



WORLD BANK GROUP

MAURITIUS PUBLIC EXPENDITURE REVIEW

**From Resilience to Performance:
Modernizing Fiscal Policies to Boost
Mauritius's Growth Post-pandemic**

November 2023

**THE WORLD BANK
MACROECONOMICS, TRADE AND INVESTMENT GLOBAL PRACTICE
AFRICA EAST REGION**

Acknowledgements

This report was prepared by a team led by:

Gabriela Schmidt (Economist, ELCMU, and TTL) and
Kirk David Schmidt (Governance Specialist, EAEG2, and co-TTL).

The team included **Francisco Haimovich Paz** (Senior Economist, HAEE1)
Sjamsu Rahardja (Resident Representative, EAEM2)

Ruxandra Burdescu (Lead Governance Specialist, EAEG2)

Mario Negre (Senior Economist, EAEPV)

Alexander Haider (Research Analyst, EMFMD)

Emmanuel Jose Vazquez (Consultant, HAEE1)

Iwona Maria Borowik (Consultant, SSAS2)

Sudhir Shetty (Consultant, EAWM2)

Daisy Yesenia Loayza (Consultant, ELCMU)

Sergio Alfredo Garcia Gomez (Consultant, EAEM2)

Kirstin Iman Conti (Consultant, IDD02)

James Brumby (Consultant, EGVPF)

Jose Carlos Illan Sailer (Consultant, EAEPV)

Nani A. Makonnen (Senior Program Assistant, EAEM2)

Suran Kc Shrestha (Program Assistant, EAEG2)

Sean Craig Lothrop (Consultant, CGRDR) provided excellent editorial support.

The report was prepared under the overall guidance of:

Idah Pswarayi-Riddihough (Country Director, AECS2)

Mathew A. Verghis (Regional Director, ESADR)

Marco Antonio Hernandez Ore (Practice Manager, EAEM2)

Omowunmi Ladipo (Practice Manager, EAEG2)

Paulo Guilherme Correa (Program Leader and Lead Economist, EACS2)

Zubair Kurshid Bhatti (Lead Public Sector Specialist, EAEG2)

Emre Ozaltin (Program Leader, HLCDR) provided valuable and timely feedback throughout the preparation of the report.

Felix Simone (Economist, IMF), **Jana Kunicova** (Lead Public Sector Specialist, EAEG1), and **Samer Al-Samarrai** (Senior Economist, HAEE1) peer reviewed the report and provided useful comments. The team is also grateful for the good collaboration sustained with the Government of Mauritius.

Contents

Executive Summary	6
I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth	14
1. Introduction	14
2. Overview and Macroeconomic Context	15
2.1 Mauritius has an opportunity to adjust its fiscal policy framework to sustain robust growth in the post-pandemic era	15
a) Supported by enabling fiscal policies, Mauritius has developed rapidly over the past 50 years and is now one of Africa's most secure and prosperous countries	15
b) Over the past decade, government expansionary spending to sustain demand-led growth has begun to undermine macroeconomic stability and hinder growth	16
c) As the economy recovers from the pandemic, the government has an opportunity to revise its fiscal policies to strengthen macroeconomic stability and boost resilience	20
3. Fiscal Policy Framework	22
3.1 Increasing revenue mobilization and streamlining tax expenditures will be necessary to maintain spending at current levels	22
a) Revenue mobilization has increased since 2014 but remains below the average for comparator groups, with very limited social contributions	22
b) The taxation system is sophisticated and has seen several reforms in recent years, but indirect taxes continue to account for the bulk of government revenue	24
c) Consolidating and reducing tax expenditures will help minimize inconsistencies and leakages, enhance transparency, and improve equity	27
3.2 Increasing the allocative and technical efficiency of public spending could greatly enhance the impact of a limited fiscal envelope	29
a) Public spending levels in Mauritius are below those of structural and aspirational peers yet consistently higher than revenues, resulting in persistent fiscal deficits and mounting debt levels	29
b) Reversing the fiscal inefficiencies built up over the past decade will be critical given the country's reduced fiscal space due to the COVID-19 crisis and the indirect impact of Russia's war in Ukraine	29
c) The composition of expenditures can be improved both across and within spending categories, and adopting new instruments can increase expenditure efficiency	31
3.3 Close monitoring of contingent liabilities can offer valuable insights to aid in managing overall fiscal risk levels and assist government in making well-informed fiscal policy decisions	34
a) Explicit Direct Liabilities to the State: The public debt stock is high, but its composition is favorable, while trends in budgetary and extra-budgetary spending present cause for concern	36
b) Explicit Contingent Liabilities are substantial and require close monitoring	40
c) Implicit direct liabilities from social spending are elevated and will rise further unless the root causes for income inequality are addressed	42
d) Implicit indirect contingent liabilities emanating from multiple sources could compel the government to cover large losses even without a legal obligation	42
4. Public Finance Management Framework	44
4.1 Mauritius's PFM framework is among the strongest in Africa, but it remains incomplete by the standards of HICs	44
a) The institutional framework is sound overall, but important gaps persist	45
b) Mauritius has been making steady progress on implementing reforms	47
c) Additional reforms are necessary to improve PFM performance	48
4.2 The budget system faces several challenges that limit its effectiveness	51
a) Expenditure rigidity leaves little scope to reallocate public resources in response to changing policy priorities and economic conditions	51
b) Volatility and uneven execution across spending categories negatively impact overall budgetary performance	51
c) Adhering to formal budget processes and fiscal rules is vital to reestablish credible fiscal discipline	58
5. Key Messages and Policy Options	58
References	61

Contents (Cont'd)

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development	62
1. Introduction	62
2. Sectoral Deep Dive: Improving Equity and Efficiency in Education	64
2.1 Overview of the education system	64
a) Mauritius has a solid structure of educational institutions, where the private sector plays a key role	64
2.2 International benchmarking	66
a) Total public spending on education in Mauritius is at the expected and recommended levels	66
b) Mauritius has achieved universal coverage in preschool and primary education but faces challenges at the secondary and tertiary levels	68
c) Learning outcomes are high compared to the region, but low for Mauritius's aspirations	70
d) Education and learning outcomes are highly unequal across Mauritius	70
2.3 Distributive Incidence	74
a) Total public spending on education is progressive and pro-poor, but a pro-rich bias is evident at the highest education levels	74
2.4 Estimating the Efficiency of Education Spending	75
a) A More Efficient Use of Resources Could Yield Significant Gains in Learning	75
2.5 Potential Sources of Inefficiency	78
a) Allocative inefficiency in public spending across education levels weaken education outcomes	78
b) High dropout rates in secondary education reduce equity and efficiency	81
c) Low pupil-teacher ratios driven by the demographic transition are rising unit costs	82
d) Closely monitoring outcomes can provide key insights to guide policy decisions	83
2.6 Policy Options for Increasing the Returns to Public Investment in Education	83
3. Special Topic: Optimizing Public Support for Private-Sector Development	85
3.1 The COVID-19 pandemic had a profound and lasting impact on Mauritius's private sector development programs	85
a) Measures under the <i>Plan de Soutien</i> aimed to provide immediate support to firms and workers affected by COVID-19	86
b) The <i>Plan de Relance</i> fostered a revival of bruised traditional economic sectors, supported SMEs survival economywide, and provided incentives for the emergence of new economic activities	86
c) Measures under the 2021/22 and 2022/23 budgets marked a shift in the policy focus, pivoting toward green growth-oriented policies	88
3.2 Analyzing private-sector development programs can help determine their contribution to high-level policy objectives	88
3.3 Mauritius invests both in incremental and radical innovation, but it lags peer countries	90
3.4 State support programs need to align with international best practices for developing high-value-added sectors	93
3.5 Key Messages and Policy Options	99
References	100
Annex A1. Distributional impacts of alternative compensation measures in the context of inflation in Mauritius	102
Annex A2. Climate mitigation and adaptation strategies in the Netherlands, Costa Rica and Kenya	105
Annex A3. Legal and institutional framework for PFM in Mauritius	107
Annex A4. Anticorruption, transparency, and accountability institutions	110
Annex A5. The relation between efficiency and budget allocations to pre-primary education	111
Annex A6. Pupil-teacher ratios in Mauritius	112
Annex A7. The potential gains from increased learning	113
Annex A8. Description of support programs in terms of objectives pursued, targeted beneficiaries by sector and firm size, instruments used, and implementing institutions	114
Annex A9. List of all state support programs covered in the analysis	119

Figures

Figure ES1.	Social Contributions and Social Benefits, Mauritius and Comparator Groups	7
Figure ES2.	Social Contributions as a Share of Social Benefits, Mauritius and Comparator Groups	7
Figure ES3.	Public Expenditures by Rigidity Level, 2012-2022 (US\$ millions)	9
Figure ES4.	The Execution percentage of Closed and Ongoing Special Funds	10
Figure 1.	Public Revenues and Expenditures, 2009-2021 (% of GDP)	16
Figure 2.	Public Revenues and Expenditures, 2009-2021 (US\$ billions)	17
Figure 3.	Real GDP Growth, 2010-2022	17
Figure 4.	Discretionary Fiscal Response to the COVID-19 Crisis in Selected Economies (% of GDP)	18
Figure 5.	The Fiscal and Primary Balances, FY15/16-FY25/26	19
Figure 6.	Financing of the Fiscal Balance, FY15/16-FY21/22	20
Figure 7.	Total Revenue and Level of Income, 2020	22
Figure 8.	Revenue Structure, Mauritius and Selected Peers, 2016-19 Average and 2020 (% of GDP)	23
Figure 9.	Social Contributions and Social Benefits, Mauritius and Comparator Averages	23
Figure 10.	Share of Social Benefits Covered by Social Contributions, Mauritius and Comparator Average	23
Figure 11.	Tax Structure, Mauritius and Selected Peers, 2016-19 Average and 2020 (% of GDP)	24
Figure 12.	Tax Structure, 2009-2020 (% of GDP)	24
Figure 13.	Detailed Tax Structure, FY2013-FY2020/21 (% of GDP)	25
Figure 14.	Estimates of Tax Expenditure (% of GDP)	28
Figure 15.	Contribution of Individual Taxes to Aggregate Tax Expenditures	28
Figure 16.	Trends in Revenues, Expenditures, the Fiscal Balances, and the Public Debt Stock	30
Figure 17.	Total Expenditure and Level of Income, 2020	32
Figure 18.	Mauritius Public Expenditure Structure by Economic Classification, 2009-2020 (% of GDP)	32
Figure 19.	Current and Capital Expenditures, Mauritius and Peers, Average 2016-2019 vs. 2020	33
Figure 20.	Composition of Current Expenditure by Economic Classification, Mauritius and Peers 2009-2020 (% of GDP)	33
Figure 21.	Mauritius Consolidated General Government Expenditure by Functional Classification (% of GDP), FY2012-FY2020/21	34
Figure 22.	Mauritius Consolidated General Government Expenditure by Functional Classification (% of Total Public Expenditure), FY2012-FY2020/21	34
Figure 23.	Composition of Current Expenditure by Functional Classification, Mauritius and Peers 2009-2020 (% of GDP)	34
Figure 24.	Quality of Mauritius Institutions: An Overview	46
Figure 25.	Anti-Corruption, Transparency and Accountability	46
Figure 26.	Rule of Law	47
Figure 27.	Public Service Performance	47
Figure 28.	Classification of Public Expenditure by Rigidity Level 2012-2022	52
Figure 29.	Budgetary Rigidities by Spending Category, 2012-2022 (% of Total Expenditure)	53
Figure 30.	Budget Planning and Execution, 2012-2022	53
Figure 31.	Budget Execution by Spending Category (2012-2022)	53
Figure 32.	Budgeted vs. Executed amounts by Economic Categories of Public Expenditure (2012-2022)	54
Figure 33.	Mauritius's Budget Execution by Functional Classification spending category (2012-2022)	56
Figure 34.	Budgeted vs. Executed amounts by Functional Categories of Public Expenditure (2012-2022)	56
Figure 35.	Public Spending on Education, 2001-2020 (% of GDP)	62
Figure 36.	Structure of the Education System in Mauritius	64
Figure 37.	Educational Institutions and Students by Zone, 2020	65
Figure 38.	Percentage of Educational Institutions and Enrollment in the Private Sector by Education Level	66
Figure 39.	Public expenditure on education in Mauritius, high-income countries, upper middle income, investment hubs, and other structural peers, 2019 averages	67
Figure 40.	Public expenditure on education and GDP per capita	68

Contents (Cont'd)

Figure 41.	School Enrollment by Education Level, Mauritius and Comparators, circa 2019	69
Figure 42.	Grade Repetition Rates by Education Level, Mauritius and Comparators, circa 2018	70
Figure 43.	Percentage of Grade Six Students Performing at SACMEQ IV (2013) Performance Levels	71
Figure 44.	PISA average score in Reading, 2009	71
Figure 45.	Public and private school attendance rates by quintile of per capita market income in Mauritius, 2017	72
Figure 46.	Average Gap in Grade Six Mathematics and Reading Scores by Students' Socioeconomic Status, SACMEQ 2013	72
Figure 47.	Average Gap in Reading Scores by Students' Socioeconomic Status in PISA	73
Figure 48.	Average Grade Six Mathematics and Reading Scores by Region and Gap by Gender (boys-girls), SACMEQ 2013	73
Figure 49.	Lorenz and concentration curve for in-kind education transfer and market income	75
Figure 50.	Efficiency frontier of public spending based on Mauritius's latest participation in PISA and some simulated scenarios	77
Figure 51.	Levels and trends in public expenditure on education (as % of GDP), by level of education	79
Figure 52.	Distribution of public expenditure on education by level in Mauritius, upper middle income countries, high-income countries, investment hubs, and other structural peers	81
Figure 53.	Educational Enrollment and percentage of people In School and Out of School working and not working in Mauritius	81
Figure 54.	Projected Enrollment (number of students, left panel) and Public Spending per Student (MUR, right panel)	83
Figure 55.	Programs by Beneficiaries Size	89
Figure 56.	Programs by Implementation Instruments	89
Figure 57.	Programs by Implementing Institution	89
Figure 58.	Status of Applications (by early September 2022)	89
Figure 59.	Stated Objectives of State Support Programs	90
Figure 60.	Sectors Targeted by State Support Programs	90
Figure 61.	Gross Expenditure on R&D, 2020* (% of GDP)	91
Figure 62.	Private R&D as a Share of Total R&D Spending, 2020 (%)	91
Figure 63.	GII Rankings, 2021	91
Figure 64.	GII Scores, 2021	91
Figure 65.	Distribution of Measures Supporting Firm Growth, Survival, and Growth & Survival	93
Figure 66.	National Innovation Systems by Country Development Level	99
Figure A1.	Reform simulations (A): Distributional impacts resulting from an increase in Social Protection budget	103
Figure A2.	Reform simulations (B): Distributional impacts resulting from an increase in the Indirect Subsidies' budget – Reduction in the	103
Figure A3.	Relation between budget allocations to pre-primary education and efficiency	111
Figure A4.	Pupil-teacher ratio in Mauritius, structural peers, investment hubs, upper middle-income and high-income countries, circa 2019	112
Figure A5.	Pupil-teacher ratios and average math scores in secondary schools in Mauritius, PISA 2009	112
Figure A6.	Simulated additional GDP in 80 years attributable to increased learning (relative to current GDP), by scenario	113

Abbreviations and Acronyms

AfDB	African Development Bank	MOFEPD	Ministry of Finance, Economic Planning, and Development
APS	Advanced Payment Systems	MPSAIR	Ministry of Public Service and Institutional Reforms
BAS	Business Advisory Services	MRA	Mauritius Revenue Authority
BOM	Bank of Mauritius	MRIC	Mauritius Research and Innovation Council
BRP	Basic Retirement Pension	MSDG	Medium Scale Distributed Generation Scheme
CIT	Corporate Income Tax	MTEF	Medium Term Expenditure Framework
COFOG	Classification of Functions of Government	MUR	Mauritian Rupee
CPI	Consumer Price Index	NAO	National Audit Office
CPS	Current Payment System	NIS	National Innovation Systems
CSG	General Social Contribution	NIT	Negative Income Tax
CTF	Closeness to Frontier	NPF	National Pensions Fund
DBM	Development Bank of Mauritius	NSF	National Savings Fund
DEA	Data Envelopment Analysis	NYCBE	Nine Years of Continuous Basic Education
DSA	Daily Sustenance Allowance	OECD	Organization for Economic Cooperation and Development
EBF	Extra Budgetary Fund	OPSG	Office of Public Sector Governance
EBU	Extra Budgetary Unit	PAC	Public Accounts Committee
EC	European Commission	PBB	Program Based Budget
EMEs	Emerging Market Economy	PEFA	Public Investment and Financial Accountability
EMS	Enterprise Modernization Scheme	PFM	Public Financial Management
EOE	Export Oriented Enterprises	PIM	Public Investment Management
ERP	Economic Recovery Program	PIMA	Project Investment Monitoring Agency
EU	European Union	PIMS	Parastatal Management Information System
FATF	Financial Action Task Force	PISA	Program for International Student Assessment
FX	Foreign Exchange	PIT	Personal Income Tax
GAAP	Generally Accepted Accounting Principles	PPO	Procurement Policy Office
GBL	Global Business License	PPP	Public Private Partnership
GDP	Gross Domestic Product	R&D	Research and Development
GFS	Government Financial Statistics	SACMEQ	Southern and Eastern Africa Consortium for Monitoring Education Quality
GHG	Greenhouse Gas	SBM	State Bank of Mauritius
HEC	Higher Education Commission	SF	Special Fund
HEI	Higher Education Institutions	SIC	State Investment Corporation
HIC	High Income Country	SME	Small and Mid-size Enterprise
HR	Human Resources	SOE	State Owned Enterprise
HRMIS	Human Resource Management Information System	SSA	Sub Saharan Africa
HSC	High School Certificate	TASS	Tax Arrears Settlement Scheme
ICAC	Independent Commission Against Corruption	TFP	Total Factor Productivity
IMF	International Monetary Fund	TSA	Treasury Single Account
IP	Intellectual Property	TVET	Technical and Vocational Education and Training
IT	Information Technology	UMIC	Upper-Middle Income Country
LIDC	Low Income Developing Country	UNESCO	United Nations Educational, Scientific and Cultural Organization
LTGM	Long Term Growth Model	USD	United States Dollar
M&E	Monitoring and Evaluation	VAT	Value Added Tax
MIC	Mauritius Investment Corporation		
MITD	Mauritius Institute of Training and Development		

Executive Summary

Well-designed fiscal reforms could enable Mauritius to restore its high-income status while pivoting to a knowledge-based economy and strengthening its resilience to shocks

Mauritius's economy has grown dramatically since independence, but its dynamism has waned in recent years. Mauritius's rapid development has offered a powerful example for developing economies worldwide. In less than 50 years, Mauritius transformed itself from a low-income country with a per capita GDP of US\$260 and a heavy reliance on monocrop agriculture into a well-diversified upper-middle-income country and international financial center with a per capita GDP that reached US\$9,106 in 2021. Mauritius even briefly attained high-income-country status in 2020, before the shock of the COVID-19 pandemic returned it to upper-middle income levels. The economic fallout from the pandemic hit Mauritius particularly hard, as tourism accounted for 7 percent of GDP and 20 percent of employment. However, the economy has proved resilient to the headwinds generated by Russia's war in Ukraine, and with an economic recovery well underway, the government has an opportunity to implement structural reforms to boost inclusive growth and reinforce resilience. Reorienting the country's fiscal policy will be critical to this effort.

Macroeconomic stability played a major role in Mauritius's economic success. Sound fiscal and debt policies reinforced sustainable debt dynamics while opening space for public investment. Macroeconomic stability attracted private capital, creating jobs and enhancing productivity, which in turn boosted public revenue, generating a virtuous cycle of stability, investment, and growth.

To achieve robust, inclusive, and resilient growth, the government will need to modernize the macroeconomic framework and resolve several serious inconsistencies in approach to fiscal policy. In recent years, public spending has increasingly shifted from investment to consumption. The share of social protection in total public expenditures rose from 22.8 percent in FY2014 to 26.5 percent in FY2018/19, just before COVID-19. As productivity growth has slowed, demographic aging has imposed an ever-greater fiscal burden, and basic retirement pensions accounted for more than half of total social protection spending in FY2018/19. The large expansion in both social protection and general public services to cope with the exigencies of the pandemic reinforced this trend and crowded out spending in areas with longer-term yields, such as environmental protection, health, and education.

The pandemic exacerbated the widening deficit by necessitating a massive increase in social support while undermining debt dynamics. Mauritius's sovereign risk rating has been downgraded twice in the recent past, leaving the country just one notch above investment-grade status. These downgrades reflected Mauritius's reliance on unconventional and one-off measures to reverse the pandemic-induced deterioration of its macroeconomic and fiscal positions, which increased uncertainty around its future fiscal performance and destabilized its previously strong institutional framework. Any further downgrades would increase differential spreads for the public sector, should it decide to issue a global bond, while also entailing significant negative consequences for domestic banks and private investors. Unless Mauritius can cultivate new sources of economic dynamism, its current fiscal arrangements will prove unsustainable. Moreover, as a small island state, Mauritius urgently needs to strengthen its resilience to climate change.

Mauritius's transition to a knowledge-based economy will require a robust competitive environment and sustained investment in human capital and innovation. This report identifies opportunities to enhance the impact of fiscal policy on macroeconomic stability and accelerate the transition toward greener, more resilient, and knowledge-based growth. The recommended reforms are designed to prioritize investment in productive assets while continuing to meet the social needs of an aging society in a cost-effective manner and strengthening resilience against climate change and other shocks. The report also identifies opportunities to leverage Mauritius's low-carbon growth potential in line with the focus of its most recent budgets, which have been strongly oriented toward fostering a green recovery and leveraging renewable energy as a new driver of economic growth.

Revenues and expenditures must be realigned to address mounting fiscal imbalances. The imbalances generated by social benefits are particularly large, as the trajectories of expenditures and social contributions continue to diverge. In this context, the report identifies measures to: (i) improve resource mobilization; (ii) rebalance expenditures toward productive investments to build human capital, increase the cost-effectiveness of public spending, and bolster resilience to shocks; (iii) address the risks posed by contingent liabilities; (iv) improve the overall efficiency of the public sector; and (v) lay the foundation for green and resilient growth as a knowledge-based economy.

A gradual increase in public revenue will be necessary to support expenditure levels consistent with high-income status

Persistent fiscal deficits could threaten debt sustainability over the medium-to-long term. The government provides generous social benefits, including universal pensions, blanket subsidies on essential goods, and an extensive network of social protection programs directed to vulnerable groups. While these benefits are not exceptionally large as a share of GDP—being just below the average for upper-middle-income countries and about half the average for high-income countries—the social contributions that finance those benefits are increasingly inadequate, and their low level contrasts sharply with the situation in all peer groups (Figure ES1).

Although average social benefits exceed average contributions in all peer groups, the gap is much larger in Mauritius. Social contributions tended to cover at least half of social benefits in all benchmark groups, both before and after the pandemic. In Mauritius, however, social contributions covered just 17 percent of social benefits in 2016-2019 and 14 percent in 2020 (Figure ES2). To ensure the sustainability of social benefits, increasing the level of social contributions will be essential. Implementing the Contribution Sociale Généralisée (CSG) in a revenue neutral manner, limiting the level of benefits and future increases of the same to the revenues generated by CSG contributions would aid in achieving this objective.

