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CAMEROON

SELECTED ISSUES

December 7, 2023

Approved By
African Department

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ANNEX

STRUCTURAL TRANSFORMATION AND EXPORT DIVERSIFICATION[1]

Abstract. *Cameroonian authorities aim for the structural transformation of the economy and export diversification because of their well-known benefits. They intend to achieve this objective through import substitution policy. However, empirical literature points out that horizontal policies, such as investments in human capital and infrastructure and governance improvement, are not only the most effective to foster structural transformation and export diversification, but also a necessary condition for the success of any industrial policy. Therefore, it is advisable that the authorities concentrate efforts on those areas as a priority because the country's related performance has substantial deficits.*

A. Introduction

1. Economic structural transformation and export diversification yield many benefits. Numerous studies have documented that economic diversification protects against volatility in production and in export earnings, which is in turn associated with stronger sustained output growth for developing countries (Hausmann et al., 2007; McIntyre et al., 2018; UNCTAD, 2018). Consequently, structural transformation and export diversification can also improve the government's net position and overall debt sustainability.

2. Structural transformation and export diversification reinforce each other. On the one hand, economic diversification to higher value-added products is a necessary condition for export diversification. Export diversification into new products and services also fosters production diversification by generating positive externalities on the rest of the economy as export-oriented sectors gain lessons from foreign purchasers and get exposure to international competition. IMF REO 2017 found that the introduction of new product lines and a more balanced mix of products are both significantly related to exports, with a stronger link at lower levels of economic development. This suggests that low-income countries may benefit proportionately more not only from expanding trade in existing sectors but also from tapping new sectors.

3. Structural transformation of the economy and diversification of exports are key development priorities for Cameroon. In the national development strategy for 2020-30 (SND30), Cameroon wants to become a newly industrialized country by increasing the Manufacturing Value Added (MVA) from 14.5 percent in 2017 to 25 percent in 2030 and the share of manufacturing exports to 54.5 percent by 2030. The industrial development strategy integrates the Industrialization Master Plan (IMP), adopted in 2016, which seeks to make Cameroon the switch (electricity supplier), the feeder (supplier of agro-industrial produce) and the equipment manufacturer (supplier of capital goods including furniture) of the Economic Community of Central African States (ECCAS) and Nigeria. It aims to achieve this through promoting manufacturing and technological catch-up. The industrial strategy focuses on ten key industrial sub-sectors: energy, agribusiness, digital technology, forestry and wood processing, textiles, mining, metallurgy and ironworking, hydrocarbons, refining

[1] Prepared by Idossou Marius Adom and Nicholas Staines (IMF).

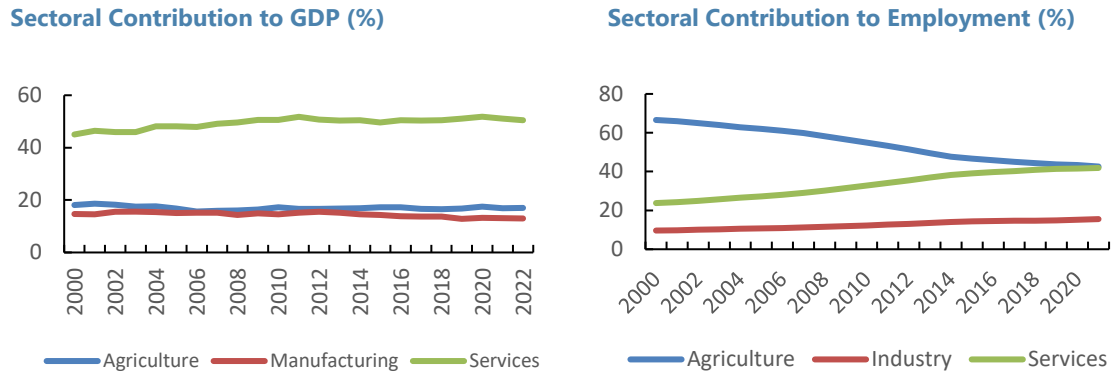
and petrochemicals, chemicals and pharmaceuticals, construction and related services, and non-financial services. In addition to industrial services, the development of industry will be accompanied by non-financial services. To achieve this goal, the NDS30 embraces an import substitution agenda; aims to set up a dedicated agency supporting national champions in priority sectors and create special economic zones (SEZs).

The rest of the paper is structured as follows. Section B gives an overview of the structure of the Cameroonian economy and its exports. Section C reviews the determinants of structural transformation and exports diversification from the literature while section D assesses the situation of these determinants in Cameroon. Finally, section E makes some policy recommendations before section F concludes.

B. Employment, Production, and Export Structure in Cameroon

4. The manufacturing share of employment has increased slightly in the last two decades in Cameroon, but its contribution to GDP has remained persistently low. The economy is shifting more and more to services. The manufacturing share of real GDP in Cameroon has remained almost constant around 15 percent between 2000 and 2012 and decreased after to less than 13 percent in 2022. On the other hand, the manufacturing share of employment slowly increased from 9.6 percent in 2000 to 15.5 percent in 2022 (Text Figure 1). While the GDP share of agriculture also moved only slightly from 18.1 percent in 2000 to 16.9 percent in 2022, its employment share has decreased significantly by 22 percentage points in the same period. Thus, employment shifted mostly to the services sector which grew by more than 18 percentage points in terms of employment share and 5.4 percentage points in terms of GDP share. The GDP share of services is more than 50 percent in 2022.

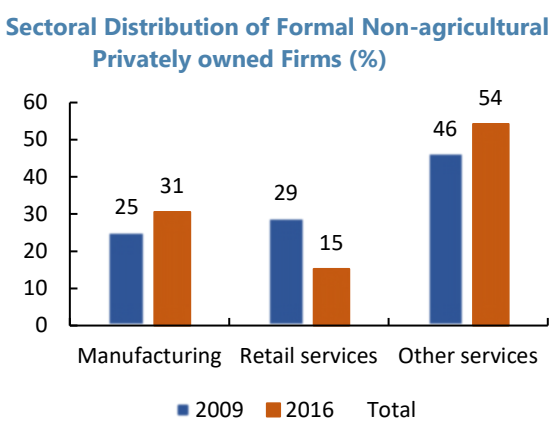
Figure 1. Cameroon: Sectoral Contributions to GDP and Employment



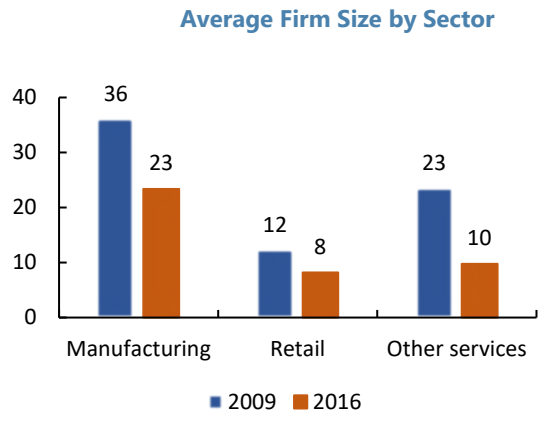
Source: WDI and authors' calculations.

5. The proportion of manufacturing in formal firms has increased, but firms have shrunk on average in all sectors. The data of Text Figure 2 show that the proportion of retail in formal non-agricultural privately-owned firms decreased from 28.8 percent in 2009 to 15.2 percent in 2016. In the same period the proportion of manufacturing firms increased from 25 percent to 30.5 percent. However, the average size of firms as measured by the number of full-time employees shrunk in all sectors. In manufacturing, it fell from 36 in 2009 to 23.6 in 2016. In fact, Text Table 1 shows that the overall distribution of firm size has shifted to the left in all sectors. Nevertheless, manufacturing firms are on average three times bigger than retail firms and two times bigger than other services firms.

Figure 2. Cameroon: Sectoral Distribution of Firms and Firm Size



Source: Anaclet Désiré DZOSSA (2014) based on INS/EESI1&2



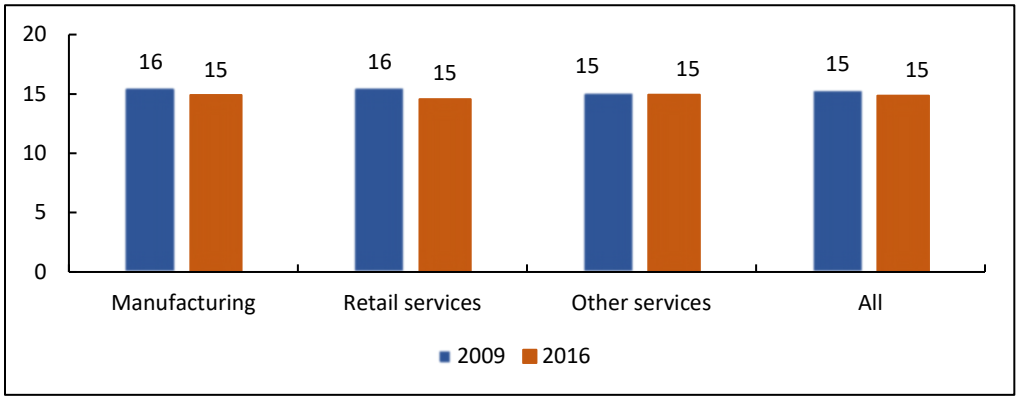
Source: WDI and authors' calculations

Table 1. Cameroon: Firm Size Distribution

	Avg.	Min	Q1	Median	Q3	Max
Manufacturing						
2009	35.96	2	7	21	60	3000
2016	23.4	1	5	9	25	1500
Retail						
2009	12.22	1	6	8	21	150
2016	8.21	1	5	6	12	120
Other services						
2009	23.37	2	7	15	25	5000
2016	9.77	1	5	7	15	300

6. Firms' productivity has remained overall stagnant on average in all sectors between 2009 and 2016 and has been virtually equal across sectors. Text Figure 3 shows that productivity of Cameroonian formal firms as measured by sales per employee is virtually equal on average across all sectors. In addition, it has been stagnant in all sectors over these seven years. If anything, it slightly fell in all sectors.

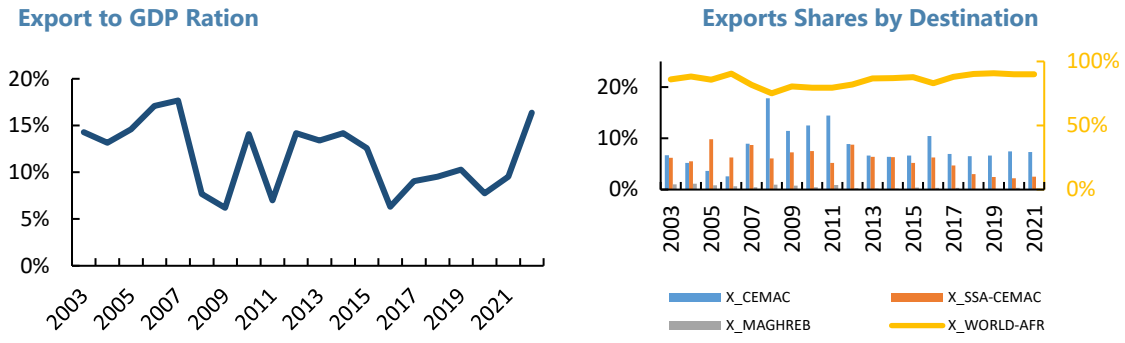
Figure 3. Cameroon: Log of Sales per Employee by Sector



Source: WBES and authors' calculations.

7. Exports are relatively low and mainly directed to international markets outside Africa. Between 2003 and 2018, the average exports to GDP ratio is 11.8 percent with an historical peak of 17 percent in 2006-2007. In general, Cameroon's exports value fluctuates with the price of oil and/or raw materials. The last trend shows an improvement due to economic recovery from the COVID-19 pandemic and positive windfall of oil price. As regards to the destination of exports, between 2003 and 2021, on average 85 percent of the Cameroon's exports landed on global markets outside Africa, 8 percent in the CEMAC area, and 5.8 percent in the rest of Sub-Saharan Africa (SSA).

Figure 4. Cameroon: Exports and Export Destinations



Source: ITC and authors' calculations.

8. Cameroon's exports comprise mainly mineral and fuel (43,15 percent), processed food (18,6 percent), fiber, textile, wood, hide and feather (15.2 percent) and agricultural products (9.2 percent). The overall exports of Cameroon are dominated by fuel and minerals because the country is rich in underground resources. Its agroindustry is responsible for the second larger group of exported products. Historically, the relative share of processed food in the country's exports has reached 30 to 40 percent in 2009, 2011 and 2016, years of export troughs due to crises and fuel price slack on international markets. The country's exports to the CEMAC zone and to SSA since 2019 are more diversified towards processed food, chemical and pharmaceutical products, metal and glass, and furniture, machinery, and appliances.

9. In summary, Cameroon's labor force, production and exports are concentrated in low value-added products like raw commodities. The manufacturing sector is struggling to take off while services are continuously gaining more weight. To meet the challenge of industrialization, the country will need to act on the levers of the determinants of structural transformation.

C. The Determinants of Structural Transformation

10. Human capital and public infrastructure are the most effective drivers of industrialization. There is quasi-unanimity in the literature that good quality human capital and public infrastructure favor economic activity shift from low value-added raw commodity sectors to high value-added manufacturing and services (Hausmann et al., 2007; Cabral and Veiga, 2010; Harrison and Rodríguez-Clare, 2010; Zhu and Fu, 2013; Teng and Lo, 2019; Salinas, 2021). For example, Salinas (2021) found in a panel regression analysis that a one standard deviation increase in educational attainment is associated with a 170 percent increase in non-hydrocarbon/mineral exports while the return on infrastructure quality is 20 percent. Cabral and Veiga (2010) also found that increases in human capital in SSA countries promote both export diversification and export sophistication. As regards infrastructure, strengthening port and electricity infrastructure seems the most important among all infrastructure areas.

