

Cabo Verde Economic Update

Cabo Verde's Potential Digital Dividends

May 2022



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Preface

The second Economic Update for Cabo Verde focuses on the importance of returning to fiscal sustainability in the aftermath of the COVID-19 crisis and on the potential role of Information and Communications Technology (ICT) in strengthening the foundations for a sustainable and inclusive economic recovery. The first chapter discusses the current macroeconomic situation, outlook, and risks the country faces over the medium term. The second chapter provides an overview of key challenges to transform Cabo Verde into a Digital Hub. The report offers a set of actionable policy priorities for a swift return to fiscal and debt sustainability and around the national digital transformation agenda, which include enhancing the ownership of the innovation agenda, strengthening digital foundations, investing in human capital, and mobilizing Diaspora resources to create a private ICT sector.

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Acronyms and Abbreviations

ARME	Agência de Regulação Multisectorial da Economia	IMF	International Monetary Fund
ASA	Aeroportos e Segurança Aérea	ISP	Internet Service Provider
BCV	Banco de Cabo Verde	ITU	International Telecommunication Unit
CAD	Current Account Deficit	JUCE	Janela Única de Comércio Externo
CNPD	Centro Nacional de Proteção de Dados	LTE	Long-Term Evolution
CPI	Consumer Price Index	NRI	Network Readiness Index
CPLP	Community of Portuguese-Speaking Countries	NOSi	Public Agency for Information Technology
CSIRT	Computer Security Incident Response Team	OCWAR-C	West African Response on Cybersecurity and Fight against Cybercrime
CVA	Cabo Verde Airlines	PDE	Platform for Data Exchange
CVD	Cabo Verde Digital	PEACE	Pakistan and East Africa Connecting Europe
CVE	Cabo Verde Escudo	PEDS	Strategic Plan for Sustainable Development
CVT	CV Telecom	PIN	Public Infrastructure Network
DGTED	Directorate-General for Telecommunications and Digital Economy	PPG	Public and Publicly-Guarantee
DSSI	Debt Service Suspension Initiative	PPP	Public-Private Partnerships
ECOWAS	Economic Community of West African States	SNIAC	Sistema Nacional de Identificação e Autenticação Civil
EDCV	Estratégia Digital de Cabo Verde	SIDS	Small Islands Developing States
EGDI	Electronic Government Development Index	SOE	State-Owned Enterprise
EUR	Euro	STEM	Science, Technology, Engineering and Mathematics
FAS	Financial Access Survey	SSA	Sub-Saharan Africa
FDI	Foreign Direct Investment	UN	United Nations
GDP	Gross Domestic Product	UNDP	United Nations Development Program
GII	Global Innovation Index	UNCTAD	United Nations Conference on Trade and Development
GNI	Gross National Income	UNESCO	United Nations Educational, Scientific and Cultural Organization
GNIpc	Gross National Income per capita	WACS	West Africa Cable System
GSMA	Groupe Spéciale Mobile (GSM) Association	WBG	World Bank Group
ICT	Information and Communications Technology	WDI	World Development Indicators
IFH	Imobiliária, Fundiária e Habital SA	ACMI	Aircraft, Crew, Maintenance, and Insurance
INE	National Institute of Statistics	DFIs	Development Finance Institutions

Executive Summary

Chapter 1: The State of the Economy

Recent Economic Developments

Real GDP expanded by 7 percent in 2021, from the depressed level in 2020, reflecting a gradual economic recovery. Private and public consumption drove growth, supported by the gradual reopening of the economy and measures put in place by the Government to support businesses and hard-hit sectors. Construction and commerce boosted economic growth, whereas hospitality and restaurants remained depressed. Overall, the performance of the service sector improved, reflecting the gradual reopening of the tourism sector, with positive spillovers elsewhere. The agriculture and fishing sector also performed relatively well, as agriculture recovered from four years of drought and the external demand for fish returned to normal levels.

A comprehensive vaccination campaign was fundamental for the recovery during the second half of 2021. Cabo Verde administrated approximately 700,000 vaccine doses obtained through the COVAX mechanism and donations from partner countries. Much of the progress was made between June and October and by mid-April 2022, 74 percent of the eligible adult population had received two doses, about 76.9 percent of eligible teenagers received at least one dose, and boosters were applied to 15.8 percent of eligible adults. Cabo Verde's administered vaccine doses is much higher than world and Sub-Saharan Africa (SSA) averages, ranking 4th in SSA with 108.85 doses per 100 people.

The shock resulting from COVID-19 produced the largest economic contraction on record and exposed the country's economic vulnerabilities. Prior to the crisis, Cabo Verde experienced robust and accelerating economic growth driven by a thriving tourism sector and benefiting from deep structural reforms, including reforms in the SOE sector, and fiscal restraint that reduced debt. The crisis reversed this progress, with Gross Domestic Product (GDP) contracting by 14.8 percent in 2020 (15.7 percent in per-capita terms), the second largest reduction in SSA. The development model is characterized by an overreliance in tourism, large presence of the government in the economy, and large FDI flows directed to all-inclusive hotels with little connection to other sectors of the economy. The national poverty rate increased from 28 percent in 2019 to 35 percent in 2020, reversing the progress made since 2015.

The economic recovery in 2021 led to a slight reduction in poverty. Poverty stood at 33 percent in 2021, using the national poverty line equivalent to \$5.4 in purchasing power parity (PPP) terms per person per day in 2015 prices, a drop of 6.5 percent in the poverty headcount, compared to 2020. In rural areas, because of the resumption of growth in agriculture and fishing, poverty fell by 3 percentage points, from 45 percent in 2020. Urban poverty also declined by 2 percentage points, to 28 percent in 2021, reflecting the revival of service activities (particularly trade), transport, and public services.

The fiscal deficit and financing needs remained high in 2021, because current expenditures continued to be required to address the effects of COVID-19. Driven by the gradual recovery of the economy in 2021, fiscal revenues increased by 2.5 percent, reaching 25.8 percent of GDP. However, public expenditure increased by 3 percent in 2021 due to additional measures put in place to address protracted effects of the COVID-19 crisis, reaching 34.6 percent of GDP. Current spending increased by 2.6 percent, reflecting continued spending on public health services, disease prevention and control, and support for hard-hit sectors. As a result, the overall deficit (including grants) stood at 8.8 percent of GDP in 2021, compared to 8.9 percent in 2020. Consequently, fiscal financing needs for 2021 remained high at a budgeted amount of US\$153 million. They were fully covered by concessional credits, grants, domestic borrowing, and resources freed up by the Debt Service Suspension Initiative (DSSI).¹

Hard won gains in reducing the public debt burden were erased. Public debt, which had been on a declining path since 2017, increased sharply to 155.3 percent of GDP in 2021, with the need to resort to additional external concessional loans and the issuance of treasury bonds to cover fiscal financing needs. Cabo Verde's risk of external and overall debt distress remains high, according to the December 2021 joint WB/IMF Debt Sustainability Analysis but is assessed as sustainable. Prudent borrowing policies and strengthened debt management, as well as measures to enhance the functioning of the government securities market are critical to achieve sustainable debt dynamics. In view of Cabo Verde's vulnerability to exogenous shocks, progress in export and output diversification is also needed for long-term debt sustainability.

The COVID-19 crisis continued to hammer the SOE sector, demanding additional fiscal support and leading to the reversal of the privatization of CVA in 2021. The authorities had extended loan guarantees amounting to US\$52.4 million in 2020 to support financially distressed SOEs, with CVA accounting for almost half of the loan guarantees (US\$25 million). In 2021, additional loan guarantees accounted for US\$43.6 million, driven again by CVA (US\$20.1 million). Capitalization to SOEs accounted for US\$8 million in 2021 (US\$7.9 million in 2020), with NEWCO (the Special Purpose Vehicle created to absorb CVA debt before privatization) being the largest recipient with US\$6.8 million. The exceptional negative impact of the pandemic on the aviation sector led to the reversal of the privatization of CVA in July 2021. The increased exposure to contingent liabilities in 2020 and 2021 added to the already high fiscal risks. These fiscal vulnerabilities may undermine Cabo Verde's efforts to restore fiscal sustainability and return debt (as a share of GDP) to a declining trajectory in the medium term. Improving the management and monitoring of fiscal risks is paramount.

The gradual recovery in net service exports helped narrow the Current Account Deficit (CAD) from 16.5 percent of GDP in 2020, to 13.2 percent in 2021. The decline in the CAD in 2021 reflects the gradual recovery in tourism, a smaller deficit in net goods exports with the upturn in external demand for fish, and an increase in remittances. The CAD was financed primarily by FDI and concessional loans in 2021. FDI accounted for 5.6 percent of GDP. International reserves in 2021 are estimated to cover about 7.5 months of imports, well above the 3.6 months recommended by the IMF 2019 External Stability Assessment (ESA). As such, reserves have helped support the accommodative monetary policy response to the COVID-19 shock.

¹ The DSSI is an initiative of the G20 group to help countries cope with the fallout of the COVID-19 crisis. It offered a temporary suspension of official sector debt payments, with repayment period of five years and a one-year grace period. The DSSI was approved in April 2020 for eight months, it was subsequently extended until December 2021.

Outlook and risks

The strong post-COVID-19 economic recovery was set to continue in 2022, underpinned by the reactivation of the tourism sector, but the impact of the Ukraine war has reduced growth prospects in the short term. Real GDP growth is projected at 4 percent in 2022 due to inflationary headwinds from the Ukraine war but is expected to gradually increase thereafter. Growth will be supported by the continued recovery of the tourism sector as the impact of the pandemic fades and vaccination coverage increases. Growth is expected to average 5.3 percent between 2023 and 2025, led by the recovery of tourism and investments in the ICT, energy, and fishery sectors. The gradual fiscal consolidation, which is needed to restore debt sustainability, will support growth. This will be mainly focused on enhancing the efficiency of revenue and debt management and on key structural reforms, particularly in the SOE sector, to improve growth-supporting service delivery and lay out a better-leveled playing field for investors.

The outlook is subject to downside risks stemming from new COVID-19 variants, the Ukraine war, and climatic shocks. While the COVID-19 vaccination rollout is among the highest in Africa, the country remains vulnerable to new variants. An increase in the size or duration of the terms of trade shock emanating from the Ukraine war could lead to higher inflationary pressures and the continuation of policy support to ameliorate its impact, which in turn could undermine fiscal and debt sustainability. Political pressures against continued fiscal consolidation in the aftermath of the crisis could also derail SOE reform efforts. However, the authorities remain committed to continuing to improve fiscal risk management, with a view to lowering the debt burden and enhancing the provision of public services over the medium term. In addition, the country remains exposed to growing climate-related shocks and needs to develop more resilient adaptation and disaster risk management strategies.

Chapter 2: Digital Development Outlook: Challenges and Prospects

Digital technologies have become an intrinsic part of sustainable growth across the world. COVID-19 caused disruptions in almost all aspects of socio-economic life; and digital technologies gained heightened importance in not only short-term economic recovery plans but also in long-term, resilience building strategies. The pandemic-imposed crisis further underscored the role of ICT in increasing the productivity and resilience of Cabo Verde's economy.

The concept of "Digital Archipelago" of "Cyber Islands" aims to position Cabo Verde as a hub for digital services. The country intends to create an environment for hosting technology solution providers, growing ICT talent, and adopting technologies to boost productivity across industries.² As a small island nation, Cabo Verde has always acknowledged the importance of being connected to the world and having reliable inter-island connectivity. More recently, the ICT sector development agenda has gained momentum as a potential source of new income, job creation, and economic diversification. In addition, the COVID-19 crises further intensified the role of technologies and connectivity in building the country's resilience.

Digital Infrastructure, Access, and Use of Internet

Cabo Verde's internet penetration is above average, compared to its peers, but still has space to grow, driven by improved affordability and better connection quality. With around 62 percent of the population and 67 percent of households using the internet, the country is ahead of most peers and only behind Mauritius and Saint Kitts and Nevis. However, the limited international internet bandwidth, at 44

² <https://www.itu.int/hub/2020/12/connecting-continents-how-cabo-verde-plans-to-become-a-digital-hub/>

kb per user, is a main weakness, according to the Network Readiness Index (NRI). In addition, there are notable disparities in internet penetration among the rural and urban populations. For example, while 69 percent of residents of urban settlements use the internet, just 48 percent are internet users in rural settlements. Despite significant advancements, 2G technologies dominate the market of mobile broadband; the internet connection speed also demonstrates poor performance.

Digital Government and Institutions

Some foundational elements of digital government are in place and functioning. The digital transformation in government is led by strong institutions, such as NOSi and ARME. The recently created Ministry of Digital Economy is expected to coordinate digital transformation in the government and broader economy. Citizens can access multiple online government services through a single window; the data exchange platform will enable more end-to-end digital services. In addition, ongoing digital government projects, such as single external trade system JUCE, e-Embassy and others, promise accelerated digital development. However, e-government infrastructure is not developed enough to support resilient service delivery, as highlighted by the 2020 UN Electronic Government Development Index (EGDI) that ranked the country 110th out of 193.

Digital Development Policies and Regulations

In its efforts to promote the digital sector for economic diversification, the government is enhancing sectoral policies, strengthening the regulatory framework, and improving the legal environment. Digital development is central to the government's *Strategic Plan for Sustainable Development* (PEDS 22-26) along with the dedicated *Cabo Verde Digital Strategy* (EDCV) – Agenda for 2019-2021. Some elements of the digital economy's regulatory and legal framework are in place, but sector-related policies need to be enhanced to incentivize investments. Telecom sector has been developing; however, insufficient market competition is still limiting growth. With the development in e-government, data privacy, data protection, and sovereignty also started to gain prominence. The *National Cybersecurity Strategy 2016-2020* identified priority areas for the country's cybersecurity capacities. However, the Cybersecurity Capacity Review by the WB in 2019 assessed the country's capabilities in areas such as software quality, technical security controls, or incidence response to be insufficient. In addition, ITU's Global Cybersecurity Index 2020 positioned Cabo Verde 136th in the world and 27th in the Africa region in terms of the resilience of its cybersecurity system.

Innovation and Entrepreneurship

There is an emerging entrepreneurship scenery in Cabo Verde; however, the innovation ecosystem is still nascent. A variety of programs aim at cultivating digital entrepreneurship in Cabo Verde, but startup activities are still limited. According to Global Innovation Index 2020 (GII), Cabo Verde's innovation performance ranked 100th among 131 countries and 15th among lower-middle-income countries, and 7th in Sub-Saharan Africa. The Global Startup Ecosystem Index 2021 ranks it 87th among 100 countries globally. With the growing trends, the ICT sector's (telecommunications and postal services) contribution to the economy was 2.7 percent of GDP in 2021.

Digital Skills

Sustained effort is needed to promote the digital skills agenda. Modernization of the national school curriculum and enhancement of ICT laboratories in schools could produce tech-savvy graduates with higher rates going into ICT careers. The adoption of technologies in the education process is still hampered by

limited reliable high-speed connectivity and lack of ICT skills among teachers. Several initiatives, such as NOSiakademia, Outcode program and others aim at filling the ICT skills gaps in the market.

Policy Priorities and Reform Areas

Further investments and policies are required to bolster the innovation ecosystem, increase the adoption of digital technologies across industries and create a favorable business environment to position Cabo Verde as a regional digital hub. The country has developed a relatively sound connectivity infrastructure and built the foundations for the digital economy. However, existing gaps and fundamental issues in all areas of the digital ecosystem prevent the country from fully realizing the potential digital dividends. Policy priorities for the national digital transformation agenda include enhancing the regulatory framework for digital development, strengthening the digital foundations, including data ecosystems and cybersecurity, and investing in human capital.

Policy Priorities	Timeline
Strengthen the regulatory framework for digital development	
<i>Conduct a regulatory gap analysis for the digital economy.</i> This activity would include identifying gaps that hamper the development of digital businesses and digital entrepreneurship and studying global examples and good practices in terms of policies and regulations to close those gaps.	ST
<i>Create formal and non-formal dialogue platforms</i> to engage the private sector, academia and diaspora networks in strategic discussions about sector-related policies and strategies. Such platforms and collaboration mechanisms could enable more precise identification of market failures and design of more targeted interventions to address those failures.	ST
Enhance digital foundations, including data ecosystem and cybersecurity	
<i>Build cyber resilience</i> by strengthening the infrastructure for trusted ecosystems coupled with programs to enhance the cybersecurity capacity among government entities, firms, and individuals. This would include conducting a national risk assessment and identifying Critical Infrastructure; designing and implementing cybersecurity awareness and literacy programs; and promoting adoption of international ICT and cybersecurity standards in the government and private sector.	ST
<i>Develop a national data policy</i> to promote the exchange and use of open government data by government agencies, private sector and academia. This work would include a legal and regulatory gap analysis, stocktaking of available data infrastructure, national databases, and their integration with the Data Platform Exchange Framework. The policy would also define national targets to develop a strong data ecosystem in Cabo Verde and a roadmap on how to achieve those.	MT
Invest in human capital	
<i>Develop a national digital skills agenda</i> as an overarching framework to help coordinate various programs in the field. It could help consolidate many available training programs, improve their relevance for the private sector, and ensure their long-term sustainability. It could also address existing gender gaps more effectively, as women continue to be underrepresented in technology-oriented education programs and jobs.	ST
<i>Coordinate and streamline investments</i> of Development Finance Institutions (DFIs), public sector participants and other stakeholders to align with the national digital skills agenda.	MT

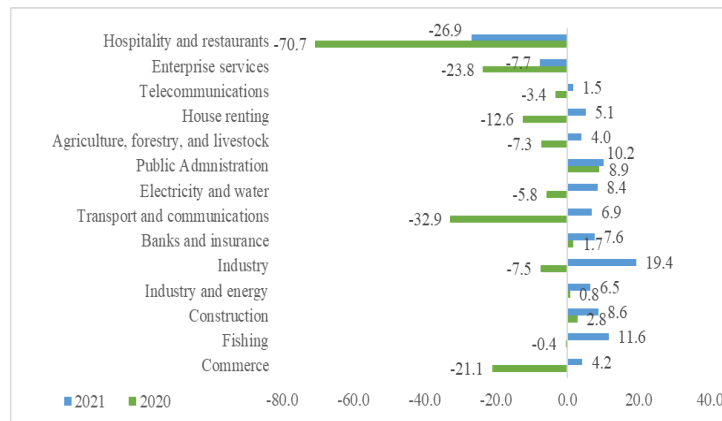
Part I –The State of the Economy

A. Recent Developments

1. Real Sector

1. Reflecting a gradual recovery of the economy and base effects, real GDP increased by 7 percent in 2021. After nine months of closure due to COVID-19 restrictions, the country reopened to tourism at the end of December 2020, with positive spillovers elsewhere. The tourism sector represents 25 percent of GDP and drives around 40 percent of overall economic activity. The sector is also the main recipient of most of Cabo Verde’s FDI, a critical source of external finance. Overall, the services sector grew by 6.3 percent in 2021, while industrial output increased by 9.5 percent. Construction and commerce increased by 8.6 percent and 4.2 percent, respectively, whereas hospitality and restaurants remained depressed (Figure 1). The agriculture and fishing sector also performed relatively well, increasing by 4 percent and 11.6 percent, respectively, as agriculture recovered from four years of drought and the external demand for fish returned to normal levels.

