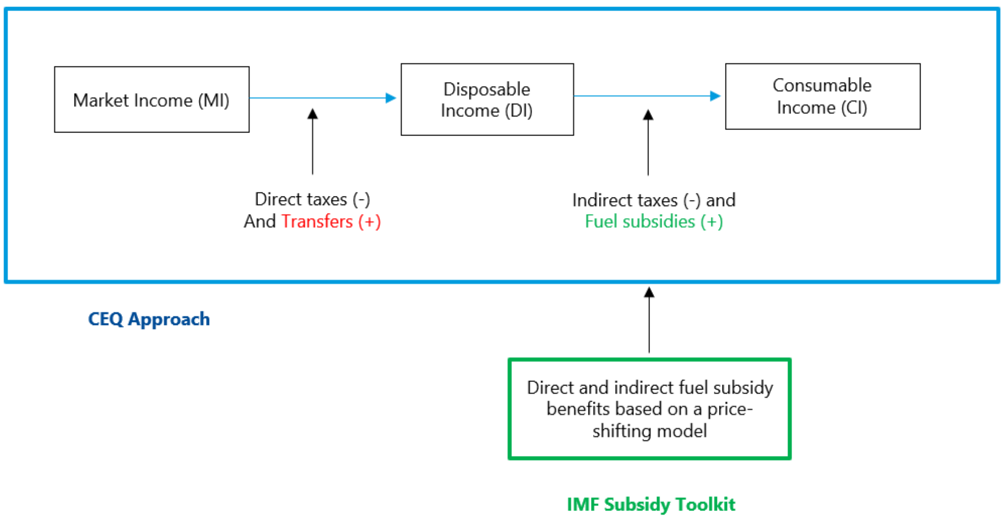
[3] The financial losses considered represent a narrower concept than revenue forgone and are therefore not systematically reflected in the government's fiscal accounts as transfers. The associated subsidy benefits are treated as implicit, given that the SCH is a state-owned enterprise.

[4] Preliminary SCH financial statements for December 2024.

[5] See section B – paragraph 13 for more discussion on the fuel subsidies and the magnitude of the price change.

8. **The CEQ different concepts of income used in this paper are presented in figure 1.** The first income concept is "Market Income (MI)" or Pre-Fiscal Income, which represents income before the deduction of direct taxes, social contributions and the receipt of direct transfers (typically cash transfers). By subtracting direct taxes and adding direct transfers to MI, "Disposable Income (DI)" is derived, representing the income available to households for consumption and savings. Then, "Consumable Income (CI)" is calculated by subtracting indirect taxes and adding subsidies to DI.

Figure 1. CEQ Income Concepts



Source: Staff elaboration.

9. **The distributional impact of the fiscal system (or fiscal incidence) is assessed by comparing the distribution of MI and CI.** This overall impact can be decomposed into the components of the fiscal system by analyzing the different income concepts. For example, the comparison between DI and CI reveals the effects of indirect taxes and subsidies. This framework will be leveraged to explore specifically policy options involving changes in taxation envisioned by the Comorian authorities under the contexts of post WTO accession and the ECF program.

10. **We discuss below the construction of the three income concepts and taxes.**

- **Disposable Income (DI)**

The CEQ approach starts with DI, covering a typical range of income sources across observation levels and recall periods, as in other West African surveys. Although DI could be computed using income data following Akim et al. (2020), we use consumption expenditure as the primary welfare measure due to limitations in income data quality and to align with the literature in the context of Comoros (World Bank, 2017; Lustig et al., 2023). Hence, we assume that total consumption expenditure, including the implied value of self-consumption and imputed rent, equals DI. This assumption likely leads to an underestimation of actual DI by the amount saved, particularly among upper-decile households, who typically save a higher share of their resources. While this approach underestimates the actual level of DI, we expect the progressivity analysis to be mildly affected as the relative position of households in the income distribution would likely remain unchanged even if savings were accounted for. For instance, a household ranked in the top 10 decile based on income is likely to remain in the top 10 decile using disposable income.

- **Market Income (MI) and direct taxes allocation**

Market income (MI) is computed by adding direct taxes back to DI. Direct taxes include personal income tax (PIT) and single professional tax (SPT), identified in the survey using household employment characteristics. PIT taxpayers are determined from the detailed employment module; a PIT payer is an adult over 15 years old employed in the public sector or in any enterprise (public or private) and receiving a pay slip. Wages reported in the survey are assumed to be net of taxes and are used to compute taxable wages using the equation (1):

$$Taxable\_wage = \frac{(Net\_Wage - borneinf_r \times \tau_r + \sum_{j=1}^{r-1} cumulative_j)}{(1 - 0.7 \times \tau_r)}, r = 1, .., 6 \qquad (1)$$

Where r represents the range in the tax schedule (table 1) and $\sum_{j=1}^{r-1} cumulative_j$ is the cumulative tax of previous ranges.

