INTERNATIONAL MONETARY FUND

REPUBLIC OF CONGO

SELECTED ISSUES

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POVERTY AND INEQUALITIES IN THE REPUBLIC OF CONGO: PUBLIC EXPENDITURE PRIORITIES FOR INCLUSIVE GROWTH[1]

The Republic of Congo's outlook of more limited fiscal space, in view of the need for fiscal consolidation, makes it all the more important that public expenditure programs maximize their impact. This chapter highlights the scope to reorient public expenditure policies to better address poverty and inequality. Based on the recent World Bank Public Expenditure Management and Financial Accountability Review (PEMFAR), the analysis notes that recent economic growth has only translated into relatively modest reductions in poverty. Underlying this broad picture are persistent inequalities between regions and income groups. Against this background, recommendations are developed that can help guide future budget allocations with a view to promoting inclusion and reducing inequality.

A.   Background

1.   Despite robust growth over the past decade, poverty remains pervasive. Middle income status was attained in 2006. GNI per head stood at an estimated USD 2,590 in 2013. And GDP grew at an average of 5.2 percent per annum over the period 2010 to 2014. This has resulted in only a modest improvement in human development indicators, however, with Congo ranked 142 out of 187 in the 2013 Human Development Index. While substantial progress has been made in key areas such as maternal and child mortality, poverty nevertheless remains widespread and continued sustained growth will be required over the medium term before it is eradicated. The relatively slow progress is reflected in the national poverty headcount ratio which declined by only 4.2 percentage points from 2005 to stand at 46.5 percent in 2011.

2.   The broad national picture conceals deep-seated inequalities between income groups and geographically. This is reflected in the Gini index of 40.2 based on the most recent household consumption data from 2011. The highest income quintile accounted for 45.9 percent of consumption compared to only 5.6 percent for the poorest quintile. Similar inequalities are also evident in spatial terms, with the poverty headcount in urban centers declining significantly from 43.3 percent in 2005 to an estimated 30.0 percent in 2011. In contrast, rural poverty increased over the same period from 65.2 percent in 2005 to 74.8 percent in 2011.

3.   The pattern of inequality has not improved significantly over time. The household surveys conducted in 2005 and 2011 show some narrowing of inequalities but substantial gaps remain between the richest and poorest households. This is reflected in the modest shift in Lorenz

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[1] Prepared by Guy Jenkinson (AFR).

curves for the two years (Figure 1) and the limited decline in the Gini index from 47.3 in 2005 to 40.2 in 2011.

Figure 1. Inequality Over Time: Lorenz Curves for Income Share by Quintile, 2005 and 2011

Sources: World Bank Poverty and Inequality Database.
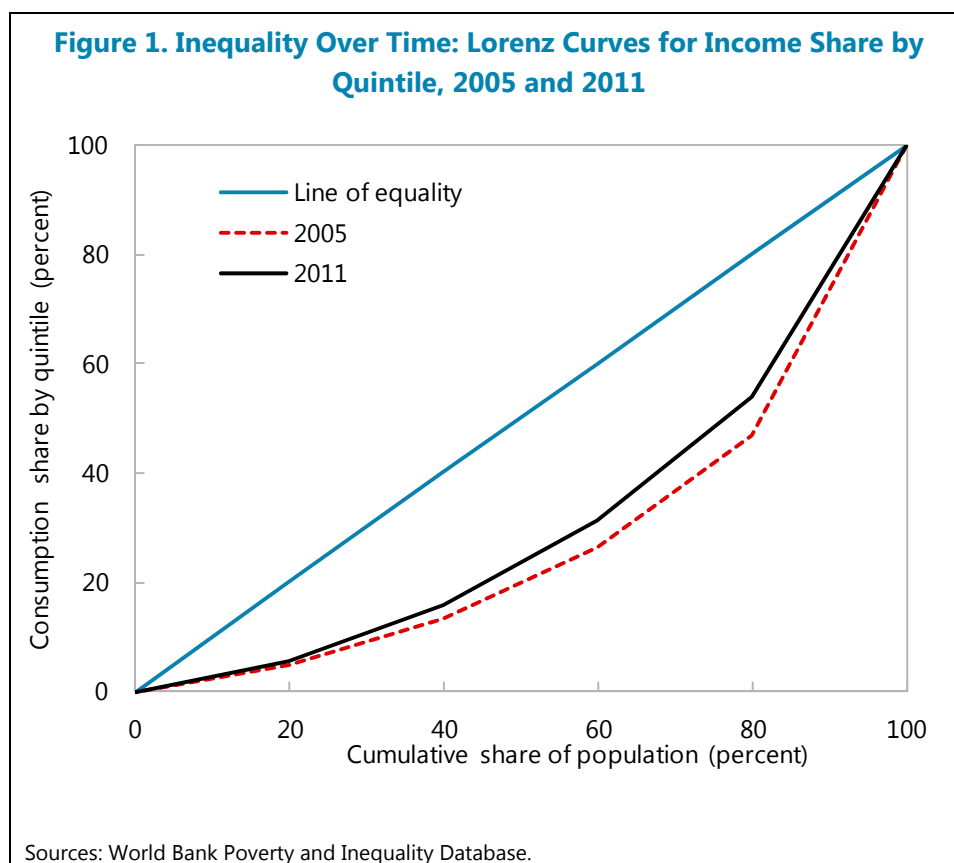
4.   Recent analytical work suggests that there is substantial scope to enhance the impact on poverty reduction of Congo's development strategy through measures that specifically address inequality. In line with the broad conclusions of the April 2014 Regional Economic Outlook for sub-Saharan Africa (SSA), policies that support financial inclusion and job creation are essential to underpin more inclusive growth. In particular, household enterprises are found to play a key role in creating jobs in SSA economies, and policies to support their development are critical to the job creation that is necessary for inclusive growth. Against this background, this chapter focuses on Congo's public expenditure policies and their impact on poverty reduction and inequality. The analysis extends Hakura, Alter, Ghilardi, Maino, McLoughlin, and Queyranne (2015) and also draws on the 2015 World Bank-led Public Expenditure Management and Financial Accountability Review (PEMFAR) which focuses on public expenditure patterns in health, education, energy and agriculture.

B. Public Expenditure Trends and Poverty

5.   The distinguishing feature of public expenditure trends in recent years has been the marked shift towards investment spending. Public investment has grown three-fold since 2010 to account for almost two thirds of the budget in 2014. This has taken place in a context of a rising

share of public expenditure generally as the ratio of public expenditure to GDP for the period 2010 to 2015 increased by over 20 percentage points compared with the previous 5 year period (Table 1). Within this overall trend, the share of public investment increased from an average of 9.3 percent of GDP over period 2005 to 10 to 21.9 percent of GDP in the period 2010 to 2015 while current expenditure remained unchanged. At the same time, a significant increase in off-budget expenditures occurred over the period 2005–10 which also had a significant capital expenditure component.

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Table 1. Public Expenditure Trends
(Percent of GDP)

	2005-10	2011-15
Total expenditure	25.3	45.6
Current	16.0	16.0
Capital expenditure	9.3	21.9
Domestically financed	8.2	15.9
Externally financed	1.1	6.0
Off budget	--	7.7

Sources: Authorities data and IMF staff.

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C.   Public Expenditure: Efficiency and Equity

6.   Budget execution of the public investment program has been uneven with overall execution averaging below 90 percent since 2010. Underlying this average is a significant variation across sectors. This underperformance reflects weaknesses in budget preparation and procurement bottlenecks which give rise to absorption constraints and implementation delays.

7.   The assessment of the equity aspects of the public investment program is hampered by data availability. The World Bank PEMFAR surmises that Congo's investment in transport linkages, particularly in rural networks, has favored the poor. In contrast, the significant power production investments and airports are considered more likely to favor urban and higher income groups respectively. This is confirmed by analysis by the Dabla Norris et al. (IMF, 2011) which highlights the relatively low efficiency of Congo's public investment.

8.   There is considerable scope to enhance the budget allocation process to better address spatial equity issues. As pointed by the PEMFAR, budget allocations from the center to the lower tier of government are dominated by block grants that are not significantly based on population or need. As a result, some geographical areas receive broadly equivalent allocations despite substantial differences in their population share. As a first step towards better reflecting regional need and promoting regional equity, budget documentation should be complemented by figures for geographical allocations. Looking to the medium term, the reform of the transfer system to better reflect population and social need should be a considered.

Agriculture

9.   Congo's agriculture sector has received relatively low budget allocations combined with very low execution rates. Agriculture's share of total expenditures accounted for 1.6 percent of total expenditure while its share in GDP amounts to 10.6 percent. The relatively low allocation of resources hampers efforts to develop the sector and realize Congo's substantial potential in arable farming, livestock production and fisheries. Budget execution, meanwhile, has been low with only about two thirds of budgeted expenditures actually released over the period 2008–2012. This lack of predictability in funding undermines effectiveness of programs designed to enhance productivity. This warrants further attention in view of the findings of the April 2014 Regional Economic Outlook for sub-Saharan Africa which highlighted the importance of improvements in agricultural productivity in boosting job creation and triggering structural transformation.

Education

10.   Despite some progress in overall sector outcomes, inequalities in access to education remain significant. Free primary education introduced in 2007 has resulted in rising enrolment rates for both boys and girls. While completion rates have also improved, repetition rates remain among the highest in the region. Progress in gender parity for basic and primary education has not been matched at higher levels.

11.   Public expenditure on primary and lower secondary education has been pro-poor whilst expenditure on post-primary education has favored higher income groups. Based on the incidence of public spending on household consumption quintiles, expenditure on primary and lower secondary education has to the benefit of all income groups. The concentration curve for each level of education plots the cumulative proportions of households, ranked from the poorest to the richest, on the horizontal axis based on Core Welfare Indicator Questionnaire. This is plotted against the cumulative share of educational benefits received by households on the vertical axis. The consumption curve indicates overall consumption distribution. Primary and lower secondary education closely follow the straight line which represents perfect equality in benefit distribution. Upper secondary and pre-school education lies significantly below the equality line but above the consumption curve. Higher education and technical and vocational education curves lie below the consumption curve, indicating that their benefit incidence is more unequal than income distribution.

12.   The increased inequality in benefit incidence in post-primary education reflects the importance of pupil fees and costs. Out of pocket expenses are cited as the key reason for being out of school for the poorest quintiles of the population. Moreover, the public provision of teaching staff to private schools is a further source of public expenditure to a sector which is only used by highest income quintiles, further reinforcing inequalities.

Figure 2. Lorenz Curve for Household Consumption and Public Expenditure on Education by Level, 2005 and 2011
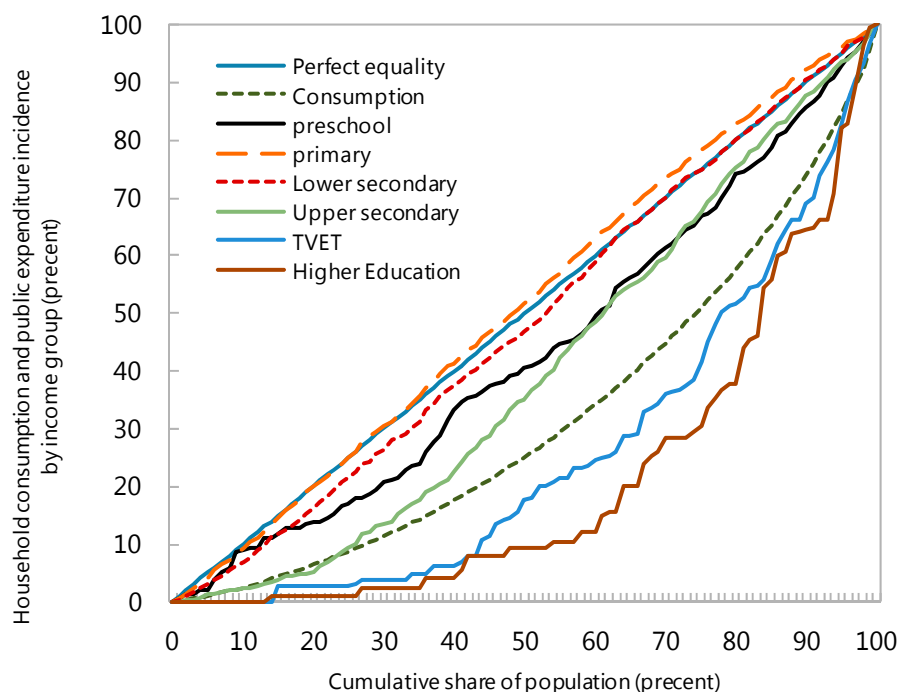
Source: World Bank PEMFAR based on ECOM 2005 and 2011.