Figure 1: Annual Growth rates 2020-2021 (Percentage)



Source: The World Bank Group

2. Private consumption led economic growth in 2021. Private consumption increased with the easing of the restrictions imposed by COVID-19 pandemic and the gradual reopening of the economy, contributing 6.3 percentage points to GDP growth (Table 1). Likewise, public consumption contributed 6.2 percentage points, due to exceptional expenditures measures to respond to the pandemic. The contribution of total investment to growth was negative, driven by a reduction in public investment. FDI inflows accounted for 5.6 percent of GDP, an increase of 1.9 percentage points compared to 2020. Exports of goods and services increased by 8.4 percent due to some recovery in the tourism sector in the second half of the year and a strong increase in exports of goods, mainly fish and fishery products, contributing 1.4 percentage points to GDP growth. At the same time, imports of goods and services increased by 4.3 percent, making the contribution of net exports to growth for the year slightly negative.

**Table 1: Contribution to GDP Growth
(Percentage points)**

	2019	2020	2021p	2022p	2023p	2024p
GDP Growth	5.7	-14.8	7.0	4.0	4.7	5.7
Demand Side						
Consumption	4.6	-7.1	12.5	3.2	3.6	4.1
Investment	-2.4	6.7	-4.3	3.8	2.2	3.1
Exports	4.1	-28.7	1.4	1.1	7.0	2.0
Imports	0.5	-14.4	2.6	4.2	8.1	3.4
Supply Side						
Agriculture	-0.5	-0.4	0.3	0.2	0.3	0.3
Industry	1.1	-0.4	2.3	1.6	1.8	2.0
Services	5.1	-14.0	4.3	2.3	2.6	3.4

Source: Cabo Verdean authorities, IMF and WBG estimations (February 2022)

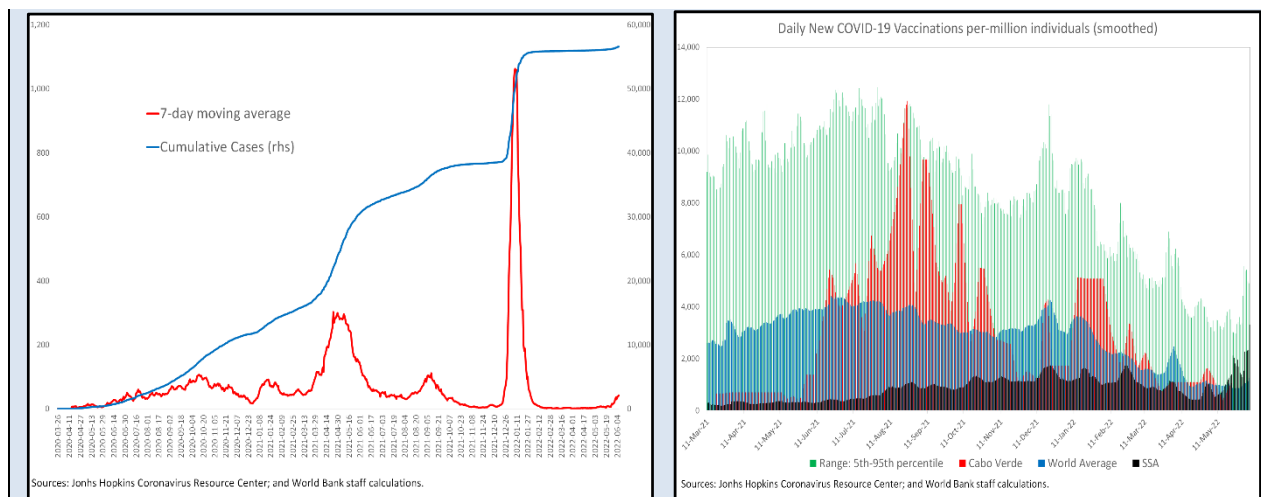
3. Mitigation measures in place until December 2021 played an important role in supporting vulnerable businesses and families affected by the crisis. The credit lines provided to companies amounted to around US\$41 million (2.6 percent of GDP), with preferential interest rates up to 3 percent and state guarantees up to 80 percent. This support is estimated to have benefited 633 companies and protected 13,300 jobs in 2021. The suspension of labor contracts, which cost the Government around US\$25 million, is estimated to have avoided layoffs of additional 18,265 workers. This simplified lay-off regime under which the workers retain 70 percent of the gross salary was first implemented in April 2020 and was extended until December 31, 2021. However, in its fourth extension, which began on January 1st, 2021, the companies' contribution was reduced from 35 percent to 25 percent of the total, with the National Pension Fund (INPS) now contributing 45 percent instead of 35 percent out of 70 percent. Measures aimed at preserving the livelihood of the most vulnerable were successfully implemented. The Government quickly scaled up the existing safety net, using the social protection delivery systems already in place and provided emergency cash transfers to additional households, reaching approximately 24,000 people.

Box 1: The COVID-19 Pandemic in Cabo Verde

As of June 5, 2022, the country recorded an incidence of 56,590 cases, with a recovery rate of 98.8 percent (Figure B1.1). Like most countries, Cabo Verde suffered several waves of the COVID-19 pandemic, the most severe being the Omicron variant between late December 2021 and early January 2022. After the Omicron variant, cases decreased from 7,182 in the first week of January to 105 in the last week of February, and the rate of positive tests reduced from 45.8 percent to 2.5 percent. Despite the increase in the number of cases with the omicron variant, hospitals were not overwhelmed, and routine health services continued to function. The number of deaths was low, with a lethality rate of around 0.7 percent.

Figure B1.1: Number of COVID-19 Cases

Figure B1.2: Number of COVID-19 Vaccinations



A comprehensive vaccination campaign was fundamental for the recovery during the second half of 2021. The vaccination campaign started on March 18, 2021 and progressed rapidly covering both adults and teenagers populations. Cabo Verde received from March 12 to December 13, 2021, a total of 945,220 doses of vaccines from various manufacturers (AstraZeneca, Pfizer, Moderna and Sinopharm) through the COVAX mechanism and donations from partner countries. During this period, the country used 651,653 doses, equivalent to 69 percent of the total vaccines received. Much of the progress was made between June and October with a substantially higher number of administered doses relative to world standards. As of June 5, 2022, 85 percent of the eligible adult population had received two doses of the vaccine. The booster dose has already been applied to 24.2 percent of eligible adults. Additionally, teenagers between the ages of 12 and 17 started being vaccinated on December 16, 2021. As of June 5, about 85.8 percent of eligible teenagers have received at least one dose of the vaccine and 71 percent are already fully vaccinated. Cabo Verde's number of administered vaccine doses is much higher than the world and SSA averages, ranking 4th in SSA with 108.85 doses per 100 people (Figure B1.2). The COVAX mechanism recently announced the distribution of 52,000 doses of the pediatric vaccine, which should arrive in the country by the end of July to cover, in a first phase, 60,000 children between 5-11 years of age.

2. Fiscal and Debt Dynamics

4. Driven by the gradual recovery of the economy in 2021, fiscal revenues increased by 2.5 percent, reaching 25.8 percent of GDP. With the reopening of the country to tourism and its spillover effects into other sectors, tax revenues reached CVE 33 billion (USD 339 million) in 2021, an increase of 2.7 percent compared to 2020. All sources of taxes increased, except taxes on income and profit, which continued with a poor performance due to the COVID-19 measures to protect companies, jobs, and income still in place in 2021 (installment payments on taxes, suspension of coercive collection of taxes, and lay-off scheme). Decreased economic activity in 2020 also had a negative impact on the annual profit tax paid by firms in 2021. Taxes on goods and services and on international trade increased by 4.1 and 19.7 percent, respectively, compared to 2020, reflecting the rebound in economic activity and increase in imports (Annex 1). Non-tax revenue increased by 11.3 percent of GDP, reaching 4 percent of GDP, mainly reflecting an increase in revenues from the specific fee on tobacco, hospital medical services, and registry and notary

fees. Grants accounted for 2.3 percent of GDP in 2021, 1 percentage points lower than in 2020, since part of the grants were frontloaded in 2020 to help the country cope with the crisis.

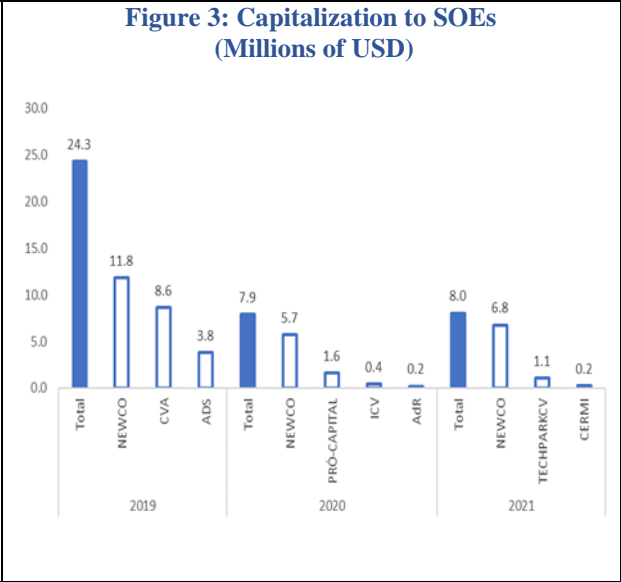
5. Total expenditure increased by 3 percent in 2021 due to additional measures put in place to address protracted effects of the COVID-19 crisis, reaching 34.6 percent of GDP. Current spending increased by 2.6 percent, reflecting continued spending with public health services, disease prevention and control, and support for hard-hit sectors. In addition, the increase in current spending also reflects the phased implementation of the Armed Forces Career and Salary Plan, the increase in the number of pensioners, and payment of arrears. Capital expenditure decreased by 3.1 percent due to the delay of several public investment projects, mainly investments to improve housing conditions, strengthen infrastructure in education, health, and roads. Social expenditure accounted for 47.7 percent of total expenditures.

6. The fiscal deficit and financing needs remained high in 2021 because of sustained high current expenditure. The revenue-driven fiscal consolidation program, in implementation since 2016, was halted in 2020 due to falling fiscal revenue and increasing COVID-19 related expenditure. The contraction of the economy in 2020 led to a decline in fiscal revenue by 23.9 percent in nominal terms, reaching 26.5 percent of GDP compared to 29.4 percent of GDP in 2019, while urgent needs brought upon by the pandemic increased public expenditure from 31.8 percent of GDP in 2019 to 35.4 percent in 2020. The overall deficit (including grants) increased from 1.8 percent of GDP in 2019 to 8.9 percent in 2020. It stood high at 8.8 percent of GDP in 2021. Consequently, fiscal financing needs for 2021 remained high at US\$153 million. Extra financing needs were covered by concessional credits of US\$58.1 million provided by the World Bank, and the African Development Bank (AfDB). Grants amounting to US\$14 million were provided by the European Union (EU), Luxemburg, and Portugal. The remaining financing gap was covered by government securities (US\$38.7 million) and resources freed by the Debt Service Suspension Initiative (US\$23.2 million).

7. The COVID-19 crisis continued to undermine the SOE sector, which required additional fiscal support and lead to the reversal of the privatization of CVA in 2021. The authorities had extended loan guarantees amounting to US\$52.4 million in 2020 to support financially distressed SOEs, with CVA accounting for almost half of the loan guarantees (US\$25 million). In 2021, additional loan guarantees accounted for US\$43.6 million, driven again by CVA (US\$20.1 million) (Figure 2). Capitalization to SOEs accounted for US\$8 million in 2021 (US\$7.9 million in 2020), with NEWCO (the Special Purpose Vehicle created to absorb CVA debt before privatization) being the largest recipient with US\$6.8 million (Figure 3). The exceptional negative impact of the pandemic on the aviation sector led to the reversal of the privatization of CVA in July 2021 (Box 2). The increased exposure to contingent liabilities in 2020 and 2021 added to the already high fiscal risks. These fiscal vulnerabilities may undermine Cabo Verde's efforts to restore fiscal sustainability and return debt (as a share of GDP) to a declining trajectory in the medium term. Improving the management and monitoring of fiscal risks is paramount.



Source: Cabo Verde’s Ministry of Finance.



Source: Cabo Verde’s Ministry of Finance.

Box 2: The Reversal of the Privatization of CVA

With the goal of reducing the fiscal burden and increase service delivery and connectivity, the Government sold 51 percent of the CVA’s shares to *Lofleidir Icelandic*, a subsidiary of *Icelandair*, in March 2019. The choice of the investor aimed at providing CVA with experienced management capacity based on an Air Hub business model capable of leveraging the strategic location of Cabo Verde into an international platform for business and tourism. The restructuring of the company before privatization involved the creation of a Special Purpose Vehicle entirely owned by the Government to absorb CVA’s debt, estimated at around US\$100 million. In December 2019, an additional 10 percent of CVA shares were sold, 7.5 percent to the diaspora (44 people) and 2.5 percent to the workers.

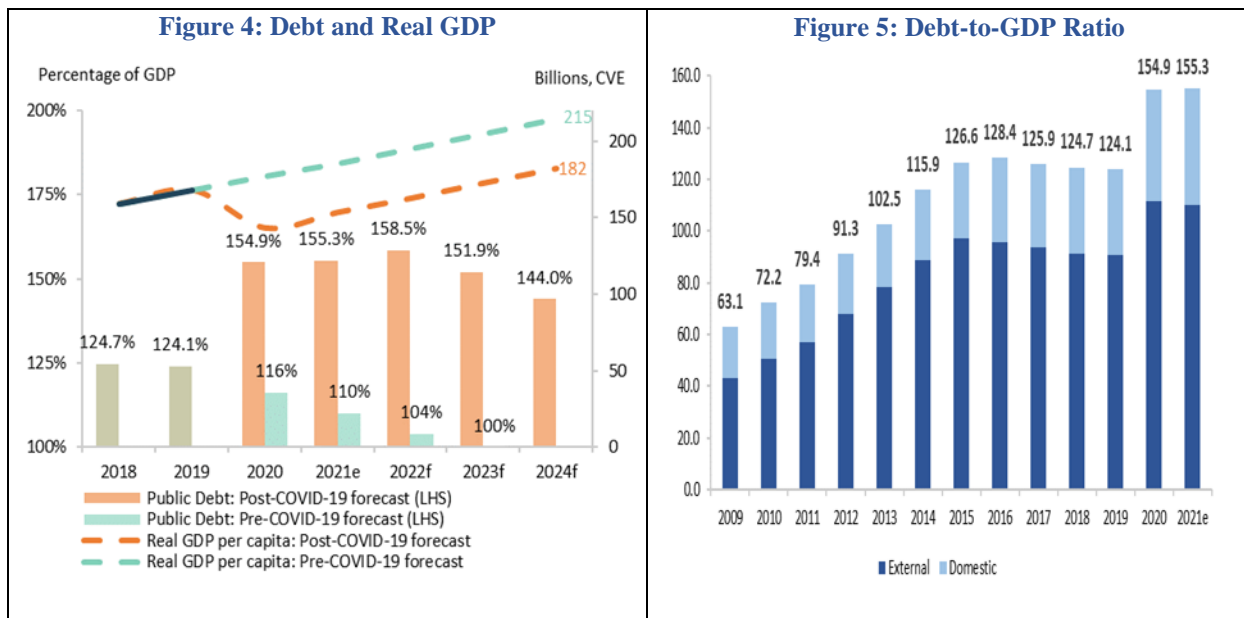
CVA’s poor financial performance after privatization, exacerbated by the impact of the COVID-19 crisis in the aviation sector, led to an accumulation of debt of US\$58.1 million (3.3 percent of GDP) and the accrual of arrears of US\$17.8 million (1 percent of GDP) in 2021. While operational revenue increased after privatization, the company reported losses (EBITDA) of US\$66.1 million and US\$38.3 million in 2019 and 2020, respectively. The lion share of debt is fully guaranteed by the Government (US\$57.4 million). CVA was grounded in March 2020 because of the COVID-19 shock. In March 2021, the Government and the investor agreed on a revised business plan to relaunch the airline. However, difficulties in the implementation of the business plan made impossible the restart of CVA operations.