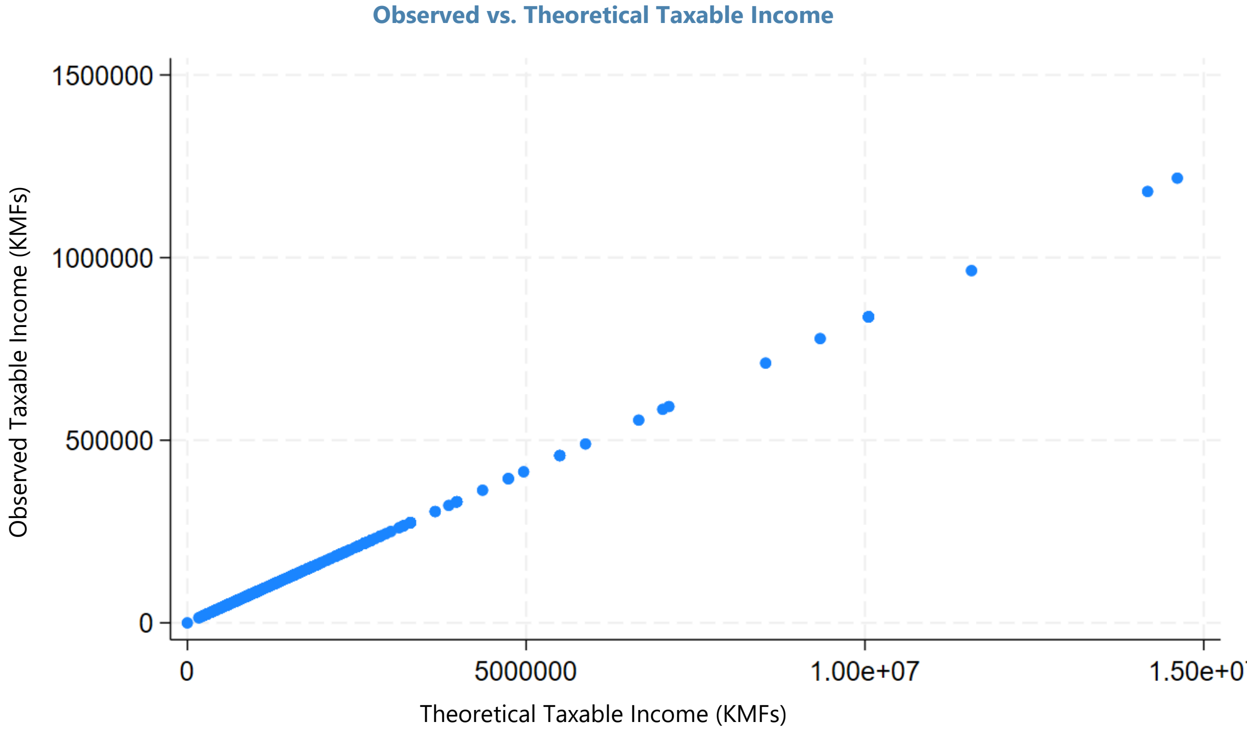
Table 1. Union of the Comoros: Tax Schedule

r	Taxable income ranges (KMFs)	Net income ranges (KMFs)	Taxation rates (%)	Cumulative tax (KMFs)
1	0 – 150 000	0 – 214 285	0	0
2	150 001 – 500 000	214 286 – 696 787	5	17 500
3	500 001 – 1 000 000	696 788 – 1 361 073	10	67 500
4	1 000 001-1 500 000	1 361 074 – 2 000 359	15	142 500
5	1 500 001-2 500 000	2 000 360 – 3 228 931	20	342 500
6	2 500 001-3 500 000	3 228 932 – 4 407 502	25	592 499
7	3 500 001 and plus	4 407 503 and plus	30	

Source: Staff calculations based on the general tax code.

Equation (1) is cross-checked with the Excel tool employed by the tax administration to calculate personal income tax based on reported pre-tax earnings. Specifically, we simulate pre-tax wages for hypothetical individuals, input them into the Excel tool, and obtain both taxable wages and corresponding tax liabilities. Applying Equation (1) to the simulated net wages reproduces the theoretical taxable wages for these individuals. Figure 2 compares the taxable income generated by the Excel tool with that derived from Equation (1) using the simulated net wages. The exact correspondence between the two confirms the validity of our imputation method for deriving taxable income from reported net wages in the survey.

Figure 2. Comparison Between the Observed Taxable Income and the Theoretical Taxable Income



Source: Staff calculations.

SPT is collected from the self-employment module, which asks whether the respondent paid any taxes on their activity. We assume these payments represent SPT, as this tax is designed for small and medium enterprises with turnover below 20 million KMFs, operating informally, corresponding to the firms captured in the household survey.

- **Consumable Income (CI) and Indirect Taxes**

Consumable Income (CI) is computed by subtracting indirect taxes from DI and adding subsidies. The survey reports expenditures (x_k), including taxes, for each good consumed k. Similarly to the taxable income, we work backward to compute the consumption expenditures net of any taxes (m_k), consistent with the tax code in force in 2024. Hence, indirect taxes for each good (T_k) taxable ad-valorem are computed using the equation below:

$$T_k = x_k - m_k$$

where

$$m_k = \frac{x_k}{\left[(1+\tau_{duties}) \times (1+\tau_{excise}) \times \left(1+\tau_{consumption}\right) + \tau_{rau} + \tau_{ai} + \tau_{cci} + \tau_{pt}\right]}$$

Indirect taxes include specific unit taxes on oil products and rice. To compute their corresponding pre-tax expenditures, we derive implicit ad valorem rates from the selling price on each island and the applicable unit taxes (Table 2). The pre-tax expenditure m_k for these products is calculated as following:

$$m_k = \frac{x_k}{[1 + implicite\ rate\_k]}$$

Table 2. Union of the Comoros: Implicit Tax Rates for Specific Taxes on Oil Products and Rice

	Areas	Ordinary rice (kmf/kg)	Premium rice (kmf/kg)	Gasoline (kmf/liter)	Diesel (kmf/liter)	Kerosene (kmf/liter)
				Petroleum Excise Tax (TIPP[1])		
Specific taxes		25	200	230	115	0
Selling price	National	313.3	1000.8	750	650	500
	Anjouan	312.3	1045.7	n.a.	n.a.	n.a.
	Moheli	301.1	1050.0	n.a.	n.a.	n.a.
	Grande-Comores	315.8	991.7	n.a.	n.a.	n.a.
Implicit tax rates	National	8.7%	25.0%	44.2%	21.5%	0.0%
	Anjouan	8.7%	23.6%	n.a.	n.a.	n.a.
	Moheli	9.1%	23.5%	n.a.	n.a.	n.a.
	Grande-Comores	8.6%	25.3%	n.a.	n.a.	n.a.