Health

13.   The relatively low overall provision of health services is compounded by its inequitable distribution. Congo has fewer doctors than would be expected given its level of per capita income. A number of countries with similar GDP per head have significantly more than Congo's 0.1 doctors per 1,000 people. A similar picture emerges for hospital beds and nurses. This relative under-provision is compounded by significant geographical variation in health service provision. There is a substantial variation on the provision of health centers and dispensaries by region (*département*). The range for dispensaries extends from 2,155 persons per dispensary to 12,345 persons per dispensary.

14.   Key health indicators also show inequality between rural and urban areas and across income quintiles. Neonatal and child mortality incidence show significant variation between rural and urban districts (Table 2). The inequality in infant mortality is also present across income quintiles but has shown some improvement over time.

Table 2. Key Health Indicators in Urban and Rural Areas, 2005 and 2011/12								
(per 1000)								
	Neo-natal mortality		Post-neo-natal mortality		Infant mortality		Child mortality	
	2005	2011-2012	2005	2011-2012	2005	2011-2012	2005	2011-2012
Urban	36	26	31	18	66	45	108	77
Rural	35	21	58	29	93	51	136	88

Source: World Bank PEMFAR based on EDSC 2005 and 2011/12.

15.   The incidence of government expenditure by household category does not show significant variation. This suggests that public provision is broadly equitable across income profiles. However, private expenditure on health varies significantly by quintile, indicating that ability to pay plays a key role in access to health care (Figure 3).

Figure 3. Expenditure on Healthcare by Government and Households, 2011
(In Millions of CFAF)
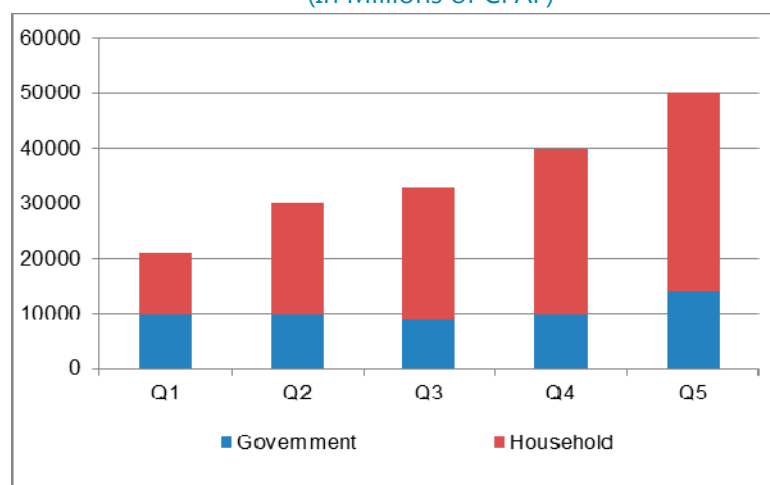
Source: World Bank PEMFAR based on ECOM 2011 and MSP.

16.   Significant household out of pocket (OOP) expenses are also a source of inequality. Estimates from the 2011 Household Consumption Survey (ECOM) indicate that out of pocket expenses are rising and amounted to 1.7 percent of GDP in 2011. Outlays on user fees for medicines are an important source of such expenditures along with a range of other clinical expenses. The poorest households show a higher share of expenditure is devoted to OOP expenses than richer groups, but the variation between groups is not significant around an average of around 1.5 percent of total household spending.

17. **The impact of OOP expenses owing to catastrophic health events is a further significant source of inequality.**[2] In such cases, the impact on household budgets is clearly more significant for lower income quintiles. In Table 3 a range of expenditure thresholds for catastrophic health events is presented which indicates both the incidence (headcount) and intensity (mean positive overshoot) of such health events based on household survey data. For all ranges of the threshold, the incidence of catastrophic health episodes is higher for households in the lower expenditure quintiles and declines with successively higher expenditure quintiles. The mean positive overshoot for catastrophic payments exceeding 25 percent of non-food expenditure is 12.5 percent. This means that the average share of the non-food household budget devoted to health payments is 37.5 percent. The impact of such payments is more heavily concentrated in poorer households, as evidenced by the negative concentration ratio.

Table 3. Incidence and Intensity of Catastrophic Payments Using Non-Food Expenditure, 2011

	5%	10%	15%	25%	30%	40%
Headcount						
Lowest quintile	31.1	12.2	6.0	2.0	1.5	0.7
2	27.9	8.8	4.8	1.4	0.9	0.4
3	20.9	7.8	2.3	0.5	0.2	0.0
4	16.0	5.2	1.6	0.4	0.3	0.2
Highest quintile	15.0	3.6	0.9	0.1	0.1	0.1
Total	22.4	7.6	3.2	0.9	0.6	0.3
Mean positive overshoot						
Lowest quintile	6.7	9.1	11.1	14.5	13.7	14.3
2	5.5	8.6	9.0	10.9	11.3	11.8
3	4.8	4.5	5.9	5.3	3.9	2.9
4	4.3	5.1	7.6	9.8	10.0	3.8
Highest quintile	4.1	5.1	7.7	25.4	26.3	31.1
Total	5.4	7.1	9.1	12.1	12.4	12.8
Concentration index	-0.158	-0.222	-0.362	-0.431	-0.478	-0.445

Source: World Bank PEMFAR based on ECOM 2011.

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[2] Catastrophic health events are defined where costs exceed a certain threshold of household income and severely disrupt living standards. In the PEMFAR study, a range of thresholds is examined using both total expenditure and expenditure net of food costs as a basis.

D. Conclusions and Recommendations

18.   The outlook for more limited fiscal space over the medium term underlines the importance of improved efficiency in public expenditure. The mixed results in terms of combating poverty and inequality suggest the need to reorient public expenditure. Policies therefore need to be carefully designed to ensure maximum impact on poverty reduction. At the same time budget allocations should be kept under continuous review and closely monitored in order to better assess impact.

19.   Public investment spending should be rationalized and re-focused on poverty reduction objectives. In line with the analysis presented in the 2014 review, the current rapid rate of public investment entails risks for both the maintenance of the capital stock and eventual debt distress. In addition to these concerns about the scale of investment, the PEMFAR also highlights concerns about the quality of Congo's public investment. A slower pace of public investment, and a stronger focus on projects with a high potential impact on poverty, would also allow more scope to address quality concerns and safeguard social programs.

20.   A rebalancing of expenditures in favor of social programs would also help mitigate the potential adverse impact of fiscal consolidation. The government is beginning to address the needs of the very poorest in society through targeted social programs, with the assistance of the World Bank. These include a cash transfer system (Lisungi) which initially supports 5000 households and additional 1000 elderly individuals to provide grants to targeted beneficiaries. In addition, the initial stages of developing a Universal Health Coverage program is underway which aims to shift the provider payment system from fee for service to payment by diagnosis related groups. Eligible individuals are identified by community-based targeting with service delivery units reimbursed by central government based on care packages delivered. Once administrative and targeting systems under these programs are established, consideration should be given to their scaling up and mainstreaming.

21.   Closer attention to geographical variations in population and specific development needs is also necessary to better target poverty reduction. The significant transfers to lower levels of government without reference to population, or other indicators of need, inhibits the scope for public expenditure to be used as a tool to tackle inequalities. The publication of budget documents with a breakdown of planned expenditure by *département* would be a useful starting point to help decision making in this area.

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FUEL PRICE SUBSIDIES IN THE REPUBLIC OF CONGO: EVOLUTION AND OPTIONS FOR REFORM[3]

Energy subsidies are estimated at about 4 percent of non-oil GDP in 2014. The current low international oil prices have virtually eliminated the subsidies on diesel and gasoline, thereby providing a window of opportunity to rationalize the subsidy regime with limited effects on current retail prices. Alleyne (2013) shows that while energy subsidies can benefit all segments of the population in sub-Saharan Africa, the main beneficiaries are the better off. Moreover, eliminating the subsidies would affect the poor because energy consumption represents a large share of their total consumption. For this reason, reforms to energy subsidies should be carefully designed, with consideration given to measures to mitigate social impacts such as conditional cash transfers to target vulnerable households.

A.   Background to the Current System

1.   Congo is a net oil exporter with the state-owned national refinery (Congolaise de Raffinage - CORAF) meeting about 80 percent of domestic demand for oil products. Imports of refined products are mainly for diesel, imports of which amounted to about 26 percent of total domestic diesel consumption in 2012 (International Energy Agency - IEA). These are sourced by the state-owned Societé Nationale des Pétroles de Congo (SNPC) through Kinshasa, Democratic Republic of Congo (DRC).

2.   The Congolese authorities did not follow through on implementing a 2005 automatic pricing formula that adjusts pump prices to internationally traded prices. The main features of the current fuel pricing regime in Congo were established in 2005. However, this formula has never in fact been applied and regulated retail prices have been set by ministerial decree. By 2008 the gap between international prices and the regulated retail prices was estimated to have resulted in an implicit subsidy of 5.6 percent of non-oil GDP.

3.   Administered retail petroleum product prices were revised upward in September 2008 in the face of the spike in international oil prices and have since remained unchanged.
The current price regime establishes regulated retail prices for diesel, gasoline, kerosene and a range of other fuels. The price at which petroleum products enter the distribution chain (the entry distribution price) is given by subtracting specific transport costs, distribution margins, in addition to VAT, from the regulated retail price (Table 1). This system has limited the pass through of oil price increases with the cost continuing to be borne by the budget. The never applied formula, in contrast, aimed to modulate the entry distribution price in line with border import prices. This has not been applied, however, primarily reflecting concerns about the social impact of high energy prices on poor households.
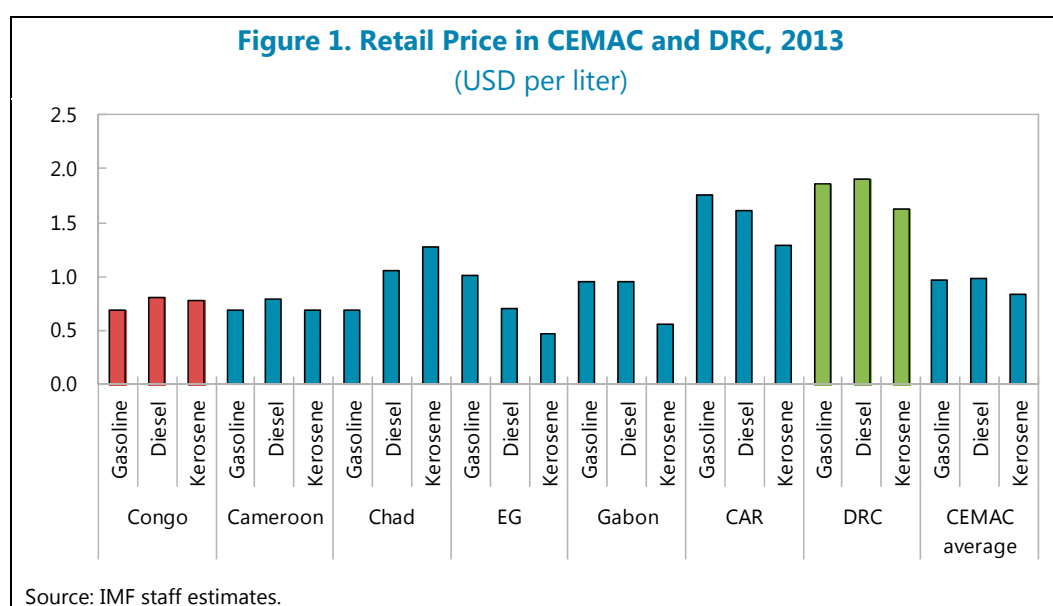
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[3] Prepared by Guy Jenkinson (AFR).
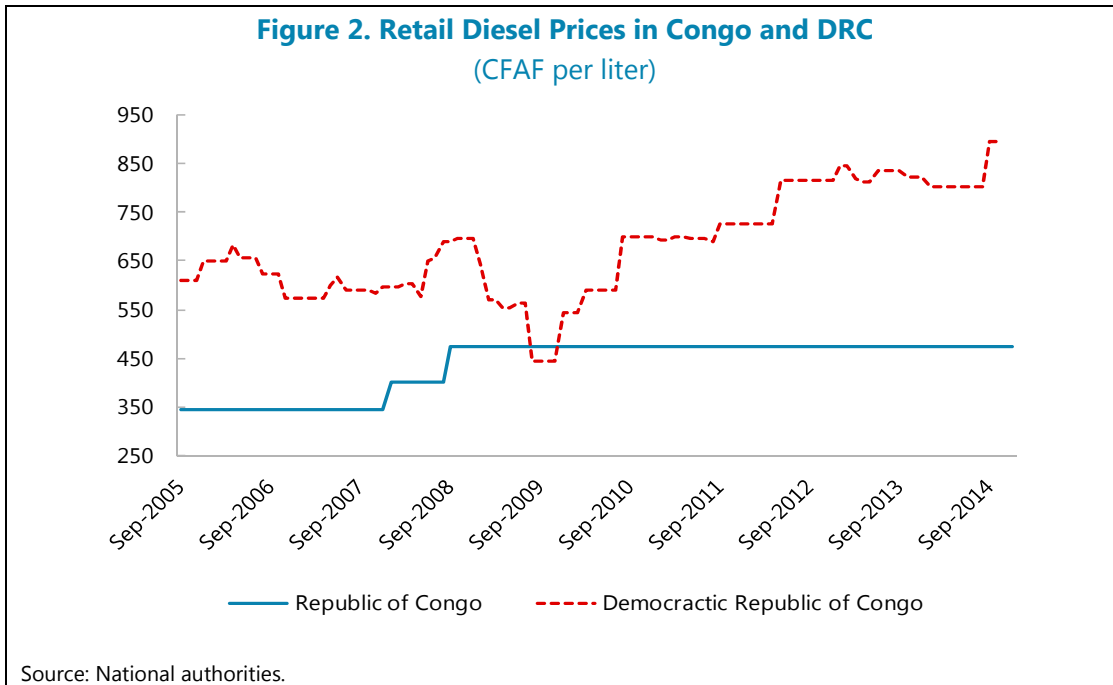
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Table 1. Current Retail Fuel Price Structure