In July 2021 the Government reversed the partial privatization of CVA on public interest grounds of fiscal responsibility, to manage risks that could trigger the loan guarantees and require further fiscal support. The authorities’ announced a three-stage plan to restructure the airline and prepare it for re-privatization by 2024-2025. The first stage, to be implemented in 2022, aims to link Cabo Verde to Portugal to ensure competitive connectivity and requires an estimated financing of US\$ 17.6 million (1 percent of GDP). This phase includes restoring the operating license, training crews, and start operations under an ACMI leasing agreement. The second stage of the business plan, envisioned to be implemented in 2023-2024, aims to scale up operations and restore commercial credibility. The third stage, envisioned to be implemented in 2024, will stabilize operations and restore the carrier reputation to start the process for privatization.

Cabo Verde Airlines resumed operations in January 2022 with weekly connections from Santiago, Sal, and São Vicente to Lisbon. The company operated under an ACMI leasing agreement with TAAG (Transportes Aéreos de Angola) that made available a 120-seat aircraft for CVA operations. By mid-March 2021, the airline had carried around 3,100 passengers. CVA plans to begin operating on a dry lease basis by the end of May, with national crews, maintenance, and insurance services provided directly by CVA. The Government plans to resume flights to Boston in mid-July, for which the leasing of a second aircraft will be negotiated with TAAG.

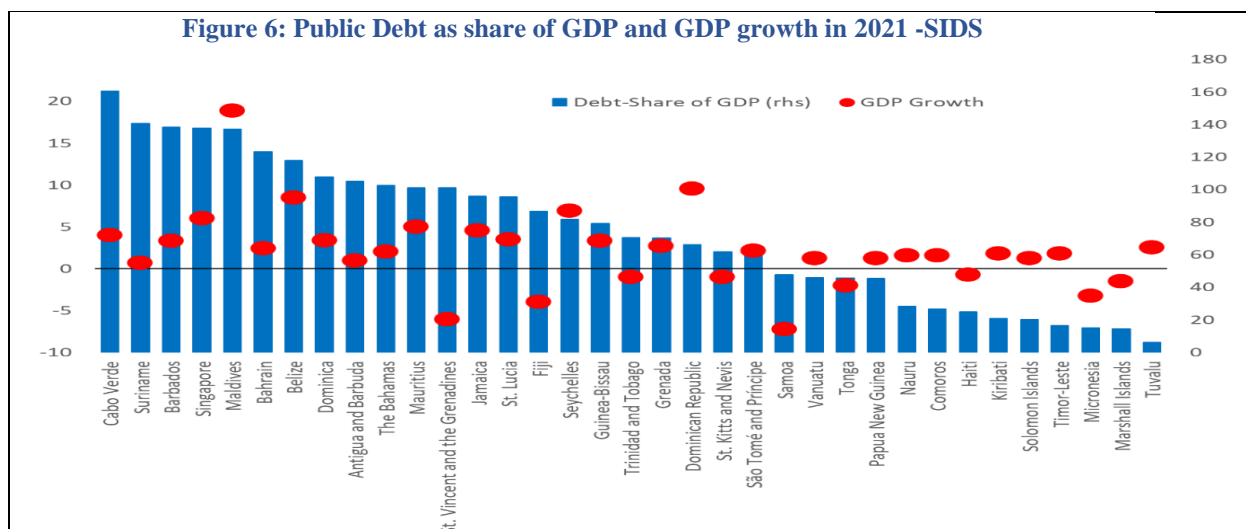
Financing needs are estimated at US\$17.6 million (1 percent of GDP) in 2022 and to remain stable at around this level from 2023 to 2025. Authorities plan to finance this requirement with a combination of direct capitalization and guarantees for domestic loans, which are included in the baseline scenario of the fiscal framework for this operation. In February 2022, the state granted a loan guarantee of US\$1.6 million to CVA.

8. Public debt increased further in 2021, reaching 155.3 percent of GDP, as the country resorted to external concessional loans and the issuance of treasury bonds to cover fiscal financing needs. Public debt had been on a declining path since 2017, falling to 124.1 percent of GDP in 2019. However, this progress was reversed during the pandemic, with increased borrowing (and the contraction of GDP), leading public debt to rise to 154.9 percent of GDP in 2020 (Figure 4). In 2021, debt increased slightly to 155.3 percent of GDP, with the stock of external debt representing 110.1 percent of GDP and domestic debt representing 45.2 percent. However, approximately 95 percent of central government external debt is on concessional terms, which is characterized by low interest rates and long maturity profiles, mitigating the impact on debt servicing. Debt service increased 26.1 percent in 2021, reaching 13.6 percent of GDP, due to the increase in domestic debt service, while external debt service decreased with the moratorium granted by bilateral creditors. The country registered the largest debt-to-GDP ratio within SIDS in 2021 (Figure 6).



Source: World Bank (2021)

Source: World Bank (2021)



Source: World Bank Estimates

9. Cabo Verde’s risk of external and overall debt distress remains high, according to the December 2021 joint WB/IMF Debt Sustainability Analysis. The present value (PV) of public and publicly guaranteed (PPG) external debt-to-GDP ratio breaches its threshold during 2021–25 under the baseline, and protractedly under stress test scenarios. The PV of total public debt-to-GDP ratio is projected to breach the threshold during 2021–31 under the baseline scenario and stress test. The external and overall debt outlook is assessed to be sustainable and is predicated on several assumptions, including the recovery of economic activity in 2021, reprofiling of debt service of all official bilateral creditors under the debt service suspension initiative (DSSI), a return to growth-friendly fiscal consolidation in the post-pandemic period as well as resumption of structural reforms, notably to restructure State-Owned Enterprises (SOEs) and improve the business environment. Prudent borrowing policies and strengthened debt management, as well as measures to enhance the functioning of the government securities market are critical to sustainable debt dynamics over time. In view of Cabo Verde’s vulnerability to exogenous shocks, continuous progress in export and output diversification are also needed for long-term debt sustainability.

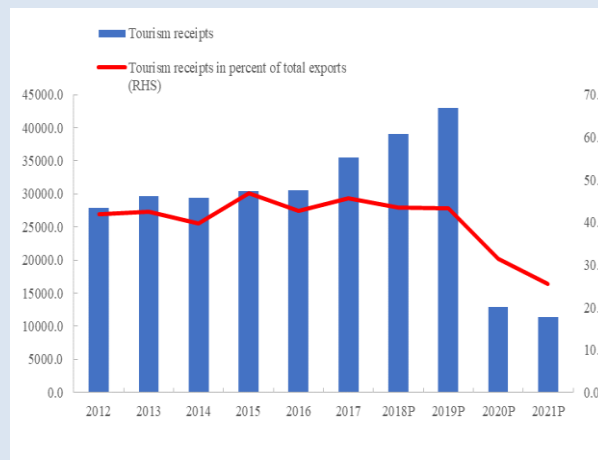
3. External Sector

10. The Current Account Deficit (CAD) is estimated to have narrowed slightly in 2021, from 16.5 percent of GDP in 2020 to 13.2 percent. The deficit in the goods and services account widened with the increase in merchandise imports outweighing the increase in goods and services exports. Merchandise imports increased by 8.6 percent, reflecting the increasing dynamic of economic activities. Export of goods led the increase in total exports, with an increase of around 30 percent, mainly reflecting the upturn in external demand for fish and fishery products. Tourism receipts, which account for around 60 percent of services exports, declined by 11.6 percent (- 70.1 percent in 2020), despite a sustained increase in the number of tourists since the second half of 2021 (Box 3). Net outflows from the primary income account decreased with lower investment income, resulting in lower dividends. In the secondary income account, net inflows increased due to higher remittances inflows, as European countries economies, which contribute around 70 percent of Cabo Verde’s inward remittances, begin to recover from the crisis.

Box 3: Impact of the COVID-19 Crisis on the Tourism Sector

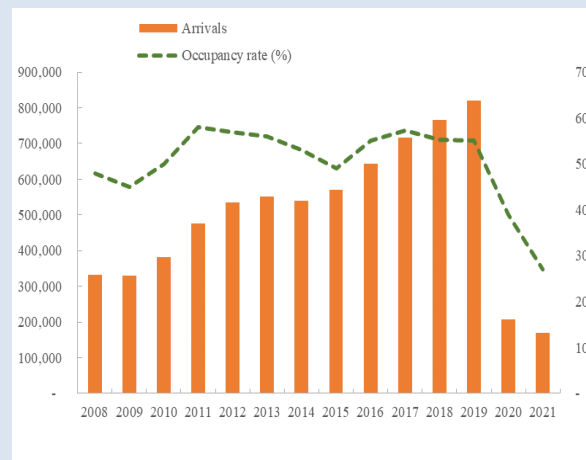
The COVID-19 pandemic has created an unprecedented shock for tourism in Cabo Verde. Following the closure of international borders in March 2020 and the partial reopening in October 2020, the authorities estimated a reduction of around 75 percent in tourism arrivals in 2020 and 78 percent in overnight stays. Tourist arrivals began to rise steadily towards the end of 2020, reaching nearly 169,068 visitors in 2021, which in absolute terms represents 38,057 fewer guests and 311,165 fewer overnight stays than in 2020. This year-on-year decrease reflects the strong first quarter of 2020, prior to the COVID-19 crisis, in which the country received 189,110 tourists and registered 1,102,883 overnight stays. In fact, data from the third and fourth quarters of 2021 shows that hotels welcomed about 135,149 guests, an increase of 122,414 guests compared to the same period last year. The number of overnight stays reached 722,845 in the same period, which represents an increase of 687,366 days compared to 2020.

Figure B3.1: Tourism Receipts



Source: Cabo Verde Central Bank, 2021.

Figure B3.2: Tourism Arrivals and Occupancy Rate



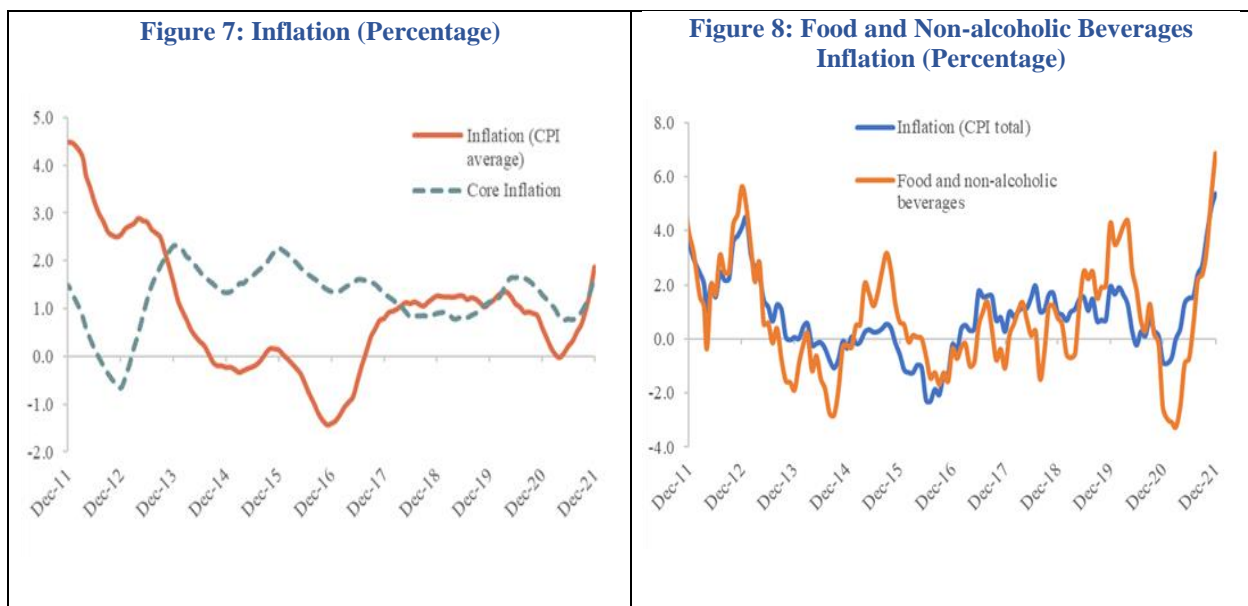
Source: Cabo Verde National Institute of Statistics, 2021.

Authorities pursued needed reforms to relaunch the tourism sector. The authorities enacted immediate response measures to support MSMEs across the economy and announced a tourism recovery plan to support the revitalization of the economy in the short term. The plan was based on four pillars. First, health safety, which aimed at restoring tourist confidence and stimulating demand by implementing training and sanitary certification programs for tourism operators. Second, tourism diversification, which intended to position other tourist attractions nationwide while still promoting the well-established sun and beach destinations of Sal and Boa Vista islands. Third, culture, which focused on the rehabilitation of cultural heritage. Finally, the fourth pillar is strengthening support mechanisms to businesses and workers in tourism to build crisis resilience. In addition, Cabo Verde Ambition 2030 Plan opens a new opportunity for pursuing medium-term reform to promote sustainable tourism, diversified across more niches and islands, and better linked to the natural and cultural assets of the country. The national economic development strategy for 2022 – 2026 (Plano Estratégico de Desenvolvimento Sustentável - PEDS), under preparation, envisages to prioritize measures aimed at recovering and accelerating sustainable growth in tourism.

11. The CAD was financed primarily by FDI and concessional loans in 2021. The financial account widened by around 70 percent, mainly reflecting a strong increase in FDI due to the resumption of planned investment projects. FDI accounted for 5.6 percent of GDP in 2021. Gross international reserves increased by EUR 10 million, reaching approximately EUR 595 million and covering about 7.5 months of imports, well above the level of 3.6 months recommended by the IMF 2019 External Stability Assessment (ESA). As such, reserves have helped support the accommodative monetary policy response to the COVID-19 shock.

4. Monetary Policy and Inflation

12. Inflationary pressures emerged in 2021, fueled by high international oil prices and disrupted global supply chains. Prices increased by 1.9 percent y/y, on average, in 2021, compared to 0.6 percent in 2020. This rise in prices was primarily driven by an 8 percent increase in alcoholic beverages and tobacco prices, 6.2 percent increase in transport prices, and a 4.8 percent increase in accessories, household equipment and home maintenance prices. On the other hand, prices of education (-1.3 percent) and health services (-0.5 percent) declined in 2021, the latter reflecting the ease in demand for health services. Core inflation (overall index excluding unprocessed food and energy products) reached 1.7 percent y/y, on average, compared to 1.3 percent in December 2020 (Figure 7). Cabo Verde's monetary policy is fully aligned with the European Central Bank as the Escudo is pegged to the Euro, with the Portuguese Treasury providing access to a short-term credit facility to support foreign exchange reserves.



Source: Cabo Verde's National Institute of Statistics

Source: Cabo Verde's National Institute of Statistics

13. Food prices remained under control in 2021, although presenting a rising trend. Food price inflation has been a concern globally due to supply disruptions caused by the COVID-19 pandemic. In Cabo Verde, prices in food and non-alcoholic beverages class, which account for around 25 percent of the CPI basket, increased on average by 0.5 percent y/y in 2021. The government's subsidization of wheat operators, avoiding the rise in the price of this staple and its derivatives, contributed to control inflation. However, despite this support, the total price change in food and non-alcoholic beverages class was 6.9 percent y/y in December 2021, putting increasing pressure on households (Figure 8).

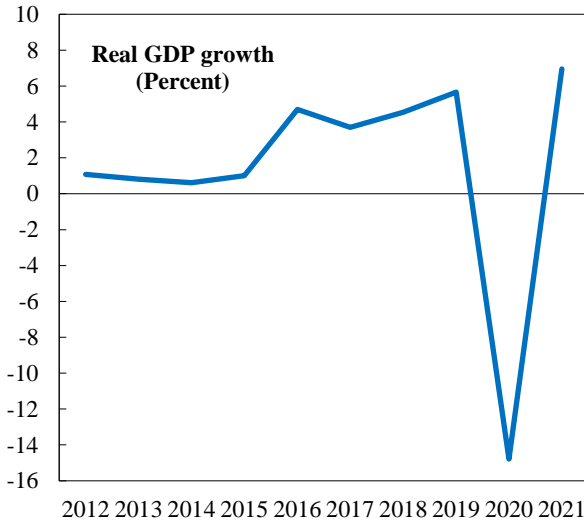
14. Despite the COVID-19 crisis, the financial system remained resilient in 2021, supported by the monetary policy measures adopted by the Central Bank to maintain market liquidity. The financial soundness indicators of the banking sector evolved positively in 2021. The regulatory capital-to-risk weighted assets increased from 19.4 percent in 2020 to 21.1 percent at end-December 2021. Return on assets stood at 1.5 percent, while return on equity at 15.9 percent. The banking sector remained liquid and credit to the economy increased by 6 percent (y-o-y) at end-December 2021, supported by credit lines and

moratoria on loan payments provided in response to the COVID-10 crisis that were extended until March 2022. The facility for long-term financing provided to banks, and reduction of the central bank's reference rates and reserve requirements supported the liquidity in the economy.