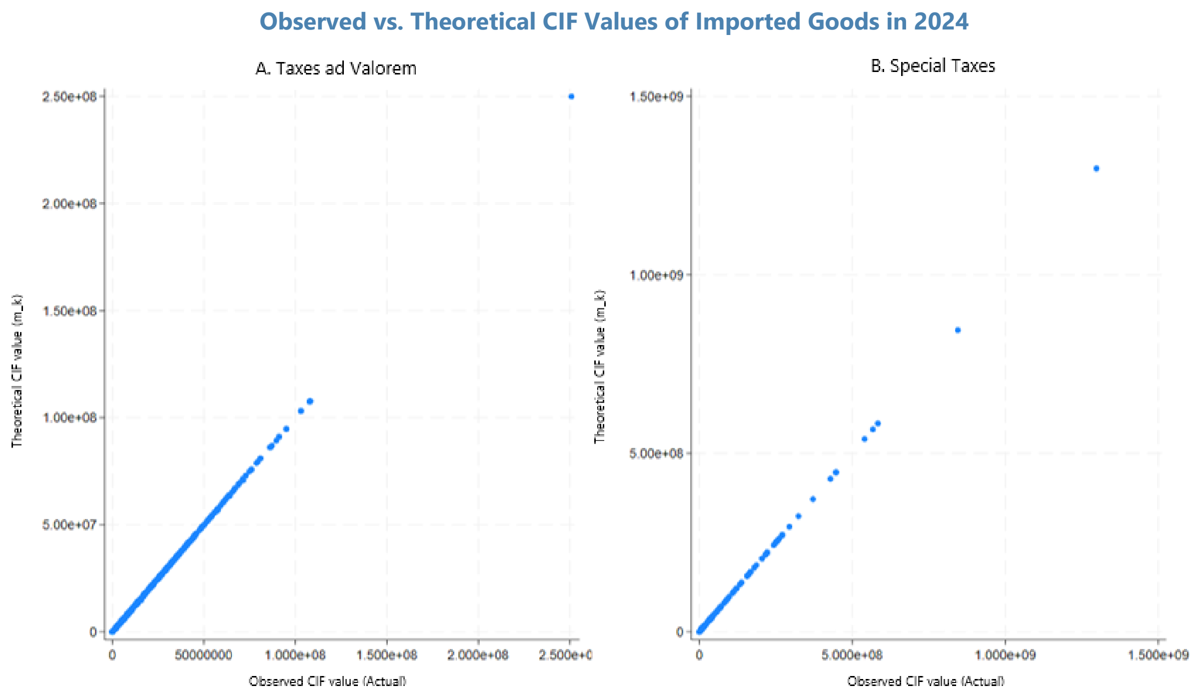
Source: Staff calculations.

[1] Taxe Intérieure sur les Produits Pétroliers.

Analogous to the validation of taxable personal income, figure 3 assesses the consistency of formulas (3) and (4) using comprehensive customs data that record the universe of goods imported into Comoros, their CIF values, and the full set of taxes levied at the border. These taxes comprise import consumption taxes, customs duties, excise taxes, special levies, import license fees (pt), import prepayment taxes (ai), and other administrative charges.[6] Both formulas provide an internal consistency check by replicating the CIF value from tax-inclusive import values.

[6] This includes the Revenu Administrative Unique (RAU); Chambre de Commerce, d'Industrie et d'Agriculture (CCIA); and Redevance de la Coopération Internationale (RCI).

Figure 3. Comparison Between the Observed Cost, Insurance and Freight (CIF) Values of Imported Goods and their Theoretical Values



Notes: CIF stands for Cost, Insurance, and Freight
Source: Staff calculations.

11. We now present the calibration of CEQ model. Table 3 reports CEQ-simulated government revenue of 33.8–38.9 billion KMFs for 2019–2020, disaggregated into direct taxes (personal income and single professional) and indirect taxes (consumption, customs, excise). The micro-simulation model reproduces 59 percent of total revenue in 2021 and 65 percent in 2020, excluding corporate income, capital, and export taxes, as well as non-tax revenues from stamps and registration fees. Micro-simulated aggregates broadly align with official government operations data, although discrepancies persist for special customs duties and domestic consumption taxes. Simulated direct taxes amount to 3.2 billion KMF, consistent with the 3.0 and 3.5 billion KMF reported in 2019 and 2020. Indirect taxes are estimated at 27.9 billion KMF, slightly below the 30.9 billion KMF recorded in 2019/20. Differences in customs duties largely stem from imports that are not directly consumed by households, and which are thus underrepresented in household surveys. For example, oil products are predominantly used as intermediate inputs in electricity, transport, and bakery sectors. Likewise, domestic consumption taxes are underestimated due to survey coverage, which includes expenditures on water, electricity, tobacco, and communications but omits major taxable items such as financial services, construction, and incoming phone calls charges.

Table 3. Union of the Comoros: Category of Tax Revenues Included in the Microsimulation Model

	Micro – simulation (billion KMFs)	Government statement operations (billion KMFs)		
		2019	2020	2021
Direct taxes (i)	***3.2***	***3.0***	***3.5***	***3.9***
Personal income tax	3.1	2.9	3.5	3.8
Single professional tax	0.1	0.0	0.0	0.1
Indirect taxes (ii)	***27.4***	***30.9***	***32.2***	***35.1***
Custom duties + Excise	12.1	13.8	15.9	16.0
- Custom duties	5.2	-	-	7.4
- Excise	7.0	-	-	8.6
Import license	0.7	0.6	0.4	0.7
Import prepayment tax	0.7	0.5	0.2	0.6
Special custom duties	4.5	8.8	8.7	8.8
- Oil products	1.4	6.8	7.2	6.0
- Rice	2.8	2.1	1.5	2.8
- Vehicle	0.3	-	-	-
Administrative revenue	5.7	2.6	2.9	4.9
Consumption taxes	3.7	5.7	4.9	5.4
- Imports	2.8	2.1	1.0	2.6
- Domestic	0.9	3.6	4.0	2.8
Total (i) + (ii)	**30.6**	**33.8**	**33.0**	**38.9**
Total government revenue[1]		**50.0**	**49.4**	**55.0**

Source: Staff calculations.
[1.] From the Government Financial Operations Statements for 2019, 2020 and 2021.

12. We also analyze the distribution of fuel subsidy benefits using the IMF subsidy toolkit. In Comoros, the importation and distribution of petroleum products are monopolized by the state-owned Comorian Hydrocarbons Company (SCH), with retail prices being set and regulated by ministerial decree. This decree sets the selling price per liter[7] charged by SCH to service stations, as well as the margin that service stations apply when charging the end consumer. There is no clear formula in setting the selling price. Until 2022, the selling price per liter imposed by the government covered the SCH price cost per liter[8] allowing the SCH to generate profits. However, the selling price per liter may be below the cost price per liter resulting in financial losses for the company. Given the sensitivity of this product, the authorities intend to preserve households' purchasing power by maintaining SCH selling prices regardless of changes in the company costs. As a result, SCH incurred significant losses in 2024 on diesel sold to the state-owned electricity company SONELEC (-1.9 billion KMFs) and on kerosene (-1.1 billion KMFs) used for household consumption (table 3). These

[7] The selling price per liter to service station includes CIF price per litter, the TIPP per liter and the SCH operating cost per liter.