11. Good quality institutions and sound public governance are also powerful drivers of industrialization. Improved government effectiveness and controlled corruption seem particularly productive. Salinas (2021) found that a one standard deviation increase in governance is associated with a 65 percent increase in non-hydrocarbon/mineral exports. Many other studies found that institutional quality fosters economic diversification (Cabral and Veiga, 2010; Weldemicael, 2012; Zhu and Fu, 2013; Atasoy, 2020). But Hausman and Rodrik (2003) note that there are some counterexamples of economic success without horizontal policies such as South Korea and Taiwan Province of China since the early 1960s, China since the late 1970s, and India since the early 1980s. Conversely, many Latin American economies' response to the governance reforms has been slower than desired.

12. Industrial policy measures are justified theoretically in some circumstances to promote structural transformation but have poor success record empirically. Many countries, Cameroon included, pursue industrial policies by providing advantages in some specific sectors that they want to promote. On a theoretical ground, such practice is justified if the protected industry exhibits large externalities, the international price for this industry is higher than warranted by the

true opportunity cost of this good in the rest of the world (Harrison and Rodríguez-Clare, 2010) or if demand factors are very likely to create incentives for diversification towards less complex products (Freire, 2017). Empirically though, industrial policies have had limited success. According to Harrison and Rodríguez-Clare (2010), the empirical literature on FDI does not show evidence of horizontal spillovers, and benefits from vertical spillovers may not exceed the cost of FDI subsidies. More generally, sector-specific and industrial policies have a long and vast history of failures (Salinas, 2021). Important loopholes in industrial policy agendas are the often-inherent cost in terms of fiscal expenses and opportunities of rent seeking (Hausman and Rodrik, 2003). In summary, horizontal factors seem to be a necessary condition for the success of industrial policies. For Anand, Mishra and Spatafora (2012), an educated workforce, external liberalization, and good information flows are important prerequisites for developing sophisticated goods and services while Salinas (2021) thinks that countries cannot simply bypass the need to strengthen their horizontal institutional, educational, infrastructure, trade, and labor policy framework. In the same vein, Sen (2016) attributes the failure of structural transformation in several Asian countries to the failure of these horizontal factors.

13. Other determinants of structural transformation and export diversification include revenue, trade openness, digitalization (and information flows), FDI, R&D/technology adoption, access to credit. Hausman *et al.* (2007) found that GDP per capita is highly related to the exports of high-value goods while Atasoy (2020) found that exports get more sophisticated as digitalization promotes and Alessandria and Yi (2021) found that importation of inputs favors structural transformation.

D. Assessment of the Determinants of Structural Transformation in Cameroon

In this section, we describe how Cameroon performs on the identified factors that favor structural transformation and export diversification according to the literature.

14. Human capital. Cameroon benefits from high quality educational institutions, but the level of educational attainment is not sufficiently widespread nor adequately attuned to meet private sector needs. According to the World Bank Human Capital Index (2020), a child born in Cameroon today will be 40 percent as productive when she grows up as she could be if she enjoyed complete education and full health. This is slightly lower than the average for Sub-Saharan Africa region and lower than the average for lower middle-income countries. Between 2010 and 2020, the HCI value for Cameroon increased from 0.38 to 0.40. The country performs relatively better than the average SSA in terms of years of schooling. However, it scores relatively poorly in the test scores dimension that captures the actual learning (rather than mere attendance) in school.

15. Infrastructure and ICT. Despite large outlays on public investment, Cameroon's poor record on implementation has resulted in weak public economic infrastructure, including for electricity, water, telecommunication, roads, railways, port, and air facilities. Regional transport routes are a major impediment to trade and regional integration and a high priority for CEMAC institutions and member countries. This is a major impediment to private sector productivity, including for exports. Nevertheless, it is encouraging to note that there are several major

infrastructure projects going on, notably in the electricity sector. In the short to medium term, the completion of these projects can significantly improve the country's supply of electricity, provided that the related financial needs are met**.**

16. Institutions. Although Cameroon has a rich institutional structure that, despite security pressures, has maintained political and macroeconomic stability, the private sector and reviews of economic governance cite several areas where Cameroon's institutional environment could be strengthened to better meet private sector needs. Weaknesses include budget formulation and execution (especially with respect to timely domestic payments and public investment spending), property rights and the legal system, revenue administration, government regulations, and corruption.

17. Border administration. Cameroon's border administration efficiency improved recently, but additional efforts are needed. Border administration can significantly impact trade flows. The government has made efforts to improve border administration and the OECD Trade Facilitation Indicators (2022) rates Cameroon's border administration well compared to the sub-Saharan region. The OECD reports improvement since 2019 in the areas of internal border agency co-operation, external border agency co-operation, governance, and impartiality. The OECD's assessment of trade facilitation measures on bilateral trade flows and trade costs shows that reforms with the greatest benefit are in the areas of formalities, governance and impartiality, information availability, involvement of the trade community, advance rulings, and appeal procedures. Considering the potential to increase trade flows and reduce costs of these policy areas, Cameroon would benefit from continued improvements in the availability of information, advance information on future rulings, ease the burden of documentation, advance automation, and risk management procedures.

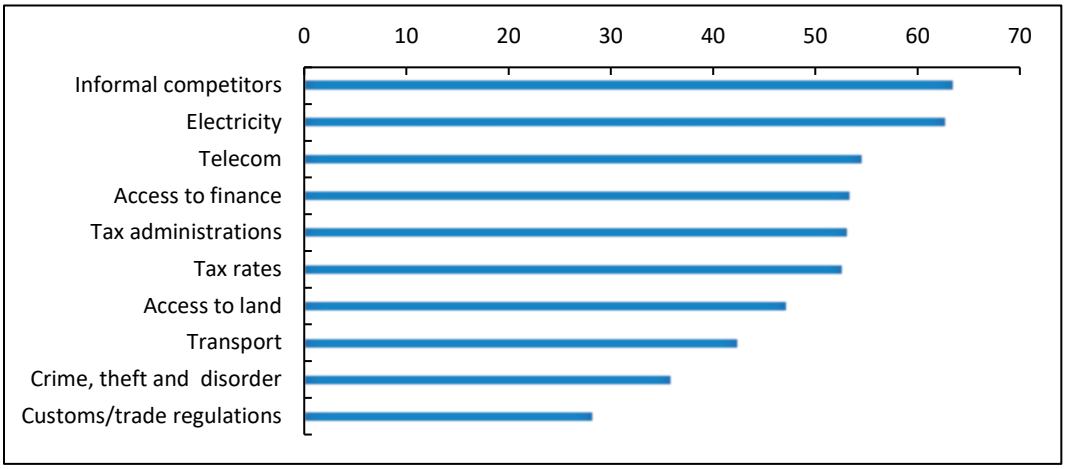
18. Financial markets. Inadequate access to financing is a major impediment for business. It partly reflects banks' heavy exposure to the state, but also is the outcome of a poor legal environment for property rights and collecting debt obligations. Recently, the government has put in place a guarantee fund of CFAF 200 billion to facilitate the SMEs' access to commercial bank loans. Efforts should be pursued in this sense.

19. Business dynamism, innovation, and product market. Cameroon's labor market is flexible, but product markets are heavily regulated either formally or informally. The weight of public institutions and market control does not make for an inviting entrepreneurial environment. Product market flexibility is hampered by the control of prices for key items, whether subsidized by the state or indirectly by business. An important consequence of the tax and regulatory environment is that a large portion of the businesses community remains in the informal sector.[2]

[2] A vast literature has delved into informality and tends to agree that its causes are multiple and multiform. They include regulations, but also poor productivity of entrepreneurs, lack of access to finance, lack of enforcement and self-exclusion as result of poor public governance. Another factor that is relevant in the case of Cameroon is fuel subsidies. Indeed, the informal sector also benefits from fuel and energy subsidies that are financed by taxes on the formal sector (Bento et al., 2018).

20. In summary, Cameroon has recently made some progress on the determinants of structural transformation. But the remaining significant challenges are still representative of the latest data of the World Bank enterprise surveys dated back in 2016 on Text Figure 5.

Figure 5. Cameroon: Proportion of Manufacturing Firms that Report Factors as Major or Very Severe Obstacle to Operating Business



Source: WBES and authors' calculations

E. Policy Recommendations

21. To achieve its goals of structural transformation and export diversification, Cameroon will need to effectively address the identified challenges related to the structural factors. Because they constitute the basis of a healthy economic environment in which firms can innovate and grow, these institutional and governance requirements constitute a necessary condition for economic development. In this area, the focus can be on the following.

22. Institutions. The country needs to significantly improve its overall governance, strengthen the institutional environment, and better meet the private sector needs. The priority in this area should be to achieve nation-wide sustainable peace and political stability. There is also a need to undercut corruption, improve the functioning of the legal system, improve budget formulation and execution, especially with respect to timely domestic payments and public investment spending.

23. Infrastructure and ICT. Improve public investment efficiency and increase infrastructure in electricity, telecommunication, and roads. The country can first improve its public investment implementation records by taking measures to foster public spending efficiency in this area. Then efforts should be pursued to build more quality infrastructures, such as roads, telecommunication, and electricity and water facilities. The country can leverage its natural endowments to embrace and promote renewable energy sources in this process.

24. Human capital. Improve human capital by enhancing learning in schools and aligning the training curricula to the private sector needs. Human capital in Cameroon can be significantly

improved. Efforts should continue to support school attendance; but the country needs to specifically improve the quality of learning in the schools and ensure the adequacy of the training to the needs of the private sector. Given the critical mass of informality, there should also be emphasis on entrepreneurial skills training.

25. Product and labor markets. In this area, it is advisable to remove regulations that hinder competition among firms, allow more market flexibility and encourage more formalization of existing firms. Formalization incentives crosscut various policy reforms including improving access to finance, improving tax administration efficiency, improving governance, and simplifying tax requirements and procedures for firms. It will also involve informality enforcement.

26. Business dynamism and innovation. Decreasing the weight of public institutions and market control can improve the entrepreneurial environment and favor creativity and innovation.

27. Promote measures that facilitate access to finance. In general, improving credit history and financial record at micro-levels helps financial institutions measure the risk inherent to borrowing and screen potential clients. Therefore, it can improve access to credit. In Cameroon where the banking participation is low, the government should promote competition among banks and nonbank financial actors, including mobile money service providers. To accompany the government's ongoing effort to provide guarantee fund for the benefit of SMEs, the country can also learn from others that have taken such actions to facilitate access to credit for companies.

28. Improve tax administration and customs efficiency and simplify tax codes. The goal here should be removing red tape, bribery, and any other administrative bottlenecks. Digitalization of payments and procedures can help in this area. Digitalization in Benin and Rwanda are good experiences that Cameroon can leverage.

29. Promote regional trade. The African Continental Free Trade Agreement (AfCFTA) is a welcome initiative to leverage.

F. Conclusion

30. This paper analyzes the challenges of economic structural transformation and export diversification. Despite a longstanding objective of the country to industrialize, its manufacturing has been persistently sluggish, and its exports were concentrated in minerals, fuel, and raw commodities in less diversified destinations outside Africa. The obstacles to address range from economy-wide structural and institutional deficits to market failures and strategic choices.

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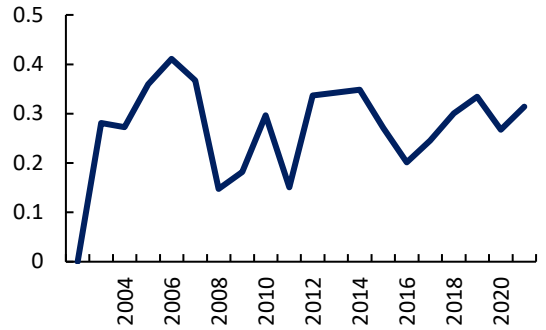
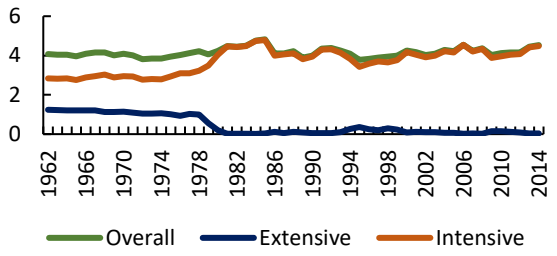
Annex I. Export Concentration in Cameroon

Figure 1. Cameroon: Export Concentration HHI



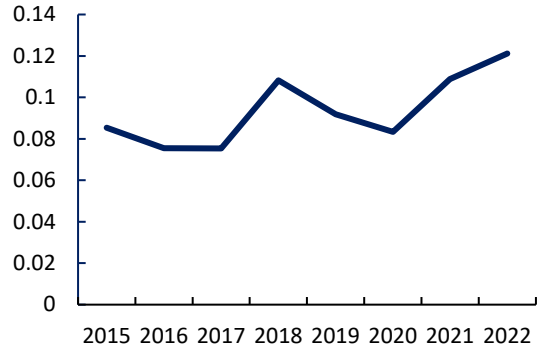
Source: ITC and authors' calculations

Figure 2. Cameroon: Export Concentration Theil Index



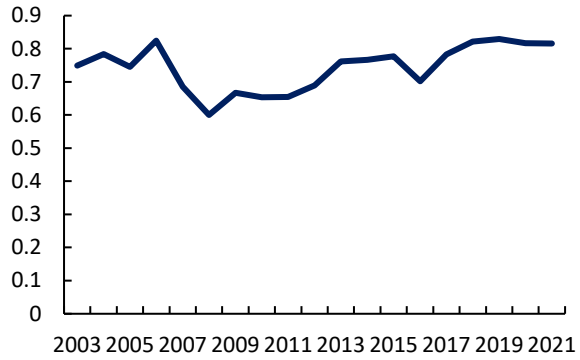
Source: IMF export diversification index and authors