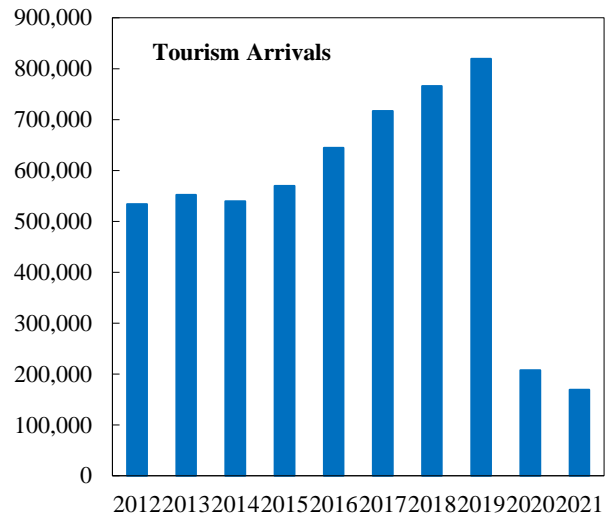
15. The financial sector continues to display structural weaknesses and risk aversion due to high levels of non-performing loans (NPLs). High liquidity levels reflect risk aversion in an environment of persistently high NPLs (a ratio of 8.1 percent at end-December 2021), as well as limited investment opportunities meeting acceptable credit standards. The sector is struggling with low asset quality, and despite a relatively strong capital adequacy ratio, banks in Cabo Verde are potentially vulnerable to high NPL ratios. High debt levels of public enterprises, non-financial corporations, and households compound the problem. The sector remains highly concentrated with two (of the seven active) commercial banks holding 64 percent and 68 percent of credit and deposit market shares.

Figure 9: Recent Economic Developments

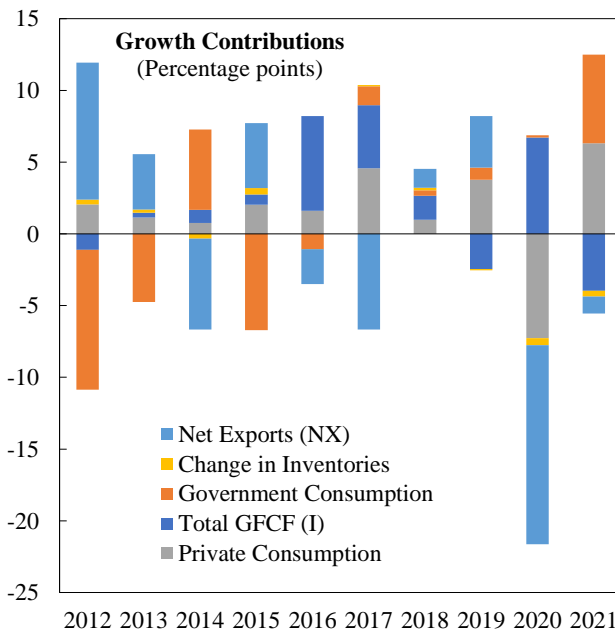
The economy has strengthened...



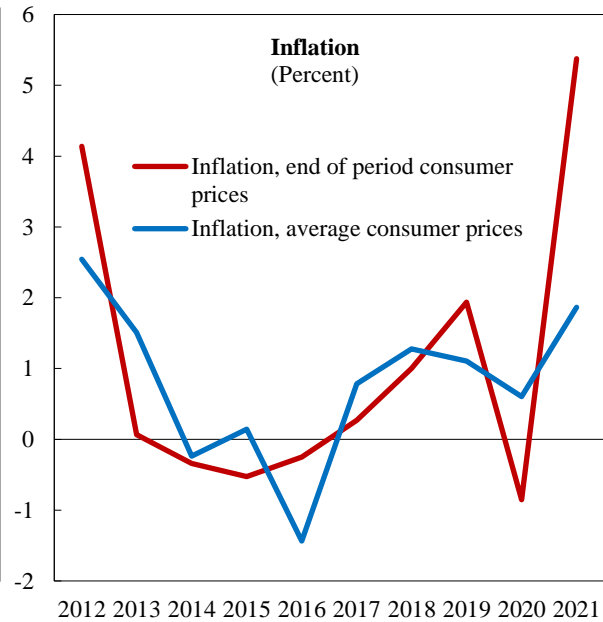
... supported by the gradual reopening of the economy.



Private and public consumption led economic growth.



Headline inflation increased fueled by high international oil prices and disrupted global supply chains.

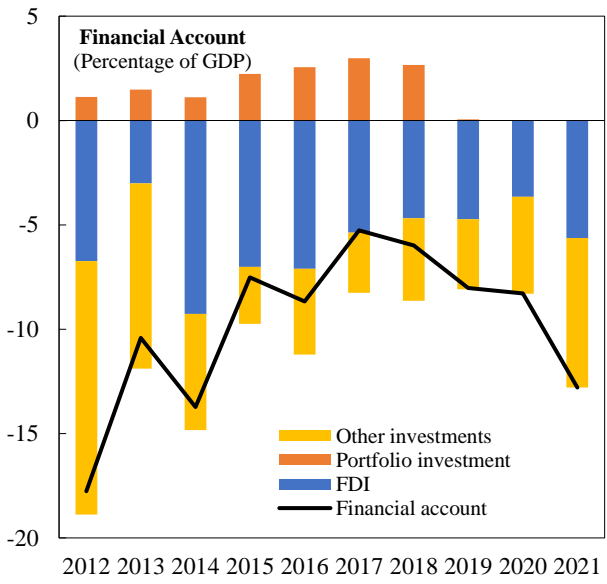
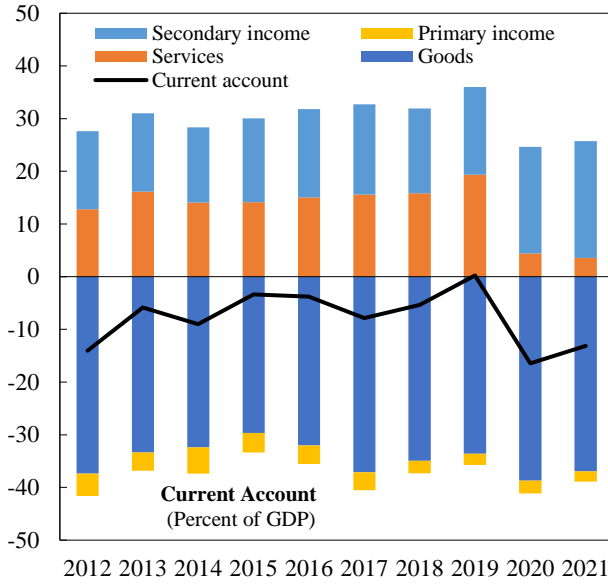


Source: Author's calculations using authorities' data

Figure 10: External Sector Developments

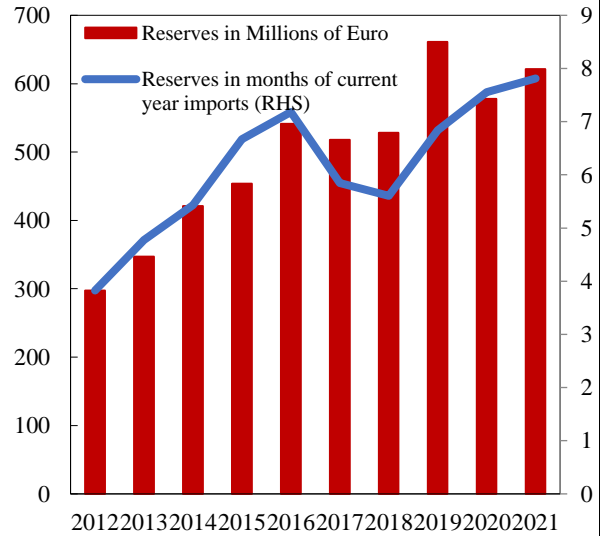
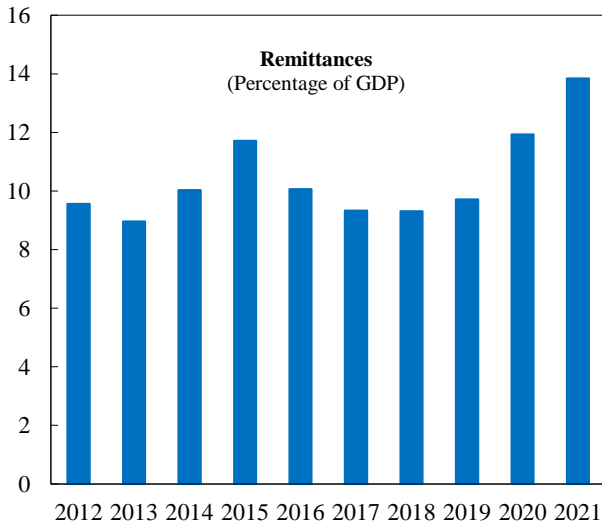
Current account deficit slightly narrowed in 2022, mainly due to an increase in goods exports and remittances.

The deficit was financed mainly by foreign direct investment and concessional loans.



Remittances continue to be an important source of foreign currency...

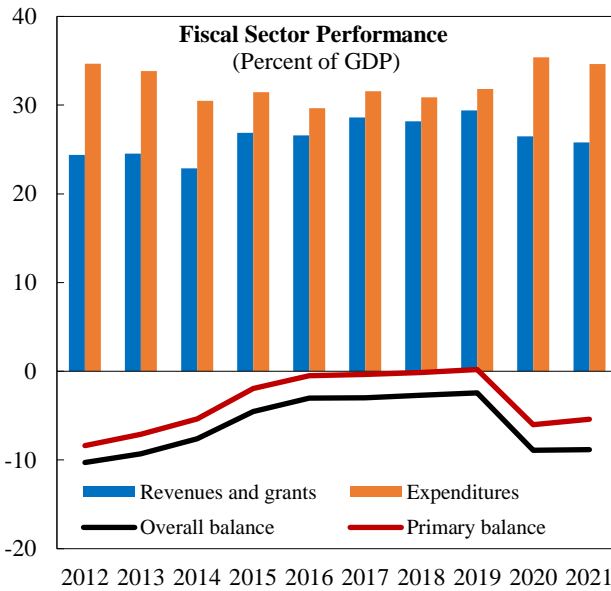
... supporting the country's strong reserve position.



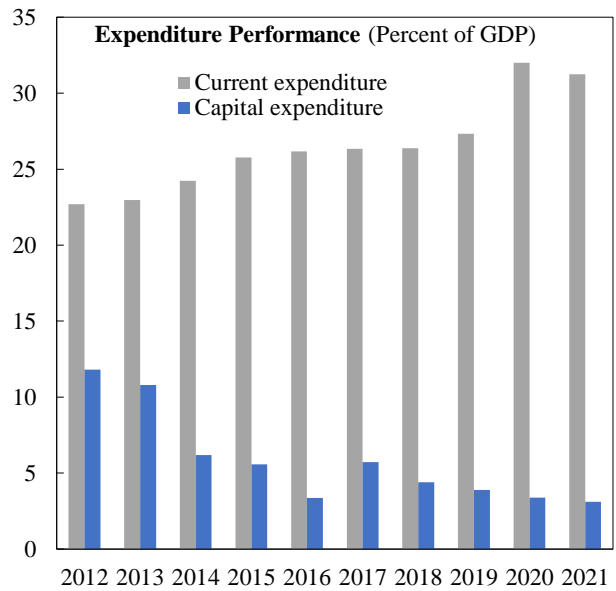
Source: Author's calculations using authorities' data.

Figure 11: Fiscal Sector Developments

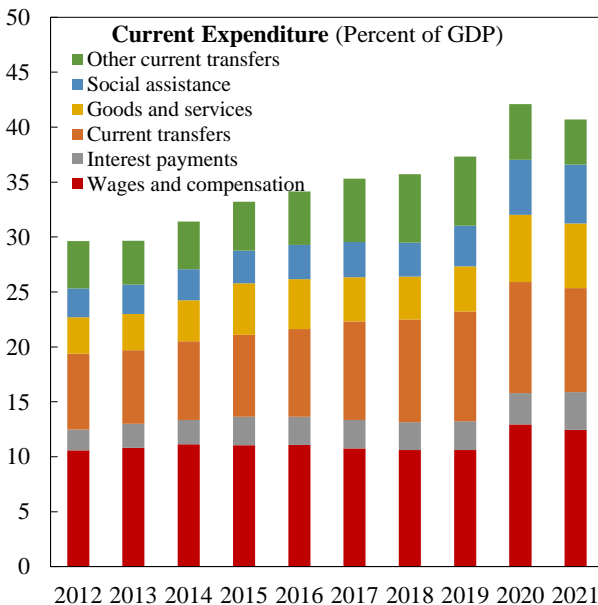
Fiscal performance remained depressed in 2021...



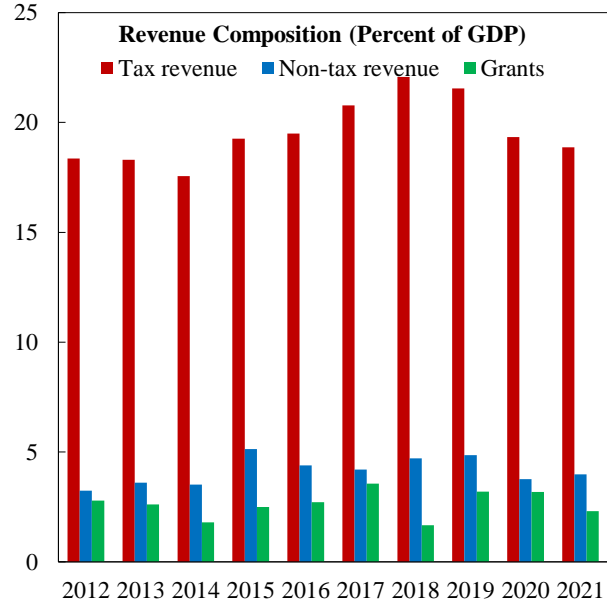
... owing mainly to an increase in current expenditure...



... Wage bill and current transfers continue to be the largest components.



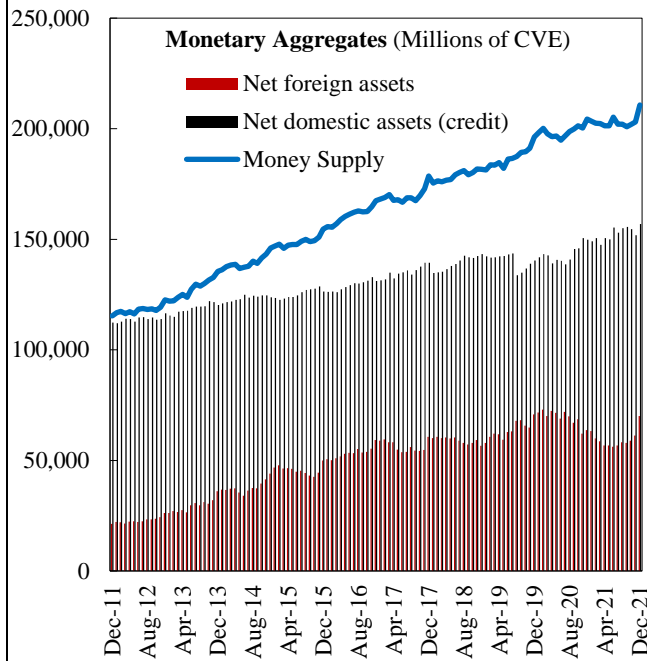
Fiscal revenue slightly increased.



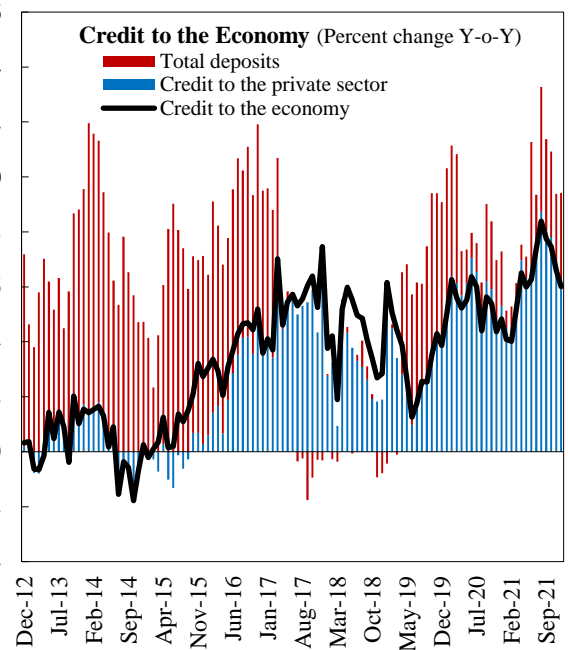
Source: Author's calculations using authorities' data.

Figure 12: Monetary Developments

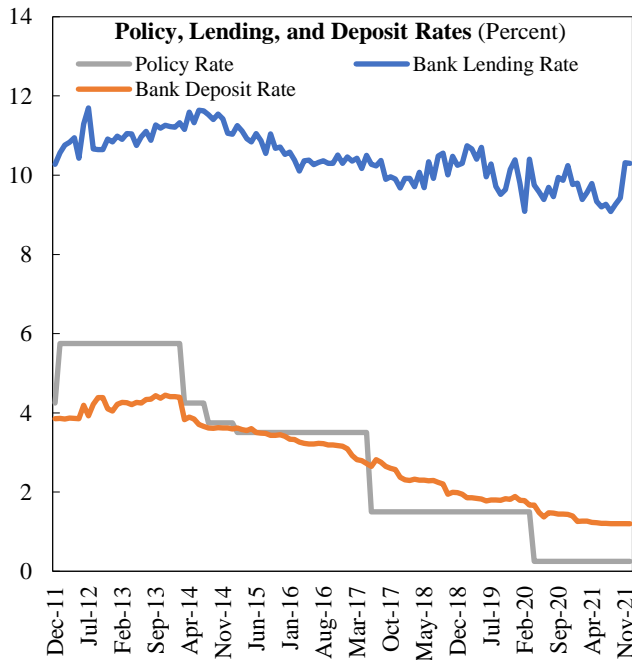
The financial system remained resilient.