[8] The price cost per liter includes CIF price per liter, TIPP per liter and SCH operating cost per liter.

losses[9] reached 14.5 billion KMFs in 2022, equivalent to 2.5 percent of GDP (Ahamada, 2024). While most of these losses stem from diesel sold to SONELEC (63 percent in 2024 and 45 percent in 2022), the latter is also exempt from the excise tax on diesel (115 KMF per liter). The government thus not only covers the losses from underpriced diesel but also incurs additional tax expenditure by granting these exemptions.

Table 4. Union of the Comoros: SCH Fuel Price Structure and Profit in 2024

Fuel	2024 Monthly average cost price (KMF/liter) [I]	Selling price to gas station (KMF/liter) [II]	SCH Margin (Billion KMFs) [III]	% change in price [(II – I)/I]
Kerosene for households	393.4	315	-1.1	-19.9
Diesel - SONELEC	393.1	345	-1.9	-12.2
Gasoline	638.5	725	1.8	13.5
Diesel - Tourism	508.4	630	3.0	23.9
Total				

Source: Staff calculations using preliminary SCH financial statement for December 2024.

13. **The IMF fuel subsidy toolkit assesses the impact of fuel subsidies on two dimensions: (1) the change in total spending required to maintain the same basket of goods, and (2) the distribution of subsidies across different households.** These calculations assume that household consumption patterns remain unchanged in response to subsidies. With this simplifying assumption[10], the direct impact is calculated as:

$$\frac{dY_{dir}}{Y} = b_i \frac{dP_i}{P_i}$$

where b_i is the spending share on product i, and $\frac{dP_i}{P_i}$ refers to the percentage change in the price of product i due to subsidy. The interpretation is that if the price of good i decreases by $\frac{dP_i}{P_i}$, and the good accounts for a share of b_i in total spending, then households need to spend $b_i \frac{dP_i}{P_i}$ less to afford the same basket of goods. If the price of multiple goods changes at the same time, the direct welfare impact would be $\frac{dY_{dir}}{Y} = \sum_i b_i \frac{dP_i}{P_i}$. The indirect impact is calculated as

$$\frac{dY_{ind}}{Y} = \sum_j b_j \frac{dP_j}{P_j}$$

where j indexes the goods whose prices vary as a result of a change in the price of good i, due to the use of good i as an intermediate input in their production. To implement this approach in the toolkit, we also match the consumption categories from household survey to the corresponding industries from the input-output table.

[9] The losses are not systematically reflected on the government fiscal accounts.

[10] This simplifying assumption could potentially distort the results. Household of different income level could have different fuel price elasticity of demand. If lower income households have higher elasticity, then the unequal impacts between richer and poorer households produced by the toolkit are closer to an upper bound.

C. Results

14. The assessment of the fiscal and distribution incidence of policy options under the ECF and post-WTO accession using the CEQ model are as follows:

- Inconsistencies between the tax code and its application at the customs were identified by a recent FAD technical assistance (TA) mission supporting the Tax Policy Unit (TPU) in preparing the tax expenditure report, a structural benchmark (SB) under the ECF program. To address these inconsistencies, the authorities issued a circular note in July instructing customs to correctly apply the tax code. The circular broaden the bases used to compute consumption, excise, and prepayment taxes. Its Implementation in September 2025, after a moratorium period with the private sector, is expected to generate additional revenue of 1.2 billion KMFs equivalent to 0.18 percent of GDP (Table 5). Excise taxes account for the largest share—about 58 percent (0.7 billion KMFs)—followed by consumption taxes on imports (33 percent), while the prepayment tax contributes only 8 percent.
- The total fiscal cost of these tax expenditures—defined as the revenue that would have been collected if these products were subject to a 10 percent consumption tax and excise rate less than 10 percent[11]—is estimated at 1.0 billion KMFs (0.16 percent of GDP) (Table 5). A 45 kmf/liter tax on the kerosene would generate around 0.6 billion KMFs (0.8 percent of GDP).
- The post-WTO accession measures, including the removal of import licenses and prepayment tax as outlined in the 2025 budget law, would lead to a revenue loss of 1.4 billion KMFs (0.24 percent of 2024 GDP), equally spread between import licenses and the prepayment tax (table 5). Sawadogo and Kett (2024) found a comparable amount of 1.7 billion KMFs.
- Based on the household consumption basket, the broadening of the tax base mainly affects alcohol and tobacco products (Table 6). The change in the tax base leads to an increase in unit prices of tobacco products by 14.3 percent and of alcoholic beverages by 15.0 percent. The impact on basic food commodities is smaller, ranging from 1 percent for poultry or beef to 5.8% for root crops. Other basic commodities, such as rice and fuel, are not affected, as they are subject to a single tax, namely the specific customs duty. The products most affected appear to be those subject to high excise and customs duties (Table A1). The impact is limited for products not subject to consumption or customs taxes.

[11] The theoretical consumption tax and excise duties are computed using the broadened tax base, in accordance with the customs circular note of July 2025.

Table 5. Union of the Comoros: Impact of Broadening the Tax Base and the Tax Expenditure on the Government Budget

	Benchmark[1] (billion KMFs)	Impact (billion KMFs)
Direct taxes (i)	***3.2***	***0.0***
Personal income tax	3.1	-
Single professional tax	0.1	-
Indirect taxes (ii)	***27.4***	***1.2***
Custom duties + Excise	12.2	0.7
- Custom duties	5.2	-
- Excise	7.0	0.7
Import license (pt)	0.7	-
Import prepayment tax (ai)	0.7	0.1
Special custom duties	4.5	0.0
- Oil products (Gasoline, diesel)	1.4	-
- Rice	2.8	-
- Vehicle	0.3	-
Administrative revenues (rau, rci, cci)	5.7	0.0
Consumption taxes	3.7	0.4
- Imports	2.8	0.4
- Domestic	0.9	-
Total revenue (i) + (ii)	**30.7**	**1.2**
Fiscal Cost of Tax Expenditures (iii)		***1.6***
- Kerosene for household use (45 KMFs/liter)	-	0.6
- Exemption on 10% consumption tax	-	1.0

Source: Staff calculations.
[1.] Benchmark is the reference situation before the implementation of the circular note.