Figure 3. Cameroon: Export Country Concentration HH



Source: Authorities data and authors' calculations

Figure 4. Cameroon: Export Region Concentration HHI



Source: ITC and authors' calculations

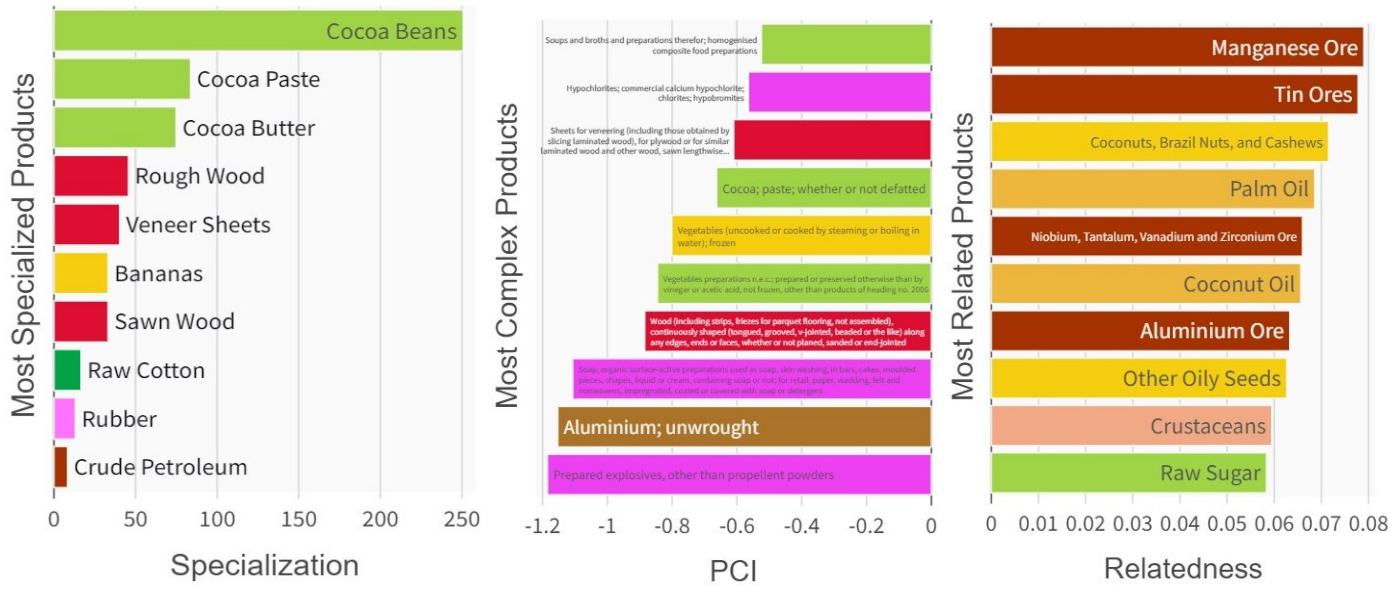
Specialization, complexity and relatedness.[1] Cameroon has a high level of specialization in Cocoa Beans, Cocoa Paste, Cocoa Butter, Rough Wood and Veneer Sheets.[2] The highest complexity exports of Cameroon according to the product complexity index (PCI) are Soups and broths and preparations thereof; homogenized composite food preparations (-0.52), Hypochlorites; commercial calcium hypochlorite; chlorites; hypobromites, Sheets for veneering (including those obtained by slicing laminated wood), for plywood, Cocoa; paste; whether or not defatted, and Vegetables

[1] Data and graphics related to this are taken from the OEC at https://oec.world/en/profile/country/cmr

[2] Revealed Comparative Advantage Index measures specialization by taking the ratio between Cameroon observed and expected exports in each product. The RCA index of country I for product j is often measured by the product's share in the country's exports in relation to its share in world trade: RCAij = (xij/Xit) / (xwj/Xwt). A value of less than unity implies that the country has a revealed comparative disadvantage in the product. Similarly, if the index exceeds unity, the country is said to have a revealed comparative advantage in the product.

(uncooked or cooked by steaming or boiling in water); frozen.[3] The top export opportunities for Cameroon according to the relatedness index, were Manganese Ore, Tin Ores, Coconuts, Brazil Nuts, and Cashews, Palm Oil, and Niobium, Tantalum, Vanadium and Zirconium Ore.[4]

Figure 6. Cameroon: Revealed Comparative Advantage, Complexity, and Relatedness.



[3] PCI measures the knowledge intensity of a product by considering the knowledge intensity of its exporters.

[4] Relatedness measures the distance between a country's current exports and each product.

Figure 7. Cameroon: Structure of Exports to the world

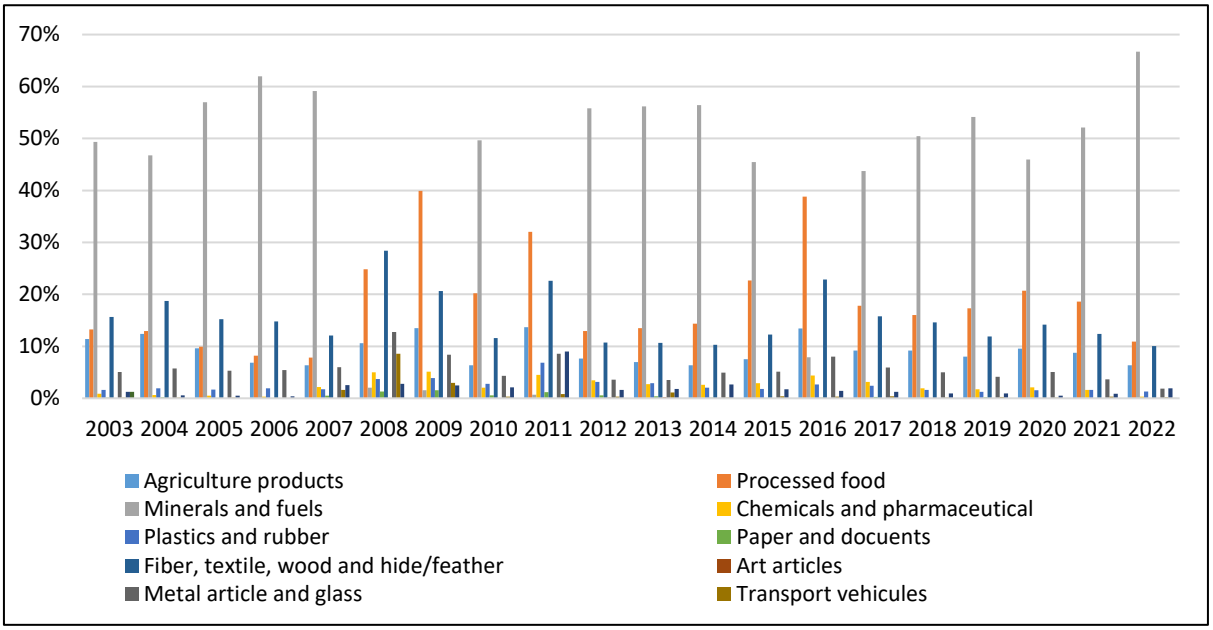


Figure 8. Cameroon: Structure of Exports to the CEMAC

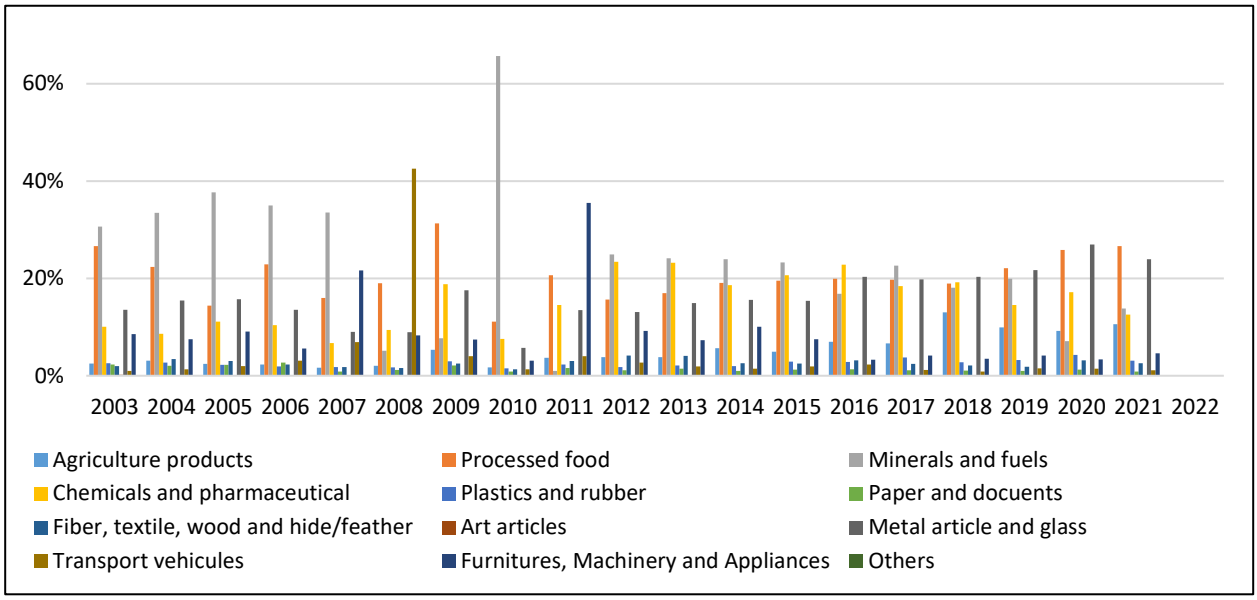


Figure 9. Cameroon: Structure of Export to Sub-Saharan Africa Except CEMAC

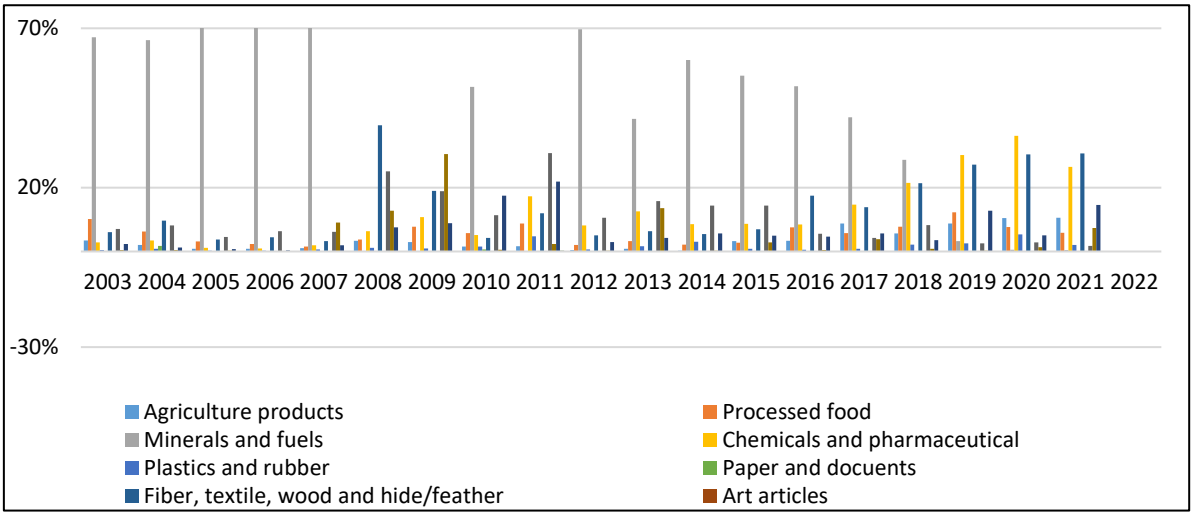
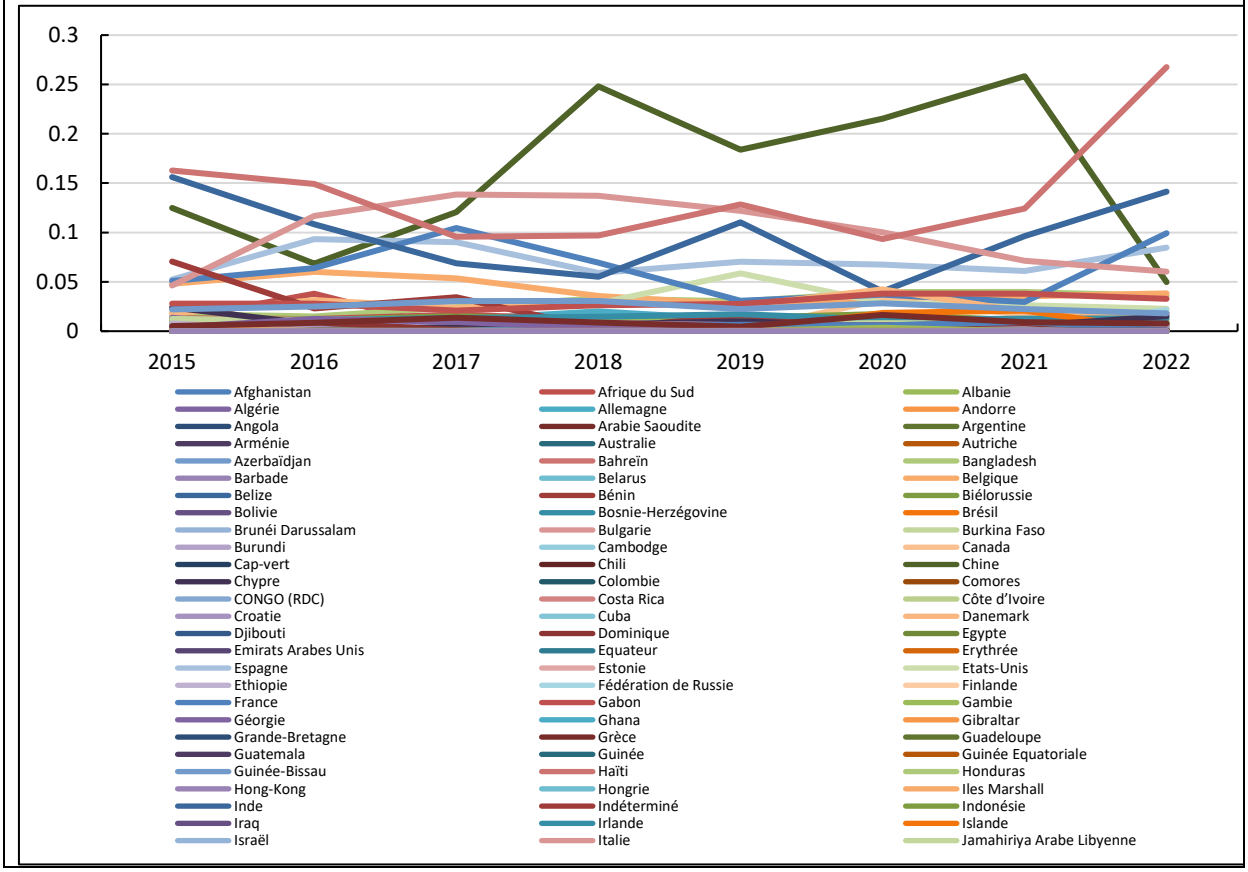


Figure 10. Cameroon: Exports by Destination Country



INDUSTRIAL POLICY IN CAMEROON[1]

A. Introduction

1. Cameroon is a gateway country in central Africa and a commodity driven economy. The oil sector has historically played a dominant role, and there are substantial untapped mineral resources. Additionally, the nation's economic landscape is supported by the export of agricultural commodities, with a notable focus on cocoa, coffee, cotton, and bananas. To mitigate the impact of global commodity price fluctuations and enhance macroeconomic stability, it is imperative for Cameroon to foster economic resilience through diversification strategies.