Figure ES1. Social Contributions and Social Benefits, Mauritius and Comparator Groups

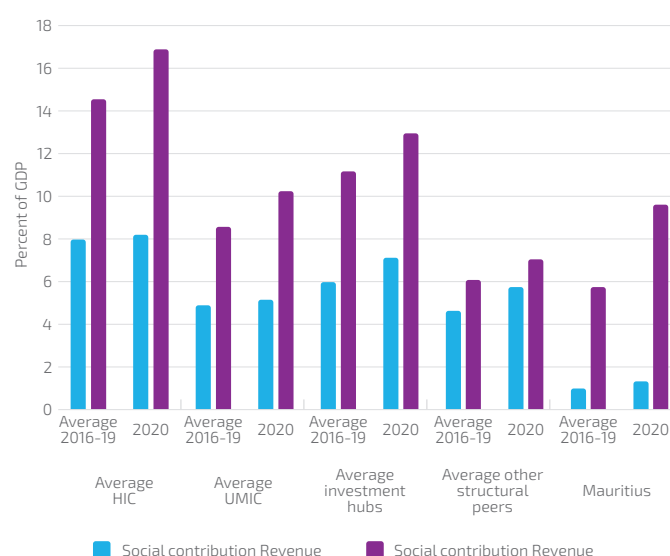
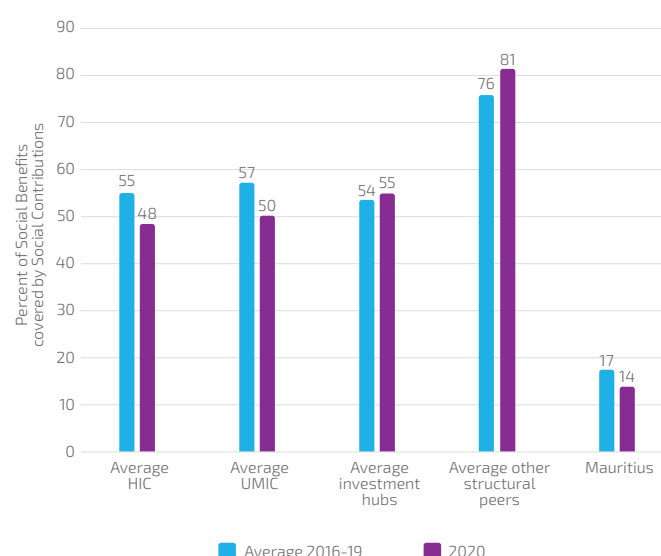


Figure ES2. Social Contributions as a Share of Social Benefits, Mauritius and Comparator Groups



Source: World Bank staff based on data from IMF GFS, July 2022.

Notes: **The social contribution shares were computed for each country group as the average for the for the following countries:** HIC: Australia, Austria, Belgium, Canada, Chile, China, P.R.: Hong Kong, China, P.R.: Macao, Croatia, Cyprus, Czech Rep., Denmark, Estonia, Finland, France, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malta, Mauritius, Nauru, Netherlands, New Zealand, Norway, Palau, Poland, Portugal, Romania, San Marino, Saudi Arabia, Seychelles, Singapore, Slovak, Slovenia, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States. UMIC: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Brazil, Bulgaria, China, P.R.: Mainland, Colombia, Costa Rica, Georgia, Guatemala, Indonesia, Jordan, Kazakhstan, Kosovo, Marshall Islands, Mexico, Namibia, Macedonia, Paraguay, Peru, Russian Federation, Samoa, Serbia, South Africa, Thailand, Turkey. Other structural peers: Albania, Costa Rica, El Salvador, Namibia. Hubs: Cyprus, Ireland, Luxembourg, Malta, Netherlands, Seychelles, Singapore, United Arab Emirates. **Country group social benefits averages calculations exclude the following countries due to missing data:** Average HIC: Andorra, Antigua and Barbuda, Aruba, The Bahamas, Bahrain, Barbados, Brunei Darussalam, Kuwait, Latvia, Lithuania, Luxembourg, Macao, Nauru, Oman, Palau, Panama, Poland, Puerto Rico, Qatar, Saudi Arabia, Seychelles, St. Kitts and Nevis, Trinidad and Tobago, for Grants Expenses only: Croatia, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, Malta, Portugal, Romania, San Marino, Slovak, Slovenia; Average UMIC: Argentina, Azerbaijan, Belize, Bosnia and Herzegovina, Botswana, China, Costa Rica, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Grenada, Guyana, Iraq, Jamaica, Jordan, Lebanon, Malaysia, Maldives, Marshall Island, Montenegro, Namibia, Russia, Samoa, Serbia, South Africa, St. Lucia, St. Vincent and the Grenadines, Suriname, Thailand, Tonga, Turkey, Turkmenistan, Tuvalu, Venezuela, for Grants Expenses only: Bulgaria, Peru, Samoa; Average Inv Hubs: Seychelles. Average Other Struct Peers: Namibia.

Executive Summary (Cont'd)

Indirect taxes account for the bulk of tax revenue in Mauritius. While this pattern is typical among upper-middle-income countries, high-income countries and global financial hubs tend to have higher levels of total tax collection and receive a larger share of their revenue from direct taxes. Mauritius also maintains various tax incentives and other schemes that often fail to yield the intended benefits while weakening the transparency and equity of the tax system and eroding the tax base. The uneven treatment of different types of businesses and investments creates distortions, as do the numerous exemptions and deductions to the personal income tax. Mauritius's international tax treaties have come under increased scrutiny in recent years, and several have been cancelled or renegotiated due to perceived unfairness in the treatment of source countries.

The government has a range of options for increasing tax revenue. To sustain the collection of international taxes, the government will need to concede more taxation rights to source countries and continue to combat treaty abuse, rigorously adhere to international best practices, and improve tax neutrality and efficiency. Scaling back excessively generous investment tax credits will be crucial to bolster business taxation revenues, as these credits have proven largely ineffective in encouraging investment and growth. This is particularly true for manufacturing activities, where the standard depreciation allowance is already generous and, when combined with a tax credit or holiday, may result in an effective subsidy that erodes revenues while shifting resources away from potential investments in services. Treating firms, banks, and investments more uniformly would alleviate distortions while increasing tax revenue. Streamlining and scaling back personal income tax exemptions and deductions could further improve tax collection, while adopting a single low tax rate for all capital income could boost revenue while enhancing the equity of taxation. Finally, scaling back value-added tax (VAT) exemptions and zero-ratings could increase revenue by 39 percent, or about 2.5 percent of GDP, without raising tax rates, while lowering the threshold could expand VAT coverage. In parallel, the government could improve domestic revenue mobilization by adopting cost-effective innovations in revenue administration informed by insights from behavioral science. Evidence from World Bank projects underscores the effectiveness of behaviorally informed strategies in improving tax compliance among individuals and businesses. These gains tend to come at a low financial and political cost, and implementing strategies based on behavioral science may encourage further innovations in revenue administration.

Reallocating funds across and within categories while adopting more efficient spending instruments could greatly enhance the effectiveness of public expenditures

Shifting resources from consumption toward investment could significantly enhance Mauritius's prospects for green, resilient, and inclusive growth. Social expenditures are high and rising. Pension programs account for over half of social spending, and demographic trends have put these programs on an unsustainable path. Meanwhile, resilience-enhancing investments in environmental adaptation and mitigation and public health are insufficient to meet the country's development needs. Mauritius's aging population will entail a growing burden of non-communicable disease, but spending on essential primary healthcare services is insufficient. Spending on environmental protection will need to increase by 1.6 percentage points of GDP per year through 2030 to meet the authorities' 2030 targets. The financing gap is especially large for climate-change adaptation, which accounted for just 22 percent of environmental expenditures between 2011-2017/18 despite Mauritius's high level of exposure to natural disasters. Resources can also be more efficiently allocated within expenditure categories. For example, over the past two decades education spending has risen to high-income-country levels, yet technical and allocative inefficiencies continue to undermine education outcomes.

More efficient instruments can enhance the effectiveness of social spending. To date, the government's efforts to reduce poverty and promote household welfare have relied heavily on broad-based social-benefit schemes, including universal pensions and blanket subsidies on selected goods and services. While these instruments are progressive, they are not pro-poor, and better-targeted instruments could achieve similar results at a much lower fiscal cost. For example, the basic retirement pension reduces income inequality, but it is not targeted to the poor, and as a universal program it also benefits the most affluent households. Moreover, pensions only benefit the population age 60 and above, whose poverty rate is 4.3 percent, whereas the poverty rate among those younger than 60 is 11.7 percent. The same reduction in inequality could be achieved at 30 percent of the cost by redirecting these resources to targeted pro-poor cash transfer programs, several of which already exist and could be scaled up. Improving the tracking and monitoring of beneficiaries and streamlining the various existing programs, merging initiatives that respond to similar problems and realigning programs' objectives with current needs, which may have changed over the years, would also enhance the effectiveness of social spending. The government could then redeploy the savings into growth-enhancing public investments with no adverse effects on poverty or inequality.

Closer monitoring of contingent liabilities will be vital to manage fiscal risks

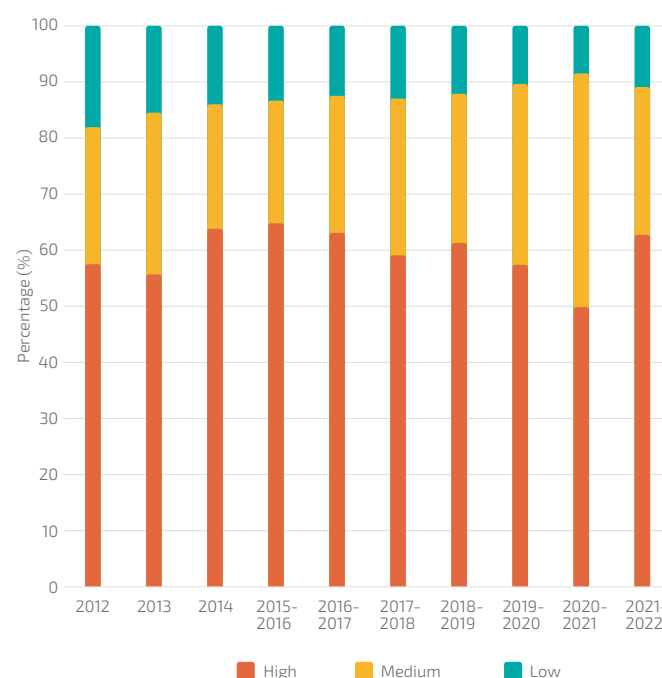
The government faces an array of direct and indirect contingent liabilities. Direct contingent liabilities arise from the debts of state-owned enterprises and parastatals, other publicly guaranteed debts, claims against the government in domestic courts, and claims related to taxes and pensions. While individually moderate, these liabilities total almost 10 percent of GDP, with varying levels of materialization risk. The potential recapitalization of the Bank of Mauritius, which is currently operating with weakened capital, could increase direct contingent liabilities by up to an estimated additional 14 percent of GDP¹. The country's nascent public-private partnership (PPP) framework is also a potential source of direct contingent liabilities and should be developed gradually in line with international best practices. Indirect contingent liabilities could result in losses far greater, as some risk sources exceed 100 percent of GDP. Potential sources of indirect contingent liabilities include natural disasters, systemic bank failures, the outcome of international arbitration, the commercial exposure of the Mauritius Investment Corporation (MIC), and the state's voluntary assumption of non-guaranteed debt.

While indirect, the contingent liabilities associated with the MIC are sizeable and could materialize over the medium-to-long term. The MIC was created in June 2020 to provide immediate crisis relief to large, systemically important, and viable Mauritian businesses experiencing financial distress during the COVID-19 pandemic and to support and accelerate economic development. During its first year, the MIC disbursed 24.9 billion Mauritian rupees (MUR), and by end-December 2022 it had disbursed MUR 48.6 billion (or 60 percent of its MUR 80 billion portfolio) to 48 investees. 52 percent of these funds were absorbed by sectors not separately disclosed in public reports, including MUR 25 billion (5.2 percent of GDP) spent on shares of Airport Holdings Ltd in December 2021, part of which helped reduce the public debt (MUR 13 billion, or 2.6 percent of GDP). As most pandemic response measures have been phased out, the MIC is taking a more long-term approach to its engagement in the Mauritian economy and relying on the government to identify key projects and sectors. While the MIC implements various strategies to mitigate commercial risk, this risk is inherent in its activities, and the MIC's relationship to the government could create the expectation that the government will cover part or all of any losses it incurs. Such losses could be substantial, as the MIC portfolio is equivalent to 15.4 percent of FY21/22 GDP.

A stronger framework for public financial management, and especially public investment management, could improve the effectiveness of public spending and enhance service delivery

The budget is becoming more rigid and fragmented, and execution rates are falling. The government's scope to reallocate public resources in response to changing policy priorities and economic conditions is narrowing, and increasing recourse to special funds—whose incoming transfers are categorized as grants—whose incoming transfers are categorized as grants—is exacerbating this trend (Figure ES3). Highly rigid public spending categories make up about 60 percent of total expenditures, with social benefits accounting for 22.5 percent and employee compensation another 20.3 percent. Grants, which are considered medium-rigidity expenditures, represent 19.2 percent of total public spending. Special funds can carry balances over multiple years, which could be reallocated to finance priority expenditures if they remained in the regular budget. Minimizing use of special funds would thus yield improvements in cash management, which could enhance overall allocative efficiency. In addition, appropriately consolidating all existing special funds into the budget, by considering as expenditure only the actual amounts spent by special funds rather than the total amounts transferred to them, would provide a more accurate measure of the true fiscal balance, enhancing transparency.

Figure ES3. Public Expenditures by Rigidity Level, 2012-2022 (US\$ millions)



Source: World Bank staff based on data from Mauritius's BOOST database.

Note: Excludes categories "N/A" and "Parent".

¹Such would be the increase in direct contingent liabilities that would result from returning to the central bank reserves the full amount of the two non-refundable transfers to government carried out in FY19/20 and FY20/21.

Executive Summary (Cont'd)

Further digitizing the day-to-day operations of the public sector could improve transparency, accountability, and service delivery. Developing a strategy to guide the implementation of e-government systems could yield substantial improvements in public financial management. Prior to the pandemic, the government was moving toward adopting e-budgeting and e-payments systems and upgrading the Human Resource Management Information System (HRMIS), but many of these efforts have stalled. Mauritius has yet to develop a “whole of government” approach to implementing e-government projects. Improvements to the e-budgeting system would increase transparency by facilitating in-year reporting and enabling more frequent updates on fiscal transfers to subnational governments.

Building staff skills can improve public investment management. The government lacks adequately skilled staff in the areas of procurement, project costing, and project development, which has been a factor in causing delays in project implementation, as well as inconsistent or inaccurate project costing. Steps have been implemented to minimize delays, like the creation of the Public Investment Monitoring Agency (PIMA), but additional skill development is needed. Projects financed by special funds appear to perform no better than those financed by the regular budget (Figure ES4). Therefore, using special funds does not address inefficiencies in public investment management, which the National Audit Office also highlighted.

Figure ES4. The Execution percentage of Closed and Ongoing Special Funds



Source: World Bank staff based on data from MOFEPD.

The government passed the Climate Change Act in 2020, but additional action will be needed to integrate green and resilient growth into the public financial management system. The legislation provided the legal authority to establish a Council on Climate Change and a Department of Climate Change, and to draft a climate-change action plan. The Ministry of Finance, Economic Planning, and Development has begun to incorporate climate-change adaptation and mitigation strategies into its infrastructure development plans, but more robust policy tools and guidance documents need to be developed.

PPPs can effectively leverage private capital to achieve key policy objectives, freeing public resources for other priorities. While PPPs offer considerable advantages, the government's limited institutional experience, combined with an underdeveloped legal framework and private-sector environment for PPPs, present significant risks and challenges. In addition to developing the appropriate staff skills, the government will need to deepen capital markets to support the increased use of PPPs. Creating markets for project financing and other long-term investments will require designing a bankable and well-planned pipeline of projects and developing regulations, policies, and financial instruments to attract foreign and domestic investors.

Policy coordination, planning, and monitoring are core challenges for improving public investment management in Mauritius. Ensuring systematic monitoring and evaluation and integrating evaluation into the decision-making process will help Mauritius implement evidence-based policies and corrective actions, which are currently limited. The government has taken steps to improve the budget process. However, more needs to be done to link the budget system closer to the policy goals.

Improving the efficiency of education and innovation spending could greatly enhance the prospects for green and inclusive growth

Mauritius will need to upgrade its educational system to accelerate and sustain its transition to high-income status. While the country is a top performer in regional assessments of students' learning, average learning outcomes remain below those of high-income countries. Socioeconomic disparities in learning outcomes are among the largest in the region and are high by international standards. A skills gap is inhibiting the growth of high-potential sectors, and mounting income inequality poses long-term challenges. For years, surveys of the private sector have consistently identified skills shortages as a critical obstacle to doing business in Mauritius, and the skills gap leads to high wage premiums that fuel income inequality. In parallel, unemployment has been rising as the labor market continues to evolve towards the services sector and more skill-intensive activities, which rose from just 3 percent of GDP in the 1990s to 6.5 percent over the past decade. Education can address the skills shortage and mitigate income inequality by driving broad-based gains in productivity.

Public spending on education has increased significantly over the past two decades, and the reallocation of existing resources could substantially improve education outcomes. Shifting resources from secondary education level to early and tertiary education while implementing strategies to reduce dropout rates could enhance the cost-effectiveness of education spending. Developing a medium-term strategy to adjust to the rapid demographic transition and the sharp decline in pupil-teacher ratios could create significant opportunities for cost savings. Improved monitoring and evaluation, including the routine use of national and international standardized learning assessments, will be crucial to inform future expenditure decisions and sectoral policies. The budget-neutral reallocation of resources could improve learning outcomes by at least 7.3 percent, equivalent to 1.1 additional years of schooling per student.

A new generation of reforms focused on promoting private-sector development and fostering innovation could enable Mauritius to regain and sustain high-income status. Mauritius's future competitiveness cannot be based on low labor costs, and encouraging the development of new high-value sectors will be necessary to sustain its growth as a high-income country. The current approach to industrial policy served Mauritius well in previous decades but is now showing signs of fatigue, and new measures will be necessary to promote transformational change. Moreover, while a proactive fiscal response successfully protected assets and jobs during the pandemic, expansive support programs are inhibiting market mechanisms and hindering the efficient allocation of labor and capital. Going forward, policymakers will need to prioritize efforts to promote radical innovation, green growth, and climate-change adaptation. The government will also need to continue addressing market failures that inhibit the incremental upgrading of productive capacity at the firm level, especially among small and medium enterprises. Table ES1 below summarizes top policy options identified by the PER and their suggested sequencing.

Executive Summary (Cont'd)

Table ES1: Top Policy Options Identified by the PER

Policy Options	Sequencing
Part I: Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth	
<i>Well-designed fiscal reforms could enable Mauritius to pivot into a knowledge-based economy and strengthen its resilience to shocks, to restore its high-income status sustainably</i>	
Strengthen macroeconomic stability to support continued growth and development by safeguarding the independence of the central bank, reducing reliance on quasi-fiscal operations, and strengthening adherence to fiscal rules.	Short Term
Restructure the social security system with a focus on pension reform, the reallocation of resources to pro-poor programs, improved tracking of beneficiaries, and increased social contributions.	Medium Term
<i>A gradual increase in public revenue will be necessary to support expenditure levels consistent with high-income status</i>	
Gradually align revenues with expenditures by increasing social contributions to match the level of benefits provided or at least reduce the gap between them to the average levels observed in UMICs and HICs, and boost tax revenues by streamlining tax expenditures, strengthening international and business taxation, and adjusting personal and indirect taxes.	Medium Term
<i>Reallocating funds across and within categories while adopting more efficient spending instruments could greatly enhance the effectiveness of public expenditures</i>	
Reallocate any resources saved through increased efficiency of the social protection system attained through its reform , to the increase of public spending on health, environmental adaptation and mitigation, and other dimensions of resilience.	Medium Term
Through budget-neutral reallocations, increase the resources spent on early childhood education and development in line with the UNICEF-recommended target of 10 percent of total spending, while allocating additional resources to disadvantaged children.	Medium Term
<i>Closer monitoring of contingent liabilities and implementation of strategies to control their growth will be vital to manage fiscal risks</i>	
Quantify the full extent of fiscal risks by creating a comprehensive list of all direct and contingent liabilities, both explicit and implicit, and updating it regularly.	Short Term
Closely monitor the evolution of the MIC's portfolio and disbursements and quantify potential liabilities arising from its operations , as the failure of large or strategically important projects supported by the MIC may require budget transfers.	Short Term
Following the recent amendment to BOM Act, phase out BOM's role in overseeing MIC's program to support the economy.	Medium term
Prepare a fiscal consolidation plan informed by current MIC investments and comprising a payback schedule based on expected profits , to gradually return to the central bank the funds received by government through non-refundable transfers carried out in FY19/20 and FY20/21.	Medium Term
<i>A stronger framework for public financial management, and especially public investment management, could improve the effectiveness of public spending and enhance service delivery</i>	
Strengthen the independence and follow-up capabilities of the National Audit Office by removing it from the traditional budget process and by formulating a list of high-risk areas and prioritizing audits accordingly.	Short Term
Minimize the use of special funds by developing more stringent criteria for their creation and closure. Additionally, appropriately consolidate any existing special funds into the general budget by considering as expenditures only the actual amounts spent by special funds, rather than the amounts transferred to them.	Short Term

Table ES1: Top Policy Options Identified by the PER (Cont'd)

Policy Options	Sequencing
Part I: Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)	
Strengthen the monitoring and evaluation framework to improve linkages between budgets, spending, and outcomes, and resume the use of program-based budgeting.	Short Term
Analyze the state of e-government and develop a dedicated strategy to improve the design, sequencing, and implementation of e-government systems.	Medium Term
Strengthen the efficiency of public investment management by mainstreaming climate-change adaptation and mitigation into the investment process, building staff capacity for procurement and project management, and aligning project selection with national and sectoral development plans.	Medium Term
Create an enabling environment for PPPs by investing in the knowledge and skills of government staff, implementing tools to screen and evaluate potential projects, and deepening financial markets.	Long Term
Part II: Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development	
<i>Improving the efficiency of education and innovation spending could greatly enhance the prospects for green and inclusive growth</i>	
Strengthen performance monitoring and evaluation in education by regularly implementing national and international standardized learning assessments, improving data collection, and analyzing the cost-effectiveness of educational programs and reforms.	Short Term
Strengthen the national intellectual property framework to enable the full enforcement of the Industrial Property Act by building institutional capacity in the public sector and raising awareness in private sector.	Short Term
Establish an innovation council led by the Prime Minister to improve interinstitutional coordination in the implementation of innovation-related policies.	Short Term
Address the underlying causes of high dropout rates , including the need to work, poor educational content, low perceived returns to education, adverse school environments, and cumulative learning deficits.	Medium Term
Design a medium-term term strategy to reallocate education resources to reflect the rapid decline in the school-age population , including policies for recruitment and deployment of teachers, as well as plans for school and/or grade consolidation.	Medium Term
Develop a national innovation strategy with clear objectives and indicators that can be monitored consistently to identify where resources need to be concentrated to build on national strengths and leverage international market opportunities.	Medium Term
Boost private and public spending on research and development in priority areas such as green growth , with the aim of converging to the average expenditure levels of upper-middle-income economies.	Medium Term
Reform higher education institutions to promote research excellence and build a relationship with the private sector by allocating greater resources to applied research and encouraging universities to develop strategies to support the commercialization of scientific results.	Medium Term
Ensure that pro-innovation programs apply international best practices for defining their rationale and strategic objectives, ensuring their alignment with the broader policy framework, evaluating alternative policy instruments, and establishing explicit and measurable performance indicators.	Medium Term

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth

1. Introduction

Supportive fiscal policies were instrumental to Mauritius's spectacular growth between 1968 and the first decade of the 21st century. Following its independence in 1968, Mauritius rapidly transformed itself from a poor country with a heavy reliance on monocrop agriculture into an upper-middle-income country with a diverse and sophisticated economy. In 2020, Mauritius briefly became a high-income country (HIC), before the shock of the COVID-19 pandemic returned it to upper-middle-income status. During its remarkable development, Mauritius implemented fiscal policies that supported long term growth, including a balanced tax system that accommodated private investment and a public expenditure strategy that prioritized investments in education and critical infrastructure. Sweeping improvements in the business climate and a pragmatic industrial policy attracted foreign investment and facilitated the growth of new export-oriented sectors, including garment manufacturing and tourism. A competitively valued exchange rate, duty-free access to imported inputs, and the establishment of export processing zones facilitated economic diversification and job creation. In addition, the signing of a Double Taxation Avoidance Treaty with India in 1982 enabled Mauritius to become a global financial center².