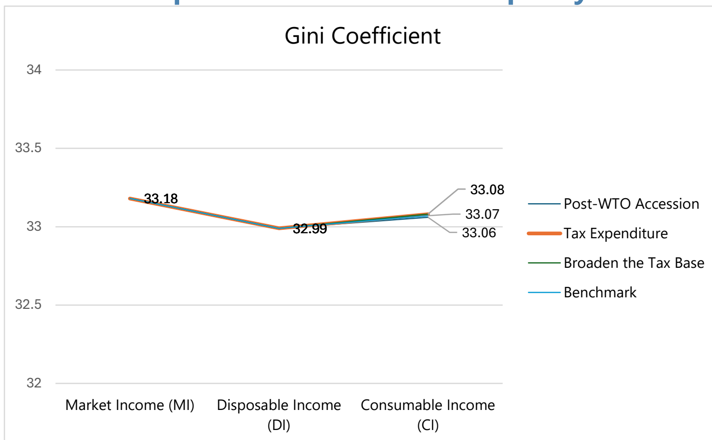
Table 6. Union of the Comoros: Impact of Broadening the Tax Base and the Tax Expenditure on Selected Sensitive Products

Code	Labels	Unit	Weight	CIF value	Tax revenue	Impact	
			(Million KMF)	(Million KMFs)	(Million KMFs)	On the revenue (Million KMFs)	On the unit price at customs (%)
	Food						
0206	Animal offal (beef, goat, etc.)	KG	0.7	481.9	98.8	5.6	1.0
0207	Poultry meat and offal	KG	12.1	6442.8	1320.8	74.4	1.0
04029910	Dairy products (milk, cream, etc.)	KG	0.2	103.9	21.3	1.2	1.0
07	Vegetables, roots	KG	0.9	231.0	54.4	16.5	5.8
1101	Wheat or meslin flour	KG	14.6	4494.5	134.8	0.0	0.0
151620	Vegetable oil	KG	3.8	2111.3	659.6	46.8	1.7
1604	Canned sardines	KG	0.9	765.6	304.5	30.1	2.8
1701	Sugar	KG	12.6	3497.9	698.0	38.3	0.9
220210	Water, non-alcoholic beverages	L	8.8	2093.8	849.6	86.3	2.9
250100	Salt	KG	1.3	109.9	21.8	2.7	2.1
	Non-Food						
220300 + 220830	Alcohol	L	0.6	136.1	632.5	115.0	15.0
24	Tobacco	KG	0.1	30.1	121.9	24.5	14.3
252329 + 252390	Ordinary or colored cement	KG	181.0	7449.7	1811.8	36.2	0.4
271113	Butane	KG	14.9	293.4	39.8	11.9	0.4
30	Pharmaceutical products	KG	0.6	1651.7	201.1	1.5	0.3

Source: Staff calculation using customs data for 2024.

15. **The three policy options have insignificant effect on the population income distribution, as the Gini coefficient for each option equals the benchmark (Figure 4)**. Disposable income under broadening the tax base, accounting for tax expenditures, or removing import licenses or prepayment tax remains the same as the benchmark (Gini coefficient of 33.1). Hence, these policies do not alter the distributional effect of the overall tax system. Overall, the redistributive impact of the tax system is negligible, with a 0.1-point decrease in the Gini coefficient—from 33.2 for MI to 33.1 for CI. Direct taxes display some moderate progressivity, as the DI Gini coefficient (of 33.0) is lower than the MI Gini coefficient (of 33.18), whereas indirect taxes seem mildly regressive, with the CI Gini coefficient (of 33.08) slightly higher than the DI Gini coefficient (of 32.99).

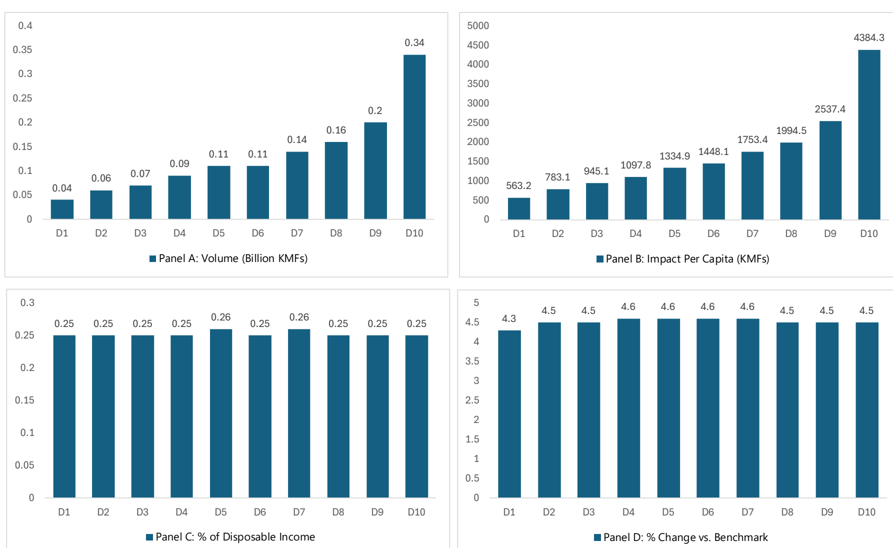
Figure 4. Impact of Broadening the Tax Base and the Tax Expenditure on Income Inequality



Source: Staff calculations.

16. Revenue from broadening the tax base (1.2 billion KMFs) rises with income, with the top 10% of the income distribution contributing 0.34 billion KMFs, while the bottom 10% contribute 0.04 billion KMFs (Figure 5, Panel a). This corresponds to a per capita tax increase of 4,384 KMFs for the top 10% and 563 KMFs for the bottom 10% (Figure 5, Panel b). Excise taxes contribute the most to revenue, accounting for 55–58% depending on the decile, followed by consumption and prepayment taxes (Figure A2). Despite higher absolute taxes for higher income groups, the burden relative to disposable income (Figure 5, Panel c) and the percentage change (Figure 5, Panel d) remains broadly uniform across deciles, explaining why the Gini coefficient remains unchanged compared to the benchmark.