(CFAF per liter)

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	Gasoline	Kerosene	Diesel	Bunker Fuel	Aviation fuel (domestic)	Aviation fuel (int.)	Maritime diesel (domestic)	Maritime diesel (int.)	Butane
Entry distribution price	474.72	204.93	359.14	233.82	234.70	420.28	221.86	409.30	144.60
Storage fees and margins	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	84.3
Transport costs	29.0	29.0	29.0	29.0	29.0	29.0	-	-	44.3
Transport losses	1.5	0.5	0.7	0.5	0.5	0.9	0.4	0.7	1.2
Distribution margin and fees	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	63.8
Financing expenses (security)	1.7	0.7	1.0	0.6	0.8	1.4	1.3	1.7	1.1
Financing of regulation authority	0.70	0.25	0.40	0.25	0.30	0.60	0.30	0.50	0.44
Retailer margin	11.0	9.0	9.0	9.0	9.0	-	-	-	50.0
Terminal transport costs	10.5	10.5	10.5	13.5	10.5	10.5	-	10.5	12.0
Insurance of environmental risks	0.35	0.14	0.21	0.14	0.16	0.30	0.15	0.28	0.22
Financing technical committee	0.10	0.03	0.05	0.05	0.04	0.07	0.04	0.07	0.05
VAT	18.4	18.0	18.0	16.1	18.0	-	-	-	48.1
Regulated price	595	320	475	350	350	510	271	470	450

Source: National authorities.

4.   Retail prices are broadly in line with those in the rest of the CEMAC region with the notable exception of CAR, where prices are significantly higher. Other than in CAR, regional prices for the three main products in terms of market demand (diesel, gasoline and kerosene) do not show wide divergence (Figure 1). Prices in Congo are somewhat lower than the overall CEMAC average, although this largely reflects the impact of the high CAR prices on the overall regional mean. In neighboring DRC, however, prices for are also significantly higher. For diesel, the average price in DRC in 2014 was 73 percent higher than in Congo (Figure 2). This may present incentives to illicit cross-border trade.

Figure 1. Retail Price in CEMAC and DRC, 2013

(USD per liter)

Source: IMF staff estimates.

Figure 2. Retail Diesel Prices in Congo and DRC
(CFAF per liter)

Source: National authorities.

B. Patterns of Consumption in the Congo Domestic Market

5.   Demand for oil products is dominated by road transport (diesel and gasoline) which accounts for 74 percent of domestic fuel use. Residential use (LPG and kerosene) and aviation (jet kerosene) account for the remaining fuel use in the country (Figure 3). Since 2005 diesel usage has grown by 173 percent, reflecting increased private and commercial vehicle usage. The growth in gasoline, meanwhile, has been more muted, reflecting its higher price and its use primarily in private vehicles accessible only to higher income groups.

Figure 3. Oil Products Consumption

Source: IEA.

Figure 4. Consumption of Main Oil Products
(In kilotonnes of oil equivalent)

Source: IEA.
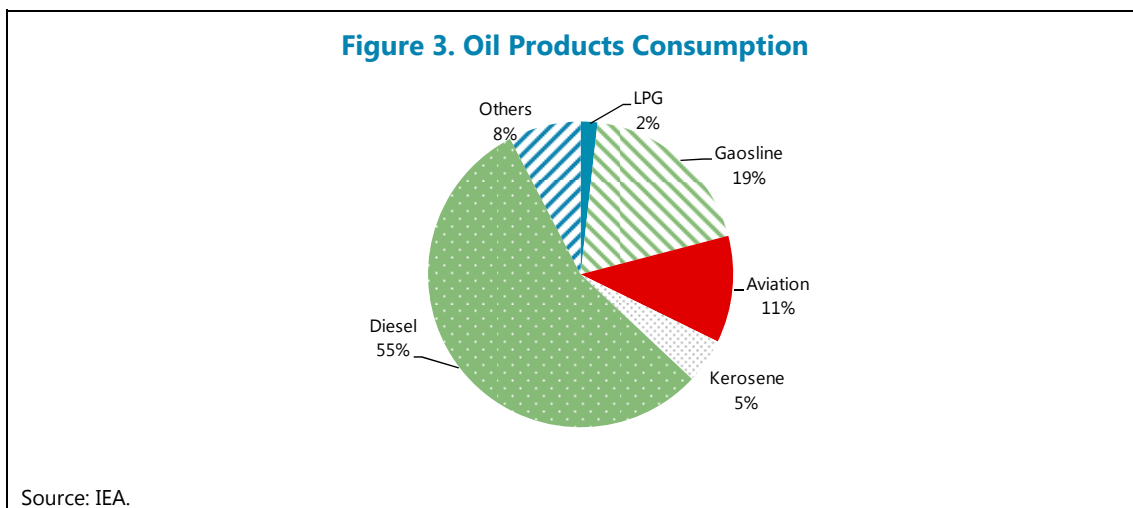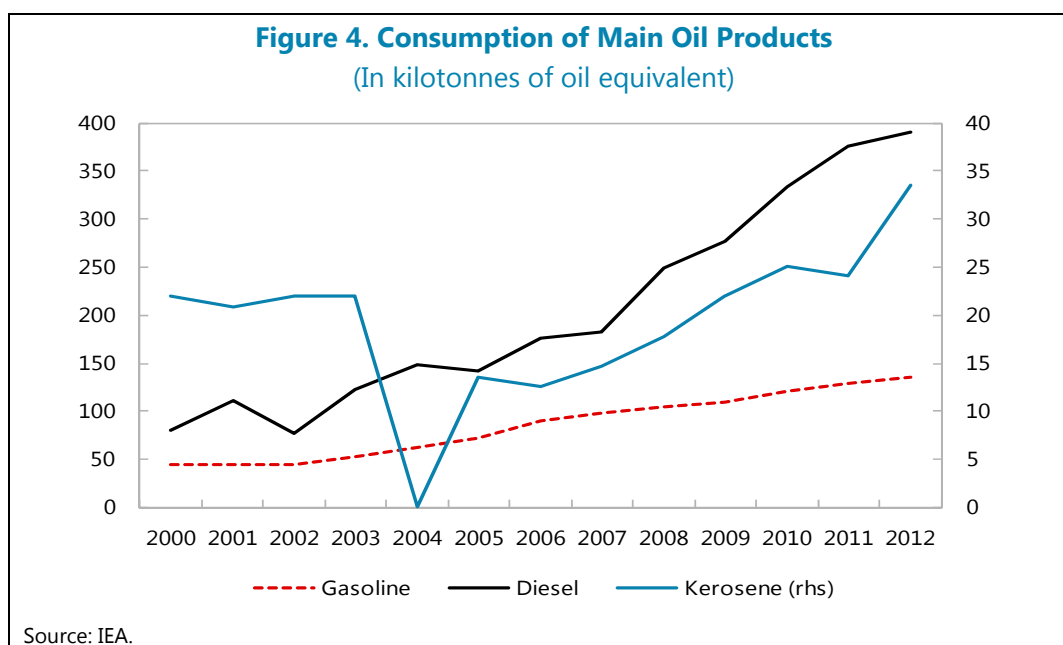
## C. The Evolution of the Domestic Subsidy Regime and Fiscal Implications

6.   In the period leading up to the 2008 reform, high international oil prices resulted in a growing wedge between domestic and international prices. At their peak the price gaps for kerosene and diesel are estimated to have been comfortably in excess of USD1.00 per liter (Figure 5). As a result, the total amount of the subsidy in 2008 is estimated to have increased to about CFAF 105 billion (USD 233.5 million) which amounted to 6.7 percent of non-oil GDP.

7.   The 2008 reform was initially successful in containing the subsidy but, its impact has dissipated over time. The reform of retail prices in September 2008 led to an increase in diesel prices of 38 percent and kerosene by 18.5 percent. This led to a narrowing of the price gaps which was subsequently reinforced by the decline in international prices in the wake of the global economic slowdown. As a result, the net subsidy is estimated to have turned negative in 2009, before continuing to grow again as international oil prices recovered (Figure 6).

8.   By the end of 2014 price gaps for the mainstays of domestic consumption had narrowed significantly. The decline in international oil prices in the second half of 2014 resulted in a narrowing of the price gaps across the range of products consumed on the domestic market. In the first quarter of 2015, price gaps for diesel and kerosene remained close to historical lows but their role as the mainstay of domestic consumption nevertheless results in a projected subsidy for these two products together amounting to 0.8 percent of non-oil GDP for the year. This is offset by a negative price gap for gasoline (i.e. regulated prices above international prices) which is projected to amount to 0.3 percent of non-oil GDP in 2015. The overall narrowing of price gaps presents an opportunity to reform the system and consider applying the price smoothing formula. This would reduce, or even eliminate, the need for fiscal outlays to cover price gaps going forward.