Despite the introduction of numerous fiscal incentives, Mauritius's structural transformation slowed markedly over the past decade. An array of interrelated challenges caused growth to become less dynamic³, as the country's once-successful industrial policies gradually lost their ability to promote transformative private investment. New subsidies and tax expenditures proliferated, and direct state investment in the economy increased, yet private investment steadily declined. Mauritius's trade competitiveness suffered as mature sectors declined while new sectors failed to take their place, due in part to a persistent skills gap and very low levels of innovation, while structural unemployment rose. Compounding these challenges, demographic aging and rising income inequality intensified pressure on the public finances, and revenues failed to keep pace with increased social spending, leading to persistent fiscal deficits and mounting public debt levels.

An increasingly expansionary, short-term-focused fiscal policy designed to sustain demand-led growth has begun to undermine macroeconomic stability. The COVID-19 pandemic accelerated this process. Over the past decade, public spending increased much faster than revenues, resulting in persistent fiscal deficits and mounting public debt levels. As a remote island country with a tourism sector that accounted for 7 percent of GDP and 20 percent of employment, Mauritius was especially vulnerable to the economic shock caused by the pandemic. The economy has proven resilient, even in the presence of additional headwinds from the war in Ukraine, partly due to the substantial state support deployed. However, this came at a high fiscal cost, and rapidly pushed the public debt to record levels. Meanwhile, heterodox economic policies and substantial quasi-fiscal activities have increased perceived risk levels. With the recovery well underway, a shift of the policy focus to longer-term structural issues is needed to boost growth and build resilience against future shocks, while continuing to meet the social needs of an aging society in a cost-effective manner. The older generation of industrial policies and its attendant structure of fiscal incentives served Mauritius well in the past but are not suited to support its transition to HIC status.

Revenue and expenditure will need to be realigned to restore fiscal sustainability and promote long-term growth. This realignment is particularly important in terms of social benefit programs, as the trajectories of spending levels and social contributions continue to diverge. Pension reform and the rationalization of social protection expenditures could free up resources to invest in health and skills development, incentivize the development of knowledge-based sectors, and build sophisticated climate-resilient infrastructure. Indirect taxes account for the bulk of tax revenue, which is typical of upper-middle-income countries (UMICs) but unusual among HICs, which generally have higher levels of tax collection overall, as well as significantly larger contributions from direct taxes. Mauritius also maintains various tax incentives and other schemes that erode the tax base and undermine the overall transparency and equity of the tax system while often failing to yield the intended benefits.

Close monitoring of contingent liabilities can offer valuable insights to help the government manage fiscal risks and make well-informed fiscal policy decisions. Having a clear view of the full extent of liabilities facing the government, both direct and contingent, is vital to monitor their size and the risks they pose to the public finances. Direct contingent liabilities are relatively elevated in the aggregate, with varying levels of materialization risk. In addition, considerable losses could arise from indirect contingent liabilities, and depending on the circumstances there might be strong public and interest-group pressures on the government to cover part or all of the losses.

²World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

³Ibid.

The further digitalization of day-to-day operations could improve expenditure transparency, accountability, and service delivery. Enhancing automation and developing a strategy to guide the scope and implementation of e-government systems could yield improvements in public financial management across the public sector. Prior to the pandemic, the government was moving toward implementing e-budgeting and e-payments systems in addition to upgrading the Human Resource Management Information System (HRMIS), but most of these efforts have stalled, and no plans to resume them have been made public. Although several e-government projects have been delivered on time, others have been abandoned or have been completed without any apparent benefits. Mauritius has yet to develop a “whole of government” approach to implementing e-government projects. Improvements to the e-budgeting system would increase transparency by facilitating in-year reporting and enabling more frequent updates on fiscal transfers to subnational governments.

Implementing capital projects efficiently remains a key challenge for Mauritius. To overcome budgetary rigidity the government has increasingly used Special Funds (SFs) and has created the Project Investment Monitoring Agency (PIMA) in the Ministry of Finance, Economic Planning and Development (MOFEPD), but these efforts have yielded no substantial improvement in performance. Meaningful progress will require building staff skills in procurement and contract management, strengthening the monitoring and evaluation (M&E) framework, addressing issues with cash management—especially the balance kept in SFs—and leveraging private-sector expertise through Public-Private Partnerships (PPPs). Increasing the use of PPPs and reducing the use of SFs would likely ease budget rigidity and free up fiscal space for other priorities. The MOFEPD has begun to incorporate climate mitigation strategies into its infrastructure development, but more robust policies and guidance documents need to be developed.

Improvements in the efficiency of education spending and increased support for innovation can help foster green, resilient, and inclusive growth. Mauritius will need to upgrade its educational system to support its transition to HIC status and narrow the skills gap that holds back high-potential sectors while easing inequality in a sustainable manner. To avoid the middle-income trap, Mauritius will need a new generation of reforms to promote competitiveness based on high productivity rather than low labor costs, and

significantly increasing innovation and encouraging the development of new sectors will be crucial to maintaining a higher standard of living for the population.

Part I of this Public Expenditure Review identifies fiscal policy, fiscal risks management, and public financial management (PFM) measures to enable greener, more resilient, and inclusive growth that will enable Mauritius to permanently transition to HIC status. Following this introduction, Section 2 provides an overview of the macroeconomic context. Section 3 describes the fiscal policy framework, including revenue mobilization and the distribution of public expenditures, and reviews trends over the past decade. Section 3 also offers a deeper look into fiscal liabilities, with a focus on monitoring and managing contingent liabilities. Section 4 describes the legal and institutional framework for PFM, highlighting outstanding gaps that need to be addressed to strengthen fiscal efficiency and enhance public service delivery. Section 5 lays out a series of actionable policy options based on the preceding analysis.

2. Overview and Macroeconomic Context

2.1 Mauritius has an opportunity to adjust its fiscal policy framework to sustain robust growth in the post-pandemic era

a) Supported by enabling fiscal policies, Mauritius has developed rapidly over the past 50 years and is now one of Africa's most secure and prosperous countries

Mauritius is a highly stable democracy with robust public institutions and a record of sound macroeconomic management. The country has enjoyed peaceful transitions of power in almost every election since 1968, and it performs well on a range of political and economic indicators, especially by regional standards. In 2020, Mauritius was formally recognized as a high-income country (HIC)⁴, a major milestone for a small island nation that just decades ago was a poor, remote mono-crop producer. However, the shock of the COVID-19 pandemic pushed Mauritius back into upper-middle-income country (UMIC) status, where it remains. The post-pandemic era is rife with new challenges, and as the country strives to continue its impressive growth and sustainably regain HIC status, it will require an institutional and policy framework similar to those of advanced economies.

⁴ This classification was made by the World Bank in July 2020 based on 2019 data for per capita GDP, net income from abroad, and price and exchange rate developments.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

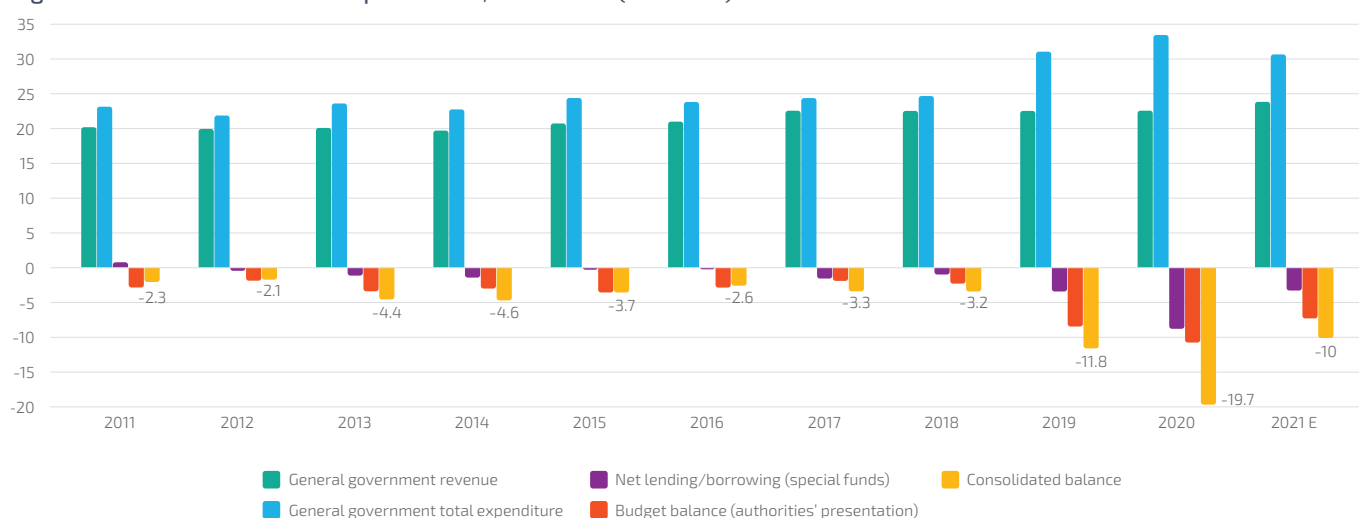
Mauritius is among Africa's most remarkable development success stories. When Mauritius achieved independence in 1968, its per capita GDP was just US\$260, and agriculture, mainly sugarcane production, represented more than 22 percent of economic output. Over the following years, well-designed policies and successful public-private collaboration paved the way for economic diversification and employment growth, and by 2003 economic transformation had reduced agriculture's share of GDP to less than 10 percent. The economy rapidly diversified into export-oriented industries such as textiles, tourism, as well as financial, information and communication, and business services. Critically, growth has been broad-based and inclusive, reinforcing the high degree of social cohesion that is one of the country's greatest strengths⁵.

Fiscal policies supportive of long-term growth were instrumental to Mauritius's spectacular development following independence. A tax system that was overall well-balanced and accommodative of private sector investment, together with public expenditures that prioritized building strategically important infrastructure and sustained public investments in education provided the foundations for fast-paced structural transformation. This was accompanied by broad and impactful improvements in the business climate over the years and a pragmatic industrial policy that successfully channeled resources towards new export-oriented sectors, including garments and tourism, which grew supported by a competitively valued exchange rate, duty free access for imported inputs, and the development of export processing zones, paving the way for economic diversification and job creation. The signing of a Double Taxation Avoidance Treaty with India in 1982 enabled Mauritius to become a global financial center⁶.

b) Over the past decade, government expansionary spending to sustain demand-led growth has begun to undermine macroeconomic stability and hinder growth

Over the past decade, Mauritius has run consistent fiscal deficits, which were widened by the COVID-19 crisis. Driven by social spending, public expenditures rose from an average of 23.4 percent of GDP in 2009-14 to an average of 25.9 in 2015-19, while tax revenue ticked up slightly from an average of 20.5 percent of GDP in 2009-14 to an average of 21.8 percent in 2015-19. This imbalance between revenues and expenditures resulted in an upward trajectory of public debt to-GDP ratio since 2013, reaching 65 percent in June 2019. Despite the favorable debt profile, with limited exchange rate risk and a relatively long-term maturities, the mounting fiscal pressures, especially regarding social expenditures driven by pensions, hindered fiscal consolidation. Given demographic trends, even before COVID-19 fiscal deficits were set to persist, and public debt was likely to continue rising even in the absence of any changes in fiscal policy. In 2020 and 2021, the exigencies of the pandemic response boosted public expenditures while revenue plunged, dramatically widening the fiscal deficit (Figure 1 and Figure 2).

Figure 1. Public Revenues and Expenditures, 2009-2021 (% of GDP)

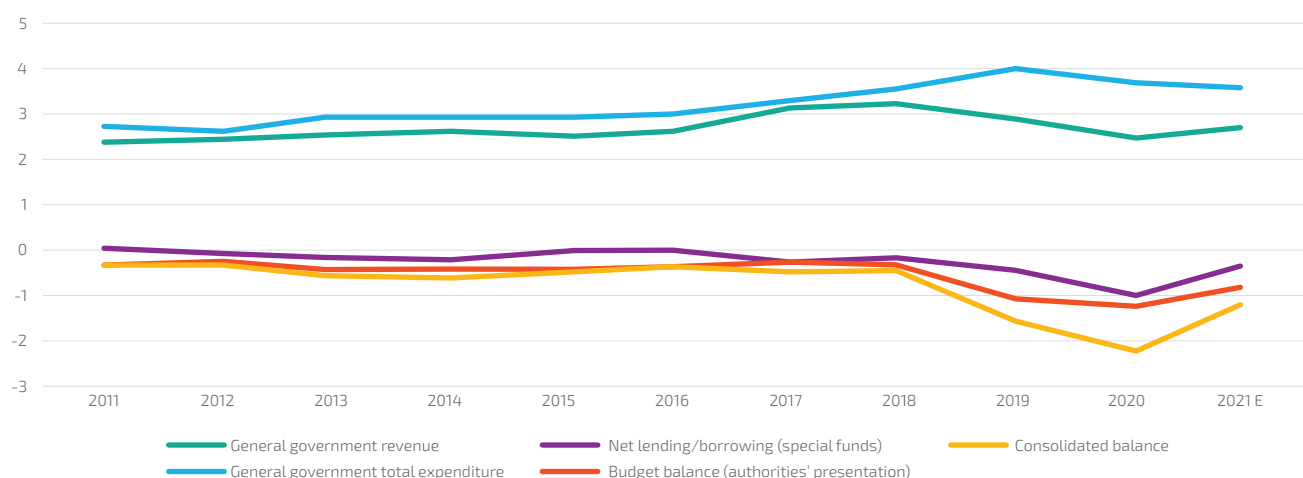


Source: World Bank staff based on data from IMF WEO, April 2022 & Article-IV: 2014, 2019 & 2022.
Note: Estimates start after 2020.

⁵World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

⁶Ibid.

Figure 2. Public Revenues and Expenditures, 2009-2021 (US\$ billions)

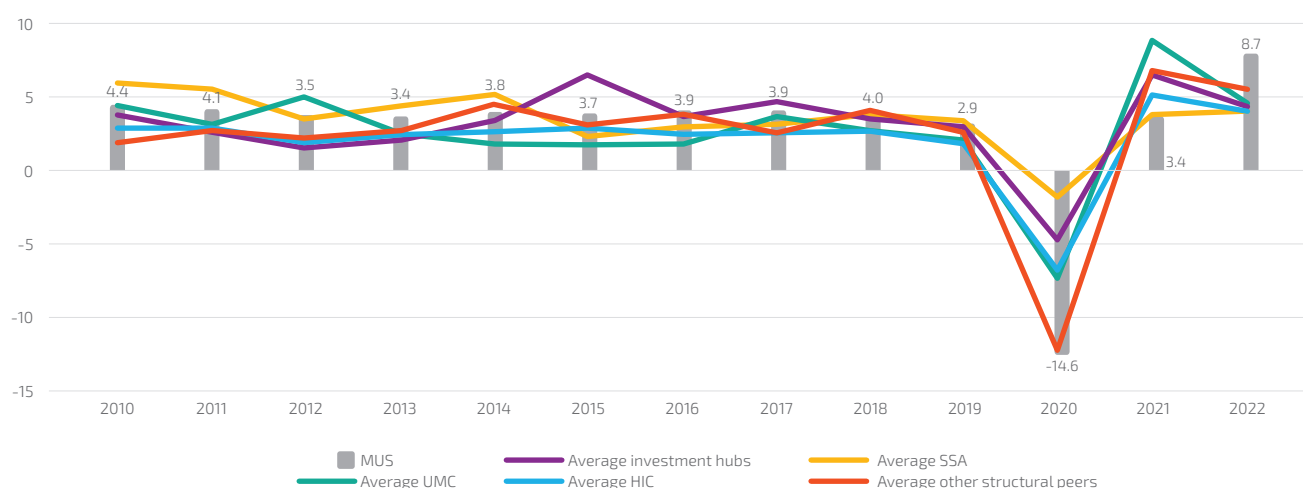


Source: World Bank staff based on data from IMF WEO, April 2022 & Article-IV: 2014, 2019 & 2022.

Note: US dollar figures are calculated in at the average annual exchange rate. Estimates start after 2020.

Mauritius's GDP contracted by 14.6 percent in 2020 when the COVID-19 pandemic hit the country⁷, worse than the average for any benchmark country group (Figure 3)⁸. From March 2020 to May 2020, a strict lockdown brought the economy to a virtual standstill. The tourism sector, which directly contributed 7 percent to total value addition in 2019, contracted by 67 percent in 2020. Meanwhile, activity in the tourism-related transportation and recreational services sectors dropped by 29 percent and 32 percent, respectively. Due to the lingering shock to the country's vital tourism industry, the 2021 recovery was also slower than those of many comparator groups.

Figure 3. Real GDP Growth, 2010-2022



Source: World Bank staff based on data from IMF World Economic Outlook, April 2022 & Statistics Mauritius.

Note: Data for Mauritius has been sourced directly from the National Statistical Agency to reflect updated historical GDP growth figures for 2021 and 2022, as well as the update of the historical GDP series due to the change in the base year. Data for all other countries in comparator groups have been sourced from IMF WEO, April 2022.

⁷With the sole exception of Figures 3, 5 and 6, and Table 1, all GDP percentages in charts and tables of this report have been calculated based in the older GDP series from the Mauritian National Statistical Agency, Statistics Mauritius, and do not reflect the recent rebasing of the GDP series due to the change of the base year.

⁸The benchmark includes both structural and aspirational peers. The structural peers are upper-middle-income countries, a group of small investment-oriented economies with similarities to Mauritius (Barbados; Cyprus; Hong Kong SAR, China; Ireland; Luxembourg; Malta; the Netherlands; Seychelles; Singapore; and the United Arab Emirates), and a group of countries with the lowest Manhattan distance from Mauritius on five key indicators: export composition, GDP per capita, population, human capital and physical capital per capita (Costa Rica, Uruguay, the Dominican Republic, Albania, Fiji, Namibia, El Salvador, and Panama). The aspirational peers are the HICs. While these comparators are used consistently throughout the PER, the composition of each group may vary with the available data.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

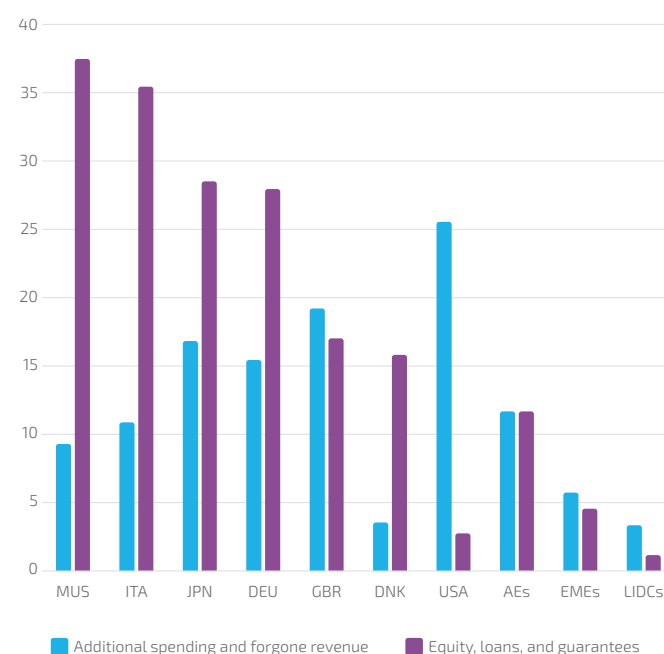
Facing an unprecedented economic downturn, the government implemented an extensive fiscal stimulus package. In March 2020, the country launched a swift response to the COVID-19 pandemic, which combined lockdowns and quarantine measures with extensive fiscal support. The response was successful in controlling the pandemic and managing its public health impact. Relative to GDP, this was the largest pandemic-response package implemented in an emerging market economy (EME) and one of the largest worldwide. Its main elements included: (i) MUR 19 billion allocated directly from the budget for wage support and self-employment assistance for all sectors during the March – May lockdown and for tourism and related sectors since then⁹; (ii) MUR 9 billion in extra-budgetary support to the national airline from the Special Resilience Fund¹⁰; (iii) MUR 25 billion in new credit lines from the Bank of Mauritius (BoM); (iv) MUR 80 billion provided by the BoM to the Mauritius Investment Corporation (MIC) to invest in systemically important companies and projects that support innovation and self-sufficiency in necessities via loans with potential equity conversions; (v) a MUR 2.5 billion equity-participation scheme under the State Investment Corporation (SIC); and (vi) a MUR 10 billion concessional credit line for SMEs from the Development Bank of Mauritius.

The government's response involved sharp expenditure increases and sizeable foregone revenues, as well as even larger amounts of publicly provided equity, loans, and guarantees (Figure 4). Compared to the average for EMEs, the Mauritian government's response entailed significantly higher levels of additional public spending and foregone revenue. The provision of equity, loans, and guarantees substantially exceeded the average not only for EMEs but also for advanced economies (AEs), surpassing some of the largest comparable responses from the United Kingdom, Germany, Japan, and Italy. Most of these resources were allocated outside the regular budget process via existing and newly created special purpose funds, the MIC, and the BoM's direct involvement in financing COVID-19 response measures.

A large share of the government's pandemic response package had yet to be disbursed by end of FY21/22. According to official data from the MOFEPD, by July 2022 only

58.42 percent of the MUR 80 billion allocated to the MIC had been disbursed¹¹, compared to 41.28 percent of the of the MUR 41.3 billion earmarked for the main BoM measures¹², less than 35 percent of the over MUR 4.2 billion earmarked for the main State Investment Corporation Ltd measures¹³, and 27.2 percent of the MUR 13 billion earmarked for the main Bank of Mauritius Ltd main measures¹⁴. The main BoM measures were rolled back between June and July 2022, but the rest of these measures are ongoing, as are several programs implemented through the regular budget, including the Economic Recovery Programme Projects under the

Figure 4. Discretionary Fiscal Response to the COVID-19 Crisis in Selected Economies (% of GDP)



Source: World Bank staff based on IMF Fiscal Monitor, Database of Country Fiscal Measures in Response to the COVID-19 Pandemic. Note: Estimates as of September 27, 2021. Numbers in U.S. dollar and percent of GDP are based on October 2021 World Economic Outlook unless otherwise stated. Country group averages are weighted by GDP in US dollars adjusted by purchasing power parity. Data labels use International Organization for Standardization country codes. AEs = advanced economies; EMEs = emerging market economies; LIDCs = low-income developing countries.

⁹ Ex-post, a total of MUR 27 billion have been spent for the WAS, Self-employed Assistance Scheme and One-off Self-employed scheme.

¹⁰ However, this ex-ante provision was not effectively disbursed.

¹¹ The MUR 46.7 billion actual disbursements by the MIC represent 89.5 percent of its approved allocations of MUR 52.2 billion by August 2022. These approved allocation of MUR 52.2 billion in turn accounts for 65.3 percent of the MUR 80 billion earmarked for the MIC. This indicates that over one third of the funds available to the MIC had not yet been allocated or disbursed by August 2022.

¹² These comprise the BOM Special Relief Fund (MUR 9.3 billion, of which only MUR 5.6 billion disbursed), Special Foreign Currency (USD) Line of Credit to operators including SMEs (MUR 20 billion, of which only MUR 0.6 billion disbursed), Swap Arrangement to Support Import Oriented Businesses (MUR 8 billion, of which MUR 6.8 billion disbursed), and Reduction in Cash Reserve Ratio (MUR 4 billion, fully disbursed). Only the first two measures represent expenditures, and both were rolled back in June 2022.

¹³ Comprising the SIC Equity Participation Scheme (MUR 3 billion earmarked, MUR 0.5 billion disbursed), SIC Corporate Guarantees referred to Commercial Banks (MUR 0.7 billion earmarked, MUR 0.3 billion disbursed), ISP - SME Factoring Scheme (unknown earmarked funds, MUR 59 million disbursed), ISP Leasing Equipment Modernisation Scheme (unknown earmarked funds, MUR 3.4 billion disbursed), and SME Equity Fund Ltd (MUR 500 million earmarked, MUR 271 million disbursed).