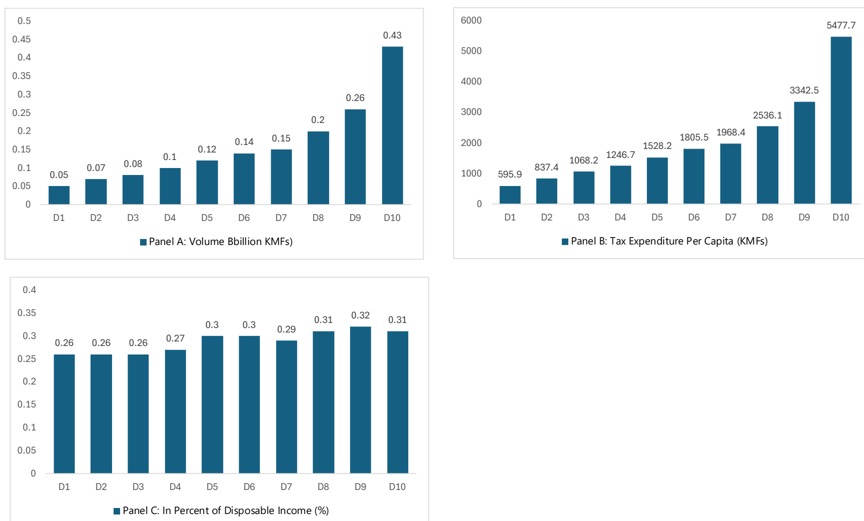
Figure 5. Impact of Broadening the Tax Base by Disposable Income Decile



Source: Staff calculations

17. **Higher-income groups benefit disproportionately more from consumption tax exemptions, with tax expenditures increasing with income (Figure 6, Panel a)**. The top 10 percent of the income distribution is exempted, benefiting from 0.43 billion KMFs in consumption tax, while the bottom 10 percent benefit from only 0.05 billion KMFs. Per capita, the top 10 percent receive 5,477 KMFs in tax expenditures, compared with 596 KMFs for the bottom 10 percent (Figure 6, Panel b). Moreover, these tax expenditures exhibit regressivity. When measured as a share of disposable income, the top deciles benefit proportionally more than the bottom two (31 percent for the top 10 and 0.26 percent for the bottom 10) (Figure 6, Panel c)

Figure 6. Incidence of the Tax Expenditures



Source: Staff calculations

18. **The application of the IMF fuel subsidy toolkit draws on a household expenditure survey of 5,624 households.** Table 7 shows the distribution of households by rural/urban location and by the gender of the household head. It also reports the average of total household expenditure and per capita expenditure. Per capital expenditure at household level is calculated as the total household expenditure divided by number of survey respondents in that household. The findings show that urban households spend more than rural households, and male-headed households spend more than female-headed households. When focusing on per capita expenditure, urban households still outspend rural households, but the gap between female- and male-headed households is less pronounced. Due to data limitations, we are

Table 7. Union of the Comoros: Household Expenditure

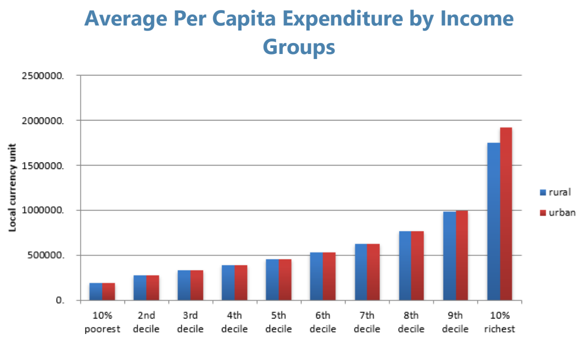
Number of observations		
	Rural	Urban
Female headed	1426	715
Male headed	2270	1213
Average total household expenditure		
	Rural	Urban
Female headed	2473065	2750881
Male headed	2742845	3253449
Average per capita household expenditure		
	Rural	Urban
Female headed	591123.4	766858.8
Male headed	552228.3	785726.8

Source: Household consumption survey and staff calculations.

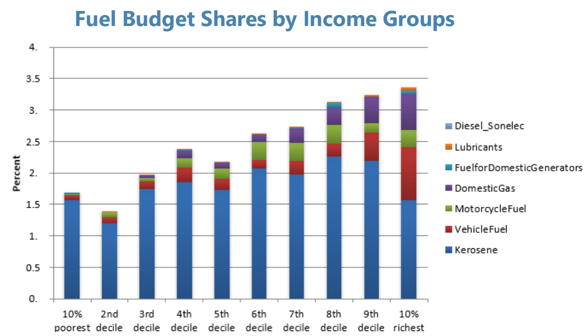
unable to conduct individual-level analysis to compare the consumption across different income levels, or between women and men.[17]

Figure 7. Household Expenditure and Fuel Budget Shares

Households in the top decile spend about 10 times the amount spent by households in the bottom decile.



Kerosene represents the largest budget share among fuel products.

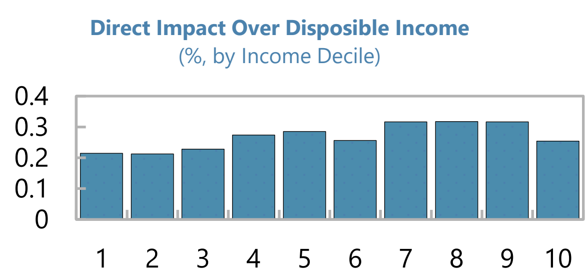


Source: Staff calculations.

19. Richer households consume more fuel products than poorer ones. The left panel of Figure 7 shows average per capita expenditure by income quintile and by rural/urban status. The right panel presents the share of total spending across six categories of fuel products: kerosene (pétrole lampant), vehicle fuel (carburant pour véhicule), motorcycle fuel (carburant pour motocyclette), domestic gas (gaz domestique), fuel for domestic generators (carburant pour groupe electrogène à usage domestique), lubricants (lubrifiants). Among all income categories, kerosene accounts for the largest budget share among fuel products. In addition, richer households devote a larger share of their spending on vehicle fuel and gas for household use.

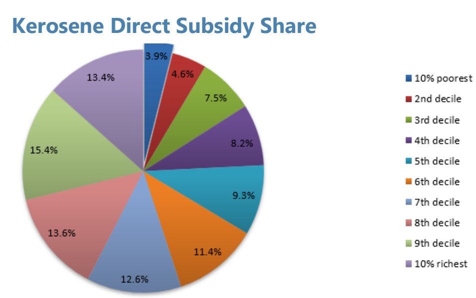
Figure 8. Kerosene Direct Subsidy

On average, kerosene subsidy as a share of disposable income is higher among higher-income households.