Figure 5. Domestic and International Prices Over Time
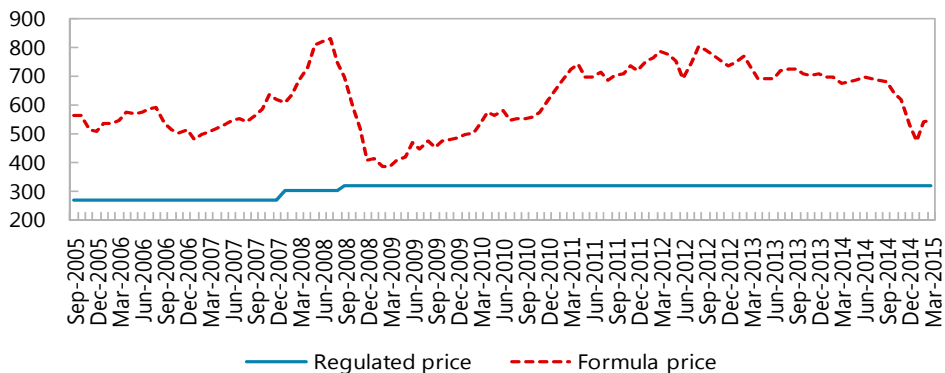(CFAF per liter)

Diesel

Regulated retail price —— Formula price ----

Gasoline

Regulated price —— Formula price ----

Kerosene
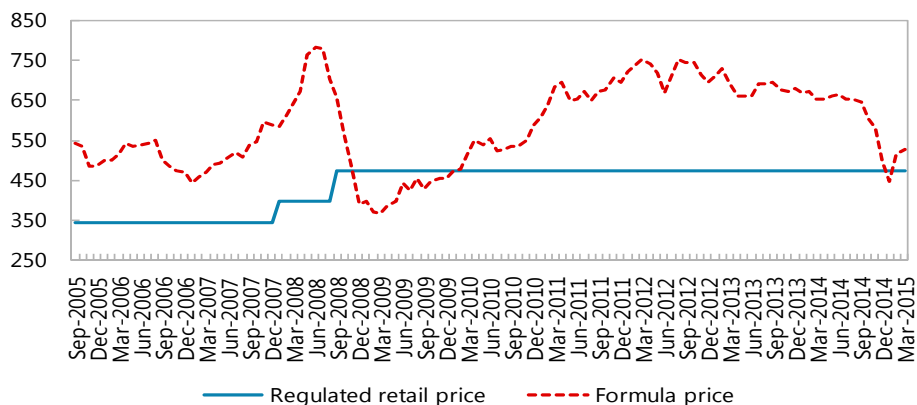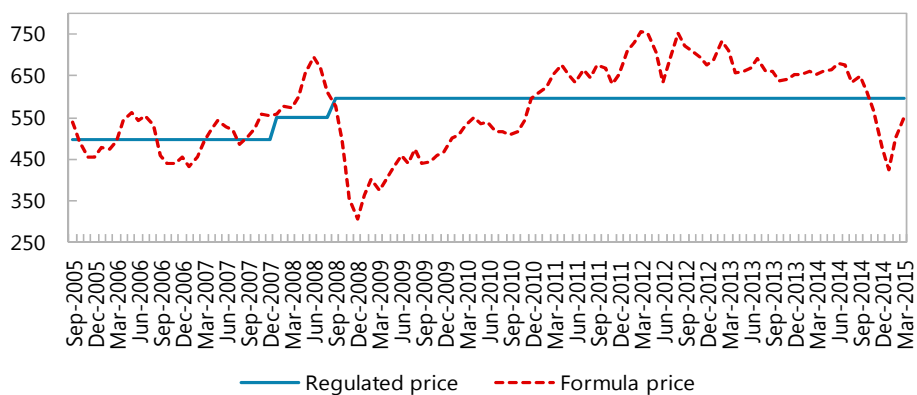
Regulated price —— Formula price ----

Sources: IEA and national authorities' data and IMF staff estimates

9.   Price gaps and subsidies are projected to re-emerge more strongly as international oil prices recover. Projecting international prices in line with WEO assumptions sees the return of significant price gaps from 2016 onwards. Assuming consumption growth in line with non-oil GDP projections, this would result in overall subsidies rising steadily to once again exceed 4 percent of non-oil GDP by 2020 (Figure 6).

Figure 6. Total Fuel Subsidy
(Percent of non-oil GDP)

Sources: WEO database and IMF staff estimate
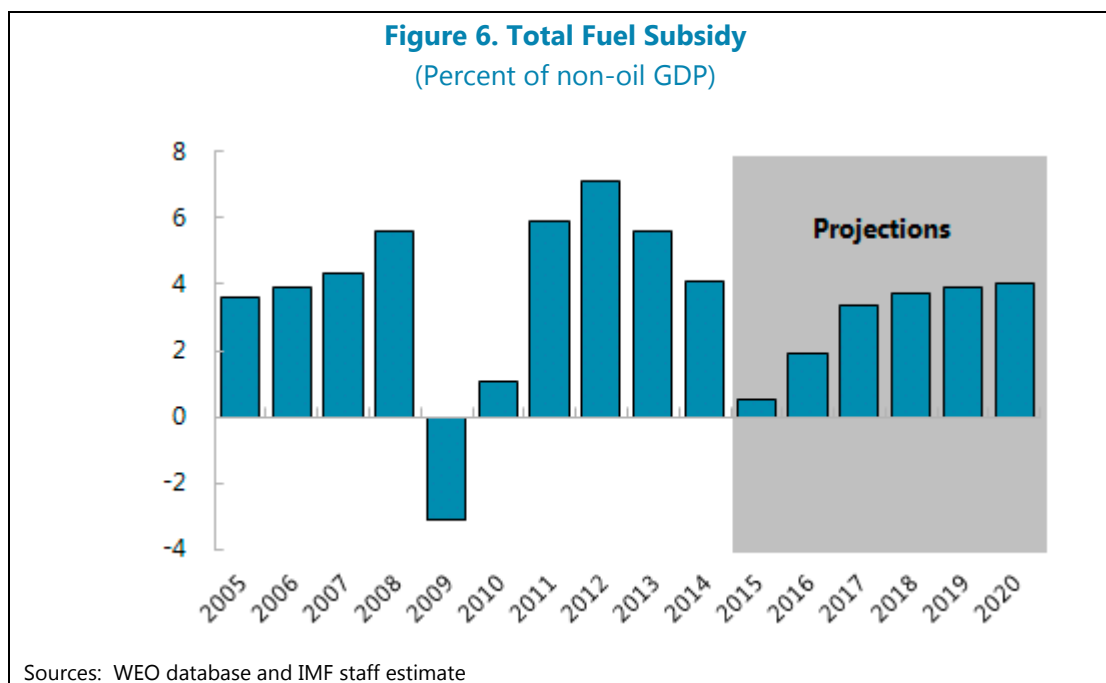
D.   Distributional Impacts

10.   A key consideration in assessing the impact of any such future reform is the distributional effects. IMF staff estimates drawing on household per capita income data from the 2005 household survey suggests that except for kerosene, the benefit incidence of the subsidy regime prior to the 2008 adjustment in petroleum product prices was skewed in favor of the highest income quintiles. Depending on the specific product, the top two quintiles received between 62 percent and 81 percent of the benefits of the subsidy. In contrast, the bottom two quintiles received between 8 and 20 percent of the benefits. Even in the case of kerosene, where the lowest two quintiles received 35 percent of the benefits of the subsidy, the highest quintiles benefitted more with 42 percent of the benefits. Thus, reducing or eliminating fuel subsidies is likely to improve the progressivity of public spending, since high-income households consume more petroleum products. This is consistent with Alleyne (2013) which shows that subsidies in SSA countries have tended to provide benefits to all segments of the population, but mainly the better off. Nonetheless, the poorest household would also be impacted negatively from a removal of energy subsidies because energy consumption represents a large share of their total consumption.

E.   Reform Options

11.   The volatility in international prices since the 2008 reform suggests that a price smoothing formula would limit fiscal exposure and improve transparency. Under current circumstances, with international prices now very close to the regulated retail price, the application of a price smoothing formula would not imply significant social costs. Moreover, the benefits of the subsidy regime have been demonstrated to be skewed in favor of higher income households, though poor households will also be adversely impacted because of the high share of energy in their total consumption.

12.   Fiscal savings could be used in more efficient, poverty-focused programs. To put this in perspective, the estimated fiscal cost of fuel subsidies in 2014 (4.1 percent of non-oil GDP) amounted to 119 percent of the Ministry of Health's allocation for recurrent expenditure. Alternatively, such an amount could cover a cash transfer payment equivalent to the estimated basic minimum household food consumption to about 14 percent of the population. In other words, any efforts to reform energy subsidies should be well-designed and take into consideration the impact on vulnerable households, including from interventions in the form of conditional cash transfers and subsidies for public transportation.

13.   Congo and CEMAC countries in general could benefit from policy convergence in fuel prices. This would require a coordination of fuel pricing and taxation. Better coordination at the CEMAC level would also help to counter the resistance to automatic pass-through of international to domestic fuel prices.

14.   The implicit producer subsidy to CORAF should also be made more transparent through an explicit budgetary allocation. The current approach of covering CORAF's inefficiencies through the *adjustement economique* could be eliminated with the shortfall in CORAF's revenues made up through a transparent budgetary subvention.

Box 1. Methodological Issue: Assessing the Reference Price in Pre-Tax Subsidies

In this analysis the consumer subsidy is defined as the difference between the reference price and the price paid by fuel consumers. The approach taken here is to assess the pre-tax subsidy. Thus, no allowance has been made to incorporate an efficient taxation element, reflecting both revenue objectives and correction for negative externalities, in the reference price. Incorporating such elements into the reference price to give the post tax subsidy would lead to an increased gap between the regulated consumer price and a higher estimate of the subsidy.

The reference price for each fuel product is derived using the methodology set out in the fuel pricing formula contained in Regulation 2005/699 that has never in fact been applied. The updated estimates of the reference price take IEA data for monthly spot prices at Rotterdam[3] for individual fuel items and adjust these for transport and distribution costs. These reference prices are compared to the regulated retail prices contained in the relevant decrees that have fixed such prices since 2008. This comparison provides a price gap per liter of each individual fuel item which is then applied to the corresponding consumption figures to provide the value of the subsidy.

Projections of consumption are made by applying forecast non-oil GDP growth to all fuel products. Price gaps for 2015 are an average of data to March 2015; thereafter they are based on projected international prices using WEO crude oil price assumptions.

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[3] In some cases Singapore is used due to data availability.

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FINANCIAL INCLUSION, GROWTH, AND INEQUALITY IN REPUBLIC OF CONGO[4]

Underdeveloped financial systems and lack of access to financial services are obstacles to growth in lower income countries. The depth of the financial system of the Republic of Congo is comparable to that of the Central Africa Economic and Monetary Community (CEMAC). However, it lags well behind its regional and global peers on aspects of financial inclusion such as access to financial services by households and firms. An empirical exercise for the CEMAC region as a whole indicates that reducing the constraints on financial inclusion would have differential impacts on growth, productivity and inequality. Policies aimed at lowering collateral requirements, reducing firms' participation costs, and lowering intermediation costs could increase firms' access to credit and would significantly boost activity. Lower collateral requirements and intermediation costs would mainly benefit firms that are already in the financial system (the "haves"). Lower participation costs would benefit all firms (including the "have-nots"). In addition, the additional economic growth resulting from greater financial inclusion would expand the tax base. This could support higher pro-poor and pro-growth government spending.

A.   Background

1.   Access to financial services by the population and business is a key driver of sustained growth and poverty reduction. It is well known that in low and middle income countries, shallow financial systems hold back growth. Companies and households need bank accounts to conduct basic financial transactions and to build precautionary savings. They also need access to credit on reasonable terms to operate and expand. Firms, particularly SMEs are typically engines of growth and employment creation. They employ a large share of the workers in developing countries (Ayyagari, Demirgüç-Kunt, and Maksimovic, 2011). Moreover, there is a relationship between inequality and financial inclusion, as significant parts of the population tend to have fewer economic opportunities due to restricted access to financial services.

2.   Firms in the Republic of Congo face particularly binding constraints on access to financial services. Drawing on responses to a cross-country World Bank survey of enterprises,[5] the top chart of Panel 1 highlights the percentage of firms in the Republic of Congo that have access to credit. It is evident that the Republic of Congo is characterized by a particularly small proportion of firms with access to credit, with the proportion of firms with access to credit lines well below the regional CEMAC average. This observation is particularly applicable to small and medium size enterprises.

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[4] Prepared by Adrian Alter, Dalia Hakura, and Cameron McLoughlin with support from Azanaw Mengistu.

[5] Enterprise Surveys (http://www.enterprisesurveys.org), The World Bank.

3.   The depth of the Congolese financial system is comparable to that of the CEMAC.
As measured by the ratio of private credit to GDP (Figure 1, middle), Congo experienced a limited degree of financial deepening over the period 2009–2013. That being said, the Congolese financial system still lags behind in comparison to peer countries on this measure, thereby placing a handbrake on economic growth and development.

4.   The relative inefficiency of the Congolese financial system is indicated by the comparatively high bank overhead costs. Shortcomings in credit information result in higher client screening costs for financial institutions. The poor business environment and the lack of public credit registries in Congo is reflected in the high overhead costs of Congolese banks, which are comparatively speaking amongst the highest in the world.