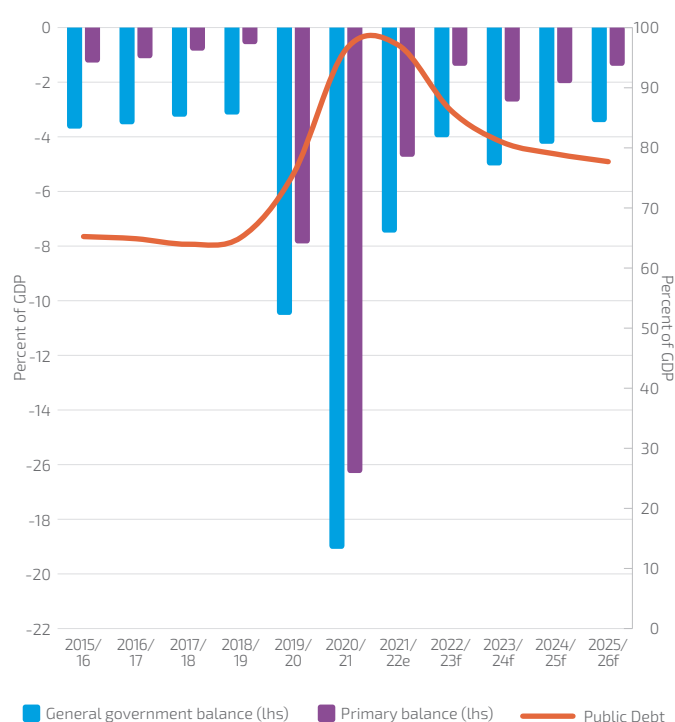
¹⁴ Including the DBM Revolving Credit Fund for SMEs (MUR 1 billion earmarked, MUR 238 million disbursed), Support to Distressed Enterprises (MUR 8 billion earmarked, MUR 64 million disbursed), Wage Support Loan Scheme for EOE (MUR 2 billion earmarked, MUR 1.6 billion disbursed), Loan Schemes to Taxi based at hotels (unknown earmarked funds, MUR 36 million disbursed), New Agricultural Loan (unknown earmarked funds, MUR 97 million disbursed), and Special Support Programme for SMEs (MUR 2 billion earmarked, MUR 1.5 billion disbursed).

COVID-19 Projects Development Fund¹⁵, and financial support to export-oriented enterprises and SMEs for the payment of salaries and other compensation in 2021¹⁶, for which funding provisions are made in the budget annually. While the amount of earmarked funds is not available for all measures or programs individually, the aggregate figures suggest that around 50 percent of extra-budgetary support funds remained undisbursed at the start of FY21/22. This estimate is consistent with the balances of government accounts at the BoM and in the banking system, which have stayed well above pre-pandemic levels since the launch of the response effort¹⁷. As the recovery is well underway, the need for government support appears to have been overestimated ex ante, and the remaining funds may be reallocated to other priorities. In particular, any unspent and uncommitted funds under the control of the MIC should be returned to the BOM, to strengthen the central bank's balance sheet which was weakened by non-refundable transfers to the government in FY2019/20 and FY2020/21, which enabled the creation of MIC with an investment portfolio of MUR 81 billion.

The government succeeded in mitigating the health impact and economic damage of the pandemic, and its fiscal response helped prevent a crisis in the banking sector, but the public debt stock increased substantially. The swift and comprehensive deployment of sanitary measures, including lockdowns and various complementary provisions, limited the spread of the virus. Meanwhile, the deployment of multiple support programs designed to sustain livelihoods and promote firm survival effectively protected jobs and assets during the unprecedented crisis. However, public expenditures skyrocketed while revenues plunged, widening the fiscal deficit (Figure 5), and the public debt stock rose from 65 percent of GDP in FY18/19 to 96.3 percent in FY20/21, even after the central bank transferred MUR 55 billion (12.3 percent of GDP) to government in FY20/21 to help finance the COVID-19 response measures¹⁸.

While the prospect of direct involvement of the BoM in fiscal policy has diminished, its involvement in the Mauritius Investment Corporation (MIC) exposes the BoM to commercial risk. The central bank operations were modified to allow for nonrefundable transfers to the government, undermining the BoM's independence and potentially weakening the effectiveness of its anti-inflationary monetary policies. Both Moody's and the

Figure 5: The Fiscal and Primary Balances, FY15/16-FY25/26



Source: Statistics Mauritius, World Bank staff estimates.
Note: Debt-to-GDP figures have been computed as the share of the debt stock at the end of each fiscal year in the GDP of the starting calendar year.

IMF have highlighted how these changes weakened the country's institutional framework^{19,20}. The amendment to the BoM Act in July 2023 prevents the BoM to transfer funds to the government budget and is expected to restore the institutional mandates of fiscal and monetary institutions. Nevertheless, the balance sheet of the BoM has deteriorated significantly, and its ownership of the MIC can expose it to significant commercial risk.

The composition of deficit financing has also changed, with foreign sources becoming more prominent since FY20/21. External borrowing by the central bank to bolster its FX reserves contributed to a sharp increase in the share of foreign financing (Figure 6). However, the consolidated debt stock is still mainly composed of long-maturity

¹⁵ Unknown earmarked funds, MUR 1.4 billion disbursed.

¹⁶ MUR 150 million earmarked, MUR 7 million disbursed.

¹⁷ It is worth noting that these balances do not provide information on any commitments that may have been undertaken but are yet to be disbursed.

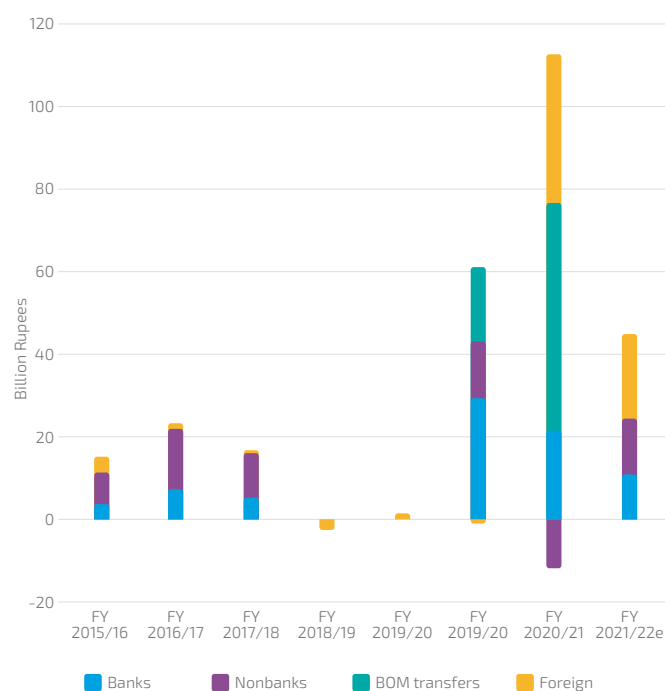
¹⁸ Another non-refundable transfer of MUR 18 billion (3.5 percent of GDP) from the central bank to government had been done the previous year under the FY19/20 budget. Debt-to-GDP figures have been computed as the share of the debt stock at the end of each fiscal year in the GDP of the starting calendar year.

¹⁹ https://www.moody.com/research/Moodys-downgrades-Mauritiuss-rating-to-Baa3-changes-outlook-to-stable--PR_467667#:~:text=New%20York%2C%20July%2028%2C%202022,outlook%20to%20stable%20from%20negative

²⁰ IMF (2022). Mauritius: Staff Report for the 2022 Article IV Consultation, July 2022.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 6: Financing of the Fiscal Balance, FY15/16-FY21/22



Source: Statistics Mauritius and IMF staff estimates.

domestic liabilities, and its profile remains favorable overall. As Mauritius has reached Graduation Discussion Income status, it may soon begin raising funds on the international market, potentially via a dollar-denominated bond issuance. These issues are discussed in detail in Section 3.3 on direct and contingent liabilities to the state.

Going forward, Mauritius will need to transition away from an increasingly unsustainable consumption-driven economic path and refocus fiscal policy on fostering productive investments. The economic model that enabled Mauritius to become a diversified UMIC economy will not support the industrial transformation necessary to achieve and maintain HIC status. Mauritius's growth trajectory is declining, as very low levels of innovation and a persistent skills gap hinder the development of knowledge-based sectors. Pension reform and the rationalization of social protection expenditures could free up resources to invest in health and education, incentivize economic transformation, and build sophisticated climate-resilient infrastructure. Accomplishing these objectives will require establishing a policy framework that both reflects the country's current income status and supports its aspirations for the future.

c) As the economy recovers from the pandemic, the government has an opportunity to revise its fiscal policies to strengthen macroeconomic stability and boost resilience

GDP grew by an estimated 8.7 percent in 2022, supported by the strong tourism recovery despite headwinds from the Omicron variant wave and the war in Ukraine. Economic activity in most sectors has fully rebounded. Arrivals totaled 997,290 in 2022, up from 179,780 in 2021, and the average stay duration and spending by visitors also increased. Nevertheless, arrivals were still almost 30 percent below pre-pandemic levels. GDP growth is expected to decelerate to 4.7 percent in 2023, negatively impacted by the slowdown in the global economy, before converging to its long-term trend over the medium term (Table 1). Sustaining growth as the share of the working-age population declines will prove challenging in the longer term, and a rising dependency ratio will intensify pressure on the social protection system over the coming decades.

The fiscal deficit decreased from 19.1 percent of GDP in FY2020/21 to 7.5 percent in FY2021/22, aided by the sale of public shares of Airport Holdings Ltd in December 2021, the strong rebound of tax receipts as the economy recovered, and the unwinding of some COVID-19 support measures²¹. Fiscal deficit is expected to continue narrowing over the medium term under a progressive fiscal consolidation, although the phasing in of the Contribution Sociale Généralisée in FY23/24 will cause a temporary rise. As a result, the public debt should gradually decline as a share of GDP over the medium term, though it will remain elevated above 75 percent of GDP and vulnerable to a range of shocks, especially the realization of contingent liabilities.

Headline inflation rose from 4 percent in 2021 to 10.8 percent in 2022 – the highest in over a decade – driven by external supply shocks stemming from the war in Ukraine, which increased the prices of energy and food products, of which Mauritius is a net importer. Seeking to control inflation, the central bank hiked the key repo rate five times between March and December 2022 by a cumulative 265 basis points, reaching 4.5 percent. The central bank also introduced a new monetary policy framework with a flexible inflation-targeting regime effective January 16, 2023, which is expected to strengthen the effectiveness of monetary policy by enhancing its transmission mechanism. The effectiveness of monetary policy is also expected to improve after amendments to the BoM Act in July 2023 which, among others, prohibits transfer of funds from the BoM to the government budget.

²¹ In December 2021, the government disposed of its shares in Airports of Mauritius Ltd (valued at MUR 39 billion) to Airport Holdings Ltd. The latter opened its shareholding to the Mauritius Investment Corporation (MIC), which invested some MUR 25 billion. As a result of this one-off quasi-fiscal operation, the public debt stock was reduced by 6.7 percent of GDP from its July 2021 level, as the government used part of the proceedings (MUR 13 billion, equivalent to 2.6 percent of FY GDP) to reduce its outstanding liabilities.

**I - Modernizing Fiscal Policies and Upgrading Public Finance Management
to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)**

Table 1. Selected Macroeconomic Indicators and Forecast

Output, prices and exchange rate	2019	2020	2021	2022e	2023p	2024p	2025p
Real GDP growth	2.9	-14.6	3.4	8.7	4.7	4.1	3.6
Inflation (period average)	0.5	2.5	4.0	10.8	9.8	7.0	5.3
Exchange rate (MRU / USD), period Average	35.5	39.3	41.7	44.2	..	..	..
Money and Credit	2019	2020	2021	2022e	2023p	2024p	2025p
Broad Money (M3) growth	8.5	16.9	8.8	5.3	6.2	9.6	10.0
Credit to private sector (% of GDP)	78.1	91.9	86.5	80.9	76.0	75.2	75.5
Key repo rate (end of period)	3.35	1.85	1.85	4.5	..	..	..
NPLs (% of total loans, end of period)	4.9	6.2	5.8	..	..	..	..
External Sector	2019	2020	2021	2022e	2023p	2024p	2025p
Current account balance (% of GDP)	-5.0	-8.8	-13.1	-12.2	-8.4	-6.9	-6.3
Goods trade (net, % of GDP)	-21.3	-18.6	-23.5	-28.8	-25.0	-24.4	-24.1
Services trade (net, % of GDP)	6.6	-0.2	-1.6	4.6	5.0	5.5	5.8
Income (net, % of GDP)	12.5	16.4	20.8	15.4	14.8	15.1	15.1
Transfers (net, % of GDP)	-2.8	-6.4	-8.9	-3.4	-3.2	-3.1	-3.1
Gross int. reserves (months of imports)	16.9	14.3	12.7	11.4	10.0	9.7	9.5
Central Government Budget	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23e	FY 2023/24p	FY 2024/25p	FY 2025/26p
Revenue and grants (% of GDP)	20.3	22.0	26.4	25.4	24.8	24.3	24.2
of which tax revenue	17.9	19.2	22.5	21.9	21.5	21.2	21.1
Current Spending	26.3	30.9	29.2	27.3	27.2	26.2	25.4
Capital spending (budgetary)	1.5	1.7	1.7	1.5	2.0	1.6	1.6
Budget balance	-10.5	-19.1	-7.5	-4.0	-5.1	-4.3	-3.5
Overall borrowing requirement	11.7	22.5	6.0	3.4	4.9	4.2	3.6
Public sector debt (% of GDP)	75.6	96.3	97.1	86.2	80.8	78.9	77.7

Sources: World Bank staff calculations/estimates based on official data provided by the authorities (June 2023).

Notes:

- (1) All percentages are calculated using the calendar year GDP as denominator, including for Central Government Budget variables. Historical debt figures are aligned with Government's debt data released on April 28, 2023, however, there are two sources of discrepancy with the official debt to GDP figures. First, unlike official figures, numbers presented do not include the official figures' consolidation adjustment for Government Securities held by non-financial public sector entities, and second, as mentioned above, due to the use of a calendar year-based denominator.
- (2) Non-refundable transfers from the Bank of Mauritius are considered financing rather than revenue and have therefore been deducted from the official figures on Budget Balance and the Overall Borrowing requirement.
- (3) Gross international reserves in months of imports are computed based on the stock of reserves reported in the balance sheet of the central bank at the end of the year, and the value of imports of goods and services in the same year.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Inflationary pressures stemming both from global and domestic sources are expected to persist over the medium term. Inflation will test the BoM's ability to conduct effective monetary policy, underscoring the importance of safeguarding its independence and enacting strong and credible measures to strengthen fiscal discipline and reduce uncertainty around the country's future fiscal trajectory. A renewed focus on fiscal sustainability is an urgent priority following two downgrades of Mauritius's long-term foreign and local currency issuer ratings, first in 2021 (from its longstanding Baa1 level to Baa2) and again in 2022 (from Baa2 to Baa3). An additional downgrade would entail the loss of investment grade and increase differential spreads for public-sector financing should government issue a global bond, while bringing significant additional negative consequences for domestic banks and private investment.

The current-account deficit narrowed to 12.2 percent of GDP in 2022, despite high prices for oil and food imports, helped by strong services exports, and is projected to continue gradually narrowing over the medium term, assuming the tourism sector will continue to recover, and efforts to strengthen export competitiveness will yield positive results. Notwithstanding this, the ongoing depreciation of the Mauritian rupee (MUR) will weigh negatively on it, by adding to rising import costs, including the cost of productive inputs. Currency depreciation will also negatively affect the sovereign debt profile, especially if combatting inflation requires active monetary policies that deplete reserves and necessitate new short-term external borrowing to prop them up. Nevertheless, the debt profile will remain favorable, as most sovereign debt is denominated in rupees and has medium-to-long maturities.

3. Fiscal Policy Framework

3.1 Increasing revenue mobilization and streamlining tax expenditures will be necessary to maintain spending at current levels

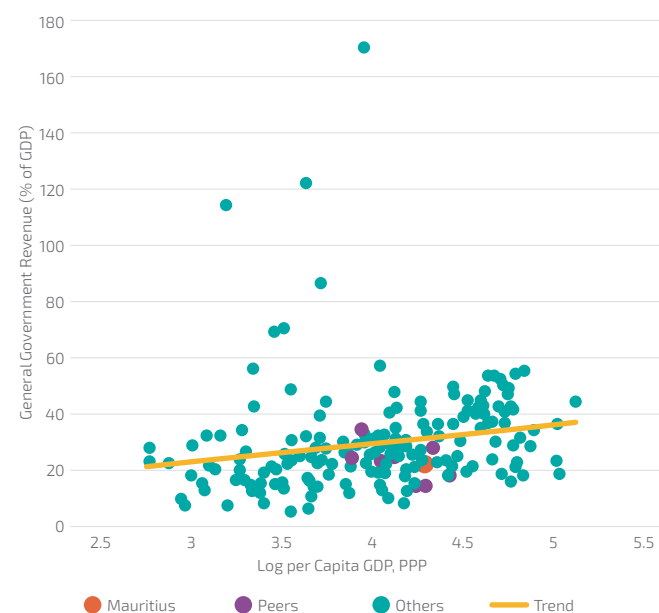
a) Revenue mobilization has increased since 2014 but remains below the average for comparator groups, with very limited social contributions

Consolidated general government revenue has increased gradually since 2014 and reached 23.8 percent of GDP in 2021. Though strong by regional standards, this level of revenue mobilization is well below the average for

HICs (38.4 percent), other investment hubs (33.1 percent), UMICs (30.8 percent), and other structural peers (27.8 percent). Between 2009 and 2021, total revenue collection rose by 11.2 percentage points of GDP, and general government revenue is expected to reach 25.4 percent of GDP in in FLY22/23. However, it is still lower than Mauritius's per capita income would predict (Figure 7), lower than the average for all comparator groups both pre- and post-pandemic, and substantially below the average for HICs and investment hubs (Figure 8). Social security contributions, which make a large contribution to non-tax revenues in HICs, are comparatively very low in Mauritius. Grant revenue is also modest.

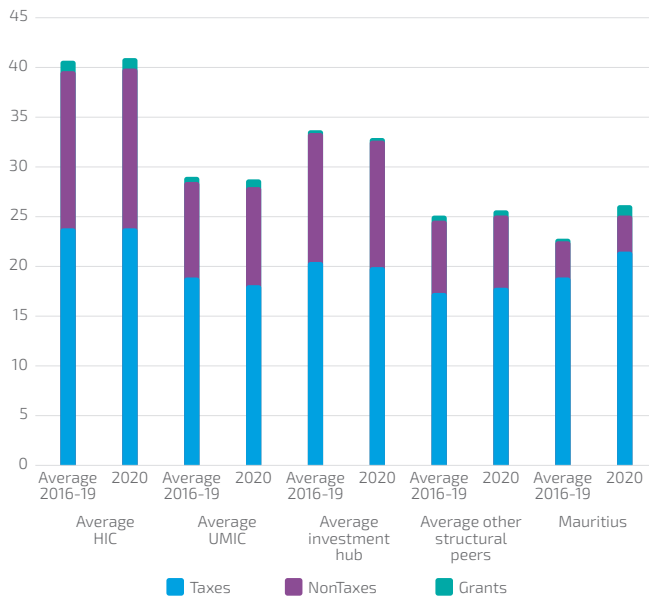
Social benefits as a share of GDP are not exceedingly high relative to structural and aspirational peers, but the social contributions that finance those benefits are markedly lower and increasingly inadequate. Mauritian social benefits as a share of GDP stand just below the average for UMICs and at about half the average for HICs, but the low level of social contributions to support them contrasts sharply with all peer groups, both pre- and post-pandemic (Figure 9). While social contributions tend to cover at least half of social benefits in all benchmark groups, in Mauritius social contributions covered just 17 percent of social benefits during 2016-2019, and this share fell to 14 percent in 2020 (Figure 10).

Figure 7: Total Revenue and Level of Income, 2020



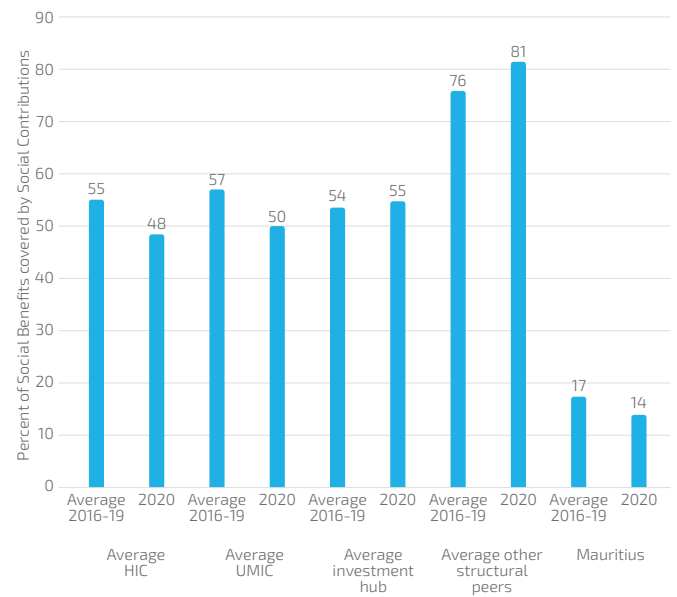
Source: World Bank staff based on data from IMF World Economic Outlook, April 2022.

Figure 8: Revenue Structure, Mauritius and Selected Peers, 2016-19 Average and 2020 (% of GDP)



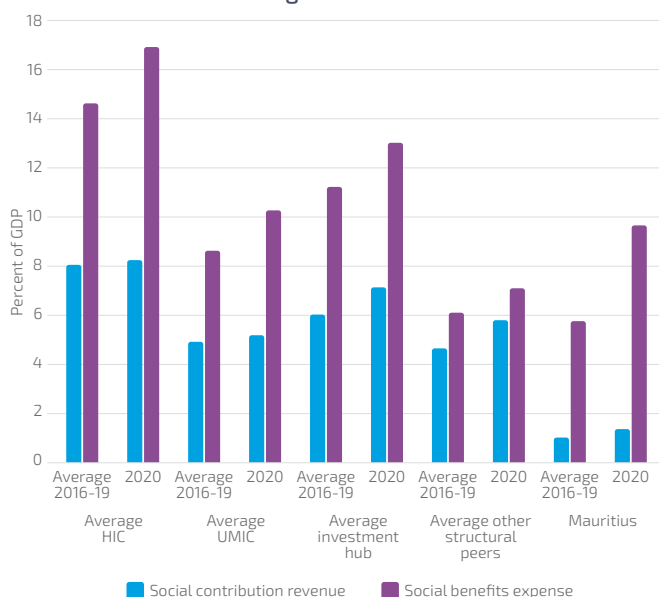
Source: World Bank staff based on data from IMF GFS, May 2022.
 Note: Consolidated General Government. **Excluded due to missing data:** Average HIC: Andorra, Antigua and Barbuda, Aruba, The Bahamas, Bahrain, Barbados, Brunei Darussalam, Kuwait, Macao SAR, Oman, Palau, Panama, Puerto Rico, Qatar, Saudi Arabia, Seychelles, St. Kitts and Nevis, Trinidad and Tobago, Uruguay, for Grants category only: Croatia, Cyprus, Denmark, France, Greece, Ireland, Luxembourg, Malta, Norway, Palau, Poland, Romania, Saudi Arabia, Seychelles, Slovak Rep, Slovenia; Average UMIC: Bulgaria (for Grants only), Argentina, Azerbaijan, Belize, Botswana, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Grenada, Guyana, Iraq, Jamaica, Jordan, Lebanon, Libya, Malaysia, Maldives, Marshall Islands, Montenegro, Namibia, St. Lucia, St. Vincent and the Grenadines, Suriname, Tonga, Turkmenistan, Tuvalu, Venezuela; Average Inv Hubs: Seychelles, and for Grants category only: Cyprus, Ireland, Luxemburg, Malta; Average Other Struct Peers: Namibia.