Source: Staff calculations based on household expenditure survey and IMF Fuel Subsidy Toolkit.

However, when we examine the allocation of total subsidy, richer households receive a larger share.



Source: Staff calculations based on IMF Fuel Subsidy Toolkit.

20. Diesel subsidies indirectly affect households and benefit the richer ones. Since only diesel sold to SONELEC is subsidized, the impact of this subsidy on households is only through the

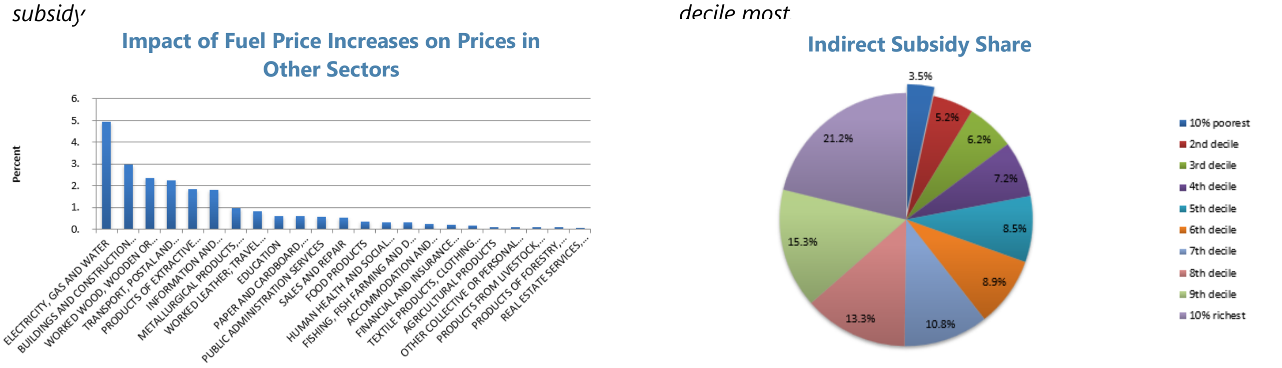
[17] Household-level analysis potentially mask differences among individual members, as resources are unlikely to be equally distributed. In the survey, women's reported average wage income is 58 % of men's income.

indirect channels. We use the fuel subsidy toolkit to simulate a scenario where only diesel used as an intermediate input is subsidized by 12.2 percent. The left panel of Figure 9 plots the impact of this subsidy on the prices of other sectors in the economy. As shown, the electric, gas and water is the most affected, since it uses diesel as an intermediate input more than other sectors. The right panel of Figure 9 calculates the distribution of the indirect subsidy considering all price changes through the consumption categories reported in household expenditure survey. Like the direct impact of kerosene subsidy, richer households benefit more than poorer ones, because they have a bigger consumption budget.

Figure 9. Impact of Diesel Subsidy

Electricity, gas and water is the sector most affected by diesel subsidy

The indirect from diesel subsidy benefits households in the top decile most



Source: Staff calculations.

D. Conclusion

21. The fiscal reforms proposed by the Comorian government are effective in raising revenue but have limited impact on reducing inequality.

- **Broadening the tax base and reducing tax expenditures.** The expansion of the tax base and the removal of selected tax expenditures are estimated to increase government revenues by approximately 2.8 billion KMF (about 0.35 percent of 2024 GDP). However, these reforms have only a modest effect on income inequality. The Gini coefficient, a standard measure of inequality, remains largely unchanged across reform scenarios, indicating that the overall distributional impact is limited.

- **Impacts on essential vs. non-essential goods.** Broadening the tax base has a minimal effect on the prices of essential goods (such as food staples and cement), with unit price increases ranging from 1 to 5 percent. In contrast, non-essential goods like alcohol and tobacco experience much higher price increases (15 percent and 14.3 percent, respectively). This suggests that the reforms strengthen the Pigouvian properties of the tax system, making their impact on consumption more progressive, as they spare necessities while targeting items with negative externalities.

- **Contribution to reforms by income group.** The reforms affect households uniformly across the income distribution when measured as a share of disposable income, indicating that they do not disproportionately burden poorer households. In absolute terms, however, households contribute more in absolute terms under a broadened tax base. For example, the top 10 percent of households pay 0.35 billion KMF, compared to just 0.04 billion KMF for the bottom 10 percent.

22. Current tax exemptions are regressive and fuel subsidies benefit more the top income, favoring the rich over the poor.

- **Tax Exemptions.** Exemption from consumption taxes disproportionately benefit higher-income population. The top half of the income distribution receives a greater share of tax expenditure benefits in percentage of income than the bottom half. The richest 10 percent receive 0.31 percent of the disposable income in benefits, while the poorest 10 percent receive only 0.26 percent. On a per capita basis, the richest receive nearly ten times more than the poorest.
- **Fuel Subsidies.** Both direct and indirect benefits from fuel subsidies accrue mainly to top income households. The richest deciles spend more on petroleum products and thus capture a larger share of the subsidy. The indirect effects—lower prices for goods and services due to subsidized fuel—also favor the better-off, as they consume more of the affected goods.

E. Policy Recommendations

- **Targeting Tax Exemptions.** Eliminate consumption tax exemptions for non-essential goods, as these primarily benefit affluent households. Redirecting these resources could improve equity and fiscal efficiency.
- **Reforming Fuel Subsidies.** Phase out fuel subsidies while mitigating adverse distributional effect through direct transfers. International experience (e.g., Moss et al., 2015; Mokhtari and Ghoddusi, 2025) suggests that targeted transfers are more effective in supporting vulnerable groups without distorting market prices or disproportionately benefiting the wealthy.

References

Ahamada Ibrahim, 2024, “State-Owned Enterprises: Oil and Gas in Comoros”, IMF selected Issue paper for Union of Comoros, IMF Country Report No. 24/5.

Akim Al-Mouksit, Ben Jelloul Mahdi, Czajka Leo, Robilliard Anne-Sophie, 2020, “Collect More, Spend Better? Assessing the Incidence Of Fiscal Systems And Public Spending In Three Francophone West African Countries”, AFD research papers, No. 190.

Fabrizio Stefania, Goumilevski Alexi, and Kpodar Kangni, 2015, "A New Tool for Distributional Incidence Analysis: An Application to Fuel Subsidy Reform", Technical Notes and Manuals, International Monetary Fund, Washington DC.