2. To promote high and sustained growth and diversification, the country has put industrial policy (IP) at the center of its development strategy. The authorities build their IP mainly around import substitution policy to support domestic production of consumer goods, while working on addressing infrastructure gaps and institutional deficiencies. Over the longer term, the authorities aspire to expand domestic production, enable local producers to compete globally, and improve export performance. Thus, the current emphasis on import substitution is portrayed by the authorities as a transitional phase toward an export-oriented strategy. Additionally, certain measures promoting export have also been implemented.

3. Globally, there has been a renewed interest in IP among policy makers who are driven by both economic and non-economic considerations. While debates surrounding the efficacy of IP persist, recent developments indicate a notable increase in its use, especially since 2018. Recent literature, including works by Juhász et al. (2023a, 2023b) and Cherif & Hasanov (2019), provide a more nuanced understanding of IP and its effectiveness. The objectives or motives driving IPs have varied between traditional economic diversification, job creation, technological progress and addressing market failures, and climate change, supply chain resilience and national security. Notably, there has been a resurgence of import-substitution-related IPs.[2]

4. The paper is organized as follows. Section B defines and introduces the framework of IPs. Section C analyzes the Cameroon's IP strategy, its policy instruments, and implementation. Section D provides a discussion drawing on empirical lessons from other countries. Section E concludes.

B. Understanding Industrial Policy

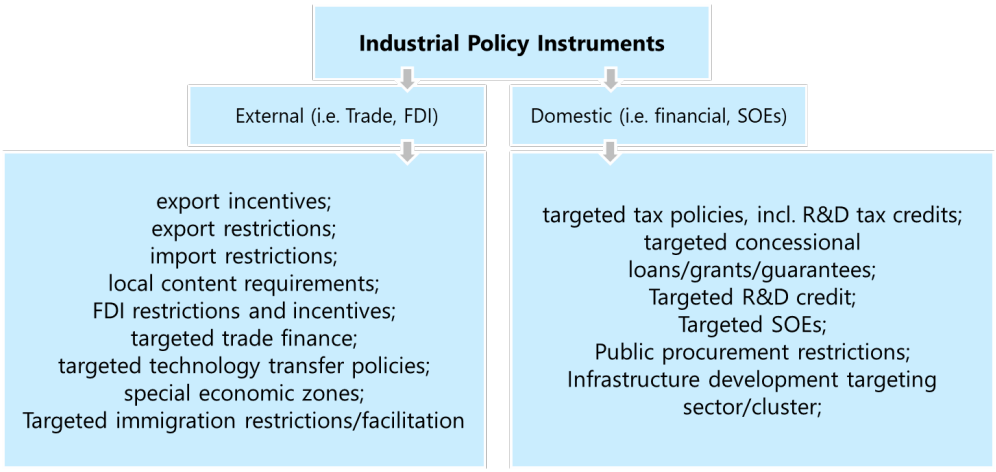
5. IP is defined as targeted government interventions to support domestic firms, industries, and economic activities to achieve certain national objectives. In essence, these interventions represent targeted state actions, often referred to as *vertical policies*. The term *horizontal policies* which pertain to enhancing the general business environment without specific targeting, is excluded from this definition (IMF, 2023). Policy makers and scholars have rekindled their interest in recent decades in analyzing the role of the government in economic development.

[1] Prepared by Xianguo Huang and Asel Isakova with research assistance by Kaihao Cai.
[2] See, for example, Irwin, 2020.

These debates suggest a complex nature of the IP that needs to be understood in specific country contexts and warrants a more granular analysis of its policy instruments (Juhász et al, 2023b).

6. IP objectives and strategies have evolved in recent years. The traditional economic objectives of the IP aim at promoting growth, diversification, employment, and technological catch-up. While these motives continue to dominate, IP becomes increasingly driven by factors such as supply chain resilience, climate change, and national security. While there is a theoretical justification for industrial policies in the presence of market failures (IMF, 2023), their practical implementation often faces challenges related to information asymmetry and rent-seeking. The use of policy instruments is determined by the chosen IP strategy that could be classified either as trade-related, encompassing export promotion and import substitution, or theme-driven, including down-streaming, achieving low carbon, and Industry 4.0 which digitize the manufacturing sector driven by smart machines.

Figure 1. IP Instruments



Source: IMF, 2023.

7. A given IP strategy should be consistent with IP objectives and rely on specific IP instruments that would determine its cost and effectiveness. The effectiveness of different instruments in achieving IP objectives may vary. For example, Aghion et al. (2015) show that subsidies and tax holidays enhance productivity more effectively in competitive sectors than other instruments.

8. IP instruments can be classified as related to external trade or domestic growth (non-trade) consideration (Text Figure 1). External instruments are designed to boost domestic exports or limit imports of foreign goods. Export-oriented measures include tax-based export incentives, trade finance mechanisms, and export subsidies. Import restrictions may take the form of quotas, sanitary or phytosanitary conditions, technical trade barriers, or import monitoring. Other external measures comprise local content requirements, trade facilitation initiatives, trade-related investment

measures, and the establishment of Special Economic Zones (SEZ). On the domestic front, IP instruments focus on industrial sector growth, with no explicit concerns about international trade and investment. Financial support, a core non-trade measure, seeks to stimulate sector or firm activities through subsidies, grants, tax exemptions or reductions, low-interest loans, loan guarantees, equity participation from state capital, and other incentives.

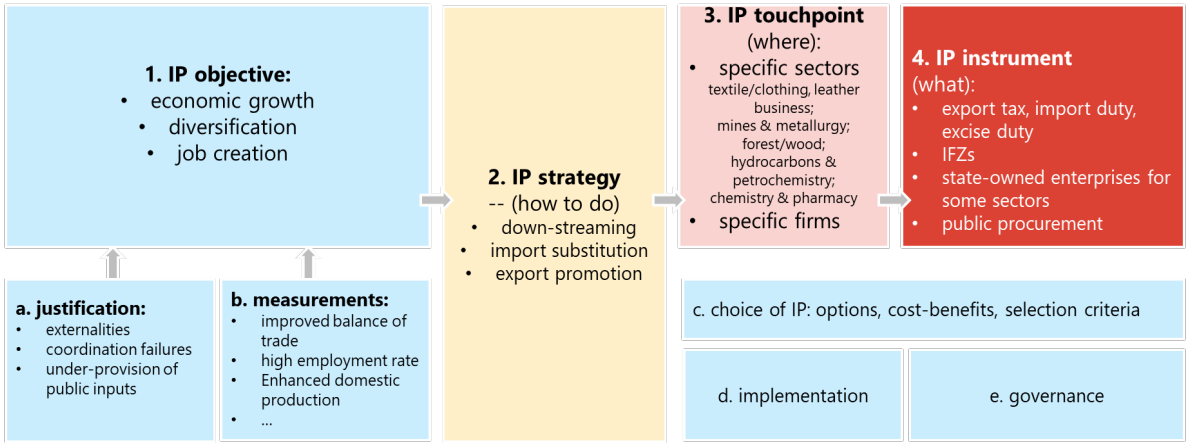
C. Industrial Policy in Cameroon

IP Objective and Strategy

9. Industrial policy in Cameroon is mainly driven by economic objectives. To achieve economic growth by enhancing domestic production, diversifying the economic base, creating jobs, Cameroon's IP targets improved external balance and higher employment. While the design and implementation of the national IP are predominantly driven by economic objectives, it does not preclude the consideration of non-economic concerns, including strategic independence and regional development, in its formulation.

10. The focal point of Cameroon's IP strategy comprises a blend of import substitution and export promotion, with an emphasis on developing downstream industries. The selection of targeted sectors aligns with the priority sectors outlined in the National Development Strategy (NDS30) and is grounded in the perceived comparative advantages of the country, such as a robust agricultural base and abundant natural resources. The authorities aim to rejuvenate industrial and manufacturing production by promoting import substitution, with a focus on scaling up output in priority sectors like agriculture, livestock, fishing, and processed wood. Policies designed to achieve these objectives employ a down-streaming strategy, discouraging the export of unprocessed materials and encouraging local processing. In practice, while export promotion is also an objective, policy priorities lean towards import substitution.

Figure 2. Cameroon: A Conceptual and Analytical Framework of IP



Source: IMF staff.

IP Instruments

11. A combination of IP instruments has been employed to pursue economic diversification via import substitution and export promotion. The authorities have utilized direct subsidies, tax incentives, and various tax and customs-related measures to encourage domestic production and transition away from raw material production. These IP instruments involve either fiscal expenditures or influence the price structure. The government has also implemented more focused measures to attract Foreign Direct Investment (FDI) and promote exports, such as the establishment of Industrial Free Zones (IFZ). These zones offer commercial exemptions, tax concessions, and other incentives to attract export-oriented sectors, including processing businesses. sector-specific State-Owned Enterprises (SOE) have been directly targeted through subsidies, often accompanied by administrative guidance, with a strategic aim—either the provision of public inputs or the implementation of downstream activities. A detailed discussion of these IP instruments is provided below.

Instrument 1: Increasing Tax to Discourage (Putting Sand in the Wheels)

12. Disincentivizing exports of raw commodities through exit export duties and direct export bans. To encourage exports of processed goods rather than raw materials, the government uses export duties on agricultural commodities and raw wood. According to Law No. 2016/004, Cameroon can prohibit exports of certain goods to support local market supply. For example, the ban was applied to exports of cement and some food items in April 2022.[3] In 2023, the government introduced an export duty on exports of raw cocoa beans,[4] increased export duty for raw log,[5] and on timber to incentivize local "advanced transformation" of this wood. There have also been continued discussions of imposing export ban of raw log—a regional CEMAC initiative—initially planned to be effective from January 2022 in CEMAC countries and is expected to come into force in 2026 in Cameroon.

13. Incentivizing local processing and production via higher import cost by using special excise duty is also in place.[6] The 2019 Budget Law introduced supplementary excise duties specifically on beverages. In 2023, the government elevated excises on imported tobacco products, beverages, and certain processed food items. Additionally, an excise duty was imposed on the

[3] On 22 April 2022, the Ministry of Commerce suspended exports of wheat flour, rice, vegetable oil, and other nationally produced cereals, to address the concerns of domestic shortages.

[4] Before 2023, export duties have been levied on green coffee exports (75 FCAF/kg) but set at zero on roasted and soluble coffee exports.

[5] Export duty on raw log has increased progressively from 17.5 percent in 2017 to 60 percent in 2023.

[6] As a member of the Central African Economic and Monetary Community (CEMAC), it imposes a common external tariff (CET) on goods from outside CEMAC. The CET often consists of four bands: 5 percent for basic necessities, 10 percent for raw materials and capital goods, 20 percent for intermediate goods, and 30 percent for consumer goods. According to the WTO Trade Policy Review 2023, the list of exemptions from CET was not available.

imports of selected paper and plastic articles, as well as packaging materials associated with certain processed food items.[5]

Instrument 2: Reducing Tax to Incentivize (Grease the Wheels)

14. Tax and other incentives have been applied to attract investments associated with targeted economic activities. The 2013 Investment law provides a list of incentives including exemptions from taxes and duties, including VAT and corporate taxes, up to 5-10 years, and financial and administrative incentives.[6] The law does not discriminate based on investor origin, but establishes eligibility criteria that reflect the policy's intention of targeted intervention. These criteria include the number of local staff, the export share of produced goods, utilization of natural resources, and value-added components. The law also highlights specific priority sectors where additional incentives can be applied.

Instrument 3: IFZ (Special Treatment)

15. A package of IFZ incentives and facilitations is also key IP instrument, in order to attract targeted FDI and promote exports. These IFZs in Cameroon are designed to create favorable conditions for businesses by offering incentives, simplified regulatory procedures, and infrastructure support.[7] The key incentives through IFZs serve as a pull force to enterprises to develop the targeted sectors either to promote exports or substitute imports. Under the 1990 Parliament Ordinance N° 90/001, enterprises exporting at least 80 percent of their products are granted extensive fiscal, regulatory, and customs benefits. In terms of trade, these enterprises are free from license and quota limitations on both imports and exports and are not bound by price or profit margin regulations. Tax-wise, they enjoy a full exemption from taxes and duties for 10 years. After this period, a flat rate of 15 percent profit tax applies, with the provision to carry over losses during the initial ten-year tax relief. Financially, these businesses can maintain foreign-currency accounts and face no barriers in repatriating profits. Additional benefits encompass trade and labor advantages, along with prioritized access and favorable rates for electricity and port services.