Figure 10. Share of Social Benefits Covered by Social Contributions, Mauritius and Selected Peers Average



Source: World Bank staff based on data from IMF GFS, July 2022.
 Notes: **The social contribution shares were computed for each country group as the average for the for the following countries:** HIC: Australia, Austria, Belgium, Canada, Chile, China, P.R.: Hong Kong, China, P.R.: Macao, Croatia, Cyprus, Czech Rep., Denmark, Estonia, Finland, France, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Latvia, Lithuania, Luxembourg, Malta, Mauritius, Nauru, Netherlands, New Zealand, Norway, Palau, Poland, Portugal, Romania, San Marino, Saudi Arabia, Seychelles, Singapore, Slovak ,Slovenia, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States. UMIC: Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Brazil, Bulgaria, China, P.R.: Mainland, Colombia, Costa Rica, Georgia, Guatemala, Indonesia, Jordan, Kazakhstan, Kosovo, Marshall Islands, Mexico, Namibia, Macedonia, Paraguay, Peru, Russian Federation, Samoa, Serbia, South Africa, Thailand, Turkey. **Other structural peers:** Albania, Costa Rica, El Salvador, Namibia. **Hubs:** Cyprus, Ireland, Luxembourg, Malta, Netherlands, Seychelles, Singapore, United Arab Emirates. **Country group social benefits averages calculations exclude the following countries due to missing data:** Average HIC: Andorra, Antigua and Barbuda, Aruba, The Bahamas, Bahrain, Barbados, Brunei Darussalam, Kuwait, Latvia, Lithuania, Luxembourg, Macao, Nauru, Oman, Palau, Panama, Poland, Puerto Rico, Qatar, Saudi Arabia, Seychelles, St. Kitts and Nevis, Trinidad and Tobago, for Grants Expenses only: Croatia, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, Malta, Portugal, Romania, San Marino, Slovak, Slovenia; Average UMIC: Argentina, Azerbaijan, Belize, Bosnia and Herzegovina, Botswana, China, Costa Rica, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Grenada, Guyana, Iraq, Jamaica, Jordan, Lebanon, Malaysia, Maldives, Marshall Island, Montenegro, Namibia, Russia, Samoa, Serbia, South Africa, St. Lucia, St. Vincent and the Grenadines, Suriname, Thailand, Tonga, Turkey, Turkmenistan, Tuvalu, Venezuela, for Grants Expenses only: Bulgaria, Peru, Samoa; Avg Inv Hubs: Seychelles. Average Other Struct Peers: Namibia.

Figure 9. Social Contributions and Social Benefits, Mauritius and Selected Peers Averages



Source: World Bank staff based on data from IMF GFS, July 2022.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Taxes on goods and services have accounted for the bulk of tax revenue, both pre- and post-pandemic, with revenue shares comparable to those of UMICs and other structural peers but significantly higher than the average for HIC and investment hubs. Taxes on income, profits, and capital gains represent the second largest component, again comparable to the averages for UMICs and other structural peers but substantially below those of HICs and investment hubs. Taxes on international trade and transactions account for the smallest share of tax revenue in Mauritius, but by 2020 they exceeded all peer group averages (Figure 11).

Adopting cost-effective innovations in revenue administration and harnessing insights from behavioral science could further improve domestic revenue mobilization. There is substantial evidence from World Bank projects on the impact of behaviorally informed strategies to improve tax compliance among individual and business taxpayers²². The approach focuses on applying behavioral insights not only from economic but also social and psychological determinants of tax compliance, to better engage with taxpayers to improve voluntary compliance; for example, through strategic notifications to non-compliant or risk-assessed taxpayers. Such an approach can have meaningful impacts on compliance at a low financial and political cost while laying the groundwork for further innovations in revenue administration.

b) The taxation system is sophisticated and has seen several reforms in recent years, but indirect taxes continue to account for the bulk of government revenue

Mauritius has a sophisticated taxation system comprising several direct taxes on personal, corporate, and international income, alongside VAT and several excises (Box 1). Over time, the relative shares of revenue from various tax categories have remained largely unchanged, with taxes on goods and services consistently accounting for the largest share (Figure 12). Overall tax revenue increased from 18.3 percent of GDP in 2009 to 21.7 percent in 2020, then fell to 18.7 percent during fiscal year 2020/21 amid the COVID-19 crisis. Throughout this period, taxes on goods and services contributed an average of 67.7% of total tax revenue (equivalent to 12% of GDP), followed by taxes on income, profits, and capital gains accounting for 23.9% of total tax revenue (4.2% of GDP). Nevertheless, the growth of excise taxes and taxes on personal income, profits, and capital gains explains most of the increase in collection since 2016/17 (Figure 13)²³.

Figure 11. Tax Structure, Mauritius and Selected Peers, 2016-19 Average and 2020 (% of GDP)



Source: World Bank staff based on data from IMF GFS, May 2022. Note: Consolidated General Government. Excluded due to missing data: Average HIC: Andorra, Antigua and Barbuda, Aruba, The Bahamas, Bahrain, Barbados, Brunei Darussalam, Kuwait, Macao SAR, Oman, Palau, Panama, Puerto Rico, Qatar, Saudi Arabia, Seychelles, St. Kitts and Nevis, Trinidad and Tobago, Uruguay; Average UMIC: Argentina, Azerbaijan, Belize, Botswana, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Grenada, Guyana, Iraq, Jamaica, Jordan, Lebanon, Libya, Malaysia, Maldives, Marshall Islands, Montenegro, Namibia, St. Lucia, St. Vincent and the Grenadines, Suriname, Tonga, Turkmenistan, Tuvalu, Venezuela; Average Inv Hubs: Seychelles, and for Taxes on International Trade category only: Cyprus, Ireland, Luxemburg, Malta; Average Other Struct Peers: Namibia

Figure 12. Mauritius's Tax Structure, 2009-2020 (% of GDP)



Source: World Bank staff based on data from IMF GFS, May 2022. Note: Consolidated General Government.

²² Goodnow-Dalton et al. (2021). <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/472181576511865338/behavioral-insights-for-tax-compliance>

²³ Indeed, although taxes on corporate income, profits, and capital gains make a larger contribution than taxes on personal income, profits, and capital gains, the latter doubled its share in total tax revenue between 2009 and 2020

Figure 13. Detailed Tax Structure, FY2013–FY2020/21 (% of GDP)



Source: World Bank staff based on data from Statistics Mauritius.
Note: Consolidated General Government.

Box 1: Structure of the Mauritian Tax System

Several features of Mauritius's tax system make it attractive to offshore businesses, which in recent years have contributed an average of 5.1 percent to GDP and about 31 percent to capital income tax revenue (equivalent to around 1 percent of GDP)²⁴. An extensive network of tax treaties, with 46 currently in force, has helped consolidate Mauritius's status as a financial center. The treaties include low withholding taxes on dividends, interest, and royalties, and they restrict the rights of source countries to tax capital gains or cross-border income flows to a greater extent than most investment hubs. However, taxation rights have been strengthened since 2005, and several of Mauritius's tax treaties have been renegotiated or terminated due to perceived imbalances. Among the most prominent cases are the tax treaties with India, Senegal, and Zambia.

Mauritius's business tax regime has a differentiated structure for banks and non-banks, as well as for the treatment of firms with or without global business licenses (GBLs). In 2018, 31 percent of this revenue was collected from CIT on multinationals, 10 percent from CIT on banks, 52 percent from CIT on purely domestic activities, 6 percent from the bank levy, and 1 percent from the telecom levy²⁵. CIT on the profits of resident non-banks is set on a worldwide basis at a statutory rate of 15 percent, and several tax holidays and investment tax credits further reduce its incidence. Taxation of offshore companies differs from that of domestic companies and varies depending on whether the GBL holder is defined as a global business company or an authorized company. Banks are subject to a separate CIT schedule with statutory rates ranging from 5 to 15 percent.

The personal income tax (PIT) has evolved significantly over the years. The original PIT regime consisted of a flat rate of 15 percent on non-residents' income from Mauritian sources and on the worldwide income of Mauritian residents, with various allowances and exemptions, as well as a credit for foreign taxes paid. Over the years, the PIT evolved into a tiered structure, first with two tiers (with 10 and 15 percent rates for income below and above MUR 650, respectively) and then with three tiers (with a 10 percent tax rate on income up to MUR 700,000, a 12.5 percent rate on income between MUR 700,000 and MUR 975,000, and a 15 percent rate on income above MUR 975,000). The 2023/24 budget replaced that system with a progressive PIT comprising eleven chargeable income brackets, with tax rates ranging from 0 to 20 percent. A solidarity levy of 5 percent applied on income (including dividends) above MUR 3 million was introduced in 2017, and later raised substantially to a 25 percent rate in the budget 2020/21 amid the COVID-19 pandemic (but capped at 10 percent of total income). The solidarity levy was repealed in the 2023/24 budget. A negative income tax (NIT) is provided to low-income individuals who work at least 3 days per week, and the PIT is subject to various significant deductions, including family allowances based on the number of dependents and disability status, and deductions for mortgage interest and health insurance premiums²⁶.

Indirect taxes account for the bulk of tax revenue. In fiscal year 20/21, 34% of total tax revenue came from VAT, well above the contributions of personal and corporate income taxes, which delivered 13.8 and 12.5% of total tax revenue respectively. Taxes on specific goods (excise duties and environmental taxes) are also significant contributors, accounting for 21.9% of total tax revenue. Customs duties only contributed 1.4%, as Mauritius is largely open to trade with few exceptions, most notably a sugar import duty of 80 percent introduced in October 2018, which was further increased to 100 percent in the 2020/21 budget.

²⁴ Keen, M.; Beer, S.; Hillier, C.; Prihardini, D. and Verhoeven, M. (2021). "Tax Policy for a Changing World", IMF Technical Report, June 2021.

²⁵ Ibid.

²⁶ Contributions to the COVID-19 Solidarity Fund and the COVID-19 Vaccination Programme Fund were also exempt from the PIT.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Significant changes to the tax system were introduced in 2018 and 2019, including modifications to the CIT and PIT regimes. The changes to the CIT included renaming Category 1 Global Business License the “GBL” and abolishing the Category 2 Global Business License as of January 1, 2019, as well as introducing the designation “Authorized Company” for firms conducting business and having their place of effective management outside of Mauritius. Effective January 1, 2019, the government replaced the controversial Deemed Foreign Tax Credit scheme, which allowed companies to deduct up to 80 percent of the taxes due on foreign income from their CIT obligations, cutting the effective tax rate for such income to 3 percent and contributing to international tax base erosion, with an 80 percent partial tax exemption subject to more rigorous requirements. The partial tax exemption is available for certain qualifying income streams such as foreign-source dividend income, interest income, and income derived from “collective investment schemes.”²⁷ The exemption on interest income can be claimed by companies whose core activity is lending, financing debt, or investing in debt instruments, provided they meet certain conditions²⁸. Freeport companies (excluding local traders) with a certificate issued on or before 14 June 2018 were exempted from tax until 30 June 2021. The maximum effective tax rate was capped at 3 percent for specific income streams and 15 percent otherwise. Finally, reforms to the PIT regime made it more progressive. Until 2018, a single PIT rate of 15 percent was in place. Following the introduction of a negative income tax in 2017 (a de facto transfer to employed individuals with an income below a minimum threshold), the 2018/19 budget introduced a 10% income tax band for individuals with annual net incomes less than MUR 650,000.

In 2020/21, the Generalized Social Contribution (Contribution Sociale Généralisée, CSG) was introduced, and the Solidarity Levy was significantly increased. In 2017, the Solidarity Levy was introduced as a temporary measure with a rate of 5 percent, but during the COVID-19 pandemic the rate was increased to 25 percent on income above a threshold of MUR 3 million up to a maximum of 10 percent of total income (a constraint that became binding at MUR 5 million²⁹). The 2020 Finance Bill abolished the pension system under the National Pensions Fund (NPF) and replaced it with the CSG, a new system of contributory pensions for private-sector workers, including self-employed workers. Under the new scheme, employees pay 1.5 percent and employers 3 percent on earnings up to MUR 50,000 per month, and double that for earnings above the threshold, with no cap. CSG contributions are more progressive

than those under the previous system due to the two-tier rate structure and the elimination of the cap.

The 2021/22 budget introduced various tax incentives and credits for companies engaging in specific activities or incurring specific types of expenditures, while a few significant changes were made to personal income taxation. Incentives were created to encourage companies to digitalize their operations, and tax holidays introduced in previous years were extended to firms in new sectors such as pharmaceuticals and biotechnology. In terms of personal taxation, the authorities introduced an additional exemption of up to MUR 30,000 for donations made to approved charitable organizations or religious bodies, as well as contributions to individual pension schemes. Deductions were allowed on contributions made to the COVID-19 Vaccination Programme Fund; the allowable deduction for medical insurance premiums for self and dependents was increased by MUR 5,000; and additional exemptions were offered for dependent children pursuing undergraduate studies and for disabled dependents.

The 2022/23 budget also updated the PIT brackets by introducing a new PIT rate, updated the threshold limit of existing deductions and reviewed the threshold for exempt traveling allowance, abolished municipal taxes on primary residences, and introduced a direct monthly transfer to low-income individuals. The new PIT structure imposed a 10 percent tax rate on income up to MUR 700,000, a 12.5 percent rate on income between MUR 700,000 and MUR 975,000, and a 15 percent rate on income above MUR 975,000, plus applicable Solidarity Levy payments. A direct monthly income allowance of MUR 1,000 for individuals earning a gross income of MUR 50,000 or less was introduced.

The 2023/24 budget introduced significant changes to the PIT, CIT, and VAT:

- **Changes to the PIT were significant**, with the elimination of the three-tier structure and its replacement with a progressive scale comprising eleven brackets of taxable income ranging from zero rate (for income up to MUR 390,000) to 20 percent (for income above MUR 2,390,000). In addition, the Solidarity Levy imposed on individuals earning a leviable income of more than MUR 3 million was abolished, eliminating the double taxation of resident dividends it created, and restoring a more equal treatment of resident and non-resident stakeholders.

²⁷ Existing Category 1 Global Business License companies with licenses issued on or before 16 October 2017 were grandfathered until 30 June 2021, while those with licenses issued after 16 October 2017 were grandfathered until 31 December 2018. The system of DFTC will continue to apply until the relevant grandfathering dates.

²⁸ These include the CIGA test, the minimum expenditure test, and the minimum employment test. CIGA for a company deriving interest income includes “agreeing funds, setting the terms and duration of any financing, monitoring and revising any agreements, and managing any risks”.

²⁹ Keen, M.; Beer, S.; Hillier, C.; Prihardini, D. and Verhoeven, M. (2021). “Tax Policy for a Changing World”, IMF Technical Report, June 2021.

- **The CIT also underwent several changes.** The taxation of banks was reviewed, rendering banks liable to tax at a flat tax rate of 15% on their chargeable income in excess of MUR 1.5 billion, and aligning the special levy on banks to 5.5% for all banks on their operating income from transactions with residents, replacing the previous two-tiered structure. Other CIT measures comprised: (i) raising the partial exemption on interest earned by Collective Investment Schemes (CIS) or Closed End Funds from 80% to 95%; (ii) making exempt the interest income derived from bonds, debentures or sukuks issued by overseas entities to finance approved renewable energy projects (Green Bonds); (iii) treatment of profits derived from the sale of aviation fuel to an airline as export of goods and taxed at a reduced rate of 3%; (iv) reduction of the solidarity levy on telephony service providers from 5% of book profit and 1.5% of turnover for profitable telephony service providers to 5% of book profit and 1% of turnover (with companies registering losses still required to pay the levy at 1%); (v) extension of the 15% ITC granted to manufacturing companies in respect of expenditure incurred on new plant and machinery (excluding motor cars) for a 3-year period (45% in total) up to financial year 2025/2026, while allowing unrelieved ITC to be carried forward for 10 years, and allowing companies engaged in the manufacturing of both alcoholic and non-alcoholic beverages to claim the ITC in respect of expenditure incurred on new plant and machinery (excluding motor cars) only on non-alcoholic beverages; (vi) double tax deduction granted to companies employing newly recruited women or women who were unemployed for at least a year under the *Prime a L'Emploi* scheme, to local companies participating in the financing, sponsorship or marketing and/or distribution of an approved film project under the Film Rebate Scheme³⁰, to manufacturing companies in respect of expenditure on market research and product development³¹, and on the cost of setting up childcare centers; (vii) triple tax deduction to companies employing persons with disabilities under the *Prime a L'Emploi* scheme; (viii) waiver of all outstanding debts under the COVID-19 Solidarity Levy as of 20 January 2023 (inclusive of penalties and interest); (ix) an additional 5-year tax holiday granted to Mauri-Facilities Management Co Ltd, which was given additional responsibilities under the National Clean-up Campaign; and (x) provision of monthly financial assistance to SMEs, export-oriented enterprises, and large public bus operators, for the payment of salary compensation in 2023.
- **Finally, various indirect tax measures were also unveiled.** These comprised the removal of VAT on 15 essential products, medical grade silicone, glass ceramic blocks for dental use, and all musical instruments; extension of VAT exemption to the construction of buildings for the provision of primary and secondary education; exemption from VAT, customs duty and excise duty to contractors engaged in the construction of social housing units under a Social Housing project implemented by New Social Living Development Ltd; reclassification from VAT tax exempt to VAT zero rating of instruments and appliances used in medical, surgical, dental or veterinary sciences (HS Code 90.18); and zero VAT rating extended to water supplied, infrastructure and renting out of meters by the Rodrigues Public Utilities Corporation. Additionally, the excise duty rebate scheme on motor vehicles and the negative excise duty scheme of 10 percent for the purchase of electric vehicles by individuals up to a maximum of MUR 200,000 were extended up to end-June 2024, while the excise duty for alcoholic and tobacco products was increased by 10 percent from June 3, 2023. Finally, several tax refund schemes to facilitate access to homeownership were extended.

c) Consolidating and reducing tax expenditures will help minimize inconsistencies and leakages, enhance transparency, and improve equity

Mauritius maintains various tax incentives and other schemes that reduce the tax burden on firms. Tax expenditures aim to promote investment or encourage certain types of business activity, and they include profit-based instruments such as tax holidays and reduced rates. The level of tax expenditures peaked at 4.46 percent of GDP in fiscal year 2020/21, at the height of the COVID-19 pandemic, then declined moderately to about 3.5 percent in the next two fiscal years—still far above historical levels (Figure 14). The categories that account for the bulk of aggregate tax expenditures are VAT (54 percent in 2022/23), CIT (31 percent), and excise taxes (12 percent) (Figure 15). VAT and CIT tax expenditures have increased by about 15 percent per year since 2016/17, while excise tax expenditures rose by 13.8 percent per year. Excise tax expenditures grew sharply during the pandemic, and while their growth is expected to moderate over the medium term, they remain well above pre-pandemic levels. Meanwhile, tax expenditures on customs duties and PIT are far lower, at just 1 and 3 percentage points of GDP in 2022/23, respectively, and have grown at a much slower pace (3.3 percent and 1.9 percent per year, respectively).

³⁰ Intended for theatrical or media streaming release, subject to the production being at least 90% in Mauritius.

³¹ No longer restricted to the African market but limited to companies having an annual turnover of less than MUR 500 million.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 14. Estimates of Tax Expenditure (% of GDP)

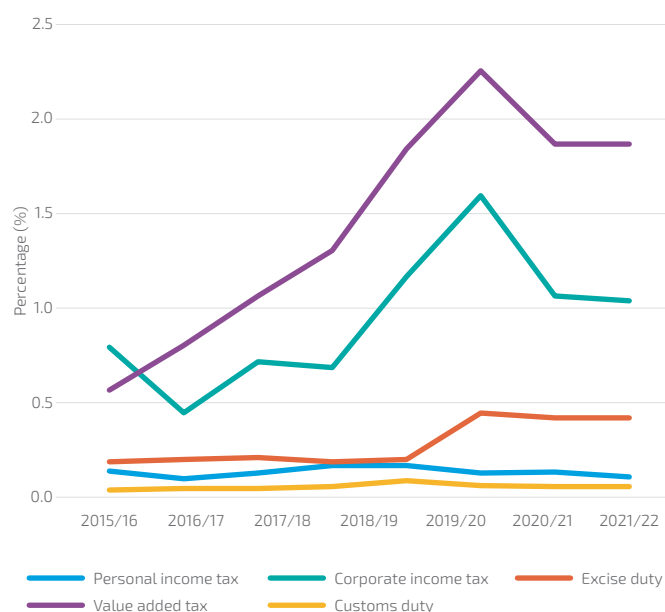
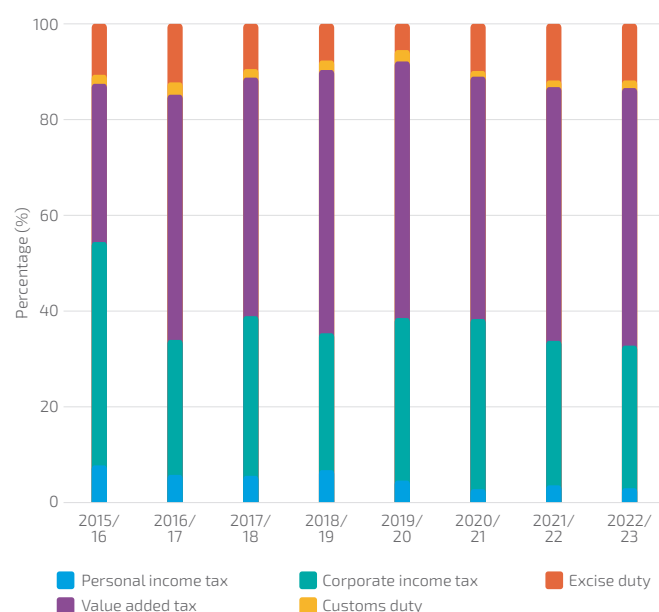


Figure 15. Contribution of Individual Taxes to Aggregate Tax Expenditures



Source: World Bank staff based on data from MOFEPD.

Note: Custom Duty tax expenditures exclude exemptions under CECPA (India), China FTA, COMESA, iEPA, IOC, SADC and UK EPA. Values until FY2020/21 reflect actuals, values for FY2021/22 and 2022/23 are estimates.

VAT is the largest source of government revenue, but receipts have declined recently, partly due to the expansion of zero-rating and exemptions since FY2015/16, while various tax expenditures under the CIT, also a major revenue source, increased significantly. After declining to 3.98 percent of GDP in 2019/20, tax expenditures from VAT zero-rating goods rose sharply to 4.5 percent in 2020/21 and reached 4.8 percent in 2021/22. In turn, most of the increase in CIT expenditures in 2019/20 is explained by the introduction of tax expenditures on other deductible items, which rose from zero to 0.49 percent of GDP in 2019/20 and more than doubled to 1.16 percent the following year. Expenditures on other deductible items are expected to fall in 2022/23 but remain relatively high at about 0.60 percent of GDP and about 56 percent of total CIT expenditures. Tax exemptions on certain types of income tripled between 2015/16 and 2018/19, rising from 0.10 percent of GDP to 0.29 percent, and remaining broadly stable thereafter. Annual allowances have fallen since 2015/16 and represent only 13 percent of total expected CIT expenditures in 2022/23, while all other CIT expenditures are negligible. PIT expenditures fell by an average of 3.5 percent per year between 2015/16 and 2022/23, dropping from 0.13 to 0.10 percent of GDP. The largest category of PIT expenditures is "interest relief on secured housing loans", accounting for an expected 45 percent of PIT expenditures in 2022/23 but down from 0.07 to 0.045 percent of GDP between 2015/16 and 2022/23. Exemptions for dependents pursuing tertiary education are expected to account for 32 percent of PIT expenditures in 2022/23 after declining from 0.04 to 0.032 percent of GDP over the last eight years. Finally, tax expenditures on custom duties rose from 0.03 percent of GDP in 2015/16 to a peak of 0.08 percent in 2019/20 and are expected to fall to 0.05 percent in 2022/23.