Mokhtari Mohammad Ali and Ghoddusi Hamed, 2025, Fueling Inequality: A Novel Estimate From Large-Scale Reforms, Journal of Environmental Economics and Management.

Moss Todd, Lambert Caroline, and Majerowicz Stephanie, 2015, Oil to Cash: Fighting the Resource Curse through Cash Transfers”, Center for Global Development, Washington DC.

Nora Lustig, Jon Jellema, and Valentina Martinez Pabon, 2023, “Are Budget Neutral Income Floors fiscally viable in Sub-Saharan Africa?”, Journal of African Economies.

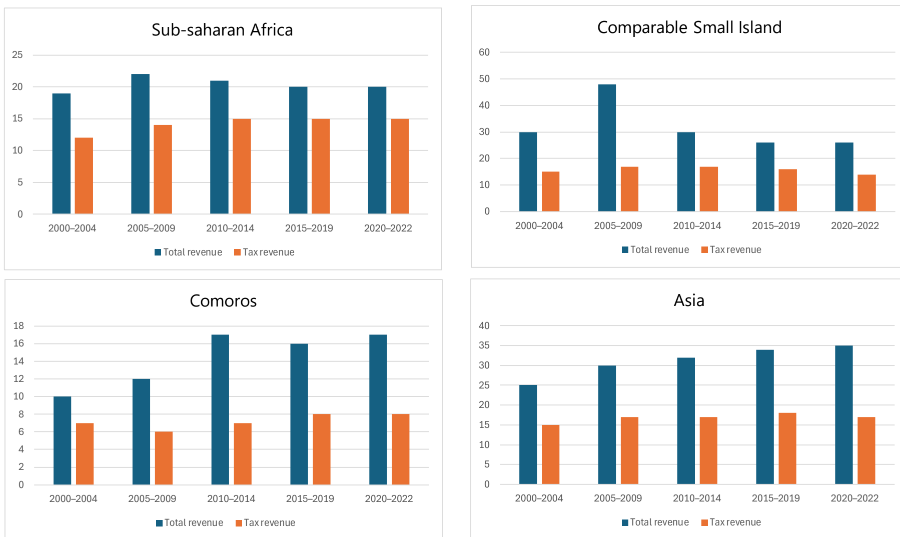
Sawadogo Pegdewende Nestor and Kett Benjamin Robert 2024, “Trade Liberalization and Tax Revenue Mobilization in Comoros”, IMF selected Issue paper for Union of Comoros, IMF Country Report No. 24/5

World Bank, 2017, “Comoros Poverty Assessment”, Report, Washington DC.

Appendix I. Tax and Expenditures Policies in Comoros

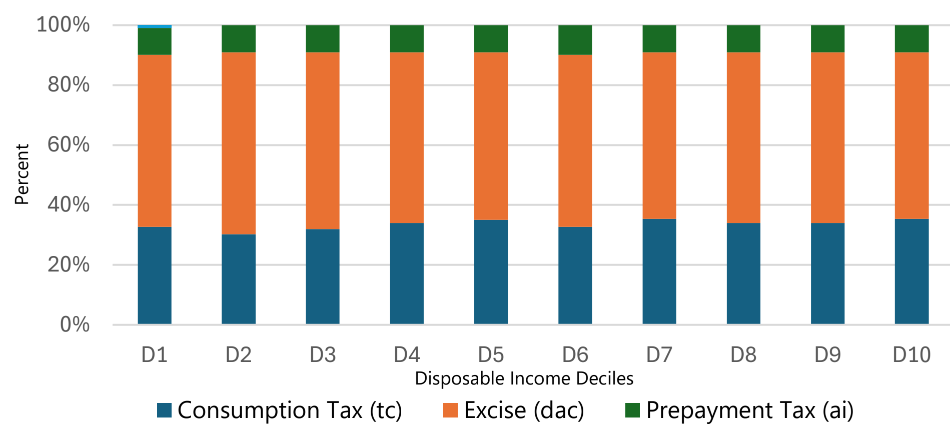
Figure 1. Revenue in Percent of GDP

Revenue as a Percentage of GDP, 5-year Average



Source: Staff calculations using UNU-WIDER Government Revenue Dataset (GDR)
Note: Small islands include Cabo Verde, Sao Tome and Principe.

Figure 2. Contribution of Each Tax to the Impact of Broadening the Tax Base



Source: A Staff calculations using UNU-WIDER Government Revenue Dataset (GDR)
Note: Small islands include Cabo Verde, Sao Tome and Principe.

Table 1. Union of the Comoros: Average Tax Rates for Selected Sensitive Products

Code SH	Labels	Average tax rate (%)							
		Custom duties	Consumption tax	RCI	FMG	AI	CCI	PT	Excise
	Food								
0206	Animal offal (beef, goat, etc.)	0.0	0.0	2.5	5.0	1.0	1.0	1.0	10.0
0207	Poultry meat and offal	0.0	0.0	2.5	5.0	1.0	1.0	1.0	10.0
04029910	Dairy products (milk, cream, etc.)	0.0	0.0	2.5	5.0	1.0	1.0	1.0	10.0
07	Vegetables, roots, tubers	5.0	0.0	0.3	5.0	1.0	1.0	1.0	15.0
1101	Wheat or meslin flour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0
151620	Vegetable oil	5.0	10.0	2.5	5.0	1.0	1.0	1.0	5.0
1604	Canned sardines	11.3	10.0	1.5	5.0	1.0	1.0	1.0	10.4
1701	Sugar	0.0	0.0	2.2	5.0	1.0	1.0	1.0	10.0
220210	Water, non-alcoholic beverages	5.0	10.0	0.8	5.0	1.0	1.0	1.0	15.0
250100	Salt								
	Non-food	20.0	10.0	2.3	5.0	1.0	1.0	1.0	352.0
220300+220830	Alcohol	20.0	9.4	0.3	5.0	1.0	1.0	1.0	302.0
24	Tobacco	4.1	0.0	1.4	4.6	0.9	0.9	0.8	11.7
252329 + 252390	Ordinary or colored cement	0.0	5.0	1.9	0.0	0.0	0.0	1.0	15.0
271113	Butane	0.0	0.0	1.3	5.0	1.0	1.0	1.0	5.0
30	Pharmaceutical products	0.0	0.0	2.0	5.0	0.0	0.0	0.0	5.0

Source: Staff calculation using customs data for 2024.