[5] The products include mustards and other preparations for tomatoes or for sauces, soups, broths, condiments, and seasonings, composed or homogenized.

[6] Law N° 2013/004 of 18 April 2013 to lay down private investment incentives in the Republic of Cameroon.

[7] IFZs have been built in Cameroon over the past decades, based on the idea of economic zone. The National Office for Industrial Free Zones (NOIFZ) is the main body to supervise and administer the IFZ program in Cameroon. The Mission of Development and Management of Industrial Zones (MAGZI), supervised by the Ministry of Mines, Industry and Technological Development, is a state-owned industrial and commercial company, acting as a project manager on behalf of the government. Currently, there are a total 13 IFZs in nine regions under the management of MAGZI. There are three more IFZs in the plan of MAGZI, including those in Douala, Edea, and Minim Martap. In addition, companies could establish themselves as a special ZFI, the number of which reached 38 in 2022, according to WTO.

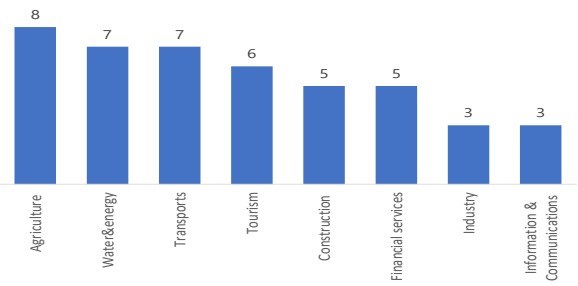
Instrument 4: Public Procurement (Demand Creation)

16. Implementation of demand-side instruments such as public procurement is constrained by supply. In 2018, a new Public Procurement Code (Decree No. 2018/366) and common rules applicable to public company contracts were adopted, emphasizing the incorporation of highly labor-intensive approaches in the procedures for awarding and executing public contracts. As outlined in NDS30, Cameroonian authorities aspire to elevate the share of public procurement for locally produced goods and services to a minimum of 60 percent, bolstering domestic sectors and employment.

Instrument 5: SOEs (Playing in the Field)

17. SOEs play a critical role in building targeted infrastructure providing essential goods and services and directly operating in specific industries. In Cameroon, SOEs are present across sectors including energy, agriculture, mining, financial, and services sectors, with the total assets at about 20 percent of GDP in 2020. The SOEs in industries, agriculture, and transport accounted for the majority in terms of firm number (Text Figure 3). The agricultural SOEs are the biggest employer among SOEs.

Figure 3. Cameroon: Number of SOEs



Source: IMF staff.

Implementation

18. The down-streaming strategy in the agricultural and forestry sectors aims at increasing the share of processed exports. A mixture of high export duties on raw materials and high import duties on finished products has been widely used in agriculture, in particular, for such commodities as coffee, cocoa, sugar, rubber, and cotton, or in forestry. There has been a gradual increase in exported value-added in cocoa and wood, such as the exports of local processed goods including cocoa butter and paste, as well as swan wood and veneer sheets (Text Figures 4 and 5). Nevertheless, challenges persist, including high agricultural input prices (e.g., fertilizers), volatile international commodity prices, and a lack of supportive hard and soft infrastructure, such as transport and access to finance. The impact of these policies needs further examination.

Figure 4. Cameroon: Cocoa-related Exports

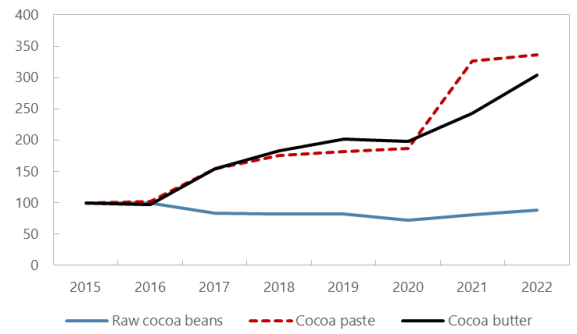
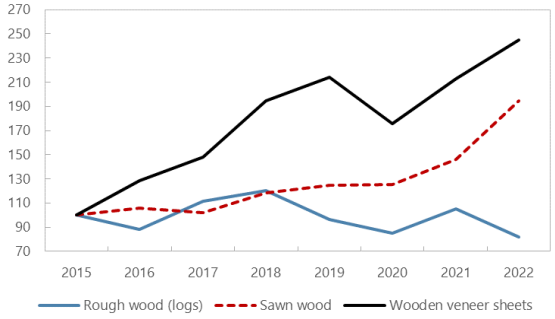


Figure 5. Cameroon: Wood-related Exports



Source: Cameroonian authorities; and IMF staff estimates.

19. Most IFZs lack economies of scale and have a limited spillover on the broader economy. While IFZs have been provided with better infrastructure such as roads, electricity, and water supply, improvement in broader infrastructure and proper quality maintenance are needed. Most IFZs are constrained by the size given difficulties with land access. The lack of availability of the local production capacity and skilled labor also limit the potential positive spillovers through labor and supply linkages. Compared to other countries where zone administrators could be private or based on public-private partnership, all the IFZs in Cameroon are managed by the government. Broader access to quality infrastructure beyond IFZs is also critical: continuous development and maintenance of the port facilities in Douala and Kribi are needed to ensure efficient trade activities. Stable road and rail connections are critical to operations of other zones which are away from ports. Meanwhile, the competition to provide more attractive concessions to attract investment in IFZs within the country and in the region has also put pressure on the sustainable development of these zones.

20. The implementation of public procurement is constrained by weak enforcement and other domestic factors. In sectors like pharmaceuticals, where local capacity for medicine production is limited, the proportion of medicines sourced from local producers stands at only 3.56 percent. This is notably lower than the African average of 11.69 percent and falls short of the 60 percent target outlined in NDS30 (MEPRD, 2022). Additionally, the enforcement of online procurement for selected projects has been lacking.

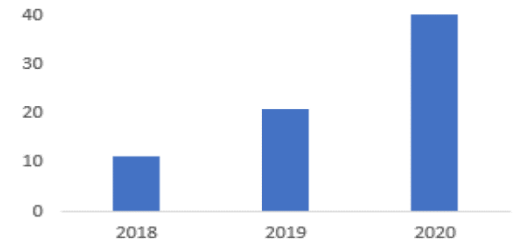
21. There is a growing number of SOEs that require budget support due to their weak performance. Such SOEs have relied on increasing direct state subsidies for operations and capital investment in the past few years.[8] Based on the study in a selected issue in IMF Article IV report 2021, the associated sectoral distortions are significant. Moreover, the restructuring of SOEs in financial and debt difficulties has experienced limited progress. For example, the restructuring of the

[8] Other forms of government SOE support include government recapitalizations, government guarantees for commercial loans, and by on-lending, and accumulation of fiscal arrears.

national oil refinery SONARA—one of the largest SOEs—that suffered a big fire in 2019, is still in its early stage.

22. The cross-border spillovers of these IPs are likely limited. In the CEMAC region, member countries are concurrently adopting similar IP strategies with a focus on import substitution. Consequently, spillover effects between countries may be contained, while the pace of implementation across specific sectors could bring varying results. Outward spillovers are likely negligible, as Cameroon's externally traded items are easily substitutable.

Figure 6. Cameroon: Direct Subsidies to SOE
(CFAF billion)



Source: IMF staff

D. Discussion

23. IP and import substitution have resurged in recent years driven by diverse motives. First, the global supply chain has proven vulnerable to shocks such as the Covid-19 pandemic. Nations heavily reliant on importing essential goods are actively seeking to diminish their dependence on such imports. Second, persistent geopolitical tensions, particularly between the US and China, have rendered imports of certain goods more costly and less reliable. Third, concerns related to economic security and resilience have driven a diversification of supply chains. While the use of IP is on the rise globally and there is empirical evidence supporting its effectiveness under specific conditions, there is a risk that these policies would lead to a less efficient global equilibrium.

24. Import substitution to achieve stronger economic growth and diversification historically has demonstrated less success compared to export orientation. While both strategies have their merits and drawbacks, export promotion targets a broader global market and seeks economies of scale in domestic production. Export orientation has proven to be a more sustainable and effective approach for long-term economic development (Cherif and Hasanov 2022; Irwin, 2021). As an outward-looking strategy, export promotion is more likely to contribute to efficiency, technological development, and skills improvement, aligning with contemporary empirical evidence of policy effectiveness (Juhász et al, 2023b). In the context of the Cameroonian economy, import substitution is seen by policymakers as a transitional step toward export orientation, and the current IP aims to incentivize domestic production in the short term. While import substitution may have merits initially (Adewale, 2017), it runs the risk of policy support overhang, and the domestic sector may struggle to compete internationally in the longer run without government support.

25. Safeguards are imperative for various IP instruments to prevent rent-seeking, ensure consistent implementation, and comply with international rules. Such safeguards include a robust institutional framework, thorough analysis of fiscal costs and risks, continuous monitoring, examination of potential effects on competition and spillovers into related sectors. Furthermore, external trade measures must adhere to WTO rules. Practices like export bans may potentially trigger retaliatory measures from other economies. A more sustainable strategy should be rooted in

efforts focused on technology innovation and cost-effective production, the development of a resilient Small and Medium-sized Enterprises (SMEs) sector, and attracting foreign investment.

26. Horizontal policies, grounded in broad-based structural reforms, are crucial for industrial development and economic transformation, particularly in low-income countries. While IP can be an effective tool for industrial development and structural transformation, as recent empirical evidence suggests, it requires strong government capacity and mechanisms to prevent rent-seeking and capture. In the absence of such prerequisites and an understanding of institutional differences, the role of IP should not be overstated. Instead, the focus should shift towards addressing structural bottlenecks through horizontal policies.[9] These policies concentrate on closing infrastructure gaps by enhancing the effectiveness of public investment and public-private partnerships, improving labor market efficiency, reducing informality, and developing human capital through quality vocational training aligned with industrial needs. Additionally, promoting financial deepening and inclusion is crucial for invigorating private sector and SMEs development, while emphasizing the creation of a level playing field for all market players and fostering competition.

E. Conclusion

27. Cameroon has positioned IP at the core of its development strategy. This emphasis on IP is primarily driven by traditional objectives, such as economic diversification, job creation, and growth. The authorities rely on the IP strategy that presents a blend of import substitution and export promotion, aiming at achieving the growth of domestic downstream industries. To achieve that goal, a combination of IP instruments has been deployed, including measures such as higher export and import duties, tax incentives and subsidies, building IFZ, public procurement, and state support to SOEs.

28. While current IP strategy presents an opportunity to upgrade domestic production, it faces challenges and comes at a cost. Tax and other incentives and increasing subsidies reduce fiscal revenues and increase spending in an already difficult economic context and given PFM weaknesses and cash management challenges (see Staff Report). SOEs' financial difficulties and slow pace of SOE restructuring have also weighed on the budget. There is a need to assess current fiscal incentives, their implementation and economic and budget impact. Infrastructure gaps and lack of skilled labor restrain development of IFZs, and their impact on economic growth has thus been limited.

29. Country experience shows that IP implementation should be supported by broader institutional reforms. Strengthening institutional framework and government capacity are essential for an effective IP execution. Cameroon's strategy would benefit from a stronger focus on horizontal policies that would support a broader economy and the private sector via more efficient infrastructure, reforms to improve business environment, and a robust institutional setup.

[9] Such polices refer to those applying broadly across various sectors of the economy, without favoring any specific sector, firm or type of economic activities, creating supportive environment for business to grow, spanning from taxation, infrastructure, finance and regulatory frameworks.

30. Monitoring and evaluation of the national IP, its instruments, and economic impact is critical. Currently, there is limited data and information to assess the IP measures in place in Cameroon. Lack of monitoring prevents a detailed cost-benefit analysis of the chosen instruments. Going forward, assessment of the economic impact of various measures and their associated costs would be important.

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CLIMATE CHANGE IN CAMEROON: KEY CHALLENGES AND REFORM PRIORITIES[1]

A. Outline

1. Climate change is an imminent threat to the people and the economy of Cameroon. It is expected to result in significant output losses, exacerbate poverty and inequality, food insecurity and conflict risk, leading to increased population displacement. Climate-related losses in output would impede export capacity, and may increase imports either to cope with food, sanitation and health needs during crises or to invest in rebuilding after crises. Therefore, climate change will also increase balance of payments needs and require fiscal space. Social and economic impact would affect human capital accumulation, jeopardize development, and hinder inclusive growth.

2. Cameroon needs to step up both its adaptation and mitigation efforts. World Bank Climate Change and Development Report (CCDR) estimates that Cameroon will incur GDP loss ranging from 4 to 10 percent in the most pessimistic scenario by 2050 due to climate change if no adaptation action is taken. Cameroon is vulnerable to climate change and natural disasters, in particular, through its impact on human capital and economic sectors such as agriculture and infrastructure. Being a hydrocarbon producer and exporter, the country should also advance its mitigation efforts and reforms to further energy transition, as the global low carbon transition could lead to spillovers risks, including to the country's financial stability.

3. Advancing climate agenda has been slow due to weaknesses in the institutional and policy framework for climate change. There is still a lack of a comprehensive legal and regulatory framework governing climate reforms. Climate considerations are yet to be effectively integrated in the Public Financial Management (PFM) framework, including in fiscal planning and public investment management. The government also faces capacity constraints and lacks an effective coordination mechanism; it is yet to operationalize its institutional and governance frameworks to respond to climate challenges.

4. Mobilizing climate finance is a serious challenge for the authorities. In the near term, the main source of climate-related financing will likely remain donor financing. Going forward, Cameroon needs to develop its capital markets to harvest the potential private funding for climate investments and engage the private sector in supporting its climate agenda.