5.   Access to financial services in Congo is also highly constrained. A variety of measures from the IMF's Financial Access Survey indicate that access to financial services in Congo lags behind that of regional and global peers (Figure 2). For example, the number of bank branches and automatic teller machines (ATMs) in Congo is comparatively low. This means that the number of borrowers/lenders, and hence the stock of deposits and loans, is also lower than in comparator countries.

6.   The banking sector's contribution to firms' investment programs appears limited (Figure 3). Enterprise surveys indicate that while 87 percent of firms possess a bank account, only thirteen percent of firms access a loan or line of credit in Congo well-below the average for CEMAC and that of emerging and developing economies. Nearly 70 percent of loans in Congo require collateral. The value of the collateral on average significantly exceeds the value of the loan, pointing at the problems with the liquidation of the collateral. Loans from banks constitute only a small fraction of firms' investment.

7.   Compared to regional and global peers, access to finance in Congo is poor across all demographic groups (Figure 4). The Congolese tend to use bank accounts for business purposes more than the regional average. However this still falls far short of Congo's global peers. The same may be said for other uses of bank accounts, such as receiving government payments and wages, as well as for sending/receiving remittances.

8.   The lack of development of the financial system in Congo is reflected in the main deposits and payment methods used (Figure 5). This is shown by the comparatively widespread use of bank tellers for deposits in Congo, as well as the limited use of advanced payment services (checks and electronic methods).

9.   The ability to save in Congo lags slightly behind the regional average, necessitating the use of loans for some everyday expenses (Figure 6). The number of survey respondents in Congo who were able to save (also for emergencies) in 2011 was lower than the region wide average and global peers. Hence, the level of outstanding loans for health or emergency purposes in Congo was higher than in comparators

B. Constraints on Financial Inclusion

10.   A micro-founded general equilibrium model developed by Dabla-Norris et al. (2015) is used to examine the most binding financial constraints on growth, productivity and inequality in the CEMAC countries (Box 1). These calibrations reflect CEMAC-specific data for 2009 on the fraction of firms with credit, the economy-wide non-performing loan ratio, and the spread between deposit and lending rates (Text Table 1).[6] Due to data availability constraints, the model is calibrated to capture the specific features of firms in the CEMAC, rather than those of Republic of Congo. However, as noted above, Congo's performance on these measures tends to rank lowest in the CEMAC region. The findings of the analysis can help guide policymakers in prioritizing between different financial sector policies in order to achieve their goals. The results for the CEMAC region are compared with the results from Dabla-Norris et al. (2015) which calibrates the model to six other developing countries, comprising three low-income countries and three emerging markets.

Text Table 1. Overview of Data (2009)	
Target moments:	
Savings (percent of GDP)	29.7
Collateral (percent of loan value)	157
Firms with Credit (percent of total)	19.7
Non - Performing Loans (percent of loans)	8.1
Interest Rate spread (percentage points)	11.8

Sources: Enterprise Surveys; World Bank and IMF Staff calculations.

11.   The relaxation of the constraints on different aspects of financial inclusion is found to have diverse impacts on growth, productivity and inequality. Based on the above model calibration, the effects of relaxing individually the constraints on financial participation, the capacity to lend and bank efficiency (see Box 1) on GDP, productivity, interest rate spreads, income inequality, percent of firms with credit and the NPL ratio, respectively, are assessed. These results for CEMAC are compared against those obtained for other countries in Text Table 2.

Text Table 2. Gains from Relaxing Constraints on Financial Inclusion

	Participation Cost ψ			Borrowing Constraint λ			Intermediation Cost χ		
	GDP (% change)	Total Factor Productivity (% change)	Gini (Change)	GDP (% change)	Total Factor Productivity (% change)	Gini (Change)	GDP (% change)	Total Factor Productivity (% change)	Gini (Change)
CEMAC	**4.81**	**4.35**	**-0.0256**	**14.89**	**22.34**	**0.0038**	**2.72**	**1.55**	**0.0087**
Uganda	5.79	5.76	-0.0210	18.05	11.01	-0.0029	0.69	0.33	0.0014
Kenya	5.76	7.99	-0.0324	13.02	9.39	-0.0155	1.17	0.36	0.0065
Mozambique	12.73	11.53	-0.0292	10.4	4.97	0.0206	0.62	0.25	0.0023
Malaysia	8.74	10.69	-0.0713	4.51	2.97	0.0060	0.86	0.23	0.0007
Philippines	2.69	3.52	-0.0170	21.17	16.38	-0.0337	0.92	0.38	0.0023
Egypt	6.81	11.8	-0.0630	7.9	6.66	0.0031	0.42	0.19	0.0021

Sources: Dabla-Norris et.al. 2015 and IMF Staff Calculations.

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[6] The performance of Congo against its peers along many of these dimensions has been outlined above.

12.   Increasing financial access by lowering participation costs could increase the fraction of firms with access to credit substantially. Lower participation cost has a positive effect on investment for two reasons. First, lower credit participation cost enables more firms to have access to credit, leading more capital to be invested in production. Second, fewer funds are wasted in unproductive contract negotiations freeing up more capital for investment. TFP also increases as capital is more efficiently allocated among entrepreneurs. In this case, income inequality decreases as lower participation costs disproportionately benefit constrained workers and entrepreneurs who hitherto did not have access to credit. It allows them to invest capital into production thereby reducing income inequality.

13.   Lowering borrowing constraints is the most effective in increasing output, a result which is similar to results obtained for countries such as Uganda and Kenya. In particular, policies aimed at improving property and creditor rights and ensuring adequate enforcement of these laws, for example by introduction of collateral registries, could make banks more confident to lend to the private sector. This is because poorly designed and enforced creditor rights tend to discourage lending and encourage individuals to default. This would enable firms to borrow and invest more easily which in turn increases output and productivity as existing firms can operate at a larger scale.

14.   The relaxation of credit constraints may, however, lead to a marginal increase in inequality. This is because addressing borrowing constraints would mainly allow firms that are already in the financial system and that have relatively higher income to borrow more. New small firms would continue to find it difficult to acquire credit. Banks in several CEMAC countries such as in the Republic of Congo are characterized by excess liquidity related to the monetization of the government's foreign currency oil revenues. While the degree of competitiveness may also affect willingness to lend in the banking system (e.g. see Chirwa and Mlachila 2002), another key reason for holding back on lending to the domestic economy is weaknesses in legal and institutional frameworks. Under these circumstances, policies aimed at reducing collateral requirements, such as the introduction of collateral registries, could make banks more confident to lend to the private sector. However, to the extent that banking supervision is weak and/or commercial courts work slowly or do not exist, the relaxation of credit constraints and the resulting increased bank lending could lead non-performing loans (NPLs) to increase. Therefore, there is a tradeoff between growth and financial stability that needs to be carefully managed.

Box 1. Assessing Constraints on Financial Inclusion

The model of Dabla–Norris et al. (2015) permits the examination of the different constraints on financial inclusion and the general equilibrium effects of relaxing these constraints on growth, productivity and inequality.

In the model, agents differ from each other in wealth and talent and can choose to become entrepreneurs or supply labor for wages. Workers are paid the equilibrium wage, while entrepreneurs have access to a technology that uses capital and labor for production. In equilibrium, only talented individuals with a certain level of wealth choose to be entrepreneurs, while less talented individuals or those who are wealth-constrained choose to be workers.

Agents also face financial frictions across three dimensions:

- **Participation costs** (ψ) which limit access to credit, in particular for smaller and poorer entrepreneurs. This relates to factors such as physical distance to banks or ATMs, the documentation required for opening or maintaining an account, or applying for a loan, and the use of electronic payments and new technologies that influence the cost to firms of participating in the financial system.

- **Intermediation costs** (χ) and inefficiencies due to asymmetric information between banks and borrowers which result in widening of deposit-lending spreads as banks have to monitor their clients. Also, limited bank competition can increase inefficiencies and raise intermediation costs.

- Imperfect enforceability of contracts which result in high **collateral requirements** and thus smaller collateral leverage ratios (λ).

In the model, increasing financial inclusion impacts growth and inequality through two different channels. Firstly, it tends to increase the optimal level of capital among entrepreneurs already participating in the market. Secondly, the relaxation of financial constraints permits new entrepreneurs to access the market. These two channels tend to increase GDP, but their impact on GDP can be very different. Typically, financial constraints that improve efficiency among existing entrepreneurs generate an increase in inequality, while financial constraints that increase access to markets generate a reduction in inequality. The extent to which each of the above constraints on financial inclusion is binding depends on country specific characteristics. The relaxation of each constraint has differential effects upon GDP, productivity, inequality and financial stability (see main text).

Moreover, each of these constraints on financial inclusion may be associated with different aspects of the policy environment. High collateral requirements often result from poor legal, regulatory and institutional frameworks that fail to adequately protect property and creditor rights and hence discourage lending. Elevated participation costs tend to reflected by poor rates of access to banking and financial services. High intermediation costs often stem from a lack of publicly available information on borrowers, for example through credit bureaus or credit registries. The model therefore permits the quantification of policy options for improving the different aspects of financial inclusion and illustrates the tradeoffs associated with different financial sector policies.

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15.   Reducing intermediation costs could have a stronger effect on GDP and productivity in CEMAC countries than in other low income and emerging market countries.
Lowering intermediation costs has a smaller effect on GDP and productivity than relaxing collateral constraints and lowering participation costs. Interest rate spreads follow an inverted V curve, as two opposing forces are in effect (Figure 9). First, the decline in the cost of borrowing induces entrepreneurs to increase bank borrowing. This would tend to push up the share of NPLs and

thereby put pressure on the interest rate spread to increase. At the same time, provided there is adequate competition in the banking system, lower intermediation costs decrease the interest rate spread by definition. Inequality would tend to increase as more efficient intermediation would disproportionally benefit firms that have borrowed more.

16.   The expected paths of growth, productivity and inequality that arise from enhanced financial inclusion differ by the type of financial constraint (Figures 7 – 9). Starting from the initial position of CEMAC (Figure 7–9, small triangle), lowering participation and collateral constraints would induce steady increases in GDP, TFP and the percent of firms with credit. The expected paths of inequality are, however, more varied. In CEMAC, a reduction in participation costs is disproportionally more beneficial for constrained workers and entrepreneurs without access to credit, which enables relatively poorer agents to earn a higher income, driving down the Gini coefficient. Relaxation of collateral constraints tends, however, to slightly increase inequality, as talented entrepreneurs can take more leverage and increase their profits. Increasing intermediation efficiency disproportionally benefits highly leveraged firms, who already have higher income than workers, thus slightly increasing inequality.

C.   Policy Implications

17.   The government of the Republic of Congo can play an important role in facilitating the potential output and efficiency gains from relaxing financial frictions. The biggest gains for growth and productivity would be yielded by relaxing borrowing constraints. Concretely, this would involve strengthening collateral registries, improving the protection of creditors' rights, regulating the conduct of banks, and putting in place recourse mechanisms to protect borrowers. Firms large and small will benefit from a stronger legal and regulatory framework for banks and the non-bank private sector.

18.   Relaxing constraints on financial sector participation are also important for harnessing growth and productivity gains. This could be achieved for example through reducing transaction costs and documentation requirements, increasing competition, as well as encouraging banking penetration and the offering of low-fee bank accounts. Enhancing information sharing can also be expected to provide important benefits. In this regard, the government can set standards for disclosure and transparency, promote credit information–sharing systems and collateral registries, and educate and protect consumers.

19.   Increased inequality could be addressed through government redistribution. Lowered borrowing constraints and increased financial intermediation efficiency could lead to greater inequality as firms that are already in the financial system would initially likely benefit the most. However, the resulting additional economic growth expands the tax base thereby providing an opportunity for the government to raise more revenue. These funds could be used to support higher pro-poor and pro-growth government spending. Provided this is supported by ongoing reforms to increase the quality of government spending, this could put the economy on a virtuous trajectory with higher and more-equitable growth.

20. **The monetary authorities (BEAC and COBAC) can also play an important role in supporting financial inclusion.** Mechanisms can be set up to monitoring financial inclusion so as to support actions taken at the national level. Financial supervision should be strengthened in tandem with rising financial inclusion to promote the benefits and manage the associated financial stability risks. The increased bank lending associated with the relaxation of credit constraints could lead to an increase in NPLs to the extent that banking supervision is weak and commercial courts work slowly and unpredictably.