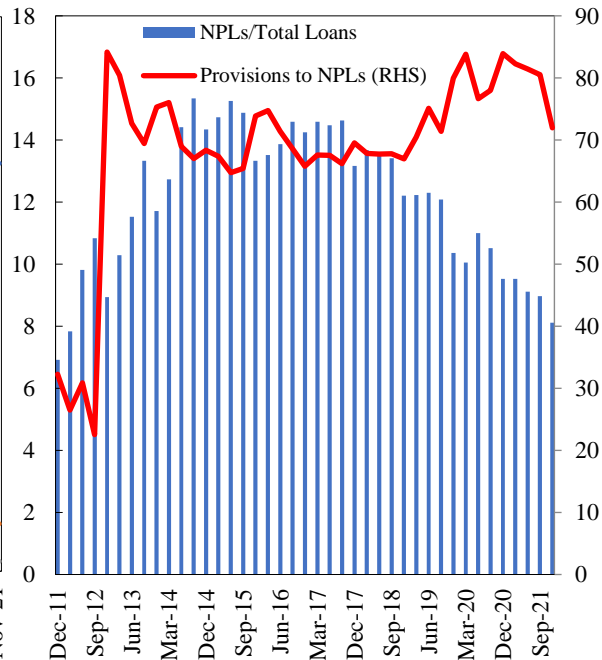
The banking sector remained liquid and credit to the economy increased.



... supported by the policy measures adopted by the Central Bank.



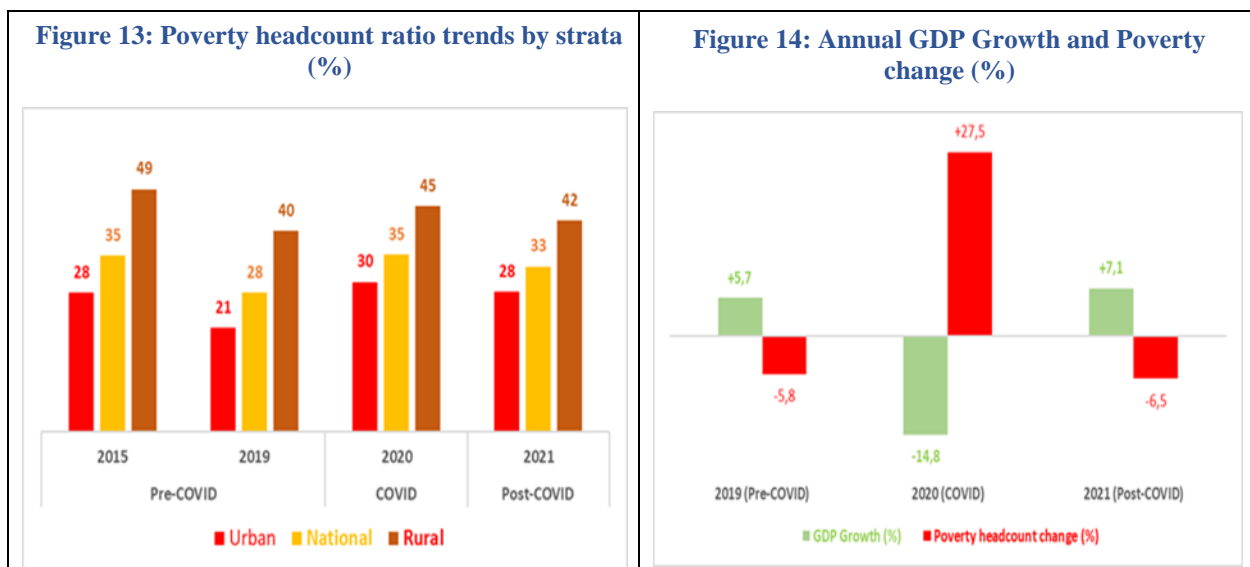
NPLs have been gradually decreasing but remain high.



Source: Author's calculations using authorities' data.

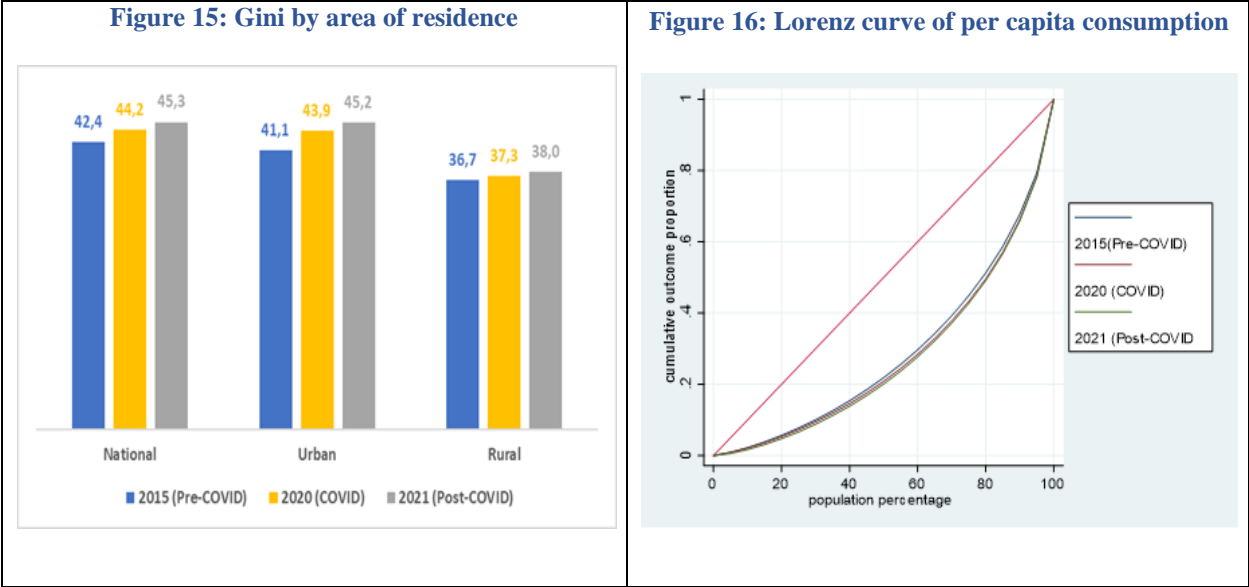
5. Poverty

16. The economic recovery that took place during the post-COVID period caused a slight reduction in poverty. The recovery of tourism activities, the revival of agriculture and the secondary sector, and certain services such as trade, favored economic growth that increased from -14.8 percent in 2020 to 7.4 percent in 2021. This resulted in a 6.5 percent drop in poverty, which stood at 33 percent in 2021, using the national poverty line equivalent to US\$5.4 in purchasing power parity (PPP) terms per person per day in 2015 prices. In rural areas, thanks to the resumption of growth in agriculture (7 percent) and fishing (15 percent), poverty fell by 3 percentage points from its level of 45 percent in 2020. Urban poverty also declined by 2 percentage points reflecting the revival of service activities (in particular trade with 17 percent increase), financial services (8.9 percent), transport (8.6 percent) and public services (7.9 percent). On the other hand, the slow recovery of tourism activities (- 49 percent in 2021 versus - 71 percent in 2020) is an explanatory factor for the slight decrease in poverty.



Source: Author's calculation using IDRF2015 and national account and CPI data

17. Inequalities remain high and have increased with the pandemic. The strong consumption inequalities observed in 2015 continue to grow. The global Gini index increased by two points in 2020 and then by one point in 2021. In addition, more than 80 percent of consumption is concentrated among less than 10 percent of the population. Inequalities are more present in urban areas, whose Gini index reached 45.2 in 2021 after an increase of 2 points during the pandemic. They become worrying in rural areas where the Gini smacks of the threshold of 40 considered very high.



Source: Author’s calculation using IDRF2015

B. Outlook and Risks

18. The strong post-COVID-19 economy recovery was set to continue in 2022 underpinned by the reactivation of the tourism sector, but the impact of the Ukraine war reduced growth perspectives in the short term. Real GDP growth was set to remain high, while public debt as a share of GDP was set to start decreasing driven by fiscal consolidation and economic growth. However, the war in Ukraine substantially impacted the short-term outlook due to significant higher oil and food prices. The fiscal measures taken by the government to alleviate the impact of inflation on the poor will increase fiscal financing needs in 2022, thereby increasing public debt. Tourism flows can also be impacted as economic conditions in Europe tighten and air transportation costs increase.

19. Real GDP growth is expected to reach 4 percent in 2022 due to inflationary headwinds from the Ukraine war but is expected to gradually increase thereafter. Growth will be supported by the continued recovery of the tourism sector as the impact of the pandemic fades and vaccination coverage increases. Growth is expected to average 5.3 percent between 2023 and 2025, led by the recovery of tourism and investments in the ICT, energy, and fishery sectors. Newly opened hotels have increased capacity and will support a sustained increase in tourist arrivals. As the Government restructures the operation of several important SOEs through public-private partnerships (PPPs), direct sale and concession arrangements, and implements structural reforms under the strategic plan for sustainable development (PEDS 22-26), further private investment will be mobilized to support growth.

20. Inflation is expected to peak in 2022, reaching 6.5 percent in line with worldwide trends and particularly in the euro zone, aggravated by the Russia-Ukraine conflict. High international oil prices will drive increases in the domestic price of fuels and grains, with a negative impact on various sectors of economic activity. Inflationary pressures in energy, coupled with rising food import prices, can increase food insecurity, and have a significantly negative impact on the poor. Inflation is projected to start stabilizing in 2023 as the shock from the Ukraine conflict is fully absorbed, supply disruptions abate and

energy prices stabilize.³ In the medium term, the strong nominal anchor provided by the peg with the Euro and the return to fiscal consolidation will keep inflation contained, converging to 2 percent. Monetary policy will continue to focus on improving transmission channels, including the low turnover in the interbank market, excess liquidity in the banking system, and limited development of the government securities market. The authorities plan to resume the recapitalization plan of the Central Bank, which started in 2019 but was halted in 2020 because of the crisis.

21. While export of services will continue rebounding in 2022, the CAD is projected to increase to 16.2 percent of GDP due to the recovery in consumption and the increase in import prices. The CAD is expected to decline to 9.1 percent of GDP in 2023 underpinned by the increase in tourism receipts and the stabilization of consumption import prices. It will decrease further reaching 8.5 percent of GDP in 2024 supported by the ongoing investments in the tourism sector and continued recovery in the sector. The stable growth in remittances, reflecting improved conditions in the European labor market, will also support the decline in the CAD. Higher public debt amortization outflows are expected to increase external financing needs, which are projected to be met primarily by official borrowing and FDI. Despite the COVID-19 crisis, the Government has signed several investment establishment agreements for projects in the tourism sector, amounting to EUR 1,716 million, which will contribute to finance the CAD over the medium term. Robust export growth and rising remittances, coupled with higher FDI inflows, are expected to keep international reserves strong at around 6 months of prospective imports over the medium term.

22. The Ukraine war will reduce the pace of poverty reduction in 2022. Poverty is projected to reach 26.9 percent in 2022, compared to the 26.2 percent expected before the war. As a result, poverty is projected to fall by 4 percent, compared to 2021, lifting around 6,700 people out of poverty. Moreover, the conflict would affect disproportionately urban areas as they are more vulnerable to the increase in oil prices and are more dependent on imported food.

23. The authorities are committed to returning to fiscal consolidation over the medium term and to placing the debt-to-GDP ratio decisively on a downward trend. The Government intends to support enhanced macroeconomic stability as an important condition for boosting private investment over the medium term. Given the public expenditure structural rigidity, fiscal consolidation will be mainly revenue-driven, supported by the (i) steady recovery of the economy; (ii) improvement in tax systems efficiency; (iii) streamlining of tax incentives; (iv) increase in environmental and health taxation; (v) and broadening of the tax base to cover e-commerce. On the expenditure side, the Government is reprogramming external disbursements under the Multi-annual Public Investment Plan and containing non-priority expenditure. The primary deficit should improve from 5.4 percent of GDP in 2021 to 0.5 percent in 2024, reflecting increased domestic revenue mobilization and expenditure restraint. As such, the overall fiscal deficit is projected to slightly decline from 8.8 percent of GDP in 2021 to 7.2 percent in 2022, and gradually decline to 4 percent by 2024. Consequently, the stock of public debt is projected to increase from 155.3 percent of GDP in 2021 to 158.5 percent in 2022 and decline to 144 percent by 2024.

24. The Government aims at maintaining the strong level of total revenue over the medium term, with a progressive increase in tax revenue in lieu of grants. Fiscal revenue is expected to increase driven by higher tax collection and better tax administration, including strengthening the tax and customs units to improve tax collection efficiency and fight tax evasion. This includes developing a data-matching platform

³ Sanctions on Russia may have a lasting impact on international oil and gas prices.

to detect tax fraud, reinforcing tax arrears recovery, and strengthening technical skills and capacity of the units. The adoption of the ECOWAS Common External Tariff, which was postponed to 2022 due to the COVID-19 crisis, is projected to increase trade tax revenue over the medium term. These measures will lead to an increase in tax revenue from 18.9 percent of GDP in 2021 to 20.8 percent in 2022 and to 23.3 percent in 2024. In parallel, grants should decline from 2.3 percent of GDP in 2021 to 1.7 percent in 2024.

25. Total expenditure is projected to remain high in 2022, at 36.4 percent of GDP, and gradually decline with improved efficiency of public spending and the gradual phase out of the exceptional fiscal expenditure measures. Current expenditure is expected to increase from 31.2 percent of GDP in 2021 to 32.2 percent in 2022 because of the measures taken by the Government to alleviate the impact of the Ukrainian crisis. Over the medium term, lower spending on goods and services, reduction on the wage bill, and the progressive phase out of COVID-19 emergency support will gradually reduce current expenditures, which are expected to reach 31 percent of GDP by 2024. Capital expenditure is projected to remain at 3.1 percent of GDP through 2024 as new investment projects are subject to stricter selection criteria consistent with the use of the new public investment management system. Total expenditure will account for approximately 35 percent of GDP in 2024.

26. Financing needs is expected to increase in 2022 as on-lending to and recapitalization of SOEs increase, but to gradually decline over the medium term with the resumption of the SOE reform agenda. Financing needs will be covered largely by domestic sources, and to a lesser extent by concessional external loans. The proactive restructuring and privatization of SOEs in 2022, including the airport management company and the electricity utility company, will reduce the financial support to the SOE sector over the medium term. On-lending to SOEs for investment purposes is expected to reach only 0.2 percent of GDP by 2024.

27. The outlook is subject to downside risks stemming from new COVID-19 variants, the Ukraine war, and climatic shocks. While the COVID-19 vaccination rollout is among the highest in Africa, the country remains vulnerable to new variants. An increase in the size or duration of the terms of trade shock emanating from the Ukraine war could lead to higher inflationary pressures and the continuation of policy support to ameliorate its impact, which in turn could deteriorate fiscal and debt sustainability. Social tensions and poverty could increase after allowing for the passthrough of higher energy prices on electricity bills. Political pressures against continued fiscal consolidation in the aftermath of the crisis could also derail SOE reform efforts. However, the authorities remain committed to continuing to improve fiscal and debt management, with a view to lowering the debt burden and enhancing the provision of public services over the medium term. In addition, the country remains significantly exposed to natural disasters, including those related to climate change.

Part II – Digital Development Outlook: Challenges and Prospects

Digital technologies have become an intrinsic part of sustainable growth agenda in many countries around the world.

28. With unprecedented economic disruptions caused by COVID-19, governments acknowledge that digital development is no longer a choice. Technologies and digitization of processes are given a central role in policies and strategies of economic recovery from pandemic and building resilience. Digital readiness defined not only the severity of the COVID-19 impact on various economies, but also the speed of their recovery. With existing digital divides, including disparities in the access to internet and mobile devices, many people have been unable to access vital public services online, such as education and health, deepening inequalities and undermining inclusive development prospects.

29. Cabo Verde, as a service-led economy, highly dependent on tourism, was hit hard by the lockdown. The pandemic underscored the importance of ICT in increasing the productivity and resilience of various economic sectors. In addition, the development of the digital economy in Cabo Verde is expected to boost the ICT services sector and foster economic diversification. This chapter discusses the foundations of Cabo Verde's digital ecosystem, including digital infrastructure, digital government, digital skills and entrepreneurship, as well as digital enablers, such as policies, regulatory environment and trust ecosystem.

1. Digital Infrastructure

Cabo Verde has an adequate connectivity infrastructure; however, user adoption and internet services market sophistication has room for improvement.

30. As an archipelago and an island country, Cabo Verde has consistently recognized the role of international and inter-island connectivity. Digital connectivity has been an intrinsic part of the connectivity agenda since the initiation of the Public Infrastructure Network (PIN) in 1995. CV Telecom, which has been managing the PIN under a concession agreement, has made sizable investments in the development of digital infrastructure within the country, with the first greenfield investment into Cabo Verde's fiber-optic submarine cable, Atlantis II, in 1996. Later, multiple development projects followed, including a national inter-island fiber-optic ring connecting all the islands, intra-island fiber-optic rings within all the islands, and a new connection to the international submarine fiber-optic cable, West Africa *Cable System* (WACS) - a new generation fiber-optic submarine cable with considerable capacity.