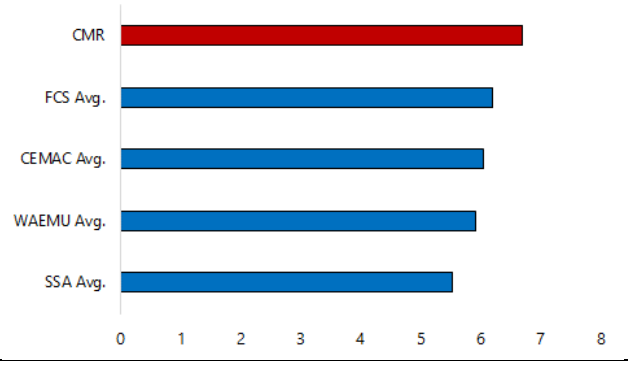
The rest of the note is structured as follows. Section 2 presents the context in Cameroon. Section 3 identifies key challenges related to climate change and priority reform areas.

[1] Prepared by Idossou Adom, Kaihao Cai, Asel Isakova and Balazs Stadler (AFR).

B. Context

5. Cameroon is ranked 16th most vulnerable to impacts of climate change globally (Text Figure 1).[2] Climate hazards are getting more severe in Cameroon. Temperatures are getting progressively warmer, with the temperature increase especially pronounced in recent years (Text Figure 2), and this trend is projected to continue. While precipitation projections are less certain, models predict an increase in the number of heavy precipitation days.[3] Extreme weather events, such as droughts and floods, are increasingly reported – with the number of recorded events doubling in the past three decades (Text Figure 3).[4] These changes have a significant impact on the society and the economy, causing both immediate damages and long-term output losses. Climate change is projected to cause a GDP loss between 4 to 10 percent by 2050, with larger output losses in the most pessimistic scenario and if no adaptation action is taken- according to the World Bank CCDR.[5] It is important to note that such estimates do not incorporate all of the impact channels outlined below.

Figure 1. Cameroon: Climate Change Vulnerability
(Higher value indicates higher vulnerability)



Source: Climate-related INFORM Risk Indicator, 2022 and IMF staff calculations.
Note: The Climate-related INFORM Risk Indicator includes three sub-indicators for components of risk: vulnerability, lack of coping capacity, hazards & exposures. The figure shows the vulnerability sub-indicator.

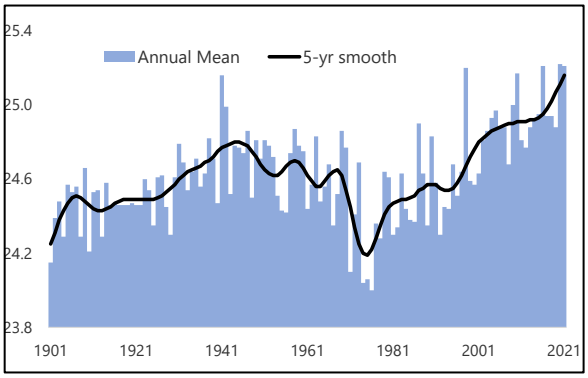
[2] Based on the 2022 Climate-driven INFORM Risk indicator, which is based on the European Union's INFORM Risk Indicator, adjusted by the IMF staff to focus only on climate risks. It has three subcomponents: coping capacity, hazards and exposure, and vulnerability. The index and its subcomponents range from 0 to 10, with larger values indicating higher risks. The vulnerability dimension represents economic, political, and social characteristics of the community that can be destabilized in case of a hazardous event. Cameroon's 2022 vulnerability index is the 16th largest globally, and it ranks 41st in terms of the total INFORM Risk Indicator (for details on the methodology, see Marin Ferrer M, Vernaccini L and Poljansek K. INFORM Index for Risk Management: Concept and Methodology, Version 2017. EUR 28655 EN. Luxembourg (Luxembourg): Publications Office of the European Union; 2017. JRC106949)

[3] Potsdam Institute for Climate Impact Research, 2022, Climate Risk Profile: Cameroon.

[4] IDMC (Internal displacement monitoring center). Cameroon | IDMC – Internal Displacement Monitoring Centre (internal-displacement.org); EM-DAT.

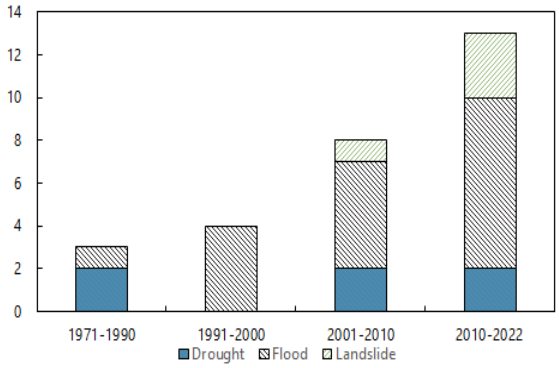
[5] World Bank CCDR, 2022. The results are reported for three Representative Concentration Pathways—RCP2.6, RCP4.5 and RCP8.5, the largest effect being under RCP8.5.

Figure 2. Cameroon: Observed Annual Mean Temperature, 1901-2021



Source: World Bank Group, Climate Change Knowledge Portal (2023).

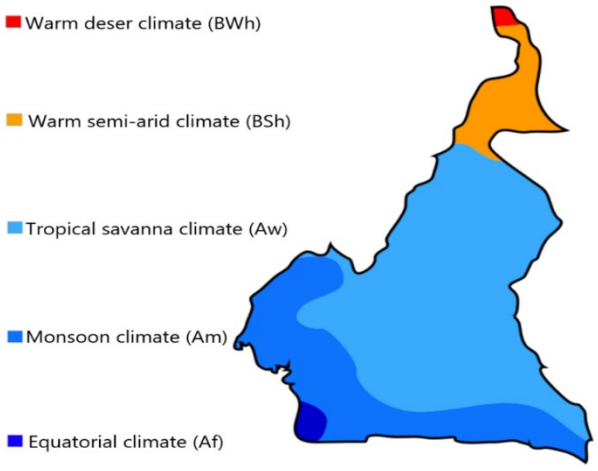
Figure 3. Cameroon: Natural Disasters



Source: EM-DAT, CRED / UCLouvain, Brussels, Belgium.
Note: EM-DAT reports natural disasters if it affects at least 100 or more people, or causes at least 10 deaths, or there's a declaration of state emergency, or call for international assistance. The increase in recent years may also be partially driven by better monitoring and measurement of such events.

6. Geographical diversity exposes Cameroon to diverse climate shocks. While some areas are less vulnerable to climate risks, all regions face their specific challenges, and failing to address them may lead to spillovers to other regions and the economy as a whole. Northern regions in the desert and semi-arid areas are most vulnerable to climate change and exposed to droughts and desertification. Historically, between 20 and 50 percent of the Extreme North's population has been affected by droughts.[6] Central and coastal regions experience heavy rainfalls and floods, which often take lives and damage vital infrastructure. The sea-level rise damages Cameroon's coastline and will continue causing costal erosion. South Cameroon is the least affected by climate events, but deforestation and mining activities undermine conservation efforts of the second largest carbon sink of the world, the Congo Basin.

Figure 4. Cameroon: Climate Classification

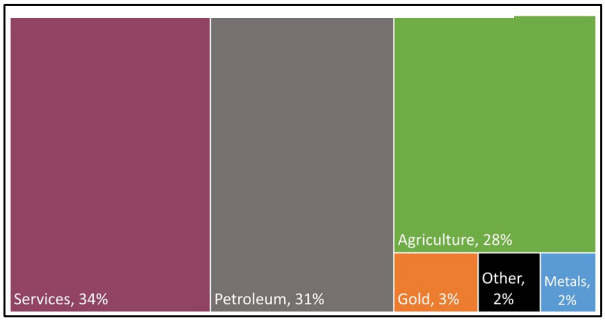


Source: Beck et al., (2018).

[6] UNDRR and CIMA (2019). Cameroon Disaster Risk Profile.

7. Climate change is expected to affect agriculture the most, reducing output, exports, and incomes, and increasing food insecurity. Agriculture in Cameroon employs over 70 percent of the population[7], and accounts for almost a third of export earnings—most important after the crude oil (Text Figure 5). It is mainly rainfed, and thus, crop cultivation is highly dependent on changes in precipitation. Higher temperatures and heat stress are expected to affect agriculture through their direct impact on labor productivity, lower crop yields, and other heat-related human health shocks.[8] Subsistence farming is widespread, in particular, in rural areas, and often relies on traditional farming methods and outdated technologies, making it especially vulnerable to weather shocks. Major subsistence crops, including cassava, maize and rice, have already experienced drop in yields due to climate-related factors, with a particularly large drop in the Northern regions. For example, the maize yield in Far North declined by over 20 percent in 1998-2012.[9] Overall, agriculture output is projected to lose between 6 to almost 14 percent by 2050 due to climate change.[10]

Figure 5. Cameroon: Export Structure, 2019



Source: Hausmann, et al. (2013)., staff calculations.

8. Climate change is also expected to impact livestock farming, fishing, and aquaculture. Livestock farming contributes about 13 percent to the agricultural output and employs 30 percent of the rural population, mainly in the Northern and Western parts of the country. Changes in weather patterns impact availability of water and food for livestock, their migration patterns, disease spread, and thus, animal health and productivity. The sector of fishing and aquaculture is also important for livelihoods and the economy with access to the Atlantic Ocean, and numerous rivers and lakes; Cameroon is one of the most dependent on marine food, with one of the largest projected decline catch potential due to climate change, according to the IPCC.[11] Moreover, it threatens livelihoods through lower incomes and access to food in an already highly food insecure environment: about 2.4 million people were severely food insecure in June 2023.[10]

9. Climate change is expected to limit water availability, particularly in northern Cameroon. Compared to other countries in Africa, Cameroon has abundant surface water resources, due to high precipitation throughout most of the year and in most parts of the country. However, there is high seasonality and regional variation in water availability (with water scarcity in Lake Chad

[7] World Bank, CCDR, 2022.

[8] World Bank CCDR, 2022.

[9] World Bank CCDR, 2022.

[10] World Bank CCDR, 2022. The impact depends on the scenario with the lowest losses in RCP2.6 and highest losses in the most pessimistic (RCP 8.5) scenario, assuming no reform.

[11] Trisos et al. (2022).

[10] WFP Cameroon Country Brief, June 2023.

region, for example). More intense use of water resources by agriculture and industry are also likely to impact demand for water and its availability.

10. Climate change would limit resources and, in turn, likely aggravate conflict and fragility risks. Cameroon, being a fragile and conflict affected state, has suffered years of conflict in its Extreme North, and Northwest and Southwest regions. In the Extreme North, bordering the Lake Chad Basin, competition over water and land had been driving conflict before the violence by the insurgent groups erupted in 2009.[11] Competition over resources will likely increase, with increased scarcity of water supply and increasing food insecurity. As of March 2023, over one million people in the country were internally displaced (IDPs) due to violence and climate hazard, and there were almost half a million refugees and asylum seekers, including from neighboring countries.[12] In the Extreme North, over 60 percent of recent displacements were caused by floods. Recent intercommunal violence in Cameroon's Logone Birni commune in Extreme North region, reflected growing tensions among fishing, farming, and herding communities, and the broader developments in the region. Climate shocks strain fragile states even further, acting as a threat multiplier, where consequences of climate change, including resource scarcity, food insecurity, and human displacement will likely aggravate conflict and violence.

11. Natural disasters damage infrastructure and thus affect people and economic activity. Road infrastructure in Cameroon is particularly vulnerable to weather shocks. Over 94 percent of roads in Cameroon are unpaved and only 11 percent of the national and regional road networks are considered in good condition.[13] More frequent floods and landslides are likely to damage and block roads—about 274 km of the transportation system (about 0.2 percent of all roads) is affected every year.[14] The average annual economic losses due to floods are estimated to be around US$130 million (or about 0.3 percent of the GDP) – according to the UNDRR[15]. Even if the direct damage to roads will presumably be small (around 0.06 percent of GDP due to multi-hazard risk based on a study cited by the IPCC),[16] indirect costs are likely to be sizeable, as frequent disruptions to trade, movement of people, and goods will have consequences for food security and economic productivity. There can also be an impact on the neighboring countries that rely on the port infrastructure in Cameroon, e.g., ports of Douala and Kribi, such as Chad and the Central African Republic.

12. Climate change poses a threat to human capital accumulation and labor productivity. Cameroon ranks 151 out of 191 countries in the 2022 Human Development Index,[17] with human

[11] Over the last 60 years, the lake Chad has shrunk in size by 90 percent due to pressures on the use of water, droughts, and the impact of the climate change. This has destroyed livelihoods and led to loss of biodiversity. This has also caused resource-based conflicts, especially due to water scarcity. (Osano, 2022).

[12] Cameroon: Humanitarian Dashboard (January to March 2023).

[13] World Bank CCDR, 2022.

[14] UNDRR and CIMA (2019). Cameroon Disaster Risk Profile. And MINTP (2020).

[15] UNDRR and CIMA (2019). Cameroon Disaster Risk Profile.

[16] Koks et al. (2019).

[17] Human Development insights.

capital development lagging in many areas. Children in Cameroon are the 10th most exposed and vulnerable to climate risks in the world.[18] Climate impacts health and education directly through heat-related illnesses and damages to education infrastructure.[19] For example, the floods in September 2022 damaged or destroyed 88 schools, in addition to more than 9,000 homes.[20] Climate shocks can also impact human capital indirectly through limiting peoples' ability to invest in healthcare and education due to income losses because of climate-related events. A study cited by the IPCC, found that a decline of plantain productivity by 43 percent was due to the temperature increase, and was associated in 6 months lower school attendance on average due to lower parental investment in education.[21] In addition climate change will likely contribute to spread of water-borne and food-borne diseases, though the exact impact is unknown.[22] The World Bank estimates show that about 60 percent of the loss to GDP by 2050 due to climate change would come from direct labor productivity losses.[23]

13. Climate change exacerbates existing inequalities and poverty. Climate change affects the poor more. Over 55 percent of Cameroonians live in poverty which affects several aspects of their lives, including health, education, living conditions and work. About 38 percent are severely impoverished, with the poverty incidence particularly high in rural parts of the Extreme North and Eastern regions, where structural underdevelopment and frequent weather shocks, including floods and prolonged dry spells, have a detrimental impact on livelihoods.[24] A very high urban population growth, [25] and poor urban planning and urban infrastructure development that do not account for climate challenges, will also increase inequality among the urban population, where informal settlements around the cities are especially vulnerable.[26]

14. Demographic growth will further increase Cameroon's vulnerability to climate change. A growing population increases pressure on natural resources, exacerbates food insecurity and leads to more GHG emissions. Climate-related shocks tend to affect women more, which is explained by the existing gender inequalities (Panel Figure 2), such as limited access to resources, education, and economic opportunities that complicates their adaptation to climate change challenges. Demographic growth is also driven by high fertility rates in Cameroon explained by women's lack of access to family planning and control of their reproductive choices.