Figure 1. Benchmarking Financial Inclusion and Development

All Firms with Credit Lines
(percent, # of firms responding)
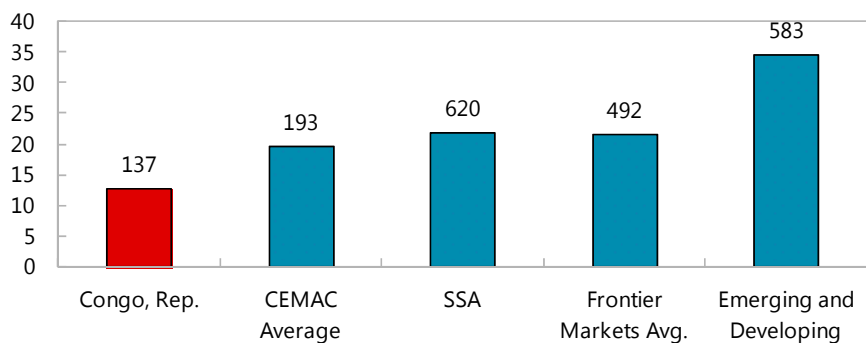
Overhead Costs to Total Assets Ratio
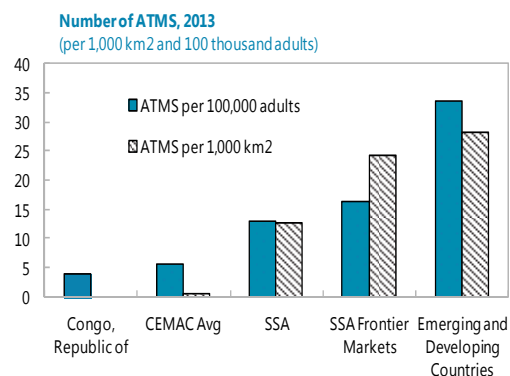(percent)
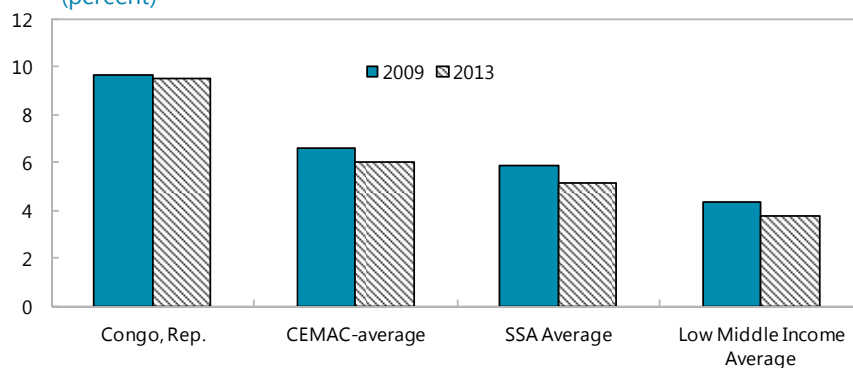
Private Credit to GDP
(percent)
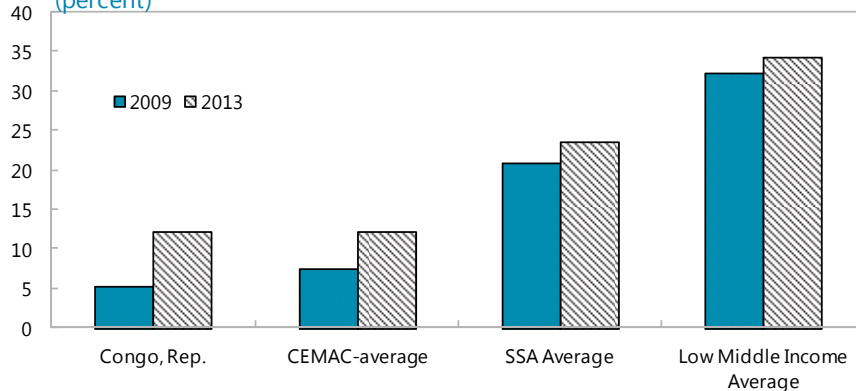
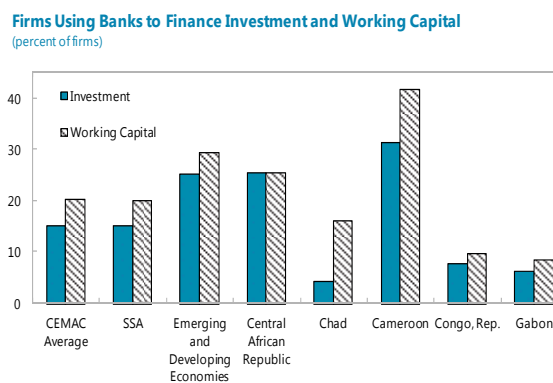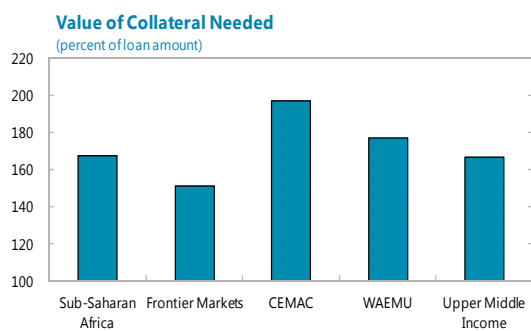Sources: World Bank, Enterprise Surveys; and IMF Staff calculations.
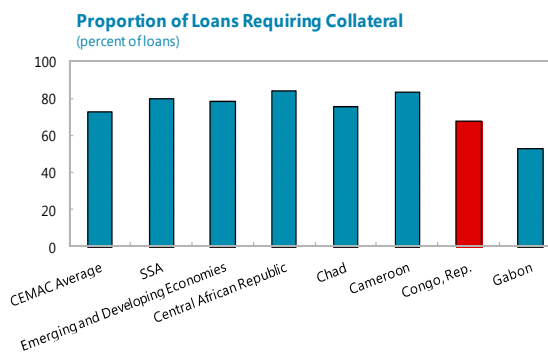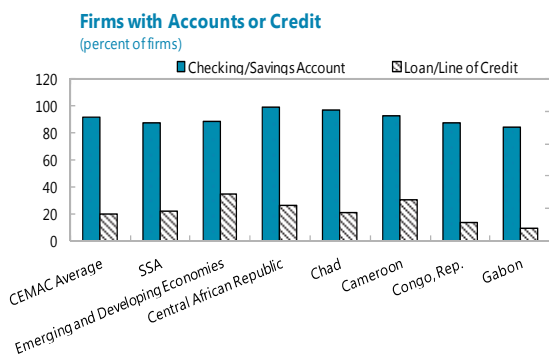
Note: For the top panel, the data for Republic of Congo is as of 2009. For the remaining countries, we take the latest available data from Enterprise Surveys.
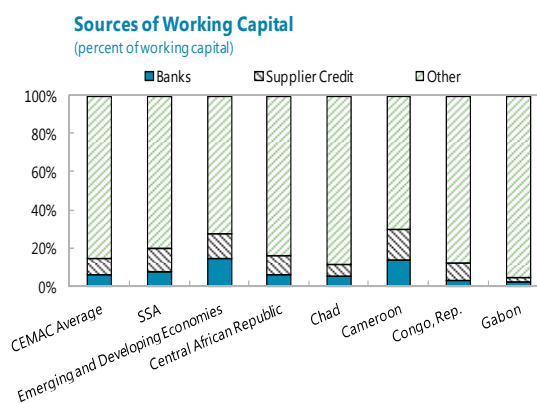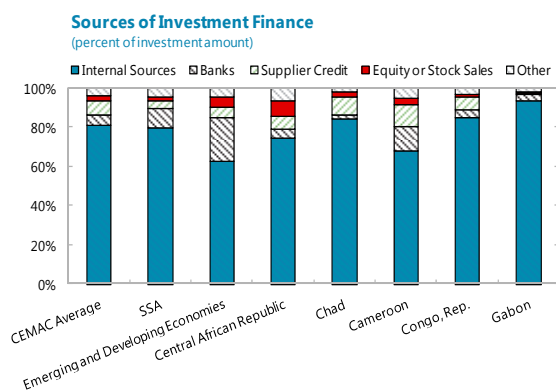
Figure 2. Financial Access, 2013

Number of ATMS, 2013
(per 1,000 km2 and 100 thousand adults)

- ATMS per 100,000 adults
- ATMS per 1,000 km2

Commercial Bank Branches
(per 100,000 adults)

- Congo, Republic of
- CEMAC Avg
- SSA
- SSA Frontier Markets
- Emerging and Developing Countries

Depositors with Commercial Banks
(per 1,000 adults)

- 2004
- 2013

Outstanding Deposits with Commerical Banks
(in percent of GDP)

- Congo, Republic of
- CEMAC Avg
- SSA
- SSA Frontier Markets
- Emerging and Developing Countries

Borrowers from Commercial Banks, 2013
(per 1,000 adults)

Outstanding Loans from Commerical Banks
(in percent of GDP)

- Congo, Republic of
- CEMAC Avg
- SSA
- SSA Frontier Markets
- Emerging and Developing Countries

Sources: Financial Access Surveys; World Bank and IMF staff calculations.

Figure 3. Firms' Access to Credit, 2009

Firms with Accounts or Credit
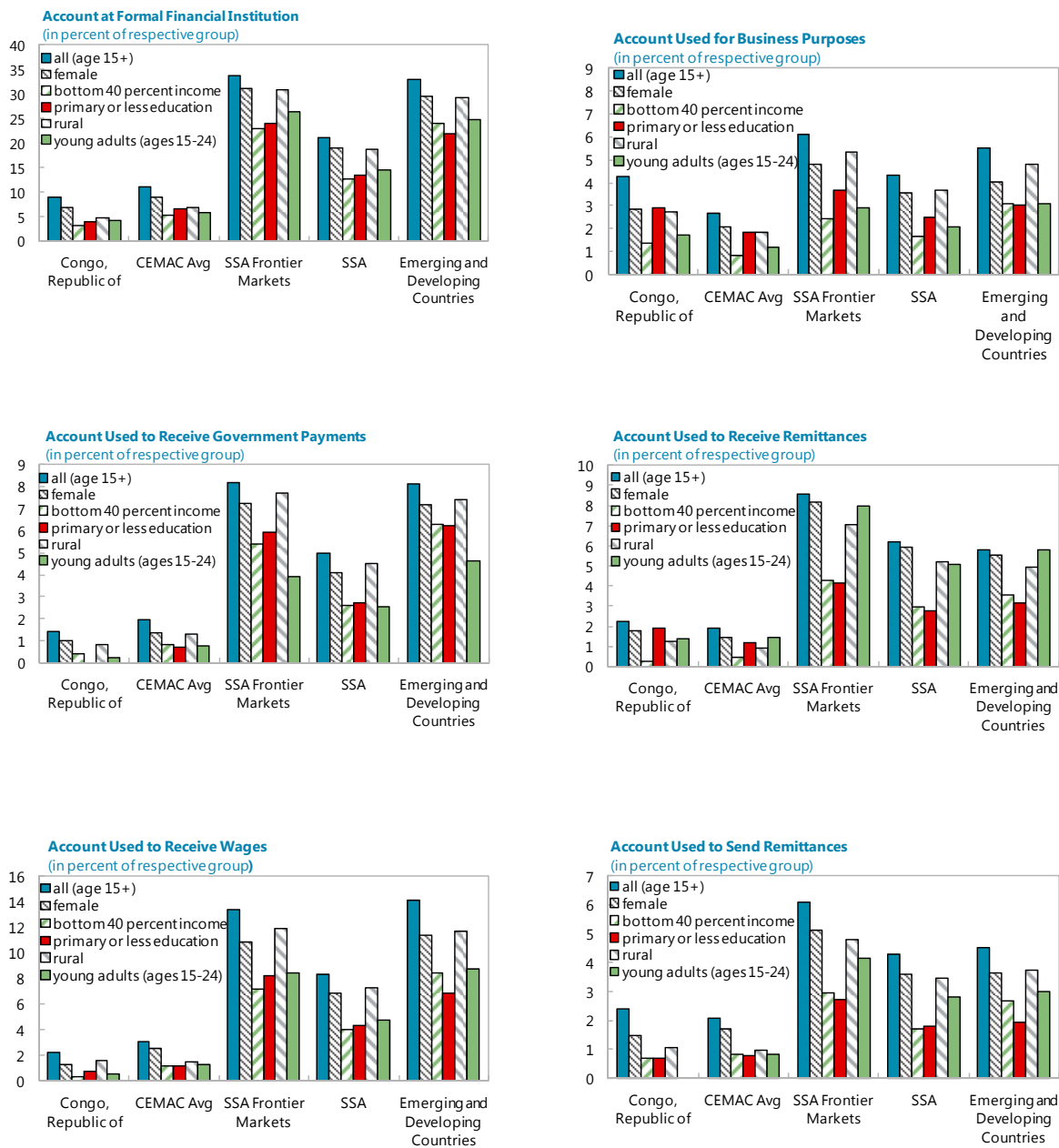(percent of firms)

Proportion of Loans Requiring Collateral
(percent of loans)

Value of Collateral Needed
(percent of loan amount)

Note: Average weighted by the number of firms in each country.