All tax expenditures are embedded in primary or secondary legislation and administered in a relatively transparent manner, but policymakers have limited information on their economic impact. The MOFEPD is the sole authority empowered to introduce tax expenditures, while the Mauritius Revenue Authority (MRA) is responsible for administering them. All tax expenditures are captured on tax returns and recorded in a master database at the MRA, and an estimate of tax expenditures as a share of GDP is published in the Budget Document each year. All tax expenditures are linked to a discrete policy objective, and some are subject to sunset clauses. Overall, incentives are administered in a relatively transparent manner, but their economic effects are not thoroughly evaluated. Indeed, while cost-benefit analyses are performed before new tax expenditures are introduced, routine evaluations are not conducted to examine the ex-ante feasibility or ex-post economic effects of tax expenditures. This lack of assessment, coupled with the difficulty of assessing revenue effects and a bias towards the participation of high-profit firms, undermines the overall transparency and equity of the tax system³². Additionally, the uneven treatment of different types of businesses and investments introduces distortions, as do the numerous PIT exemptions and deductions³³.

3.2 Increasing the allocative and technical efficiency of public spending could greatly enhance the impact of a limited fiscal envelope

a) Public spending levels in Mauritius are below those of structural and aspirational peers yet consistently higher than revenues, resulting in persistent fiscal deficits and mounting debt levels

Over the past decade, public spending in Mauritius has been relatively low by the standards of comparable countries, but its fiscal response to the COVID-19 pandemic has been especially large and sustained. Between 2009 and 2019, general government spending was broadly stable at an average of 23.8 percent of GDP, below the levels of most aspirational and structural peers. However, public spending skyrocketed in 2019/20, reaching 31.1 percentage points of GDP as policymakers stepped in to contain the economic fallout from the pandemic. Public expenditure continued to increase in 2020/21, reaching 33.6 percent of GDP (Figure 16).

In the decade that preceded the pandemic, Mauritius's fiscal balance as a share of GDP compared unfavorably

with the average for HICs and investment hubs. The country sustained larger deficits during all or most of the period, while it was closer to the average for UMICs and other structural peers. Prior to the pandemic, public debt as a share of GDP was already well above the UMIC average and close to the averages for HICs and other structural peers, but it remained consistently below the average for investment hubs until financial year 2018/19. In 2020, Mauritius's fiscal balance deteriorated faster and more severely than the average for any comparator group, a situation that persisted through 2021. Mauritius's fiscal deficit widened from an average of 2.8 percent of FY GDP according to the authorities' budget presentation (and 3.1 percent of FY GDP after consolidating in special funds) during 2009-2019, to 10.9 percent in financial year 2020/21 (19.7 percent after consolidating in special funds), and narrowed to 7.2 percent of GDP in financial year 2021/22—about 3 percentage points of GDP below all peer group averages (10 percent of FY GDP after consolidating in special funds). The rapidly widening fiscal deficit and large decline in GDP in 2020 caused the total debt stock to increase by a staggering 30 percentage points of GDP between financial years 2018/19 and 2020/21.

b) Reversing the fiscal inefficiencies built up over the past decade will be critical given the country's reduced fiscal space due to the COVID-19 crisis and the indirect impact of Russia's war in Ukraine

Public-sector debt as a share of GDP has been rising since 2013, reaching 65 percent in June 2019 and spiking to 96.3 percent in 2020 at the height of the pandemic³⁴. Sustained fiscal deficits added to the growing public debt stock, which nevertheless has a favorable profile, with limited exchange-rate risk and relatively long average maturities. Large infrastructure projects, including the recently inaugurated Metro Express, have been financed with the support of bilateral partners, but the availability of concessional and grant financing will likely decline going forward, leaving the government to shoulder a larger share of the fiscal burden for future public investment projects³⁵. During the pandemic, public spending rose dramatically while economic activity stalled, pushing the debt stock from 65 percent of GDP in June 2019 to 96.3 percent in June 2020, and 97.1 percent in June 2021. Debt levels are likely to remain elevated over the medium term. The sharp increase in the public-debt-to-GDP ratio has greatly reduced the available fiscal space, weakening the government's capacity to respond to future shocks, including rising global geopolitical tensions and climate change.

³² World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

³³ Keen, M.; Beer, S.; Hillier, C.; Prihardini, D. and Verhoeven, M. (2021). "Tax Policy for a Changing World", IMF Technical Report, June 2021.

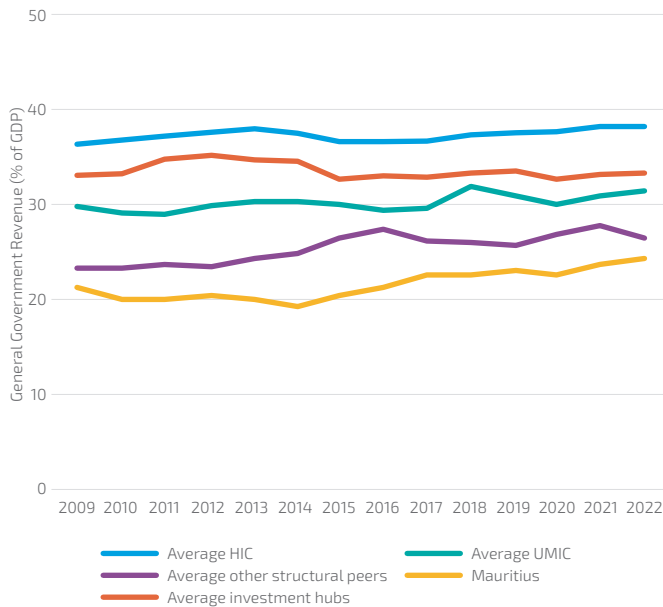
³⁴ Debt-to-GDP figures have been computed as the share of the debt stock at the end of each fiscal year in the GDP of the initial calendar year.

³⁵ World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

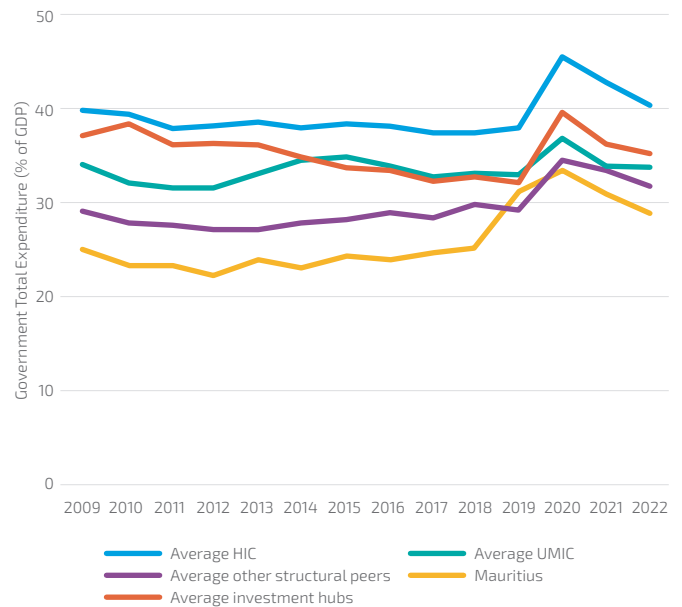
I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 16. Trends in Revenues, Expenditures, the Fiscal Balances, and the Public Debt Stock

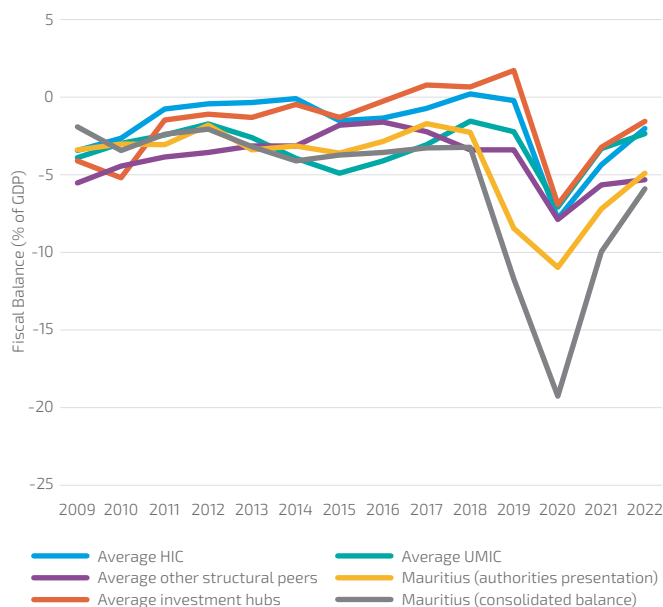
Trends in Revenues, Mauritius vs Peer-Group Averages (% of GDP)



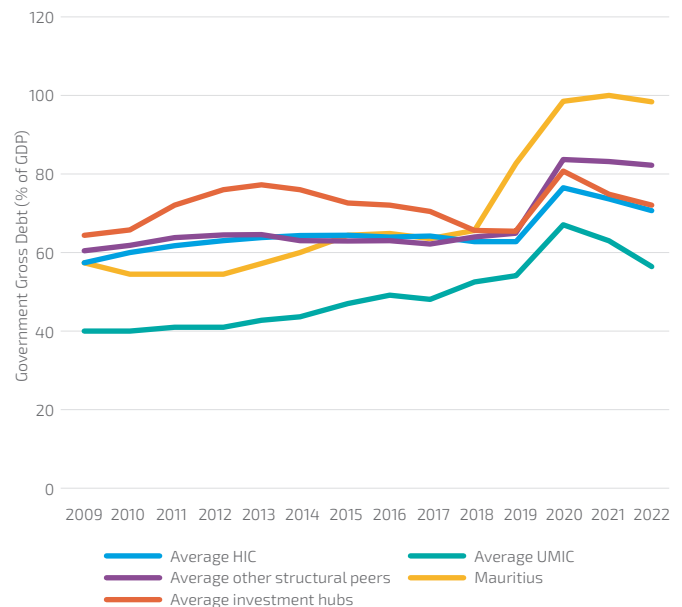
Trends in Public Expenditure, Mauritius vs Peer-Group Averages (% of GDP)



Trends in Fiscal Balances, Mauritius vs Peer-Group Averages (% of GDP)



Trends in Public Debt, Mauritius vs Peer-Group Averages (% of GDP)



Source: World Bank staff based on data from IMF World Economic Outlook, April 2022 & Article-IV Staff Reports: 2014, 2019 & 2022.
 Note: The red line in the lower lhs panel depicts Mauritius's fiscal balance according to the authorities' budget presentation, whereas the green line shows the consolidated balance comprising special funds. Data on special funds has been sourced from IMF Article IV reports, whereas all the other data comes from the IMF WEO.

GDP growth rebounded to a relatively modest 3.4 percent in 2021, as the spread of COVID-19 variants hindered the recovery of tourism, but the sector's activity increased substantially in 2022 despite renewed headwinds from Russia's war in Ukraine, bringing GDP growth to 8.7 percent.

Most economic sectors have returned to pre-pandemic levels. A successful COVID-19 vaccination campaign has been crucial to the recovery, and 90 percent of the eligible population was fully vaccinated by end-June 2022. While 2021 tourism arrivals were 41.8 percent lower than in 2020, metrics improved substantially since the reopening of borders in October 2021, and reached 997,290 in 2022, up from 179,780 in 2021. The average stay duration and spending by visitors also increased. Nevertheless, arrivals were still around 30 percent lower than prior to the pandemic. Total merchandise exports increased by 24 percent between 2021 and 2022, driven by manufactures, while imports grew by 36.1 percent, widening the trade deficit by 43.6 percent to about MUR 190 billion. However, the strong growth of services exports, driven by the recovery in the tourism sector, and a surplus in the primary income account, resulted in a narrowing of the current account deficit from 13.1 percent in 2021 to 12.2 percent in 2022.

The headline inflation rate rose from 2.5 percent in 2020 to 4 percent in 2021, as external supply shocks increased freight, energy, and food prices, and reached 10.8 percent in 2022 -the highest in over a decade- due to the indirect effects of Russia's war in Ukraine on international commodity prices. Mauritius is a net importer of oil and food, but rising oil prices have had the most significant impact. The pump price of gasoline and diesel rose by a whopping 44.8 percent during the first half of 2022 to MUR 74.10 (USD\$1.65) per liter of gasoline and MUR 54.55 (US\$1.21) per liter of diesel, stabilizing thereafter. While rising international prices for wheat, rice, maize, and cooking oil have also boosted food inflation, the impact of food insecurity was mitigated by the relatively low share of these items both in overall imports and consumer spending.

Less direct inflationary pressures stemmed from elevated freight costs and value-chain disruptions, leading to broad increases in average prices in 2022, but inflation has begun to ease in 2023. The pass-through effect of higher food and energy prices on core and overall inflation eroded the real value of wages, transfers, and savings, weakening household consumption and intensifying calls to increase wages and pensions. These factors increased the Consumer Price Index (CPI) by 13 percent, from 110.6 in December 2021 to 127.1 in December 2022. The largest hike (9.5 points, or 58 percent of the total accumulated increase in headline CPI) took place during Q1. Food and nonalcoholic beverages, which account for the largest share of the CPI basket (28.6 percent) sustained the sharpest increase in Q1 (+13.9 percent), which was partially offset in Q2 (-6.1 percent) but rose again in Q3 (+6.3 percent) and Q4 (+2.1 percent) yielding a total annual increase of 16.2 percent. Transportation, which accounts for the second largest share

in the CPI basket (14.7 percent), sustained the second largest rise in Q1 (+9.1 percent) and the largest in Q2 (+12.8 percent), marginally decreasing in Q3 (-0.2 percent) and rising again in Q4 (+1.8 percent), yielding a total increase of 23.5 percent in 2022. Core inflation also rose, with CORE1 inflation (which excludes food, beverages and tobacco, and mortgage interest) standing at 9.3 percent and CORE2 inflation (which also excludes electricity, gas, other fuels, and items with controlled prices) at 7.3 percent for the 12 months ending in December 2022, up from 3.9 and 4.5 percent, respectively in December 2021. Domestic prices continued to rise during the first two months of 2023, with headline inflation reaching 11.3 percent in February 2023, and have since trended downward, in line with declining international prices, with headline inflation dropping to 9 percent in September 2023, while CORE1 and CORE2 stood at 6.8 and 6.1 percent, respectively.

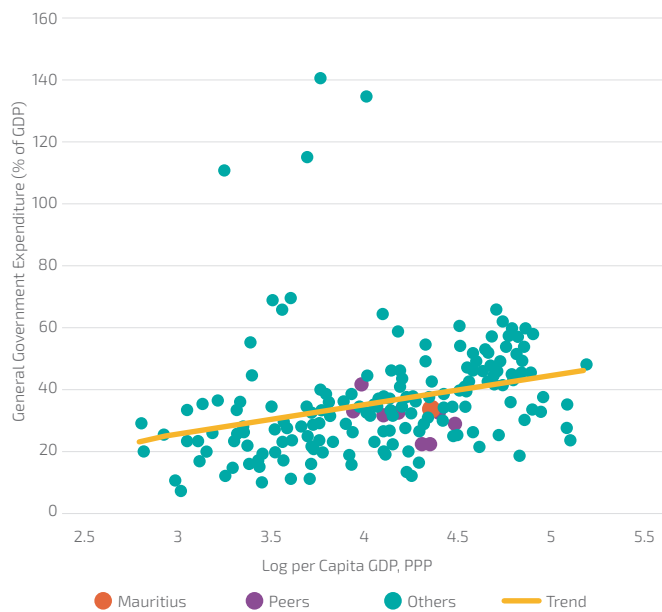
During 2022, the government and the BoM pursued parallel fiscal and monetary efforts to contain inflation and mitigate its economic impact. In March 2022, as Russia's invasion of Ukraine pushed oil prices to historical heights, the BoM raised the key repo rate by 15 basis points to 2 percent, its first hike since 2011. As inflationary pressures continued, the BoM increased the rate to 2.25 percent in June, again in September to 3 percent, a fourth time in November to 4 percent, and a fifth time and in December 14, to 4.5 percent, where it remains. The 2022/23 budget unveiled on June 7, 2022 included several measures to counter the negative impact of inflation: it increased Social Aid benefits by at least 20 percent from July 2022, earmarked MUR 500 million to subsidize staple foods and other essential goods, allocated MUR 1.4 billion provided by the STC from the levy imposed on petroleum products to subsidize flour purchases by bakers, and increased all basic pensions by MUR 1,000, including the Basic Retirement Pension, the Basic Widow's Pension, the Basic Invalid Pension, and the Basic Orphan's Pension. Individuals benefitting from any of these basic pensions will also benefit from a monthly child allowance of MUR 1,700 for dependent children up to 23 years of age attending university. An additional MUR 1,000 was also granted to all recipients of the CSG Retirement Benefit.

c) The composition of expenditures can be improved both across and within spending categories, and adopting new instruments can increase expenditure efficiency

Consolidated general government spending as a share of GDP is only slightly lower than Mauritius's per capita income level would predict (Figure 17). Spending grew slowly from 22 percent of GDP in 2009 to 25.8 percent of GDP in financial year 2018/19, then increased sharply to 35 percent of GDP in financial year 2019/20 due to the government's pandemic response (Figure 18). Current expenditures drove the increase in total spending, rising from 23.2 percent of GDP in 2019 to 32.7 percent in 2020. Social benefits and subsidies led the growth of current spending. Meanwhile, capital expenditures

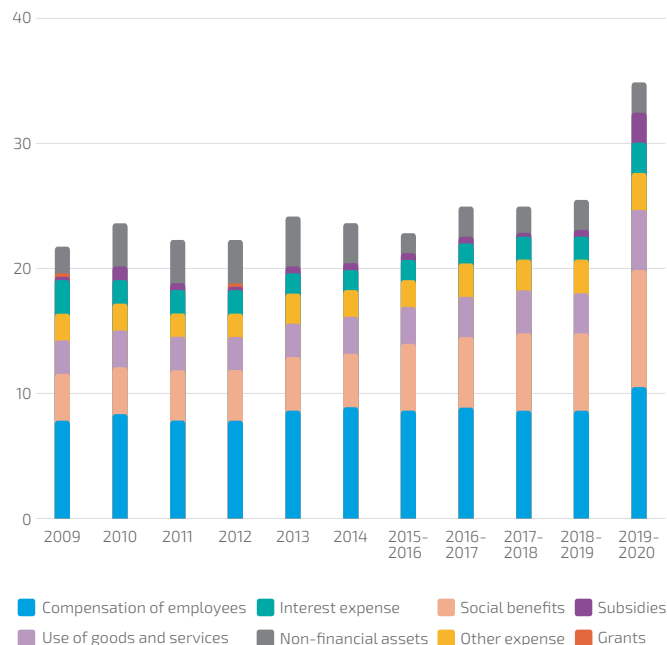
I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 17. Total Expenditure and Level of Income, 2020



Source: World Bank staff based on data from IMF World Economic Outlook, April 2022

Figure 18. Mauritius Public Expenditure Structure by Economic Classification, 2009-2020 (% of GDP)



Source: World Bank staff based on data from IMF GFS, May 2022.
Note: Consolidated General Government.

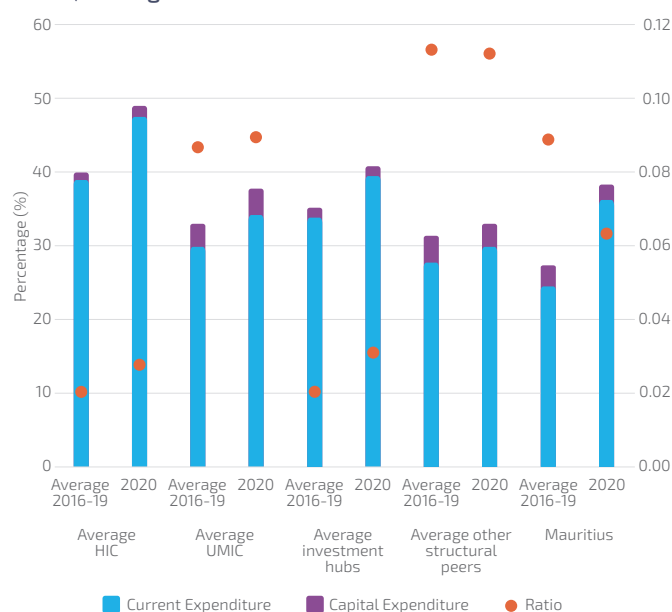
fell as a share of GDP. Current spending had been rising since 2012, driven by pensions and other social benefits, which increased from 4.2 percent of GDP in 2013 to 6 percent in 2019 and reached 9.6 percent in 2020. Wages and salaries remained broadly stable at about 8.2 percent of GDP from 2013 until 2019/20, when they increased to 9.7 percent. Subsidies averaged 0.4 percent of GDP between 2009 and 2019, then rose almost sixfold to 2.4 percent in fiscal year 2019/20. Meanwhile, the acquisition of non-financial assets fell from a peak of 4.2 percent of GDP in 2013 to 2.6 percent in 2019 and 2.3 percent in 2020. It was the only expenditure item in the budget to decrease during the pandemic.

The increase in current expenditures and decline in budgetary capital expenditures in 2020 were both larger than the averages for comparator countries (Figure 19)³⁶. In response to the pandemic, the government increased current spending from an average of 22.6 percent of GDP in 2016-19 to 32.7 percent in 2020, while capital spending ticked up from 2.2 to 2.3 percent of GDP, exceeding the pre-pandemic average in dollar terms. When the COVID-19 pandemic hit, Mauritius deployed a fiscal response that was substantially larger than those of most comparator countries (Figure 20). Due to their greater financial and debt-carrying capacity, wealthier countries tended to launch more aggressive pandemic response efforts. However, Mauritius's increase in current spending was large relative to its income level, especially given its comparatively low level of pre-pandemic current spending and its larger GDP contraction.

Total public expenditures rose from 26.7 percent of GDP in 2018/19 to 30.2 percent in 2019/20 (Figure 21), driven by a steep increase in spending on social protection and general public services. Together, social protection and general public services represented more than 54% of total public expenditures in financial year 2019/20 (Figure 22 and Table 2). Total public expenditures had increased in line with GDP growth since financial year 2016/17, remaining broadly stable at about 26 percent of GDP until the onset of the pandemic. As the economy contracted, a moderate uptick in real spending boosted relative spending by 3.5 percentage points of GDP. The large expansion in both social protection and general public services to cope with the exigencies of the pandemic crowded out spending in areas with longer-term yields. Spending on environmental protection, for example, dropped from 3.1 percent of total public spending in 2018/19 to 0.2 percent of GDP in 2019/20, recovering to 2.3 percent in 2020/21. The share of spending on education had been relatively stable between 2012 and 2018/19 at an average level of 15.5 percent, but contracted amid the pandemic, reaching its lowest share in 2020/21, at 11.7 percent. Health

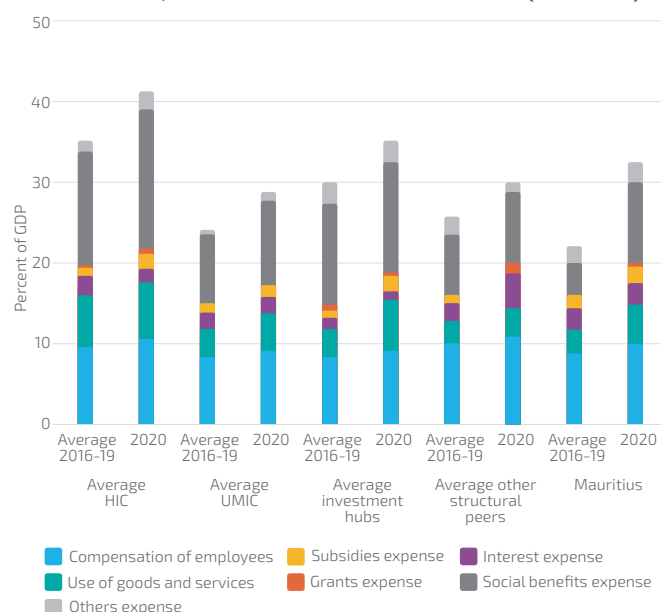
³⁶ However, analysis of the budget does not provide the complete picture regarding capital expenditures, since a growing portion of these have been done through Special Funds, which is discussed in detail under Section 4.