[18] UNICEF (2021). The climate crisis is a child rights crisis.

[19] World Bank CCDR, 2022.

[20] Davies (2022, September).

[21] Fuller et al (2018).

[22] World Bank CCDR, 2022.

[23] World Bank CCDR, 2022. The estimates are for contribution of damages to GDP loss in RCP 4.5.

[24] World Food Program: Cameroon.

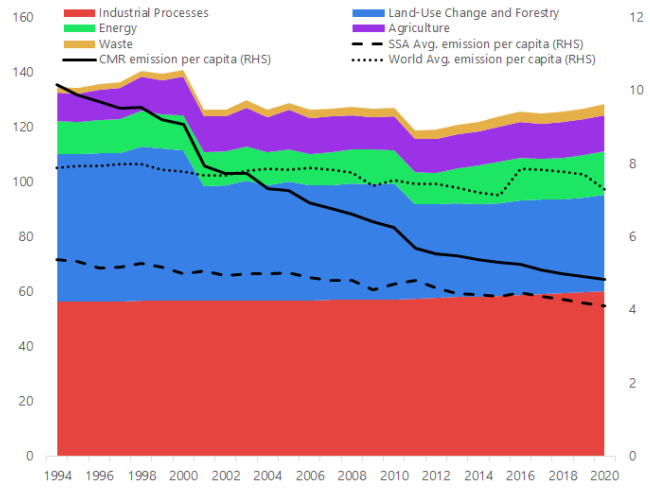
[25] The World Development Indicators.

[26] Aziz and Kakdeu (2021). The proliferation of informal housing in major cities in Cameroon: evidence, drivers and the way forward.

15. Cameroon's greenhouse gas emissions are only about 0.25 percent of the total global emissions, but higher than SSA average in per capita terms. The key contributing sectors are industrial process (47 percent) and land-use change and forestry (27 percent), followed by energy (12 percent), agriculture (10 percent) and waste (3 percent). The per capita emissions of the country decreased between 1998 and 2018 by about 47.5 percent but are still above SSA average (Text Figure 6). Moreover, the emissions per unit of GDP for Cameroon were higher than both the SSA and the world averages.[27] As a large hydrocarbon producer, Cameroon should strengthen its mitigation policies, that should support its NDC commitments and also yield social and economic benefits. Strengthening mitigation efforts will also dampen the risk of a carbon lock-in, whereby the continued reliance on fossil fuels for development will significantly increase the cost of switching to cleaner energy sources in the future.

Figure 6. Cameroon: GHG Emissions

(MtCO2e, tCO2e per person)



Source: Climate Watch, staff calculations.

C. Key Climate Challenges and Reform Priorities

Strengthening Institutions

16. Cameroon places climate change among key challenges in its development strategy. The National Development Strategy (SND30) identifies adaptation and mitigation to climate change as key objectives to achieve sustainable and inclusive growth. As part of the implementation of the strategy, the authorities plan to: (i) strengthen actions relating to sustainable management of natural resources; and (ii) take adequate measures to adapt to and mitigate the effects of climate change. In addition, in order to address the consequences of climate change, including floods and landslides in some cities and rural areas, the Government is committed to: (i) ensure that climate change concerns are taken into account in sectoral strategies and policies, both in formulation and implementation; (ii) build the capacity of institutions responsible for climate surveillance; (iii) operationalize the system for monitoring, preventing, and responding to the effects of climate change; and (iv) develop and implement a national waste management strategy while promoting corporate social responsibility. Vision 2035 also emphasizes and recognizes the importance of climate change and its economic and social impact.

17. Cameroon took important steps towards building its institutional framework governing climate policies. The key climate change policy documents are the National Climate

[27] World Bank CCDR, P.20.

Change Adaptation Plan 2015–19, which is accompanied by a costed implementation plan, and Nationally Determined Contribution (NDC) updated in 2021. Cameroon had signed key international conventions on climate change, has developed strategies in some sectors, e g., in agriculture and water. Several regional and municipal governments adopted local Climate Change Action Plans (CCAP). The central role in Cameroon's NDC institutional mechanism was given to the Ministry of Environment, Nature Protection and Sustainable Development (MINEPDED) and its agency, the National Observatory on Climate Change (ONACC).

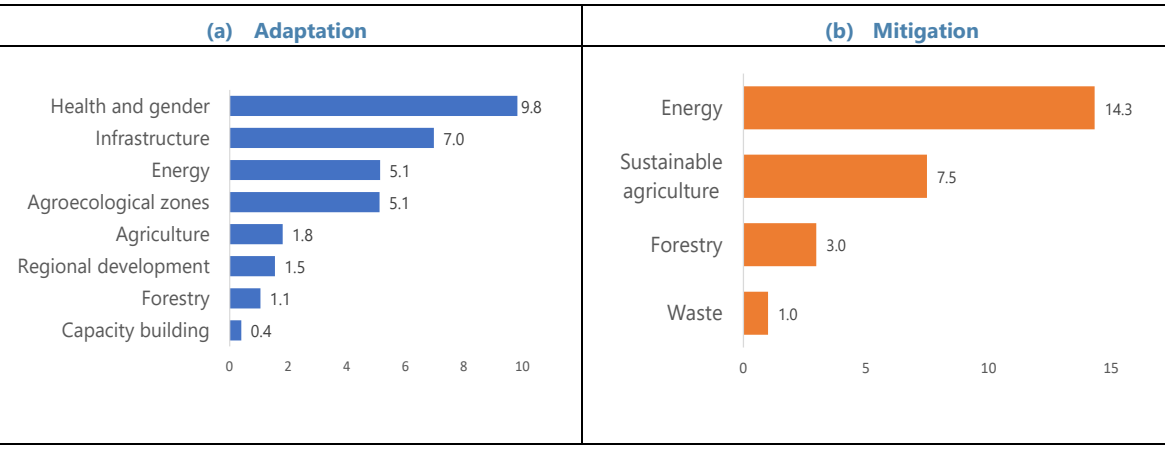
18. However, important challenges remain in implementation of climate policies. First, both central and local governments face resource and technical capacity constraints in implementing adopted plans. Second, there is still no comprehensive regulatory framework that would require to integrate climate change into the government's policy, planning instruments and processes. Finally, there is a lack of an effective coordination mechanism across arms and levels of government. This leads to duplication of functions and mandates with other agencies, which warrants clearly defining roles and responsibilities across ministries and designing appropriate coordination processes.

19. PEFA diagnostic conducted in 2023 revealed that climate change considerations are poorly integrated in Cameroon's PFM framework. Climate risks are not considered in fiscal planning tools, such as macroeconomic forecasting and medium-term budget expenditure framework. There are no formal definitions in the budget nomenclature of expenditures related to climate, which impedes their effective monitoring and evaluation. Budget evaluation and audit do not consider the impacts on climate risks. Valuation of fixed assets do not take into account their exposure and vulnerability to climate change.

20. Public investment management lacks the framework to mainstream climate considerations in the project cycle. Cameroon envisages multiples projects to enhance its adaptation efforts, in particular, by improving the resilience of the national healthcare system, infrastructure, and agriculture. Key objectives and projects are outlined in the NDC. Priority areas include promoting climate smart agriculture, building resilient energy and transport infrastructure, diversification of energy supply, disaster risk reduction, and improving population resilience. The NDC estimates financing needs to support adaptation projects at over US$32 billion until 2030 (Text Figure 7). However, implementation of these projects is challenging due to lack of the framework to mainstream climate considerations in the public investment cycle. Projects addressing climate risks are not prioritized in the investment project selection, and climate-related considerations are not taken into account in procurement.

Figure 7. Cameroon: Adaptation and Mitigation Financing Needs outlined in NDC

(bn CFAF)



Source: Cameroon NDC, 2021.

Building Resilient Agriculture and Infrastructure

21. Cameroon puts emphasis on enhancing adaptation efforts in agriculture and infrastructure. Priority areas outlined in the NDC include promoting climate-smart agriculture, building resilient energy and transport infrastructure, diversification of energy supply, disaster risk reduction, and improving population awareness and capacity. There are several challenges that hinder adaptation efforts, such as limited access to modern inputs and technologies, inadequate infrastructure, and financing constraints.

22. Building resilient infrastructure is crucial for the long-term economic health of Cameroon, especially for the agricultural sector. There are significant linkages between infrastructure and agriculture that become crucial in the context of climate change. These linkages include physical, digital, and social infrastructure that support agriculture, including transport, irrigation and water management, energy, storage, and processing. Infrastructure in general is important for the development of sustainable and productive agricultural systems. However, frequent extreme weather events, such as rainfalls and floods, damage infrastructure, disrupting the transportation and storage of food products. Building resilient infrastructure can promote sustainable farming and protect environment.

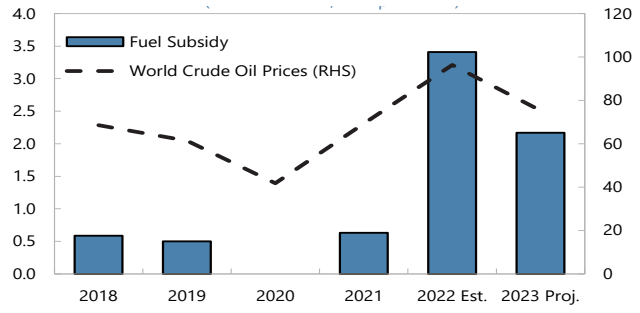
Advancing Mitigation Efforts

23. Under the NDC, Cameroon committed to reduce greenhouse gas emissions by 35 percent by 2035 relative to 2010, including an unconditional target of 12 percent. The NDC outlined specific sectors and activities targeted for emissions reduction: energy (including transportation), forestry, agriculture, and waste management (Text Figure 7). Cameroon committed to promoting renewable energy sources such as hydropower, solar, and wind energy. It also aims to improve energy efficiency to reduce emissions from the energy sector. Cameroon also recognized the importance of climate-smart agriculture practices to reduce emissions and enhance food

security, through improved land management, agroforestry, and sustainable farming techniques. This reduction target is conditional on receiving international support in the form of finance, technology transfer, and capacity building.

24. Phasing out fuel subsidies should be part of the effective mitigation strategy. Cameroon's government subsidizes fuel consumption by fixing the local pump prices for domestic fuel consumption. Soaring oil prices in 2021-22 have resulted in a considerable increase in the fiscal cost of fuel subsidies, estimated at over 1,000 billion CFAF in 2022. While this crowds out other priority spending, the true cost of the fuel subsidy is higher, given its environmental costs. In addition, the fuel subsidy is not well targeted at the poor and tend to benefit mostly the higher income households. Phasing out fuel subsidy should be accompanied by social protection measures, which would also contribute to building resilience to climate risks. The authorities are currently working with the World Bank on strengthening their social safety net.

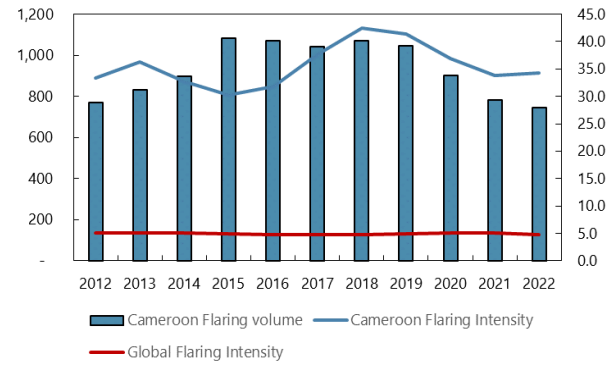
Figure 8. Cameroon: Fuel Subsidy and World Oil Prices



Source: IMF WEO, country authorities, staff estimates and calculations.

25. Rapid deforestation hampers Cameroon's ability to achieve its mitigation objectives. Cameroon has large areas of rainforests of the Congo Basin, the second largest rainforest in the world. It covers about 40 percent of its territory, but unfortunately is subject to considerable deforestation problems related to logging and farming, ineffective forest management, climate change, and growing population. Despite the authorities' conservation efforts, annual rate of deforestation is around 0.6 percent and exceed the rate of reforestation of only 0.1 percent.[28] Given the role of the rainforest in mitigating the climate change, protecting the rainforest and reforestation policies can play a crucial role in addressing climate challenges. Forest conservation and sustainable forest management are also components of Cameroon's NDC. Further strengthening forestry governance and law enforcement against illegal logging would support the policies to reduce deforestation. Promoting eco-tourism would also make the rainforest more valuable and be part of the conservation strategy.

Figure 9. Cameroon: Gas Flaring Volume (Millions m^3) and Intensity (m^3 per barrel)



Source: NOAA, the Payne Institute at the Colorado School of Mines, World Bank/GGFR.

26. Gas flaring has significant environmental and economic implications. Hydrocarbons represent more than one third of the country's exports, and their exploitation is associated with gas flaring, which contributes to greenhouse gas emissions. Cameroon is among top 30 countries by volume of gas

[28] NDC 2021, FAO 2020.

flaring and has one of the highest intensities of gas flaring in the world.[29] In addition of greenhouse gas emissions, flaring gas wastes an important resource that could be used for power generation or other purposes. To deal with the problem of gas flaring, several potential solutions exist, such as capturing and utilizing this gas, and imposing penalties on companies to reduce such emissions.