Firms Using Banks to Finance Investment and Working Capital
(percent of firms)

Sources of Investment Finance
(percent of investment amount)

Sources of Working Capital
(percent of working capital)

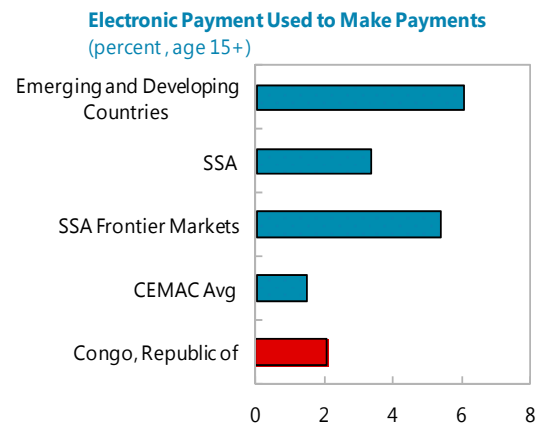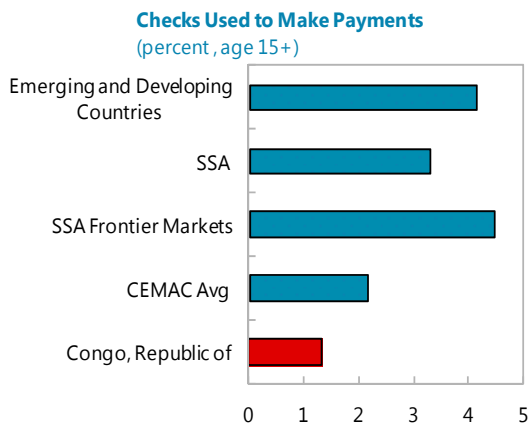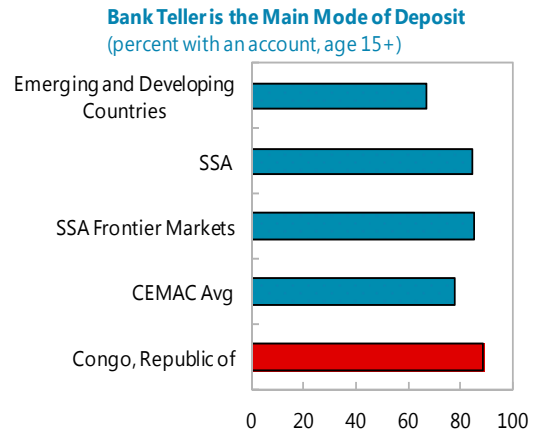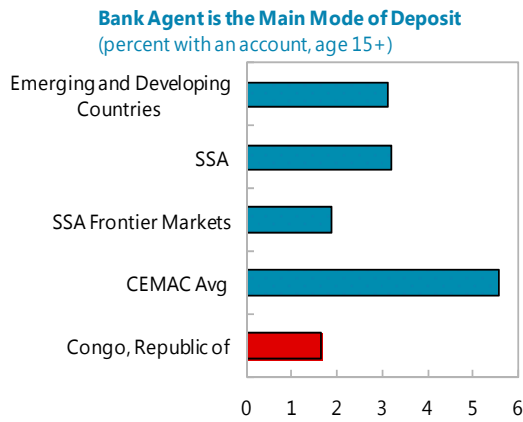Sources: Enterprise Surveys; World Bank and IMF Staff calculations.

Note: The data for Republic of Congo is as of 2009. For the remaining countries, we take the latest available data from Enterprise Surveys.

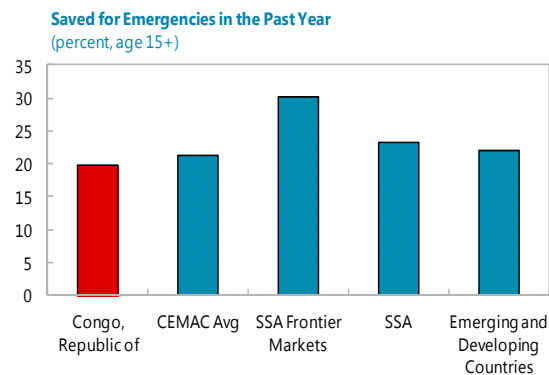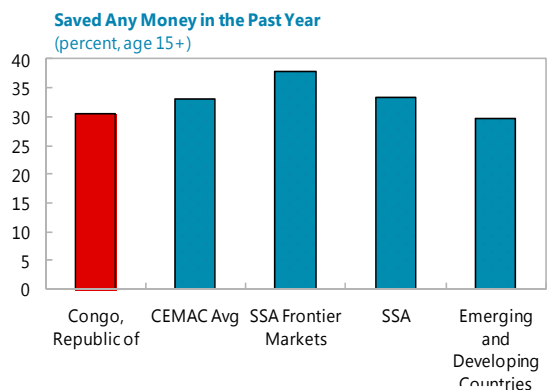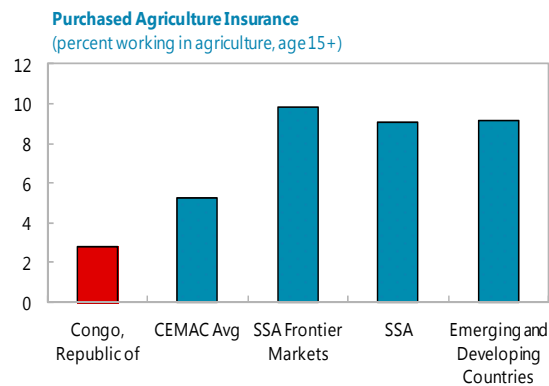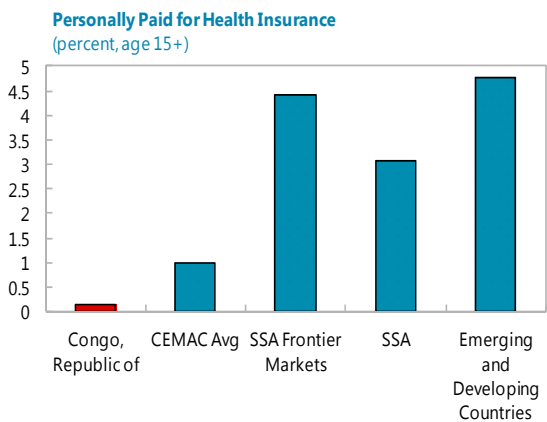## Figure 4. Demographical Characteristics of Financial Access, 2011

Account at Formal Financial Institution
(in percent of respective group)

Account Used for Business Purposes
(in percent of respective group)

Account Used to Receive Government Payments
(in percent of respective group)

Account Used to Receive Remittances
(in percent of respective group)

Account Used to Receive Wages
(in percent of respective group)

Account Used to Send Remittances
(in percent of respective group)

Legend for each chart:
- all (age 15+)
- female
- bottom 40 percent income
- primary or less education
- rural
- young adults (ages 15-24)

Categories (x-axis): Congo, Republic of; CEMAC Avg; SSA Frontier Markets; SSA; Emerging and Developing Countries

Source World Bank, Findex 2011.

Figure 5. Deposit and Payment Modes, 2011

Bank Agent is the Main Mode of Deposit
(percent with an account, age 15+)

Bank Teller is the Main Mode of Deposit
(percent with an account, age 15+)

Checks Used to Make Payments
(percent , age 15+)

Electronic Payment Used to Make Payments
(percent , age 15+)

Possession of Credit Card
(percent , age 15+)

Possession of Debit Card
(percent , age 15+)
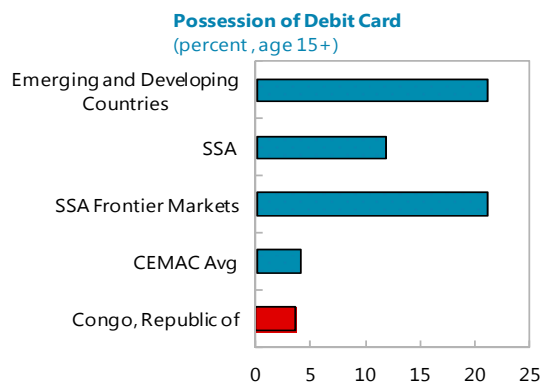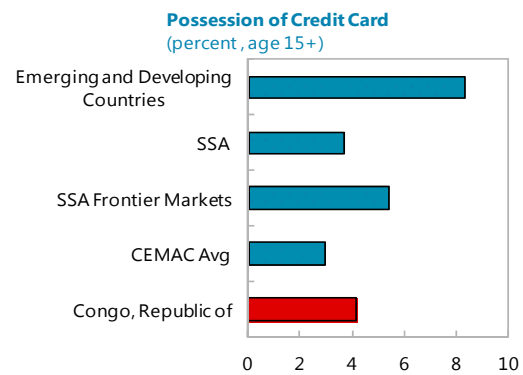
Source: World Bank, Findex 2011.

Figure 6. Use of Loans, 2011

Outstanding Loan for Health or Emergencies
(percent, age 15+)

Outstanding Loan for School Fees
(percent, age 15+)

Personally Paid for Health Insurance
(percent, age 15+)

Purchased Agriculture Insurance
(percent working in agriculture, age 15+)

Saved Any Money in the Past Year
(percent, age 15+)

Saved for Emergencies in the Past Year
(percent, age 15+)
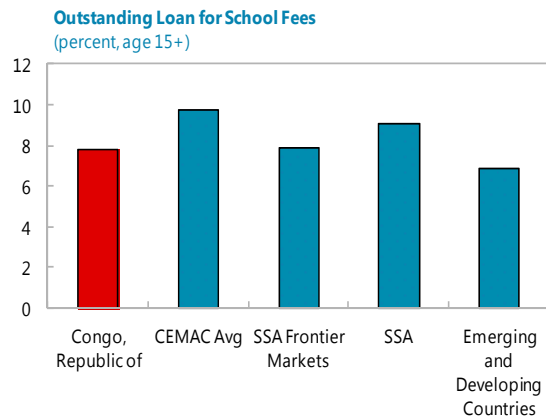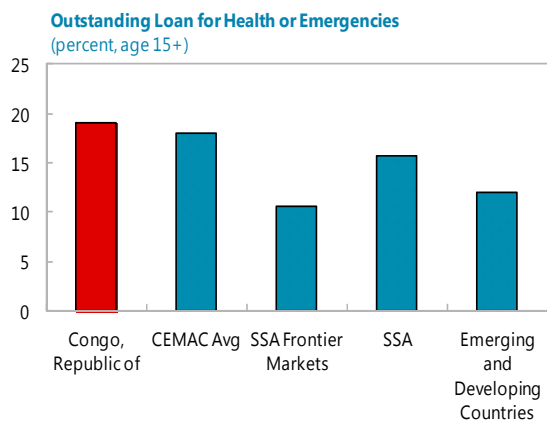
Source: World Bank, Findex 2011.