31. As a result of these developments, currently, 99.3 percent of the population in Cabo Verde has access to a mobile-cellular network. The mobile broadband-capable connection penetration reaches 87.2 percent, and 43.5 percent of the people are mobile internet subscribers. Yet, Cabo Verde needs to leapfrog to achieve global and regional best performance. The GSMA (Groupe Speciale Mobile (GSM) Association) scores the country the third lowest among aspirational top performing peer countries.⁴ GSMA Mobile Connectivity Index 2020, which consists of 4 sub-indices on Infrastructure; Affordability; Consumer Readiness and Content and Services; Cabo Verde's overall score is 48.7 (Table 3).

⁴ In the scope of this report the list of peer countries includes 11 states from different categories – **Structural peers:** Bhutan; Sao Tome and Principe and Samoa; **Aspirational peers:** Mauritius; Seychelles; Saint Lucia; Saint Kitts and Nevis; Saint Vincent and the Grenadines; and **Regional comparators:** Ghana; Senegal and Gambia.

Table 2: GSMA Mobile connectivity index, score 1-100, 2020

	GSMA Mobile Connectivity Index	Infrastructure	Affordability	Consumer Readiness	Content and Services
Mauritius	65.7	56.4	63.9	72.1	71.8
Saint Vincent and the Grenadines	61.0	58.9	43.6	73.6	73.4
Samoa	60.2	60.2	51.7	71.4	59.1
Saint Lucia	57.7	47.6	47.5	74.6	65.7
Bhutan	53.3	65.6	54.0	54.1	42.1
Ghana	52.0	49.1	48.4	59.5	51.8
Cabo Verde	48.7	37.8	42.3	67.3	52.4
Senegal	41.3	49.7	44.6	43.7	30.1
Gambia	30.3	39.4	29.8	42.9	16.7

Source: GSMA Mobile Connectivity Index

32. Going forward, several infrastructure projects in the pipeline promise significant improvements in the existing digital divide and in promoting universal access to connectivity. ⁵ The ongoing [EllaLink project](#), which is a submarine cable connecting Brazil and Portugal via Cabo Verde, is expected to solve the problem of redundancy of internet connectivity in Cabo Verde given the current dependence on WACS infrastructure, and bring an additional 40 Gbps of capacity.⁶ In addition, the government has promoted Public-Private Partnerships (PPP) and Private Sector Direct Investments, in key projects such as the launch of the "Amílcar Cabral" network consisting of fiber optic cables to sub regional capitals: Nouakchott, Dakar, Banjul, Bissau, Conakry, Freetown and Monrovia (ECOWAS, Economic Community of West African States), ⁷the connection to the PEACE (Pakistan and East Africa Connecting Europe) fiber optic cable, through South Africa and Mozambique ⁸ and others.

33. Most Cabo Verdeans are online. Around 62 percent of the population and 67 percent of households use internet, positioning the country ahead of most peers and only behind Mauritius and Saint Kitts and Nevis. With an increased number of users, the market is far from saturation in terms of bandwidth volume. The international internet bandwidth is relatively low at 44 kb per user. According to the Network Readiness Index (NRI), the limited bandwidth is one of Cabo Verde's main weaknesses positioning the country 82nd globally (Figure 17).

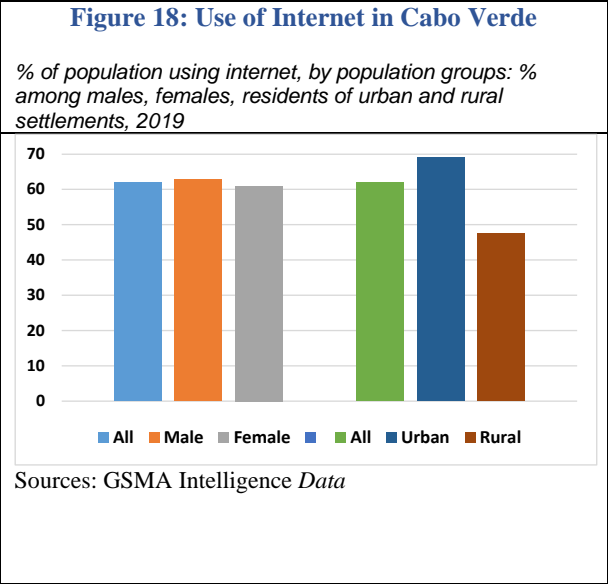
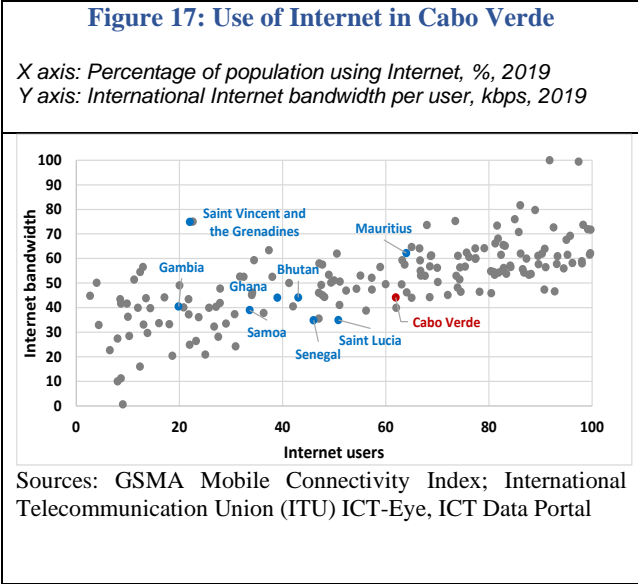
34. The gender divide in internet use is negligent, but there are again substantial differences between rural and urban areas. While many countries are disadvantaged with a significant digital gender divide, Cabo Verde provides its women and men relatively equal opportunities to reap the digital dividends of the economy, including in the job markets, learning opportunities, and access to vital services online. However, there are notable disparities in internet penetration among the rural and urban populations. For example, while 69 percent of residents of urban settlements use the internet, just up to 48 percent are internet users in rural settlements (Figure 18).

⁵ Digital divide is the gap between people who have access to modern information and communications technology and those who don't.

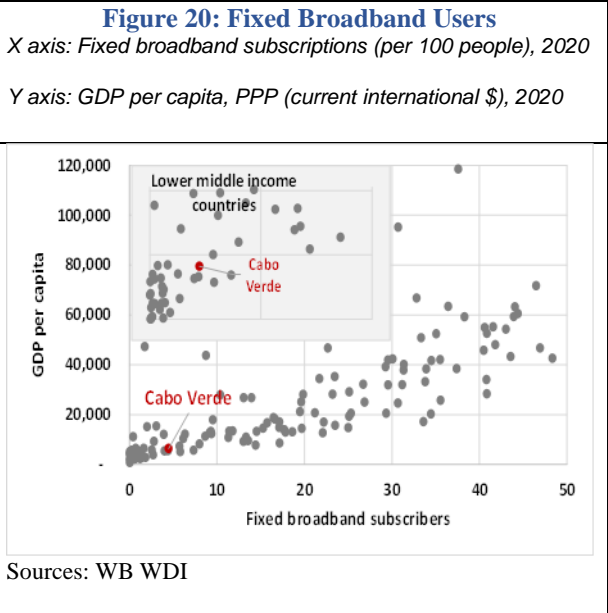
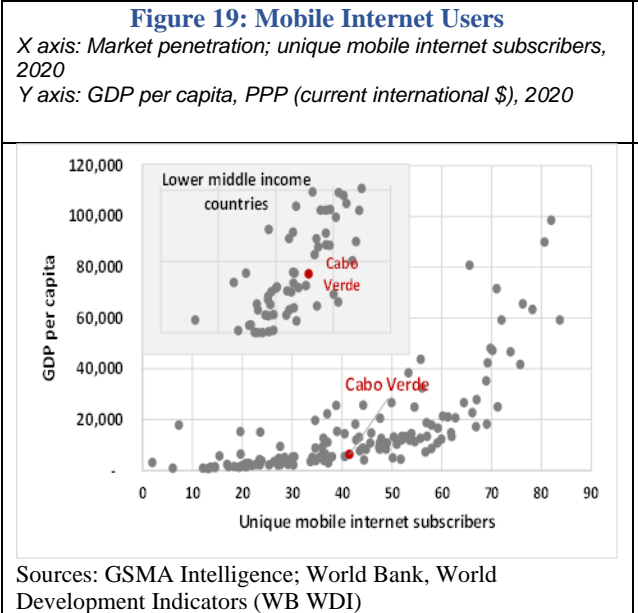
⁶ Internet Redundancy is having a secondary connection that runs on a different backbone than the primary connection. This backup internet connection activates when the primary connection fails.

⁷ https://www.mf.gov.cv/documents/89288/208073/09_UGPE_2020_Termos_de_Refer%C3%Aancia.pdf

⁸ <http://www.peacecable.net/>



35. By internet penetration, Cabo Verde’s performance is above average, compared to its peers. By mobile internet usage, the country displays an average performance among lower-middle-income countries and reports 41.5 percent unique mobile internet subscribers, while fixed broadband is at a low level of 4.5 percent. Accordingly, this indicator is as high as 25 percent and 36 percent in Mauritius and Seychelles. The rest of the peer countries perform very poorly in comparison by fixed broadband subscriptions rates at just 0.3 percent and 0.4 percent in Ghana and Bhutan; and 1.1 percent in Senegal and Sao Tome and Principe (Figure 17). According to Data-Reportal, which provides data on internet and social media use, almost half of the population in Cabo Verde are active social media users, and 99 percent of those access social media via mobile phones.⁹



⁹ DataReportal (2020). “Digital 2020 Cabo Verde”.

36. Improved coverage and affordability can further boost internet adoption. The competition limited to duopoly led to the lack of universal broadband coverage and internet services that are unaffordable to many. According to ITU, in 2020, Cabo Verdeans paid US\$ 8.2 for mobile broadband¹⁰ (down by 10 percent from 2019 price) and US\$ 7.7 for fixed broadband¹¹ (down by 27 percent from 2019 price). This constitutes 2.6 percent and 2.8 percent of Gross National Income (GNI) per capita (GNIpc), higher than acceptable levels recommended by the United Nations (UN) Broadband Commission.¹² Among peer countries, Mauritius leads the list by affordable pricing at just 0.8 percent of GNIpc for mobile and 1.4 percent of GNIpc for fixed broadband connectivity (Figure 21). Seychelles, Bhutan, and Saint Kitts and Nevis are also comparably reasonable priced economies. However, the levels of internet prices reach as high as 18.8 percent of GNIpc for fixed broadband in Senegal; 8.4 percent of GNIpc for mobile broadband in Ghana (Figure 22).

37. Recent pro-competitive reforms in the sectors, supported by the World bank, improved wholesale internet prices, but are yet to translate into affordable services for end consumers. The Government of Cabo Verde adopted a decree implementing regional ECOWAS directives (C-REG-06-06-12) and stipulated conditions for accessing landing stations for international submarine fiber optic cables. The adoption of new regulations by the regulator ARME (Agência de Regulação Multisectorial da Economia) resulted in remarkable effects on the prices of the international connection lines (including Internet), which were initially 3,500 CVE/Mb.¹³ These prices were then reduced to 1,596 CVE/Mb, then reduced again down to 413 CVE/Mb and co-installation was permitted.¹⁴

38. In terms of download speeds, the quality of the connection in Cabo Verde is also comparatively low. With 13.3 Mbps mobile broadband download speed for a price equivalent to 3.16 percent of GNI per capita and 16.3 Mbps fixed broadband speed for 2.59 percent of GNI per capita, Cabo Verdeans also raise concerns about the price/quality ratio. This indicates that consumers in Cabo Verde are receiving comparatively low value for money, especially for mobile internet services. For example, higher mobile broadband download speeds are available at considerably lower prices in Bhutan (35 Mbps for 1.13 percent of GNIpc), Mauritius (30 Mbps for 0.72 percent of GNIpc), Saint Lucia (27 Mbps for 2.82 percent of GNIpc) and Senegal (20 Mbps for 3.06 percent of GNIpc).

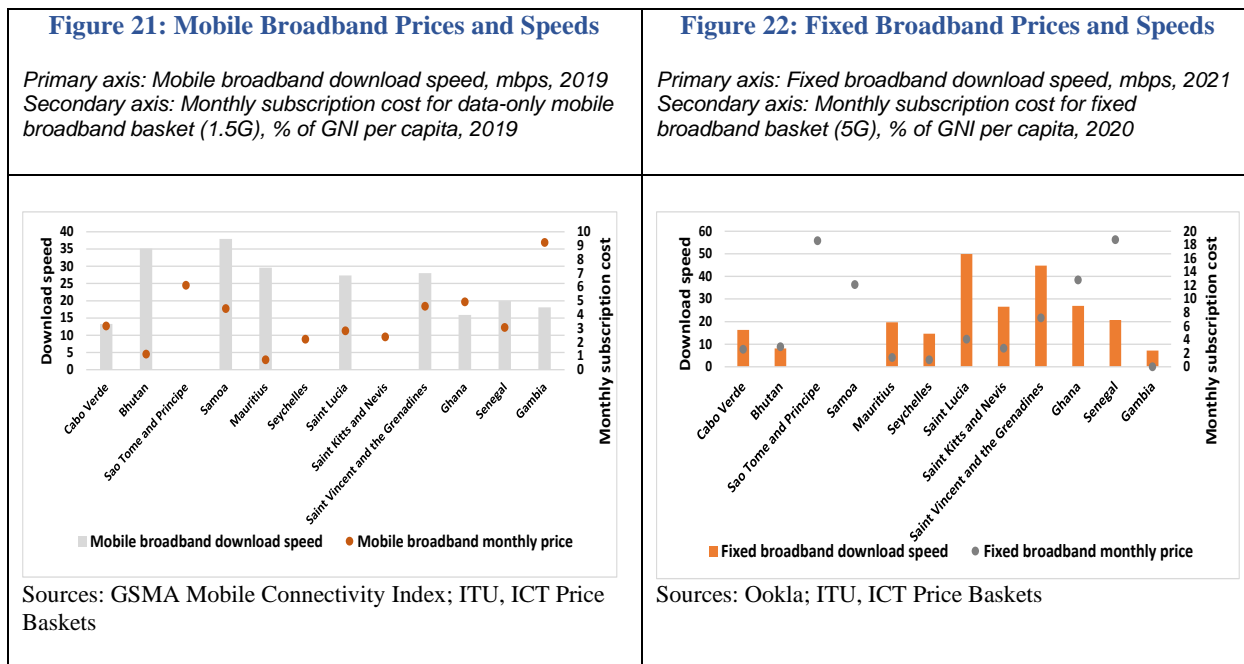
¹⁰ Data-only mobile broadband basket (1.5GB)

¹¹ Fixed broadband basket (5G)

¹² The United Nations Broadband Commission for Sustainable Development's target is as follows: "By 2025, entry-level broadband services should be made affordable in developing countries, at less than 2 percent of monthly gross national income per capita."

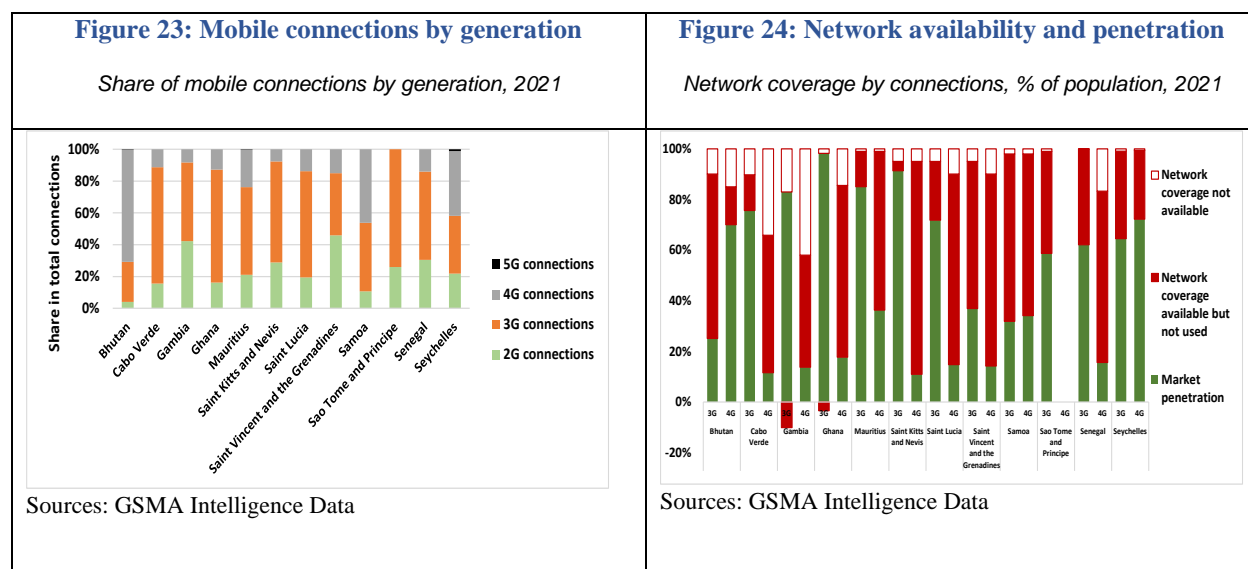
¹³ The given price considers co-installation at the landing station of the international submarine fiber optic cables.