Identifying Financing Sources

27. Estimated climate financing needs are significant. For example, the Climate Policy Initiative suggest that the overall climate financing needs in Cameroon are about USD 60 billion.[30] Addressing these needs would also help at close existing development and infrastructure gaps. These estimates suggest that considerable funding is required to achieve Cameroon's climate goals.

28. In the near term, the main source of climate-related financial flows will likely need to come from official sources of financing.[31] Between 2017 and 2021 Cameroon has received around US$ 2.7 billion in climate-related development financing, mainly from multilateral development banks targeting mitigation goals in the energy sector. About 80 percent of the funds were delivered to the government entities. Introducing green measures in public financial management could be beneficial, for example, climate budget tagging, where budget lines are tagged if they contribute to climate mitigation and adaptation objectives of the country. Moreover, in a country with relatively limited fiscal space, climate budget tagging may need to go beyond climate positive public expenditures, and will have to identify high-carbon and climate-vulnerable public spending to support reform measures, such as fuel subsidy reforms. Such policies, if sequenced appropriately and integrated well into the existing PFM framework, could improve management of public finances as well as contribute towards climate goals. These measures also provide a strong signal to donors and reduce uncertainty.

29. Achieving climate objectives will not be possible without private sector involvement. Going forward, mobilization of private sector financing will be key to address climate related challenges. Climate Policy Initiative estimates that in 2019-20, private financing only accounted for about 2.6 percent of total mobilized climate financing.[32] Therefore, participation of the private sector poses a significant challenge to implementing climate policies in Cameroon. Moreover, partnerships with businesses and industry associations can promote sustainable practices, technological innovation, and investment in low-carbon solutions. There is a need for a dynamic and competitive private sector to achieve long-term economic growth and support the country's climate agenda. However, private sector's involvement in climate considerations has so far been limited.

30. Among other obstacles, private sector has been constrained by weaknesses in the national Public – Private Partnerships (PPP) framework. Although the legal framework for PPPs has been in place for over a decade, management of PPPs varies among sectors, with some line

[29] World Bank (2023). Global Gas Flaring Tracker Report.

[30] AfDB (2023).

[31] OECD DAC data.

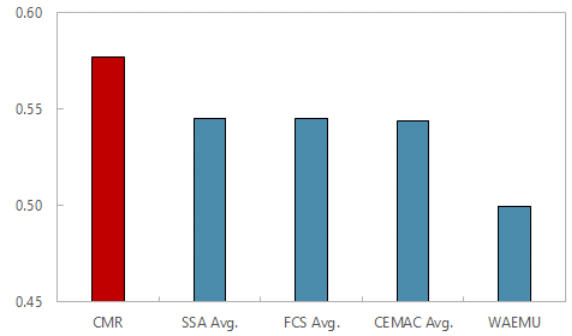
[32] AfDB (2023).

ministries and agencies conducting PPPs autonomously without involvement of national PPP structures. Sectoral governance issues, such as in the energy sector and ports, may send negative signals to prospective investors. Therefore, a comprehensive review of the PPP framework and its implementation, including funding for the Support Council for the Realization of Partnership Contracts, the PPP unit, would support the development of climate-smart infrastructure projects. It will be critical to ensure a uniform and efficient implementation based on the capacity and convening power of the national PPP structure, line ministries, and agencies, as well as developing a PPP pipeline based on sector assessments, to create a roadmap for mobilizing private financing.

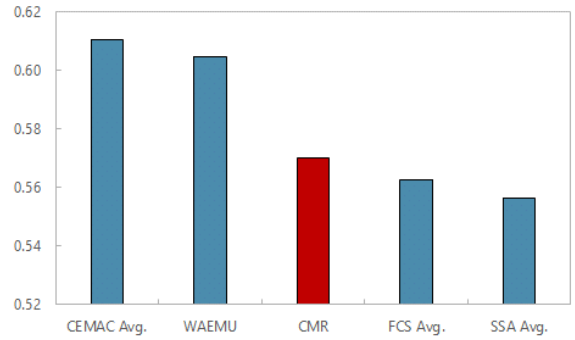
31. Cameroon needs to develop its capital markets to harvest the potential private funding for climate investments. Raising private climate finance entails several steps, including ambitious and stringent climate policies, disseminating relevant data, and developing capacity. Standard stress testing methodologies could be extended to include climate risks in the financial sector. One possible approach to raise green financing is to develop taxonomy for thematic bonds, such as green or sustainability bonds — a financial product designed to raise funds for sustainable development projects related to mitigation and adaption. Such bonds would allow sending a clear signal to the market about climate benefits. Implementing such financial strategies would require advancing development of Cameroon's capital and financial markets.

Figure 10. Cameroon: Development and Climate Indicators

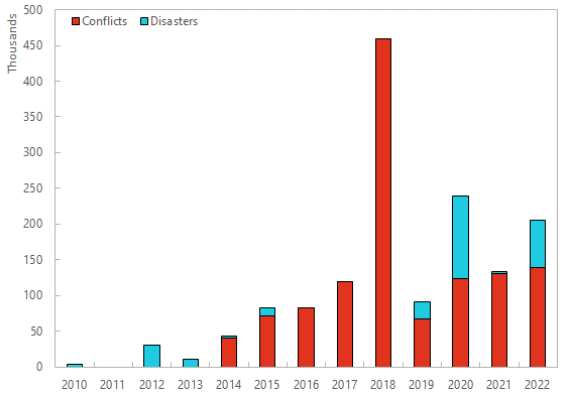
Human Development Index
(Value, 2017-2021 Avg.)



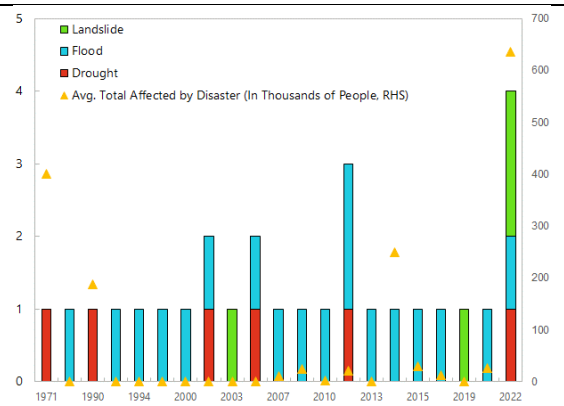
Gender Inequality Index
(Value, 2017-2021 Avg.)



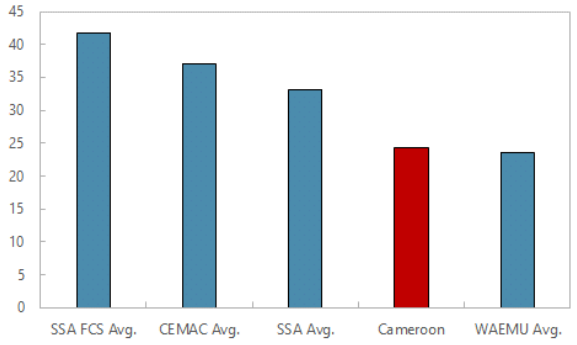
Internal Displacement induced by Conflicts and Natural Disasters
(2010-2022, in Thousands of People)



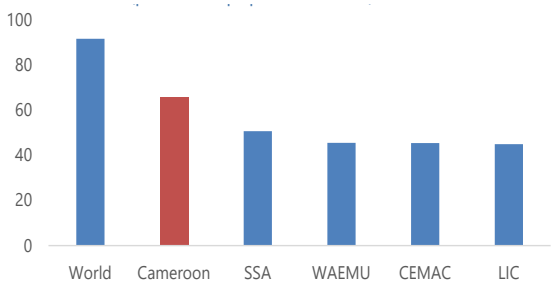
Natural Disasters in Cameroon
(1971-2022, Frequency, in Thousands of People)



Poverty Incidence
(International poverty rate, $2.15 in 2017 PPP)



Access to electricity
(Percent of population, 2021)



Source: World Bank WDI, retrived On July 31, 2023.

Source: Human Development Programme, IDMC (Internal displacement monitoring centre), EM-DAT, World Bank Macro Poverty Outlook.

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Annex I. Cooperation with Development Partners

1. Cameroon has been working with development partners to tackle climate challenges. While climate-related development finance flows have been on the rise in recent years, they are smaller than the estimated needs and relatively volatile, making planning difficult. About two-thirds of the flows targeted mitigation projects (Figure 1) with the large majority financing the energy sector (Figure 3). Agriculture, forestry, and fishing were the most targeted sectors for adaptation flows (Figure 4), with about a forty percent share. Adaptation flows also targeted multisectoral goals such as urban and rural development and disaster risk management, transportation, water supply, and disaster risk reduction. In terms of providers, multilateral partners were the most active accounting for three quarters of recent flows (Figure 2).

2. The largest multilateral provider of climate-related development finance is the World Bank. The latest Development Project Financing (DPF) targets multiple critical climate areas in Cameroon, through its sustainability pillar. The Bank seeks to improve the climate resilience of road infrastructure by targeting road and road maintenance through operationalizing the relevant law and implementing it through a decree. Water management is another targeted area, which seeks to ensure the efficient allocation of water across various uses, given its importance for agriculture. The final climate-related leg of the World Bank program is the expansion of safety nets, with the eventual goal of having adaptive social safety net that can effectively respond to disasters.

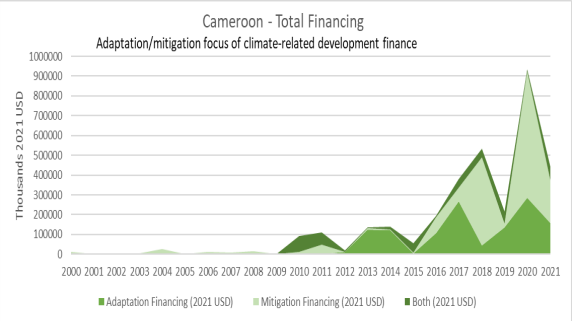
3. UN agencies are active in Cameroon, with many of the interventions focusing on disaster risk reduction and management. The World Food Program (WFP) is strengthening resilience against disasters through improving data collection to enhance early warning systems, laying the policy and legal framework for disaster risk reduction. An important aspect of the program is the strengthening of digitalization of social information, which would enable social safety nets to respond quickly and effectively in case of a disaster. In terms of disaster risk finance, the WFP is devising an insurance scheme for agricultural workers to improve their resilience to climate-related risks. UNESCO is also supporting the authorities in the areas of: (i) recording data to observe climate impacts, for example on water quality and flooding to prevent the spread of water-borne diseases; (ii) raising awareness in local communities of the climate-related risks, thereby providing an important step for an enabling environment in which private actors can manage their own risks; and (iii) providing alternative income generating activities for local indigenous populations through agroecology. In addition, the International Organization for Migration supports governance and knowledge generation for sustainable solutions of internal displacement by climate risks especially in conflict affected areas of Cameroon.

4. UN agencies are also active in forestry management. The Food and Agricultural Organization (FAO) is convening consultations and supporting the authorities on facilitating the development of a regulatory framework to promote sustainable logging, creating an inventory of biodiversity and forests, and developing capacity of forestry communities to implement forestry management plans. The International Fund for Agricultural Development is planting selected species

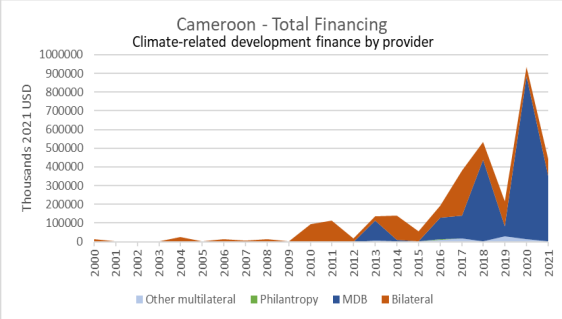
of trees to increase forest resilience in various areas. The UN High Commissioner for Refugees has multiple projects on reforestation to increase the resilience of refugees to climate risks.

5. European governments and agencies are the most active bilateral partners in Cameroon. The European Development Fund is the largest donor having projects in agricultural policy and management, with the goal of helping the government promote sustainable and inclusive growth favorable to vulnerable populations and consolidating democratic, economic, and administrative governance. The German Federal Ministry for Economic Cooperation and Development (BMZ) focuses on forestry management and improving agricultural production by making food systems more resilient.[1] The French Development Agency (AFD) is supporting Cameroon in the development of renewable energy, sustainable forest management, flood prevention, and structuring national climate change strategies.[2]

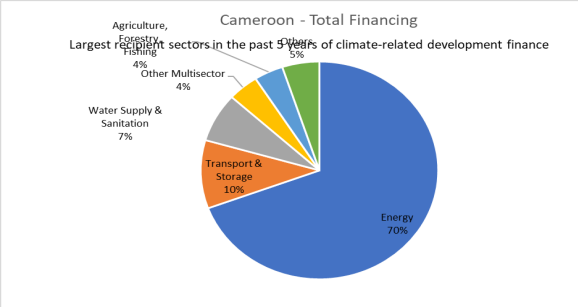
Cameroon: Adaptation/mitigation focus of climate-related development finance
(Thousands of 2021 USD)



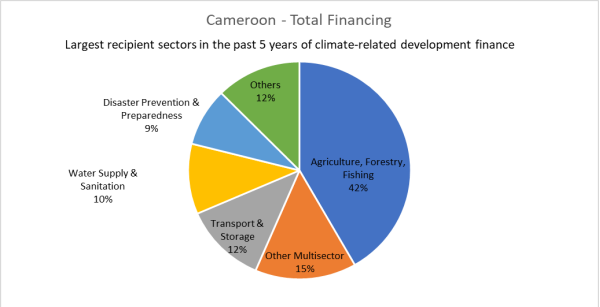
Cameroon: Providers of climate-related development finance



Cameroon: Sectors targeted by mitigation flows 2017-2021



Cameroon: Sectors targeted by adaptation flows, 2017-2021



Source: OECD DAC data.

[1] Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung. Cameroon. https://www.bmz.de/en/countries/cameroon (accessed: 11/30/2023)

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