Figure 7. CEMAC: Lowering Participation Costs
(From left to right, dot indicates initial position)
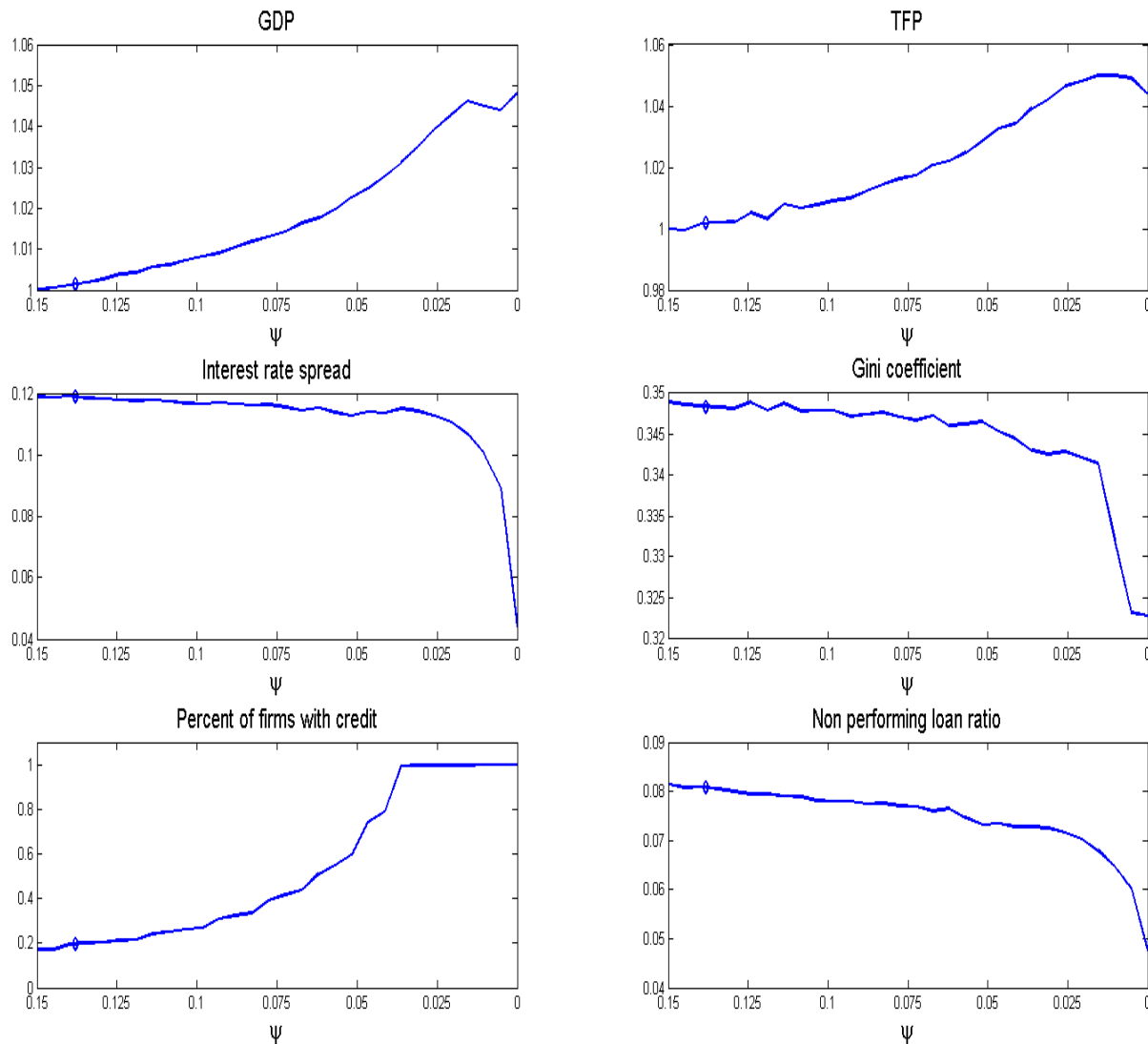
Source: IMF staff estimates.

Figure 8. CEMAC: Lowering Collateral Constraints
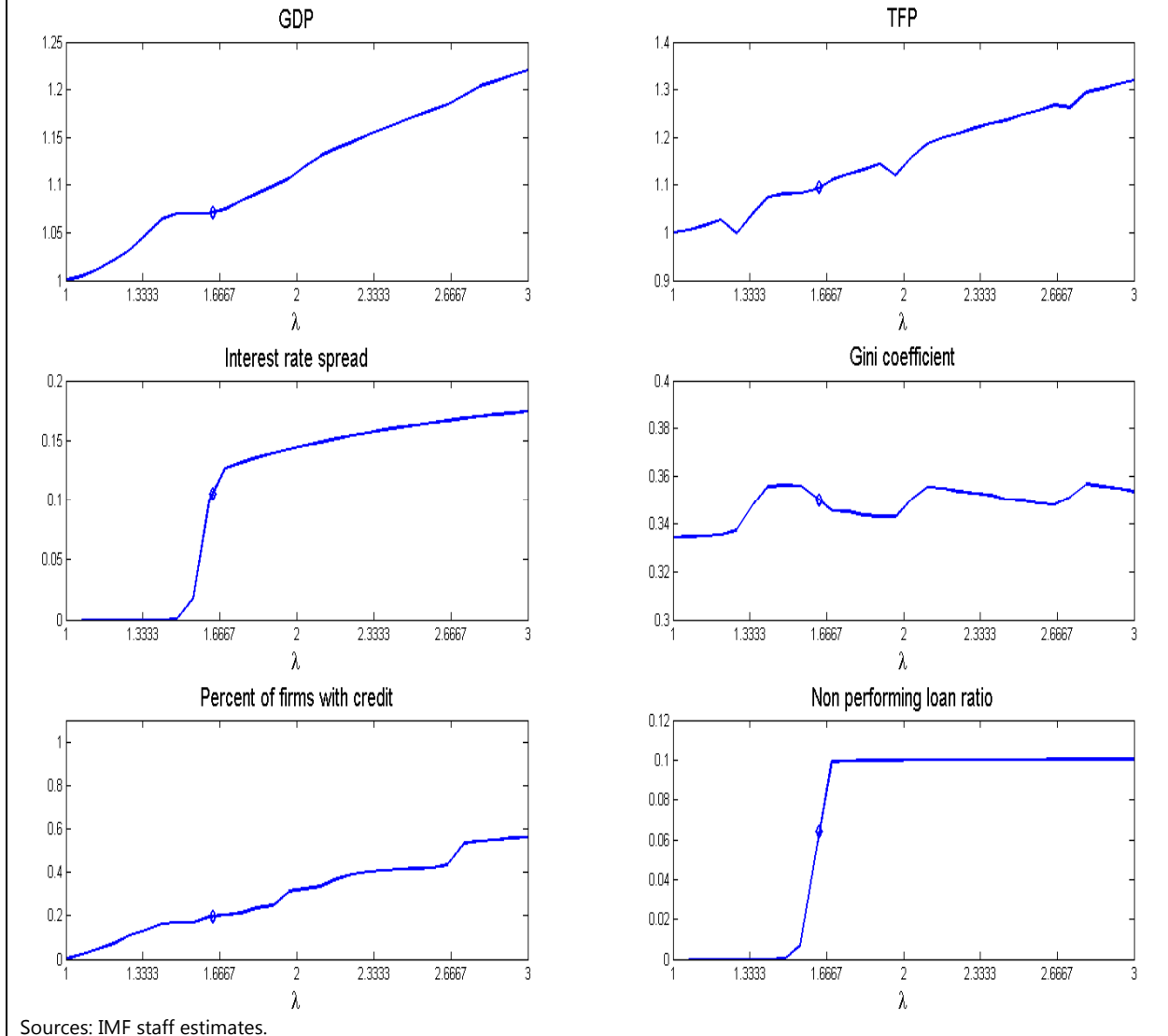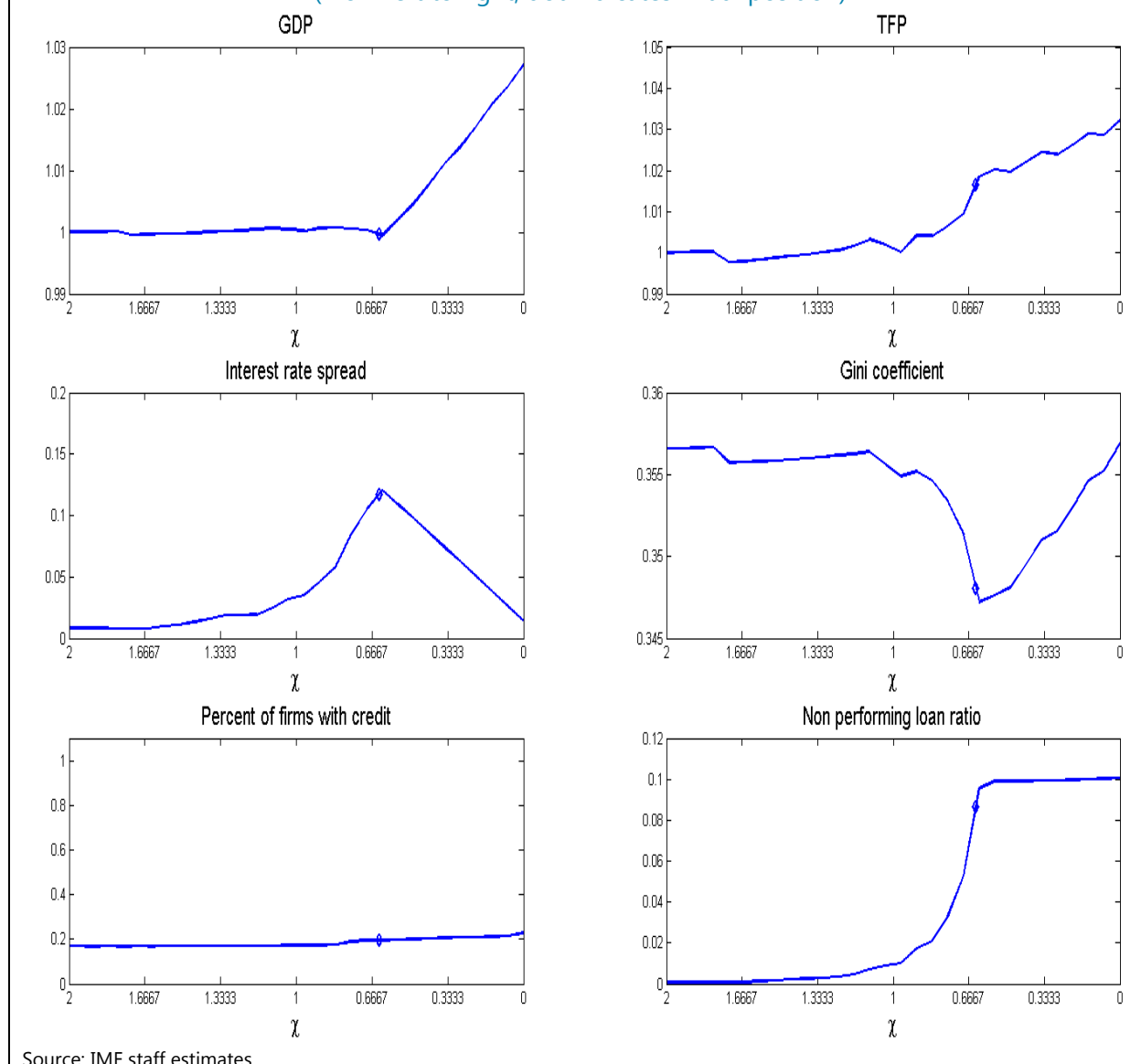### (From left to right, dot indicates initial position)

Sources: IMF staff estimates.

Figure 9. CEMAC: Lowering the Cost of Intermediation
(From left to right, dot indicates initial position)

Source: IMF staff estimates.

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Ayyagari, M. , A. Demirguc-Kunt, and V. Maksimovic, 2011, "Small vs. young firms across the world : contribution to employment, job creation, and growth," Policy Research Working Paper Series 5631, The World Bank.

Dabla-Norris, E., Ji, Y., R. Townsend and F. Unsal, 2015, "Distinguishing Constraints on Financial Inclusion and Their Impact on GDP and Inequality," NBER Working Papers 20821, National Bureau of Economic Research, Inc.