¹⁴ ARME



39. Despite significant advancements, the mobile broadband market structure is relatively disadvantaged. With the liberalization of the market and the subsequent emergence of competition, mobile network coverage grew significantly, resulting in an accelerated growth of the consumer base. The country currently stands at 43.5 percent penetration of unique mobile internet subscriptions, 75.8 percent mobile phone ownership, and 48.5 percent mobile social media penetration. However, the structure of the market by connections is not advanced. Cabo Verde was one of the latest countries in the region and peers to launch 4G services. After the regulatory framework for LTE/4G was introduced in 2019, the 4G market connections grew to 65,400 in 2021.

40. Almost 34 percent of the population in Cabo Verde is not covered by 4G networks. The country has the second biggest 4G coverage gaps after the Gambia among peer countries (Figure 23). In addition, the 4G market penetration rates are quite low. With only 11.6 percent 4G market penetration, 54 percent of the population are covered but do not use 4G services in Cabo Verde. In comparison, the 4G market penetration is over 70 percent in Bhutan and Seychelles; the only country with slightly lower 4G market penetration compared to Cabo Verde is Saint Kitts and Nevis at 10.9 percent (Figure 24). Seychelles, Bhutan, and Mauritius have already launched commercial 5G services and reached 1.1 percent, 0.2 percent, and 0.2 percent market penetration in 2021, respectively.



2. Digital Government and Institutions for Digital Development

Some foundational elements of digital government are in place and functioning.

41. Strong institutions in policy making and implementation are among the cornerstones of digital government ecosystem in Cabo Verde. The establishment of Information Society Operational Nucleus – NOSi (Núcleo Operacional para a Sociedade de Informação) in 2003, as the government’s ICT services and infrastructure development agency, gave a start to the e-government development in Cabo Verde. Since its creation, NOSi grew to be the country’s most prominent ICT institution. As a SOE, the company has developed e-government applications, automation tools for internal government processes, digital platforms for G2C and G2B interactions, and operates as an ISP (internet service provider) for the government. Currently, NOSi employs over 230 technicians, has developed several hundred applications hosted in its Hybrid Cloud Datacenter, and serves over 13,000 workstations in 800 government agencies connected to the State’s Private Telecommunication Network. With a recently adopted new strategy for 2019-2022, NOSi envisages fundamental organizational restructuring in pursuit of transitioning to a more sustainable business model.

42. Several institutions have mandates of policy making in digital economy-related aspects. The recently established Ministry of Digital Economy is mandated to drive the digital transformation of the public sector and foster the broader digital economy. The Multi-Sector Regulatory Agency – ARME, is a strong institution, which has made noticeable improvements in the regulatory and competition framework in the telecommunications sector. ARME has taken initiatives to improve the investment environment and attract more private investments in the sector. Ministry of State Optimization and Public Administration is responsible for implementing public administration reforms, simplifying business processes within government operations and improving public service delivery, also through digital platforms. Involvement of multiple agencies in the digital development domain is often accompanied with a lack of clarity on the roles and responsibilities which leads to overlapping functions and duplication of resources and efforts in the institutional governance.

43. House of the Citizen (*Casa do Cidadão*) and System of Civil Identification and Authentication Program (SNIAC – *Sistema Nacional de Identificação e Autenticação Civil*) are also vital foundations of the digital government. Casa do Cidadão is a single window platform for citizens and businesses to access public administration services. The program, launched by NOSi and the Ministry of Justice in 2007, provides a unified and centralized approach for physical, digital, and telephone interactions. As a result, Cabo Verdean Government issued digital passports since 2016. Based on the upgraded infrastructure, e-IDs have been distributed to 35,000 residents since 2018. Still, the e-ID system is operating only partially, with several significant issues. Due to logistical problems, the e-IDs are available for distribution in selected settlements only. In addition, digital signatures are not fully enabled since digital government applications are not upgraded to allow digital signing during online transactions. In addition, the CNIs come with concerns over security issues, impeding the rapid roll-out and adoption of digital authentication in Cabo Verde.

44. Data exchange practices, still in inception, have good prospects of rapid development. A Platform for Data Exchange, PDEX, allows operators/users from different sectors, such as finance, health, and others, to access open government data through Application Programming Interface (APIs) directly. The framework will help Cabo Verde adopt and implement an open government data policy.

45. Through an online service delivery platform, the Government of Cabo Verde provides numerous public administration services for all life events, accessible also for Diaspora residents. The unified e-government website – “Porton Di Nos Ilha” (The Gate to our Islands), provides information and access to online public services.¹⁵ Despite contemplating to become an online single window, the website does not include all existing digital government services. The Ministry of Family and Social Inclusion uses its own website to provide its online services to the citizens. Currently, “Porton Di Nos Ilha” lists about 100 services under doing business, tax and customs administration, education, employment, health, housing, family-related, and elections categories. Twenty of the available online services are transactional. In addition, the government links and provides unified access to the same services through physical and mobile “Casa do Cidadão” (House of the Citizen) locations. The Porton Di Nos Ilha also includes platforms for eParticipation and citizen engagement through feedback mechanisms. The integration among online, physical, and mobile modalities has been through the single government network and information database developed and operated by NOSi.

46. The e-government infrastructure is not competitive enough to support resilient service delivery. The 2020 United Nations Electronic Government Development Index (EGDI) ranked the country 110th out of 193 (Table 4). The EGDI is a composite measure of three dimensions of e-government, including provision of online services, telecommunication connectivity and human capacity. The leaders of the e-government system sophistication among the peer countries are Mauritius (63rd), Seychelles (76th), and Saint Kitts and Nevis (95th). According to EGDI, Cabo Verde’s performance is also behind Ghana, Bhutan and Saint Vincent and the Grenadines. The Telecommunication Infrastructure scored the highest among subindices, and Human Capital was assessed as the weakest area for Cabo Verde.

¹⁵ https://portondinosilhas.gov.cv/portonprd/porton.portoncv_v3?p=B7B0B2BAC4C4C4

Table 3: E-Government Development Index and Subindices

	E-Government Rank	E-Government Index	E-Participation Index	Online Service Index	Human Capital Index	Telecommunications Infrastructure Index
Mauritius	63	0.72	0.72	0.64	0.70	0.79
Seychelles	76	0.69	0.69	0.57	0.62	0.77
Saint Kitts and Nevis	95	0.64	0.64	0.33	0.39	0.80
Ghana	101	0.60	0.60	0.63	0.64	0.59
Bhutan	103	0.58	0.58	0.63	0.68	0.51
Saint Vincent and the Grenadines	109	0.56	0.56	0.46	0.47	0.72
Cabo Verde	110	0.56	0.56	0.42	0.50	0.63
Saint Lucia	112	0.54	0.54	0.39	0.38	0.72
Samoa	149	0.42	0.42	0.25	0.26	0.74
Senegal	150	0.42	0.42	0.44	0.49	0.33
Sao Tome and Principe	155	0.41	0.41	0.20	0.25	0.67
Gambia	181	0.26	0.26	0.04	0.03	0.36

Source: UN EGDI 2020

47. The evaluation of the maturity of Government technology in Cabo Verde shows a positive outlook.

The WB’s recent assessment of GovTech Maturity Index among 198 economies positioned Cabo Verde in the group of countries with “High” level of govtech maturity, which include “Governments with significant GovTech investments and good practices in most of the focus areas”.¹⁶ However, the country is behind the average performance in its peer group. With impressive achievements under Public Services Delivery and GovTech Enablers subindices, the assessment ranks Cabo Verde’s performance by Citizen Engagement particularly poorly.

48. Ongoing digital government development projects hold a great promise of accelerated digital development in Cabo Verde.

In 2019 the Government of Cabo Verde commenced a World Bank-financed program that supports the strengthening of various elements of the digital government ecosystem in the country. The main components of the US\$ 20 million project include: i) Single External Trade System (Janela Única de Comércio Externo, JUCE) – to integrate information databases of various external trade players, ii) e-Embassy (or Digital Consulate) and ComVida platform to develop the e-Embassy service (digitizing databases of all embassies and consulates and making their services available online) and to continue development of the ComVida platform to monitor the impact of COVID-19 and provide information to the general public on available resources, government response program, and disease awareness, iii) Cloud blockchain platform – to update various legacy systems of the public administration to blockchain technology, iv) Integrated e-ID – to fully consolidate databases of the national system of identification and civil authentication (Sistema Nacional de Identificação e Autenticação Civil, SNIAC), registries, and voters, and v) Digital one-stop-shop to develop a one-stop-shop for investors looking to do business in Cabo Verde, and to improve digital licensing for tourism, construction, and commercial enterprises, among others, and upgrade of the unique public services portal. The project aims to increase the number of 3G users, the share of the online government service users, enhance digital skills, and support firms creating digital solutions.

¹⁶ Dener C., Nii-Aponsah H., Ghunney L. E., Johns K. D. (2021). “GovTech Maturity Index. The State of Public Sector Digital Transformation”. World Bank Group.

3. Digital Development Policies and Regulations

In its efforts to promote the digital sector as a source of economic diversification, the government has undertaken initiatives to enhance sectoral policies, strengthen the regulatory framework, and improve the legal environment.

49. Cabo Verde has an ambitious strategy to become a hub for ICT-enabled services. Cabo Verde was largely affected by the COVID-19 pandemic, given the heavy reliance on the tourism sector. With the highlighted vulnerabilities of the low diversified economy, the ICT sector presents an opportunity to generate new sources of income and jobs. In its Strategic Plan for Sustainable Development 2017-2021 (Plano Estratégico de Desenvolvimento Sustentável, PEDS), the government outlines seven strategic sectors, including digital services and innovation, as sources of sustainable and diversified growth that would enable Cabo Verde to develop an ICT-driven economy. Enhancement of technology education and digital skills and development of the entrepreneurial workforce is an eminent part of this agenda – to help Cabo Verde realize opportunities of digital transformation. The government is currently in the process of revising the Strategic Plan for 2022-2026 – PEDS II, to be published by June 2022. The document, in the concept stage at present, envisages covering also digital and ICT sector in the overall sustainable development plan. Several sectoral strategies will be developed in parallel to PEDS II revision program, including Strategic Plan for Digital Economy and Innovation 2022-2026; National Research Agenda 2022-2026; and National Agenda for Modernization of the State and Public Administration 2022-2026. The strategic frameworks and development targets of these efforts will be aligned with PEDS II.

50. Recognizing the increasing role of digital development, the government launched a consultative process to develop a dedicated and holistic Cabo Verde Digital Strategy (EDCV) – Agenda for 2019-2021.¹⁷ The strategy anchors on four main foundations to help the country transform into a Regional ICT Hub, including Connectivity, Capacity Building, Service Provision, and Governance. Several international partners contributed to the design of the Digital Strategy.

51. Some elements of the digital economy regulatory and legal framework are in place, but sector-related policies need to be enhanced to incentivize investments into the sector. Overall, the Network Readiness Index ranks Cabo Verde's ICT regulatory environment below the global average, ranking 81st among 130 countries. In addition, the Adaptability of the existing legal framework to emerging technologies, which is instrumental in supporting the creation of digital business models, platform economies, and other applications of disruptive technologies, is also scored substantially low, positioning the country 93rd. According to the ITU's ICT Regulatory Tracker,¹⁸ Cabo Verde recorded a drastic improvement in ICT regulatory environment since 2007 and achieved an overall score of 78.3 in 2020. The progress has been substantial in the competition framework and regulatory regime.

52. The telecom sector reforms started with the sector's liberalization; however, insufficient market competition is still a central issue leading to low incentives to invest in better infrastructure and services. A duopoly operates the market of mobile services. Furthermore, the incumbent ISP – CVT, solely manages the Public Infrastructure Network (PIN) under a concession contract and gives access to the other broadband and mobile provider - Unitel T+. This leads CVT to have a dominant market position. The competitor ISP has numerously raised concerns about the unfair regulatory practices underpinning the business environment and investment climate in the telecom sector in Cabo Verde. Although primary efforts of regulatory development have gone into the telecom sector, some initiatives in parallel were undertaken to

¹⁷ <https://estrategiadigital.gov.cv/index.php/en/>

¹⁸ ITU. ICT Regulatory Tracker. <https://app.gen5.digital/tracker/country-cards/Cabo%20Verde>

introduce and enable necessary legal oversight mechanisms for financial transactions, private key infrastructure, internet domain regulations and other aspects to support the digital development in the country. At present, Cabo Verde has elements of legislation in the main areas of the digital economy, including E-Commerce legislation, Electronic Transactions, Consumer Protection, Privacy and Data Protection, and Cybercrime.¹⁹

53. With the development in the e-government arena, issues concerning data privacy, data protection, and sovereignty also started to gain rising acknowledgment and importance. In 2013, the National Center of Data Protection (CNPD - Centro Nacional de Proteção de Dados) was established to provide oversight of these issues. The protection of individuals' privacy rights has been the agency's focus so far. There is a law on the Protection of Personal Data, but the data regulatory framework is underdeveloped. For example, third parties' data (organizations or foreign governments) is not subject to regulation in Cabo Verde, which can become a significant impediment to attracting foreign companies to outsource services entailing work with data.

54. With the expanding digital economy, the trust ecosystem has become an essential part of the digital development agenda in Cabo Verde. The National Cybersecurity Strategy 2016-2020 identified priority areas for the country's cybersecurity capacities. However, the Cybersecurity Capacity Review by the WB in 2019 assessed the country's capabilities in areas such as software quality, technical security controls, or incidence response to be at an insufficient level. To implement the National Cybersecurity Strategy, a new institutional unit was set up in 2019. The National Cybersecurity Council chaired by the National Security Advisor has been responsible for implementing national cybersecurity efforts. In addition, the government introduced a Decree to establish the National Cybersecurity Center, which will be mandated to promote the continuous improvement of national cybersecurity and international cooperation and define and implement measures and instruments to anticipate, detect, and address incidents and threats. As a more recent development, Cabo Verde was selected as a pilot country for a project on the establishment of a Computer Security Incident Response Team (CSIRT) in the African sub-region. The program initiated jointly by ARME and the West African Response Team on Cybersecurity and the Fight against Cybercrime (OCWAR-C) intends to raise awareness about the computer security issues and create a cybercrime monitoring center.²⁰

55. Still, Cabo Verde has much to accomplish to ensure safe and secure cyberspace for its citizens, gaining growing exposure to various cyber risks and threats with increased use of online services. These measures are especially vital in light of the recent increase in cyberattacks during the COVID-19 crisis. For example, the data shows that globally phishing attacks have grown seven times since the pandemic. In November 2020 Cabo Verde itself suffered malware attack. The damage was considerable and affected not only state ICT network but also customers' local networks. Most government services were suspended as a result, including vital areas such as health, notary, identification and else.²¹ ITU's Global Cybersecurity Index 2020 positions Cabo Verde 136th in the world and 27th in the Africa region by the resilience of its cybersecurity system. The Technical Measures subcomponent is the weakest area of cyberspace, scored 0 by ITU's assessment. The Network Readiness Index's assessment of the cybersecurity capacities also reinforces this, placing Cabo Verde in 118th among 130 countries.

56. With significant advancements and reforms, there are still regulatory gaps in the digital economy to address. A recent assessment done by the WB's Regulatory Watch Initiative identified areas of strengths and weaknesses of Cabo Verde in telecom sector regulation. The work measures the extent to which best

¹⁹ UNCTAD Cyberlaw Tracker: <https://unctad.org/page/data-protection-and-privacy-legislation-worldwide>

²⁰ <https://plataformamedia.com/en/2021/11/23/cape-verde-wants-international-partnership-to-fight-cybercrime/>

²¹ <https://inforpress.cv/nosi-starts-today-replacement-of-suspended-services-due-to-cyber-attack-on-the-state-network/>

practice has been achieved in Cabo Verde across five regulatory themes, including Licensing and Authorizations; Fair Markets; International Access; Spectrum Management, and Regulatory governance (Table 5). Cabo Verde has shown comparatively strong performance on several aspects, including Reference Interconnect Offer (RIO) availability, absence of international traffic taxes and regulation of international access. One of the most prominent identified issues is the universal service, which is defined by the law but not enacted. Other issues include the lack of technological neutrality, lack of regulatory provisions for Over-The-Top (OTTs) telecom operators, sole oversight of the incumbent ISP over submarine cable landing stations and national and international transmission, and others.

Table 4: Results of Regulatory Watch Initiative for Cabo Verde

Cluster	Indicator	
Licensing and Authorizations	Market Openness	83%
	Infrastructure licensing	67%
	Transparency of Award Procedures	33%
Fair Markets	SMP Regulation in Place	83%
	Favorability of OTT Regulation	33%
	SMP Enforcement	83%
	RIO Availability	100%
International Access	Exclusivity Not Permitted	67%
	Absence of International Traffic Taxes	100%
	Regulation of International Access	100%
Spectrum Management	Procedures	83%
	Tariffs	83%
	Transparency	83%
	Assignment	33%
Regulatory Governance	Independence	67%
	Financing	50%
	Universal Service Fund	17%
	Transparency	83%

Source: World Bank. (2021). “Regulatory Watch Initiative. Country Profiles. Cabo Verde”. WBG Digital Development Partnership

4. Innovation and Entrepreneurship

There is an emerging entrepreneurship scenery in Cabo Verde; however, the innovation ecosystem is still nascent.

57. A variety of programs aim at cultivating digital entrepreneurship in Cabo Verde. The government established Cabo Verde Digital (CVD) ²² as a public agency to introduce targeted interventions across the startup development value chain focusing on three main areas – community development, trainings and acceleration. The Digital4Covid platform ²³ addresses pandemic-imposed challenges, including solutions for online shopping, digital payments, delivery and transport services, as well as remote education tools. Several public-funded initiatives are designed to foster entrepreneurship and help technology startups,

²² <https://www.digital.cv/index.php/pt/>

²³ <http://digital.cv/digital4covid19/>

including Pró-Empresa, which provides entrepreneurs coaching and training, and manages a matching grant scheme facilitating access of startups to a range of business development services; Pró-Garante, which works with local financial institutions to reduce credit risks for entrepreneurs through a partial credit guarantee facility; and Pró-Capital, a public venture capital fund deploying seed and equity capital to support eligible micro, small, and medium enterprises (MSMEs) in sectors deemed strategic for the economy.