Figure 19. Current and Capital Expenditures, Mauritius and Peers, Average 2016-2019 vs. 2020



Source: World Bank staff based on data from IMF GFS, July 2022.
 Note: Consolidated General Government. LHS expenditures, RHS ratio. **Excluded due to missing data:** Average HIC: Andorra, Antigua and Barbuda, Aruba, The Bahamas, Bahrain, Barbados, Chile, Brunei Darussalam, Kuwait, Macao SAR, Nauru, Oman, Palau, Panama, Puerto Rico, Qatar, San Marino, Saudi Arabia, Seychelles, St. Kitts and Nevis, Trinidad and Tobago, Uruguay; Average UMIC: Armenia, Argentina, Azerbaijan, Belize, Botswana, Bosnia and Herzegovina, China, Costa Rica, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Grenada, Guyana, Iraq, Jamaica, Jordan, Lebanon, Libya, Malaysia, Maldives, Marshall Islands, Montenegro, Namibia, St. Lucia, St. Vincent and the Grenadines, Samoa, Suriname, Tonga, Turkmenistan, Tuvalu, Venezuela. Average Inv Hubs: Netherlands, Seychelles, United Arab Emirates. Average Other Struct Peers: Namibia, Costa Rica.

Figure 20. Composition of Current Expenditure by Economic Classification, Mauritius and Peers 2009-2020 (% of GDP)



Source: World Bank staff based on data from IMF GFS, July 2022.
 Note: Consolidated General Government. Excluded due to missing data: Average HIC: Andorra, Antigua and Barbuda, Aruba, The Bahamas, Bahrain, Barbados, Brunei Darussalam, Kuwait, Latvia, Lithuania, Luxembourg, Macao, Nauru, Oman, Palau, Panama, Poland, Puerto Rico, Qatar, Saudi Arabia, Seychelles, St. Kitts and Nevis, Trinidad and Tobago, for Grants Expenses only: Croatia, Denmark, Finland, France, Greece, Ireland, Italy, Luxembourg, Malta, Portugal, Romania, San Marino, Slovak, Slovenia; Average UMIC: Argentina, Azerbaijan, Belize, Bosnia and Herzegovina, Botswana, China, Costa Rica, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Grenada, Guyana, Iraq, Jamaica, Jordan, Lebanon, Malaysia, Maldives, Marshall Island, Montenegro, Namibia, Russia, Samoa, Serbia, South Africa, St. Lucia, St. Vincent and the Grenadines, Suriname, Thailand, Tonga, Turkey, Turkmenistan, Tuvalu, Venezuela, for Grants Expenses only: Bulgaria, Peru, Samoa; Average Inv Hubs: Seychelles. Average Other Struct Peers: Namibia.

spending remained stable around 10 percent until 2019/20, but dropped to 8.8 percent the next year. In FY2020/21, the share of general public services in total public spending further increased from 25.6 to 26.2 percent, while social protection spending rose from 28.5 to 30.1 percent, consolidating and reinforcing the previous year's trend. The largest share of the increase in general public services spending consisted of grants used to finance SFs for pandemic response.

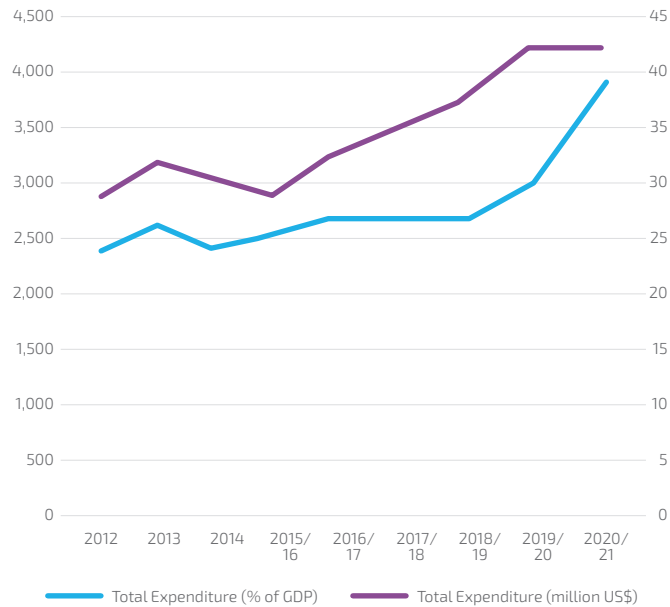
Social protection has dominated public spending over the past decade, and expenditures rose substantially in 2020.

A similar increase was observed across all benchmark country groups (Figure 23). Social protection spending increased from 22.8 percent of total public spending in 2014 to 26.5 percent in 2018/19, right before the pandemic, and further to 30.1 percent in 2020/21. Demographic trends have put pension programs, which account for over half of such expenditures, on an unsustainable path. The second largest expenditure category is general public services. Education, and economic affairs also accounted for large shares of public spending, broadly in line with the general trend observed across comparator groups. However, health spending in Mauritius was below most comparator-group averages and closer to the average for UMICs than HICs, signaling scope to reallocate resources across spending categories³⁷. After the onset of the pandemic, spending on general public services and social protection increased dramatically, rising by 79.4 percent and 59.5 percent from their pre-pandemic averages (Figure 23). As a result, total public spending as a share of GDP rose above the UMIC average but remained below all other comparator group averages.

³⁷ According to the Institute of Health Metrics and Evaluation, Global Burden of Disease, non-communicable diseases accounted for 83 percent of the total disease burden Mauritius in 2019, and is expected to put increased pressure on the health system going forward given demographic trends. While total health spending is increasing, it is disproportionately skewed towards private spending, largely out-of-pocket payments, and towards hospital costs and medications rather than preventative care, which has the highest yield. World Bank (2022). Mauritius Systematic Country Diagnostic Update, January 2022.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 21. Mauritius Consolidated General Government Expenditure by Functional Classification (% of GDP), FY2012-FY2020/21



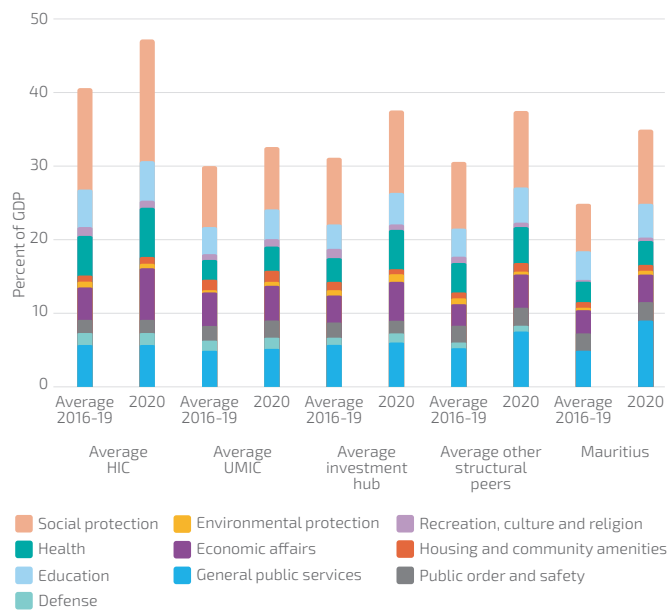
Source: World Bank staff based on data from Statistics Mauritius.

Figure 22. Mauritius Consolidated General Government Expenditure by Functional Classification (% of Total Public Expenditure), FY2012-FY2020/21



Source: World Bank staff based on data from Statistics Mauritius.

Figure 23. Composition of Current Expenditure by Functional Classification, Mauritius and Peers 2009-2020 (% of GDP)



Source: World Bank staff based on data from IMF GFS, May 2022.
 Note: Consolidated General Government. **Excluded due to missing data:** Average HIC: Andorra, Antigua and Barbuda, Aruba, The Bahamas, Bahrain, Barbados, Brunei Darussalam, Chile, Korea, Kuwait, Nauru, Oman, Palau, Panama, Puerto Rico, Qatar, San Marino, Saudi Arabia, Seychelles, St. Kitts and Nevis, Trinidad and Tobago, Uruguay; Average UMIC: Argentina, Armenia, Azerbaijan, Belize, Bosnia and Herzegovina, Botswana, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, Equatorial Guinea, Fiji, Gabon, Grenada, Guyana, Iraq, Jamaica, Jordan, Lebanon, Libya, Malaysia, Maldives, Marshall Islands, Mexico, Montenegro, Namibia, North Macedonia, Paraguay, Peru, Samoa, Serbia, St. Lucia, St. Vincent and the Grenadines, Suriname, Tonga, Turkmenistan, Tuvalu, Venezuela; Average Inv Hubs: Netherlands, United Arab Emirates. Average Other Struct Peers: Costa Rica.

3.3 Close monitoring of contingent liabilities can offer valuable insights to aid in managing overall fiscal risk levels and assist government in making well-informed fiscal policy decisions

Precisely determining the full extent of fiscal risks is complicated by the presence of several sources of potential future liabilities to the budget that are difficult to quantitatively estimate, as they are typically excluded from the reported budget deficit and contingency provisions. A sound framework for managing fiscal risks needs to be comprehensive and identify all sources from which liabilities could originate, including contingent explicit and implicit liabilities. An accurate appraisal of fiscal risks is vital to enable the government to make informed decisions and prepare for shocks that could increase fiscal costs. Table 3 below summarizes the main sources of fiscal risk organized according to their legal standing (explicit or implicit governmental responsibility) and the probability of that they will materialize (direct or certain, and contingent or uncertain). The subsequent paragraphs describe each of these sources of fiscal risk and provide estimates of their quantitative magnitude as the available data permit.

**I - Modernizing Fiscal Policies and Upgrading Public Finance Management
to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)**

Table 2. Changes in Expenditures by Functional Classification

Row Labels	2012	2013	2014	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
701 General public services	17.3	17.7	18.2	22.6	20.5	18.2	19.4	25.6	26.2
703 Public order and safety	8.8	10.3	10.1	10.0	9.6	8.9	8.9	8.0	7.0
704 Economic affairs	13.5	13.0	11.5	10.4	15.1	13.9	12.5	11.3	10.8
705 Environmental protection	3.7	2.1	2.3	2.7	2.2	2.0	3.1	0.2	2.3
706 Housing and community amenities	4.1	5.1	6.8	3.0	2.5	3.3	3.2	2.4	2.2
707 Health	9.6	9.3	10.5	10.0	10.0	9.8	9.9	9.8	8.8
708 Recreation, culture and religion	1.2	1.2	1.2	1.2	1.2	1.2	1.9	1.7	0.9
709 Education	15.0	14.6	16.6	16.3	15.8	15.4	14.5	12.5	11.7
710 Social protection	26.9	26.7	22.8	23.8	23.1	27.3	26.5	28.5	30.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: World Bank staff based on data from Statistics Mauritius.
Note: Consolidated General Government.

Table 3. Direct and Contingent Liabilities of the Government of Mauritius

Liabilities	Direct	Contingent
	<i>Will certainly or very probably have to be paid</i>	<i>Will have to be paid only if an uncertain event occurs</i>
Explicit <i>Government liability as recognized by law or contract</i>	<ul style="list-style-type: none"> • Public debt • Binding budgetary expenditures, including defined-benefit pensions (comprises BRP and CSG, as well as Widows', Orphans', and Disability Pensions) • Binding extra-budgetary expenditures channeled through SFs 	<ul style="list-style-type: none"> • Guarantees of state-owned enterprises and parastatals' debts • Other state-guaranteed debt • Claims against the government in domestic courts • Government revenue or payment guarantees on PPPs • Claims related to taxes and pensions • Recapitalization of the BoM
Implicit <i>A strong expectation upon government that reflects public and interest-group pressures</i>	<ul style="list-style-type: none"> • Payments for Mauritians covered under diverse social protection programs (Social Aid, etc.) 	<ul style="list-style-type: none"> • Natural disasters • Bank failures • MIC exposures • International arbitration adverse outcomes • Non-guaranteed debt

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

a) Explicit Direct Liabilities to the State: The public debt stock is high, but its composition is favorable, while trends in budgetary and extra-budgetary spending present cause for concern

Public Debt

The public debt appears sustainable but is subject to significant vulnerabilities, which have been exacerbated by higher gross financing needs and debt levels.

Under the baseline scenario in the July 2022 IMF Debt Sustainability Analysis, the public debt stock is expected to decline to 92.4 percent of GDP in FY2021/22 before falling to 83.8 percent in FY2026/27³⁸. This scenario assumes a gradual recovery from the pandemic and substantial improvements in the government's fiscal position. In December 2021, the government disposed of its shares in Airports of Mauritius Ltd valued at MUR 39 billion to Airport Holdings Ltd. The latter opened its shareholding to the Mauritius Investment Corporation (MIC), which invested some MUR 25 billion. As a result of this one-off quasi-fiscal operation, the public debt stock was reduced by 6.7 percent of GDP from its July 2021 level, as the government used part of the proceedings (MUR 13 billion, equivalent to 2.6 percent of FY GDP) received from the operation to reduce its outstanding liabilities. Despite its downward trend under the baseline, the public debt remains highly vulnerable to a number of risks, especially those posed by contingent liabilities, which have recently increased. Gross financing needs, already high in the baseline scenario, are susceptible to combined macro-fiscal and contingent-liability shocks, though these risks are mitigated somewhat by the preponderance of domestic debt at longer maturities. While the phased introduction of the CSG in 2023/24 is expected to cause only a temporary increase in the public debt stock, demographic aging will put renewed pressure on the public finances over the longer-term, as the pension system is not fiscally sustainable.

The bulk of the government's external borrowing comes from bilateral and multilateral sources, with original maturities of around 20 years and low interest costs.

However, the total external debt (public and private), excluding the global business sector, was relatively high at 135.6 percent of GDP in June 2022 and may pose elevated risks over the medium term. Its moderate reduction after reaching 139.5 percent in June 2021, came after rapid growth over the previous two fiscal years from its 83.2 percent level in June 2019. The public sector accounted for 31.9 percent and the private sector for the remaining 103.7 percent. Most of the private sector external debt was held by banks (98.4% of GDP). As is standard for financial centers, banking sector

external debt is excluded from the DSA as it is more than matched by external assets. The total external debt-to-GDP ratio decreased by 3.9 percentage points between June 2021 and June 2022, driven by the decrease of total private external debt by 3.3 percentage points of GDP, which given the order of magnitudes more than compensated for the increase in public sector external debt by 4.4 percentage points.

The ratio of short-term debt to total external debt increased from 53.6 percent to 62.9 percent, but short-term debt is held mostly by the banking sector while for the public sector the ratio is very low at 0.2 percent.

External debt service was 3.6 percent of exports in fiscal year 2021/22, down from 7.9 percent in fiscal year 2020/21, as proceeds from exports of goods and services recovered³⁹. The latest External DSA carried out by the IMF in April 2019 indicated that Mauritius's external debt was sustainable, albeit susceptible to large exogenous shocks. The Public DSA update performed by the IMF in June 2021 pointed out that the substantial increase in Mauritius's external debt may imply elevated risk exposures to unfavorable exchange rate movements, current account, and rollover shocks.

While Mauritius has not issued global bonds thus far, the experience of other countries with similar credit ratings can help assess potential spreads.

As noted above, Moody's downgraded Mauritius's sovereign long term foreign and local currency issuer rating from its longstanding Baa1 to Baa2 in March 2021 due to the country's weakened fiscal and economic stance, while maintaining a negative outlook based on risks to the recovery of tourism and the deterioration of the central bank's balance sheet. In July 2022, Moody's again downgraded Mauritius's rating, from Baa2 to Baa3, determining that the deteriorating quality of institutions and policymaking had weakened Mauritius's economic resilience⁴⁰. The main reason for the downgrade was Mauritius's reliance on unconventional and one-off measures for reversing the deterioration in economic and fiscal positions that resulted from the COVID-19 pandemic, creating uncertainty around its future fiscal performance and undermining the country's strong institutional framework.

It is of paramount importance for Mauritius to avoid further credit downgrades, which would widen differential spreads and push the country's debt below investment grade.

Such a transition would bring significant additional negative consequences for private businesses and banks associated to speculative sovereign credit ratings. At the time of its latest credit rating downgrade in 2022, Moody's reversed Mauritius's outlook from negative

³⁸ IMF (2022). Mauritius: Staff Report for the 2022 Article IV Consultation, July 2022. Debt-to-GDP ratios have further declined since the release of the last IMF DSA, as reflected in Table 1 of this report. Nevertheless, the trend is similar.

³⁹ Debt data sourced from Mauritius MOFEPD (<https://mof.govmu.org/Pages/Debt-Data.aspx>).

⁴⁰ https://www.moody.com/research/Moodys-downgrades-Mauritiuss-rating-to-Baa3-changes-outlook-to-stable--PR_467667

to stable, reflecting its expectation that Mauritius's credit profile would remain aligned with Baa3-related sovereigns and that the headline fiscal and debt metrics would further improve. In 2023, Standard & Poor's confirmed the stable outlook based on the strong economic recovery and easing external pressure, while setting the sovereign rating at BBB-, and Moody's upgraded its Credit Opinion Scorecard-indicated outcome of Mauritius to Baa1-Baa3. The stable outlook is further supported by Mauritius's sizeable international reserves, averaging 10.3 months of imports in mid-2023, which limit external vulnerability risks and provide a buffer to higher import prices, as well as by the low social and political risks. As most debt is domestic and medium (1-5 years) or long term (>5 years), the overall debt composition is favorable with limited exchange rate and rollover risk. Sustaining growth and maintaining macro-fiscal resilience will help Mauritius' credit rating.

Binding Budgetary Expenditures

A key source of liabilities to the state is social protection spending, which is one of the largest and fastest growing spending categories in the budget. These resources support an extensive system comprising social assistance, pensions, labor market programs, and unemployment protection. Most social protection benefits are untargeted, including the universal old age pension and general consumption subsidies⁴¹. While the universal basic retirement pension is responsible for the largest reduction in income inequality because it channels more than half of social protection spending, it is not targeted to the poor and has regressive effects because it also reaches the most affluent households and benefits only the population age 60 and above, whose poverty rate is 4.4 percent, whereas the poverty rate among those younger than 60 is 11.7 percent (and 10.4 percent for population overall)⁴². World Bank analysis has shown that the same reduction in inequality could be achieved by spending 30 percent of what is currently devoted to the basic retirement pensions if the resources were channeled more efficiently to the vulnerable populations through pro-poor cash transfers programs, some of which already exist in Mauritius but could be scaled up⁴³. In addition, Fiscal Incidence Analysis microsimulations point out to the clear superiority of targeted transfers in comparison to general subsidies in responding to inflation, both in terms of poverty reduction

and distributional outcomes, for any given level of public spending⁴⁴. The government could then redeploy the savings into growth-enhancing public investments with no adverse effects on poverty or inequality.

The coverage of the social protection system is broadly comprehensive, with limited exceptions. The social protection system includes both universal benefits and targeted cash transfer programs and accounted for about 30.1 percent of total public spending in FY20/21. While Mauritius's cash transfer programs, such as the Social Aid program⁴⁵, are progressive and pro-poor, the basic retirement pension is not targeted to the poor and has regressive effects, in addition to creating adverse labor market incentives by encouraging retirement at 60⁴⁶. Due to structural issues and insufficient coordination and targeting, the fiscal cost of the social protection system greatly increased over the past decade. This rises the current and future explicit liabilities of the state while consuming a large share of public resources that could be invested in building human capital.

The Mauritian pension system is non-contributory, and demographic trends threaten to render it fiscally unsustainable. The non-contributory Basic Retirement Pension (BRP) and the General Social Contribution (CSG) are complemented by several mandatory income-based contributory schemes, including the National Savings Fund (NSF), which offers lump-sum payments at retirement; the civil service and local government pensions schemes; multiple parastatal pension schemes; and private voluntary occupational pensions. The BRP provides universal benefits to all persons above age 60 while the CSG, beginning in 2024, and the civil service scheme, are only available at age 65. Eligibility ages for the other schemes vary.

Currently, 18.4 percent of the population is over the age of 60, but this share is projected to rise to 23.4 percent by 2030, 29.2 percent by 2045, and 34.1 percent in 2058, while the working-age population is expected to steadily decline⁴⁷. The recent CSG reform dismantled the contributory pension system for private sector workers, and all pensioners, irrespective of income level, now rely on the government to fund their retirement, drawing resources away from pro-poor social programs and other public spending priorities.

⁴¹ Mauritius has in place several consumption subsidies including on rice, flour, and liquefied petroleum gas (LPG), as well as free public bus transport.

⁴² World Bank (2022). Mauritius Systematic Country Diagnostic Update, January 2022.

⁴³ Ibid.

⁴⁴ The methodology and main findings from the application of Fiscal Incidence Analysis to evaluate the distributional impacts of alternative compensation measures in the context of inflation in Mauritius are shown in Appendix A1.

⁴⁵ The Social Aid Program, which is targeted on households temporarily unable to earn a livelihood, is pro-poor: over 85 percent is absorbed by households in the bottom 40.

⁴⁶ World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

⁴⁷ United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022, Online Edition.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Moreover, while CSG benefits were extended to everyone over age 65, the obligation to contribute was not extended to everyone of working age. Consequently, fiscal pressures are set to increase even further as the population ages and the CSG scheme compounds the mounting fiscal burden of the BRP. The government has also guaranteed pension rights to anyone who contributed to the now-abolished National Pension Fund, but the fund was operated on a pay-as-you-go basis and has no resources to cover these pension rights. As a result, the National Treasury will need to cover these liabilities over the medium term.

Binding Extra-Budgetary Expenditures

In FY07/08, the government introduced the practice of using SFs to expedite priority spending. SFs are created through annual updates to the Finance and Audit Act, and their purpose is to finance urgent expenditures in cases where the usual budget process and PFM tools are seen as too rigid or slow. Each SF has specific monitoring and reporting requirements, and each is overseen by a committee that includes senior government officials. As of October 2022, the government had established 13 SFs, seven of which were closed and six ongoing, with objectives ranging from utilizing lottery revenue to fast-tracking the COVID-19 vaccination response to implementing capital projects (Table 4). SFs are primarily financed through transfers from the Consolidated Fund, and there is currently no limit on the amount of government funding that can be channeled through SFs in any given year. This creates a risk that the government may channel too large a share of its yearly funding through SFs, compromising its ability to respond quickly to unexpected shocks.

The six active SFs were created at different times to pursue different objectives; three predated the COVID-19 pandemic, and the other three responded to it. The pre-pandemic SFs are the National Environment and Climate Change Fund (created in 2002); the National Resilience Fund (2012); and the Lotto Fund (2016). Of the post-pandemic SFs, the COVID-19 Projects Development Fund and the COVID-19 Solidarity Fund were both created in early 2020, whereas the

National COVID-19 Vaccination Programme Fund was set up in 2021. All six active SFs are replenished from the general budget and from grants, and they can carry balances over subsequent fiscal years. SF expenditures include current spending and capital spending, as they finance projects under the government's Public Sector Investment Program (PSIP). The three pre-pandemic SFs pursue a range of high-level national objectives, including environmental resilience, private-sector competitiveness, employment opportunities for young workers and members of vulnerable groups, and the development of sports, culture, and community⁴⁸.