58. UNDP Cabo Verde Accelerator Lab ²⁴ is part of a network of laboratories in different countries established to create solutions to local issues and contribute knowledge to the global community with the potential of scaling up the local solutions. The Lab in Cabo Verde focuses on three main areas of interventions, including i) tourism, ii) blue economy, and iii) digital economy. Examples of programs and pilots implemented via this platform in Cabo Verde include Citizens Feedback, Waste Management Commercial & Industrial in clean beaches, Lab Open Days online innovation forums, COMVIDA Platform (including solutions for mobility tracking and health screening), Business Platform NEGOCIA, Tourism Recovery Landing page, Served by Drones (technological solution for street disinfection), ReInventa Turismo 2020 online Hackathon and else. Most of these ideas were in response to COVID-19 challenges.

59. The "Remote Working Cabo Verde – Digital Nomads" program was introduced in December 2020. The country has already identified the first "villages" to host digital nomads from Europe, North America, the Community of Portuguese-Speaking Countries (CPLP), and the Economic Community of West African States (ECOWAS). With this program, the government intends to attract 4,000 professionals to settle and work from Cabo Verde.

60. Cabo Verde Technology Park Project ²⁵ is a vital innovation ecosystem development project currently under implementation. The EUR 35.9 million financed by the African Development Bank (AfDB) includes the construction and equipment of a data center, business center, incubation center, and Training and Qualification center with ICT facilities. Aiming to promote a regionally based ecosystem of technological innovation and entrepreneurship, the Cabo Verde Technology Park has an ambitious goal of becoming a “gateway to Africa digital transformation”. Some other notable initiatives supporting entrepreneurship development by Cabo Verde Digital include “Bolsa Cabo Verde Digital” - a pre-incubation program for technology-based projects with components of training and financial support; and “Go Global” market development program to help the startups make connections in foreign markets through capacity building and participation in international technology events.

61. The recent emergence of online and mobile solutions has activated the use of digital payments, e-marketplaces, and consumer engagement platforms by local enterprises. However, Cabo Verde is very unfavorably positioned by the share of firms having/operating a website – 112th in the world. The penetration of mobile money is limited – at 11.6 percent of population, ²⁶ and mobile money transactions count just up to 0.9 percent of GDP. ²⁷ The pandemic highlighted the severe lack of digital preparedness by businesses in Cabo Verde. According to a recent survey by Women Entrepreneurs of Cabo Verde, only within the first month of COVID-19 outbreak, 65 percent of enterprises suspended their activities, with 46 percent of them not planning to reopen. ²⁸ This was also explained by low usage of ICT tools to continue delivering their services. In addition, the Network Readiness assessment shows quite a low level of

²⁴ <https://acceleratorlabs.undp.org/content/acceleratorlabs/en/home/locations/Cabo-Verde.html>

²⁵ <https://www.techpark.cv/pt/home-defaultpt/>

²⁶ Share in population of 15 years and older who hold active mobile money accounts, 2020.

²⁷ International Monetary Fund. (2021). Financial Access Survey.

²⁸ Women Entrepreneurs of Cabo Verde (AME-CV). (2020). Survey of firms on COVID-19 impact on businesses. <https://e-global.pt/noticias/lusofonia/cabo-verde/cabo-verde-seis-em-cada-dez-empresas-suspenderam-atividades-durante-covid-19/>

technology use and ICT investments in different domains of the economy, ranking the country 101st by the adoption of emerging technologies by businesses.

62. There are positive development dynamics in the innovation ecosystem, yet limited startup activities. According to Global Innovation Index 2020 (GII), Cabo Verde's innovation performance aligns with countries from its income group (lower middle income). It is ranked 100th among 131 countries and 15th among lower-middle-income countries, and 7th in the Sub-Saharan Africa. There is a vibrant startup scenery in Cabo Verde. According to GII, the country stands out with the rate of creation of new businesses, which positions it 36th in the world. The Global Startup Ecosystem Index 2021 ranks it 87th among 100 countries globally – an improvement of 4 spots in its rank compared to the previous year.

63. With the birth of many technology startups, especially with the pandemic, the country is ranked 3rd by its startup ecosystem performance among West African countries. Although there are missing foundational elements and limited access to finances, acceleration programs, talent, and markets, the ecosystem has already seen successful startups in different fields, including iFome, LestoPay, iDeia Cabo Verde, Faxi, Flexbundle, Cartaz, and others. By the number of new mobile apps developed, Cabo Verde is ranked 80th by Network Readiness Index (NRI), and the prevalence of the gig economy has been assessed to position the country 82nd. With its contributions to GitHub the local ICT community is ranked 99th.

64. ICT sector's participation in the economy is growing. In 2021, the share of telecommunications and postal services comprised 2.7 percent of GDP.²⁹ The National Council of Statistics counted 122 companies involved in activities categorized under Information and Communication sector in 2019 (Table 6). This constitutes 1.1 percent of the total number of active business entities in Cabo Verde. According to the official statistics information, communication companies employ 670 persons –2.5 percent of officially registered employees across the economy. Only 18 percent of the ICT companies are owned by women. The average share of women-led business in the economy is 33 percent, which shows that women entrepreneurship is nascent especially in technology-related sectors. Driven with gender stereotypes, less women pursue careers in ICT sector and count for 37 percent of workforce in the sector - similar to gender gap in participation in various STEM (Science, Technology, Engineering and Mathematics) trainings.

Table 5: Number of active companies and persons employed, 2019

	Information and communication services sector	Total in the economy	Share of ICT sector in total, %
Number of active companies, including:	122	11,174	1.09
Owned by women	22	3,699	0.59
Number of persons employed, including:	1,824	71,874	2.54
Women	670	30,887	2.17

Source: National Statistics Institute, Cabo Verde - INE-CV. (2019). “Annual Survey of Companies 2019”

5. Digital Skills

Multiple educational programs target the digital skills gaps in the country.

65. Modernization of the national school curriculum and enhancement of ICT laboratories in schools vow to produce tech-savvy school graduates with higher rates of going into ICT careers among them. As provisioned in its Education Sector Plan (2017–2021), the government introduced new mandatory subjects with focus on digital skills, including computer programming and robotics in the national school curriculum starting in Grade 5 (primary level). The ongoing plan is to extend the inclusion of STEM

²⁹ Reporting period: 1-3 quarters of 2021, National Statistics Institute, Cabo Verde - INE-CV.

subjects in the curriculum of all grades, until 12. However, several challenges have been reducing the potential learning outcomes, including educational content and resources for the new subjects, required classroom technologies and connectivity, and, most importantly, the teachers' preparedness. WebLabs program by NOSi has been one of the prominent initiatives in the STEM education in Cabo Verde. The program installed ICT laboratories in 43 secondary schools – in the form of equipped and connected containers. 7,000 students enrolled in the program nation-wide undergo courses in robotics, information technology (IT) equipment maintenance, and applications development. Currently the WB's Digital Cabo Verde project is working on scaling WebLabs, improving ICT curriculum in schools and making the program part of the formal education system

66. With limited data available, it is obvious that Cabo Verde has still much to catch up on digital skills development agenda to ensure higher adoption of digital services and produce ICT workforce.

The percentage of tertiary graduates from Science, Technology, Engineering and Mathematics (STEM) programs in Cabo Verde was 16 percent in 2018.³⁰ This is below the global average of the share of STEM graduates – 23 percent in 2018 and 26 percent in 2020;³¹ and far behind countries with developed industries and ICT outsourcing markets, such as Malaysia (39 percent, 2019), Iran (39 percent, 2020), Germany (37 percent, 2019), Belarus (36 percent, 2020), Singapore (35 percent, 2019), India (34 percent, 2020) and others. By the use of ICT for everyday activities, Cabo Verdeans were comparable to global average users as of 2015. Approximately 40 percent of population reported to be able to copy files, use copy and paste tools and transfer files between devices (Table 7). The use of ICT for other activities was much lower.

Table 6: Use of ICT by individuals, % among surveyed, 2015

Proportion of youth and adults who:	Cabo Verde	Global average ³²
have copied or moved a file or folder	41.5	50.8
have connected and installed new devices	19.2	19.8
have created electronic presentations with presentation software	19.6	26.2
have used copy and paste tools to duplicate or move information within a document	38.5	45.6
have sent e-mails with attached files (e.g. document, picture, video)		41.3
have used basic arithmetic formulae in a spreadsheet	22.5	31.2
have found, downloaded, installed and configured software		33.3
have transferred files between a computer and other devices	36.7	44.0
have wrote a computer program using a specialized programming language	5.3	5.0

Source: UNESCO Institute for Statistics (UIS)

67. The adoption of technologies in the education process is still hampered by the low availability of stable, high-speed connectivity and lack of ICT skills among the teachers. Cabo Verde is quite advanced by internet access in schools, it is positioned 55th among 130 countries according to NRI. Currently all secondary schools are part of the government connectivity network and are provided internet services by NOSi. However, the quality of connection varies significantly. To serve the growing demand for quality internet services for education the government intends to connect 441 elementary and secondary schools with fiber optic connection through an ongoing program.

³⁰ UNESCO Institute for Statistics (UIS). UIS Database. <http://data.uis.unesco.org/>.

³¹ Simple average of percentages is used, not weighted by the number of graduates.

³² Simple average of percentages is used, not weighted by the number of graduates.

68. In pursuit of positioning Cabo Verde as an attractive destination for global ICT businesses, the Government has been investing substantial resources in the development of professional ICT skills. NOSiakademia is an initiative designed and subsidized by the government to close the existing gap between the demand (by the private sector) and supply (by higher educational institutions) of ICT workforce in Cabo Verde. The Outcode program of NOSiakademia provides an opportunity to the graduates of its programming track to intern and be mentored at NOSi, and at the same time be involved in coding outsourcing for external clients of the program.

69. Other scattered and non-systemic trainings and short-term courses are conducted through international platforms, such as Microsoft academy, Oracle academy, Google academy, Amazon academy and else. A major awaited development is the launch of “01 Founders” international coding school in Cabo Verde. The format envisages training students in engineering, programming and other ICT related disciplines and placing the graduates in private companies. The school will be a joint initiative of the UK-based “01 Founders” and the government of Cabo Verde, which will provide a land and 18-months of remuneration for the students as its contribution in the project. The school will be based in Cabo Verde Technology Park. It plans to recruit 120 students per each batch, including participants from other African countries.

70. Both demand-side and supply-side constraints are observed in the ICT labor market. As the biggest ICT services company in Cabo Verde, NOSi provides competitive remuneration and “consumes” most of local ICT professionals. Technology professionals strive for jobs in the government which provides safe and long-term employment terms. The underdeveloped entrepreneurship ecosystem does not cultivate adequate number of startups which can create jobs and hire local ICT specialists. Dedicated policies are needed to promote the local industry of ICT services by creating demand for ICT solutions internally and by positioning Cabo Verde as an outsourcing destination.

6. Policy Priorities and Reform Areas

Sustained policies and reforms throughout the digital ecosystem are needed for Cabo Verde to realize its potential of becoming a “digital hub” for the region.

71. Cabo Verde has developed strong foundations for digital development and accomplished notable progress in digital infrastructure and online government services, yet issues persist. The adoption of digital technologies is scanty in providing and receiving services, learning and value creation, and realizing other socio-economic benefits. Despite significant progress, the country is still vulnerable to cyber threats and needs to develop a robust ecosystem to enable safe and secure online transactions for its citizens and businesses. The culture of innovation can be further spurred among the high-level policy makers of digital development.

72. A holistic approach towards the development of overall digital ecosystem is required for Cabo Verde to make the next leap in digital development. Priority areas of policy interventions and reforms for the short and medium terms include enhancing the regulatory framework for digital development, strengthening the digital foundations, including data ecosystem and cybersecurity, and investing in human capital.

Policy Priorities	Timeline
Strengthen the regulatory framework for digital development	
<i>Conduct a regulatory gap analysis for the digital economy.</i> This activity would include identifying gaps that hamper the development of digital businesses and digital entrepreneurship and studying global examples and good practices in terms of policies and regulations to close those gaps.	ST
<i>Create formal and non-formal dialogue platforms</i> to engage the private sector, academia and diaspora networks in strategic discussions about sector-related policies and strategies. Such platforms and collaboration mechanisms could enable more precise identification of market failures and design of more targeted interventions to address those failures.	ST
Enhance digital foundations, including data ecosystem and cybersecurity	
<i>Build cyber resilience</i> by strengthening the infrastructure for trusted ecosystems coupled with programs to enhance the cybersecurity capacity among government entities, firms, and individuals. This would include conducting a national risk assessment and identifying Critical Infrastructure; designing and implementing cybersecurity awareness and literacy programs; and promoting adoption of international ICT and cybersecurity standards in the government and private sector.	ST
<i>Develop a national data policy</i> to promote the exchange and use of open government data by government agencies, private sector and academia. This work would include a legal and regulatory gap analysis, stocktaking of available data infrastructure, national databases, and their integration with the Data Platform Exchange Framework. The policy would also define national targets to develop a strong data ecosystem in Cabo Verde and a roadmap on how to achieve those.	MT
Invest in human capital	
<i>Develop a national digital skills agenda</i> as an overarching framework to help coordinate various programs in the field. It could help consolidate many available training programs, improve their relevance for the private sector, and ensure their long-term sustainability. It could also address existing gender gaps more effectively, as women continue to be underrepresented in technology-oriented education programs and jobs.	ST
<i>Coordinate and streamline investments</i> of DFIs, public sector participants and other stakeholders to align with the national digital skills agenda.	MT

With timely interventions and strategic investments in digital development space, Cabo Verde has a solid potential to build strong foundations for national digital transformation supporting a long-term, sustainable and inclusive growth. Digital dividends for the country include improving governance and public service delivery, creating new sources of income, jobs and economic diversification, and developing competitive workforce for the future economy.

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Annex 1: Key Fiscal Indicators

(Percentage of GDP)

	Actual				Baseline			
	2017	2018	2019	2020	2021e	2022p	2023p	2024p
	(In percent of GDP)							
Total Revenues	28.6	28.2	29.4	26.5	25.8	29.2	30.1	31.2
Tax revenues	20.8	22.1	21.5	19.3	18.9	20.8	22.1	23.3
Tax on income and profit	6.5	6.7	6.5	5.9	5.0	5.3	5.7	5.7
Tax on Goods and Services	9.7	10.8	10.6	9.2	9.1	10.3	11.0	11.8
Tax on trade	4.2	4.2	4.1	4.0	4.6	5.0	5.1	5.5
Other tax	0.3	0.4	0.3	0.3	0.3	0.3	0.3	0.3
Non-Tax revenues	4.2	4.7	4.9	3.8	4.0	5.6	5.5	5.6
Grants	3.6	1.7	3.2	3.2	2.3	2.2	1.8	1.7
Total Expenditure	31.6	30.9	31.8	35.4	34.6	36.4	35.9	35.2
Current expenditure	26.3	26.4	27.3	32.0	31.2	32.2	31.6	31.0
Compensation to employees	10.7	10.6	10.6	12.9	12.5	12.8	12.3	12.0
Goods and services	4.0	3.9	4.1	6.1	5.9	6.1	5.8	5.7
Interest payments	2.6	2.6	2.6	2.9	3.4	3.6	3.7	3.5
Subsidies	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.1
Current transfers	3.0	3.4	3.1	3.9	4.0	3.1	3.1	3.1
Social benefits	3.2	3.1	3.7	5.0	5.4	4.8	4.9	4.9
Other expenses	1.9	2.5	3.2	1.4	0.3	1.1	1.2	1.1
Net acquisition of nonfinancial assets	5.7	4.4	3.9	3.4	3.1	3.1	3.1	3.1
Primary fiscal balance	-0.4	-0.2	0.2	-6.0	-5.4	-3.6	-2.1	-0.5
Overall fiscal balance	-3.0	-2.7	-2.4	-8.9	-8.8	-7.2	-5.8	-4.0
Net other liabilities	-0.4	-1.0	-3.3	-1.1	0.9	-2.0	-0.4	-0.2
Onlending	0.2	0.2	-1.1	-0.8	-0.7	-1.3	-0.5	-0.2
Capitalization	-0.7	-2.2	-2.3	-0.3	-0.2	-0.7	0.0	0.0
Financing Needs	3.3	3.7	5.7	10.0	7.9	9.2	6.2	4.2
Total financing	4.2	2.9	5.7	10.0	7.9	9.2	6.2	4.2
Net domestic financing	0.2	1.4	1.4	3.1	2.0	3.4	1.7	0.8
Net external financing	4.0	1.5	4.3	6.9	5.9	5.8	4.5	3.4
Exceptional financing (DSSI)				0.9	1.2			
Net errors and omissions	0.8	-0.8	0.0	-0.8	-0.5	0.0	0.0	0.0
Public Debt	125.9	124.7	124.1	154.9	155.3	158.5	151.9	144.0
External debt	93.8	91.4	90.6	111.6	110.1	109.5	109.5	104.2
Domestic debt	32.2	33.3	33.5	43.3	45.2	42.4	42.4	39.8

Source: Cabo Verdean authorities and WBG estimates and projections (April 2022).