The three post-pandemic SFs were created to help weather the crisis and support the recovery. The COVID-19 Solidarity Fund was created shortly after the outbreak of the pandemic to finance the response effort and address other related public health issues, and to provide financial support to affected individuals and organizations, inter alia. The COVID-19 Projects Development Fund was established in April 2020 to provide expedited financing for projects specified in the Public Sector Investment Programme, other approved projects and programs, and related consultancy and advisory services. The fund also finances projects under the Economic Recovery Programme (ERP) approved in October 2020, which aims to boost GDP, create jobs, reduce import dependence, and improve the wellbeing of the population, as well as drainage projects under the National Flood Management Programme. Finally, the National COVID-19 Vaccination Programme Fund was created to support a rapid vaccination effort⁴⁹.

Between FY21/22 to FY23/24, an estimated 20 percent of all capital expenditures will flow through SFs (Table 5). Among the six current SFs, most capital spending will come from the COVID-19 Projects Development Fund. Of these, 70 percent of planned expenditures are being directed to the Economic Recovery Program and a housing program that aims to construct 12,000 social housing units. With limited project management capacity and interagency coordination challenges, the government feels utilizing a special fund, and the increased senior level scrutiny that it entails, will allow the programs the best chance of being implemented on time.

⁴⁸ The National Environment and Climate Change Fund (NECCF) was created under an Act of Parliament in 2002 to finance environment-related projects aimed at reducing pollution, encouraging education and research in the field of environment, providing support to NGOs engaged in environment protection, encouraging local environmental initiatives, promoting activities relating to environment protection and management, and compensating victims in situations of environmental emergency and spills. It covers projects, programs, and schemes in the following main areas: rehabilitation, protection and management of beaches, lagoons, and coral reefs; management of solid waste; disaster risk reduction; cleaning and embellishment works; and landslide management, green economy and environment protection. The National Resilience Fund (NRF) was created in January 2012 to strengthen the resilience of the domestic economy, by supporting enterprises that show concrete efforts at building permanent resilience; acting as a contingency fund to shore up public finances if required; financing programs, projects and schemes to empower vulnerable persons and provide job opportunities for young people, and in support of SMEs and enterprises in general on cash flow problems and financing requirements and to enable them to innovate and acquire technology to enhance competitiveness, as well as to support restructuring of SME service-providing institutions to allow them to provide better and more effective service, finance promotional campaigns to help enterprises consolidate traditional markets and enter into regional as well as new fast growing emerging markets; and to support the creation of new financing instruments and the development of new economic sectors. The Lotto Fund was created in October 2016 to contribute to the financing of projects, schemes, and events in relation to sports, culture, leisure, heritage, or art development; preservation and rehabilitation of historical and cultural heritage sites and structures; community development, education, health; innovation initiatives; protection of environment; and support to victims of natural calamities. Source: Mauritius PSIP 2021/22 – 2025/26.

⁴⁹ Mauritius PSIP 2021/22 – 2025/26.

Table 4. Receipts, Expenditure, and the Execution of Special Funds

Rs million				
Only includes actuals, estimates, & revised estimates (planned excluded)	Total Receipts	Total Exp (not including transfers back to consolidated fund)	Ex percentage	
NRF 2011 - 2021/22	30,363	20,198	67%	Ongoing
NEF 2019/20 - 2021/22	6,616	2,912	44%	Ongoing
Lotto Fund 2017/18 - 2021/22	766	297	39%	Ongoing
Project Development Fund - 2021/21 - 2021/22	30,100	3,408	11%	Ongoing
COVID-19 Solidarity Fund 2019/20 - 2021/22	2,296	2,300	100%	Ongoing
Vaccination Fund - 2021/21 - 2021/22	2,321	1,592	69%	Ongoing
Food Security Fund (FS) - 2007/08 - 2015/16	1,169	155	13%	Completed
Human Resource Knowledge and Arts Development Fund (HRKAD) - 2007/08 - 2011	3,777	468	12%	Completed
Local Infrastructure/Local Development Fund (LI LD) - 2007/08 - 2015/16	1,968	1,865	95%	Completed
MID - 2007/08 - 2015/16	1,593	767	48%	Completed
Social Housing Development/National Habitat Fund (SHD NH) - 2007/08 - 2015/16	2,812	1,575	56%	Completed
Build Mauritius Fund (BM) - 2013 - 2017/18	9,922	3,780	38%	Completed
Road Decongestion Program (RDP) - 2008/09 - 2015/16	8,198	8,049	98%	Completed
Total of All Special Funds	101,899	47,367	46%	

Source: MOFEPD.

Table 5. PSIP 2021/22 - 2025/26

Details	Estimates 2021/22	Planned 2022/23	Planned 2023/24	Planned 2024/25	Planned 2025/26	5 Year Total
Consolidated Fund	22.8	24.0	22.5	14.7	9.1	93.0
<i>Acquisition of Non-Financial Assets</i>	14.1	16.4	16.5	11.5	6.5	65.0
<i>Capital Grants</i>	2.8	2.5	2.2	1.4	1.3	10.2
<i>Capital Transfers</i>	1.9	2.0	1.4	1.3	1.2	7.8
<i>Loans</i>	0.9	0.9	1.1	0.5	0.0	3.5
<i>Equity</i>	3.0	2.2	1.3	0.1	0.0	6.6
Special Funds	15.5	12.3	9.6	0.7	0.8	38.9
SOEs / Public Entities	11.8	12.3	11.9	10.9	11.3	58.2
Total PSIP	50.1	48.6	43.9	26.3	21.3	190.1

Source: MOFEPD 2021/22 PSIP.

Note: All values presented in MUR billions.

SF execution rates are no higher than those of programs financed through the general budget. When transfers back to the consolidated fund are excluded, the average execution rate for SFs, both completed and ongoing, is under 50 percent⁵⁰. While this figure may rise if the active funds execute the large expenditures planned for the coming years, their performance to date does not suggest that this will be the case. Except for the Lotto Fund, which is financed from a dedicated source and supports specific types of expenditures, the risks incurred by establishing additional SFs outweigh their potential benefits.

⁵⁰ Most SFs are financed from the consolidated fund, and many of them transfer unused resources back to the consolidated fund when they close.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

b) Explicit Contingent Liabilities are substantial and require close monitoring

Guarantees on SOE debts and other state-guaranteed debt

Total government guaranteed debt as of end June 2021, the latest available data at the time of writing, amounts to 6.87 percent of GDP, and more than three quarters of it is from external sources (76 percent) while the remaining portion is domestic (24 percent). The largest part of the guaranteed debt is SOE or parastatals debt, while the private sector accounts for less than less than 1 percent of the total (0.005 percent of GDP) which consists of SME loans from the Development Bank of Mauritius (Table 6). The external guaranteed debt is entirely from SOEs and parastatals. The largest loan is MUR 9 billion (1.88 percent of GDP) from Exim Bank of India to SBM (Mauritius) Infrastructure Development Company Ltd, followed by a loan of MUR 4.5 billion (0.93 percent of GDP) from Exim Bank of China to Airports of Mauritius Co. Ltd, and a loan of MUR 4.3 billion (0.90 percent of GDP) from the African Development Bank to MauBank Holdings Ltd (Table 7). Other SOEs or parastatals with external state guaranteed debt include the Central Electricity Board (0.74 percent of GDP), Mauritius Telecom Ltd (0.58 percent of GDP), the Mauritius Ports Authority (0.15 percent of GDP), and Cargo Handling Corporation Ltd (0.05 percent of GDP). The main creditors of external state guaranteed debt are Exim Bank of India (one loan, representing 27 percent of all guaranteed debt), the African Development Bank (two loans, 24 percent), and Exim Bank of China (two loans, 22). The French Development Agency and the European Investment Bank are also creditors of external state guaranteed debt, with one loan each, but of relatively low amounts (2.2 and 0.74 percent of all guaranteed debt, respectively).

Over 97 percent of domestic state-guaranteed debt is in the form of loans to SOEs or parastatals. The largest of these is a MUR 4 billion (0.85 percent of GDP) loan from the Bank of Mauritius to the National Property Fund Ltd, followed by a MUR 3.1 billion (0.65 percent of GDP) loan from MauBank Ltd to MauBank Holdings Ltd. The National Housing Development Co. Ltd has received three smaller loans, the largest of which is MUR 0.5 billion (0.10 percent of GDP) from MauBank Ltd. The Mauritius Housing Company Ltd also has three state-guaranteed loans from domestic sources totaling 0.016 percent of GDP. The Bank of Mauritius and MauBank Ltd together have provided over 97 percent of domestic state-guaranteed loans, representing 23 percent of all state-guaranteed debt. In addition, the government has committed to: (i) ensuring that the Development Bank of Mauritius Ltd receives at least a 10 percent return on its investment in Coromandel Industrial Estate as guaranteed under IDA Credit 411 MAS; (ii) indemnifying the Development Bank of Mauritius Ltd against exchange-rate losses in excess of the Exchange Equalization Reserve created by the bank for loans contracted

and disbursed in foreign currencies; and (iii) indemnifying the National Housing Development Company Ltd against exchange losses on foreign loans. As over three-quarters of state-guaranteed debt is from external creditors, exchange-rate risk increases the overall level of fiscal risk.

While the government has established and enforced staffing rules and pay regimes for SOEs within the direct purview of the public administration, other SOEs and parastatals are subject to political patronage systems that undermine their capacity to effectively attract, retain, and motivate competent staff. Weak SOE governance undermines performance and increases the risk of contingent liabilities. The central government's control is limited, and although some SOE performance monitoring is carried out by the MOFED, MPSAIR and OPSG, oversight is insufficient. In addition, the current legal framework and reporting practices of SOEs negatively impact service delivery. The pandemic also disrupted SOE operations. For example, the national air carrier was placed under voluntary administration. Pressure for SOE reform increased significantly during the pandemic, due in part to their increased funding allocations and expanded social functions, which could form the basis for a robust political consensus.

Claims against the government in domestic courts

There are four active court cases against the government totaling MUR 11.86 billion (2.5 percent of GDP), all of which are land disputes (Table 8). Of these, the case of Les Salines, which claims compensation of MUR 8.85 billion plus costs and is currently in arbitration, accounts for three quarters of the total. Two other cases are currently under the Supreme Court's jurisdiction, with claimed compensation amounts of MUR 1.8 billion (0.4 percent of GDP) and MUR 1.1 billion (0.2 percent of GDP). In the former case, raised by Le Morne, the government has already won the first-instance arbitration. The fourth case is relatively small, with claimed compensation of MUR 106.5 million (0.02 percent of GDP).

Government revenue or payment guarantees on PPPs

The PPPs environment, including the legal arrangements, government knowledge, and private sector involvement, is nascent in Mauritius. To date, the country has only implemented one PPP, but has started to develop a pipeline of projects and created a PPP unit to start building knowledge. While PPPs may be powerfully instrumental to leveraging private sector investment and know-how, they are also a potential source of direct contingent liabilities for the government, which could be substantial. Therefore, the necessary legal framework and supporting government knowledge and skills should be developed incrementally and according to international best practices, while avoiding moving too quickly into PPP commitments.

**I - Modernizing Fiscal Policies and Upgrading Public Finance Management
to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)**

Table 6. Loans, Bank Overdrafts, and Credit Facilities from Local Sources

Borrower	Lender	Total MUR	Extent of Government's Liability (MUR)	% of GDP
MauBank Holdings Ltd	MauBank Ltd	3,100,000,000	3,100,000,000	0.65%
Mauritius Housing Company Ltd	Swan Life Ltd	33,750,000	33,750,000	0.01%
	Hongkong and Shanghai Banking Corporation Limited	13,333,333	13,333,333	0.003%
	Hongkong and Shanghai Banking Corporation Limited	16,662,000	16,662,000	0.003%
National Housing Development Co. Ltd	Hongkong and Shanghai Banking Corporation Limited	9,230,770	9,230,770	0.002%
	SBM Bank (Mauritius) Ltd	103,478,262	103,478,262	0.02%
	MauBank Ltd	492,360,230	492,360,230	0.10%
National Property Fund Ltd	Bank of Mauritius	4,082,968,609	4,082,968,609	0.85%
Small Entrepreneurs	Development Bank of Mauritius Ltd	23,851,050	23,851,050	0.005%
TOTAL - Loans/Bank Overdrafts/Credit Facilities - Local Sources		7,875,634,254	7,875,634,254	1.64%

Source: Ministry of Finance, Economic Development and Planning, Republic of Mauritius.

Table 7. Loans, Bank Overdrafts, and Credit Facilities from External Sources (Non-Resident)

Borrower	Lender	Amount outstanding and Extent of Government's Liability		% of GDP
		Foreign Currency (USD)	Rupee equivalent*	
Airports of Mauritius Co. Ltd.	Exim Bank of China	103,976,676	4,474,636,252	0.93%
Cargo Handling Corporation Ltd	European Investment Bank	5,706,296	245,570,448	0.05%
Central Electricity Board	African Development Bank	83,066,910	3,574,784,472	0.74%
MauBank Holdings Ltd	African Development Bank	100,000,000	4,303,500,000	0.90%
Mauritius Ports Authority	French Development Agency	16,549,867	712,223,526	0.15%
Mauritius Telecom Ltd	Exim Bank of China	65,050,841	2,799,462,942	0.58%
SBM (Mauritius) Infrastructure Development Company Ltd	Exim Bank of India	209,690,608	9,024,035,315	1.88%
TOTAL - Loans/Bank Overdrafts/Credit Facilities - External Sources		584,041,198	25,134,212,955	5.23%

Source: Ministry of Finance, Economic Development and Planning, Republic of Mauritius.

Claims related to taxes and pensions

There is currently only one active claim against the government related to taxes and pensions. The case has been raised by Business Mauritius against the introduction of the new tax related to the CSG pension reform. The case only applies to the first year of the reform, and the government assesses its risk of losing this dispute as low.

Recapitalization of the Bank of Mauritius

The central bank's capital position was left substantially weakened following the non-refundable transfers to government carried out in FY2019/20 (MUR 18 billion, equivalent to 3.5 percent of GDP) and FY2020/21 (MUR 55 billion, or 12.3 percent of GDP). As a result, the central bank has currently a negative net worth.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Table 8. Summary of Active Court Cases against the Government of Mauritius

S/N	Case	Arbitration	Supreme Court	Other	Amount claimed (MUR bn)
1.	Le Morne land dispute	Dispute won by the Government of Mauritius	MUR 1.8 billion in claimed compensation		1.8
2.	Les Salines land dispute	Not less than \$200 million (MUR 8.85 billion) in claimed compensation plus costs			8.85
3.	La Ferme land dispute (VAL Farms Ltd)			MUR 106.5 million in claimed compensation (case ongoing)	0.11
4.	Mon Choisy land dispute (RA & SI CO. LTD)		MUR 1.1 billion in claimed compensation		1.1
Total					11.86

Source: Ministry of Finance, Economic Development and Planning, Republic of Mauritius.

The government is required to recapitalize the BoM under the terms and conditions set out by articles 10(5) and 47(4) of the BoM Act⁵¹, as necessary for the BoM to accommodate the costs of monetary policy, and such recapitalization, if triggered, would increase the level of public sector debt. While the precise level of appropriate central bank reserves is yet to be determined, the amount of this contingent liability could be up to the level of reserves that the Central Bank had before the execution of the two special non-refundable transfers to government.

c) Implicit direct liabilities from social protection spending are elevated and will rise further unless the root causes for income inequality are addressed

Mauritius has an extensive network of social protection programs directed to vulnerable segments of the population, but substantial fragmentation exists, and coordination is limited. This weakens the capacity of government to oversee the network of programs globally and ensure that scarce fiscal resources are used in the most cost-effective way. There are many programs and multiple ministries, foundations, and Special Funds involved in the design and delivery of social protection. This results in some diseconomies of scale leading to gaps in monitoring and evaluation, oversight, coordination, accountability, and transparency⁵². Monitoring and evaluation systems are generally very weak, although the government is working to strengthen them moving forward. Overall, the social protection system is not sufficiently dynamic, often reflecting the difficulty in reforming benefits to which

the population feels they have an entitlement, and programs continue even when the justification for their establishment no longer exists⁵³.

The government's efforts to reduce poverty and inequality have yielded important results, but at a rising fiscal cost⁵⁴. Further improvements in the human capital base will be needed to close the skills gap and reduce inequality in educational attainment and outcomes, supporting shared prosperity in a fiscally sustainable manner. Rather than further increasing the share of education in public spending, which is already in line with structural and aspirational peers as a share of GDP, and even relatively high as a proportion of the government's budget, improvements will require enhancing the efficiency in the allocation of educational spending across different levels and inputs.

d) Implicit indirect contingent liabilities emanating from multiple sources could compel the government to cover large losses even without a legal obligation

The Mauritius Investment Corporation

The contingent liabilities that may arise from the Mauritius Investment Corporation (MIC) are indirect but sizeable and could materialize over the medium-to-long term. The MIC was founded as a private limited company fully owned by the Bank of Mauritius, which operates under the Companies Act 2001 and owns and manages a portfolio of MUR 81 billion. Its Board of Directors includes the first and

⁵¹ https://www.bom.mu/sites/default/files/bank_of_mauritius_act_amended_fa_2022.pdf

⁵² World Bank (2022). Mauritius Systematic Country Diagnostic Update, January 2022.

⁵³ Ibid.

⁵⁴ World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

second deputy governors of the BoM. The MIC's Inaugural Annual Report indicated that the company received 109 requests for investments over the 12-month period ending on June 30, 2021, of which 40 were approved (totaling MUR 24.9 billion), that 23,870 people were directly employed by the investee entities, and that the MIC had disbursed MUR 6.7 billion among 16 entities and acquired 100 percent in Mon Trésor Smart City Ltd for MUR 2.4 billion. A total of MUR 5.9 billion in disbursements had been made to the accommodation and food services sector, MUR 2.4 billion to the agricultural sector, and the remaining MUR 0.8 billion to the manufacturing sector⁵⁵.

By end-December 2022, the MIC had 48 investees, and disbursed funds had reached MUR 48.6 billion (60 percent of its MUR 80 billion portfolio). More than half of these funds (52 percent) had been allocated to sectors not separately disclosed in public reports, including the purchase of shares of Airport Holdings Ltd. in December 2021 for MUR 25 billion (which financed the purchase of government shares in Airports of Mauritius Ltd by Airport Holdings Ltd), and MUR 13 billion received in cash (2.7 percent of GDP), which helped reduce the public debt. Of the remaining disbursed funds, 27.5 percent (MUR 13.4 billion) had been allocated to investments in accommodation and food service activities; 13.6 percent (MUR 6.6 billion) to projects in agriculture, forestry and fishing; 4 percent (MUR 2 billion) to manufacturing; 1.9 percent (MUR 0.9 billion) to real estate; 0.5 percent (MUR 0.3 billion) to construction; and another 0.5 percent (MUR 0.2 billion) to activities related to arts, entertainment and recreation. Most of the disbursements (58.5 percent) were carried out through equity instruments (MUR 28.5 billion), 35.3 percent through quasi-equity instruments (MUR 17.2 billion), and 6.2 percent through financial assets (MUR 3 billion). From its incorporation in June 2020 to end-December 2022, MUR 17.2 billion bonds were subscribed by 50 committed investees, while the MIC subscribed to bonds from 45 entities totaling MUR 2.3 billion⁵⁶.

As most of the immediate pandemic response measures have already been phased out, the MIC is taking a more long-term focus regarding its engagement in the Mauritian economy. This realignment is consistent with the MIC's stated mission not only to provide immediate crisis relief to systemically large, important, and viable firms that became financially distressed as a result of the COVID-19 pandemic, but also to accelerate economic development by prudently growing its capital through disciplined investment in firms that support the government's strategic objectives, including: (i) promoting the economic development of Mauritius and building a savings base for its citizens; and (ii) investing the

assets under its management to secure key basic necessities and support faster growth. To achieve its investment objectives, the MIC established dedicated portfolios for future generations, infrastructure, and equity participation⁵⁷.

The MIC implements various strategies to mitigate commercial risk, but this persists and depending on the circumstances, there could be a strong expectation upon government to cover part or all of potential losses due to public and interest-group pressures. The MIC has provided quasi-equity loans in the form of a nine-year negative covenant bond to the largest distressed firms to help with cash flow, which will be converted to equity at the end of their maturity if not repaid. The MIC relies on the Economic Development Board and the MOFEPD to identify the recipient projects and sectors in its pipeline. To mitigate commercial risk, the MIC requires the realization of a rigorous feasibility analysis for each individual investment proposal⁵⁸, appropriate collateral provision, and closely monitors investments through a dedicated unit within the MIC producing an information memorandum every quarter. Additionally, MIC contributions are limited to a maximum of 40 to 45 percent of the total project investment, with the rest to be covered by a mix of equity and debt by the investor and private banks. Disbursements are carried out in a maximum of four tranches, and in order to authorize disbursement of subsequent tranches the MIC auditor must be furnished appropriate proof that previous disbursements have been applied to the project in accordance with the approved plans. Despite these precautions, commercial risk persists, and in the event of a large bailout the costs would need to be absorbed through the budget, barring any further non-refundable transfers from the central bank. Such transfers could be substantial, considering that the MIC portfolio amounts to 15.4 percent of FY21/22 GDP (9.2 percent of GDP for the portion already disbursed).

Macroeconomic risks emanate from all quasi-fiscal activity of the central bank, including through the MIC, and have negative implications for anti-inflationary policy, the exchange rate management, and the fiscal stance. Recent fiscal policy decisions have resulted in a pattern of public spending and revenue mobilization, and a growth of contingent liabilities, that are not fully consistent with long-term sustainability. Mauritius's sovereign risk was downgraded successively in 2021 and 2022, leaving the country one notch above investment grade status. As it is well known, an additional downgrade would not only further increase differential spreads for public sector financing should the government issue a sovereign bond, but also bring significant additional negative consequences for domestic banks and private investments.

⁵⁵ <https://www.mic-ltd.mu/wp-content/uploads/2022/02/MIC-AR-22.pdf>

⁵⁶ <https://www.mic-ltd.mu/our-activities/#>

⁵⁷ Mauritius Investment Corporation Ltd. Inaugural Report 2021.

⁵⁸ Backed by PwC, Deloitte, Ernst & Young, or KPMG, according to official sources.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Natural disasters

Mauritius's vulnerability to natural disasters and the adverse effects from climate change due to its location within the cyclone basin of the Indian Ocean is an increasingly important source of fiscal risks. While cyclones rarely hit the main island of Mauritius, the country experiences the indirect effects every year, suffering direct losses due to tropical storms and floods averaging 0.8 percent of GDP. Climate change has already increased the frequency and intensity of cyclones and is likely to raise these risks in the future. Current spending on climate change adaptation and mitigation exhibits a significant financing gap of 1.6 percent of GDP per year through 2030 to meet the authorities' 2030 targets, as estimated by the IMF⁵⁹. The gap is even larger in the case of adaptation, which only accounted for around 22 percent of environmental expenditure between 2011-2017/18, despite this being the most critical dimension for Mauritius given its low contribution to global GHG emissions but high exposure to natural disaster shocks⁶⁰.

Climate resilient infrastructure and green budgeting have started to become increasing priorities but have yet to be adopted in any systemic form. The public investment management (PIM) process and policies include references to incorporating climate resilient techniques in infrastructure development but lack any specifics, requirements, or allowances in the project bidding/procurement process for the additional up-front cost that will be created. As other countries start to incorporate the ability to track green spending in the budget, Mauritius has yet to assess how it can incorporate this in the future.

Countries can adopt a variety of approaches to adapt their infrastructure and protect their economies from the impacts of climate change. The Dutch government has taken the approach of safeguarding particular services rather than facilities. In Costa Rica, the government launched a long-term decarbonization plan in 2019. In Kenya, the government has developed a five-year climate change action plan which includes sector specific PIM policies along with introducing decarbonization policies where appropriate. More information on each of these approaches can be found in Annex A2. The key point is that there is no one specific and universal approach but that each country needs to develop their own adaptation strategies based on their needs and targets.

International arbitration adverse outcomes

The government has recently experienced the materialization of an implicit contingent liability, after

the international arbitration ruling of July 14, 2021, resulted in a loss of around MUR 5.68 billion (1.2 percent of GDP).

The Judicial Committee of the Privy Council decided in favor of Betamax in a case involving the early termination of its 15-year affreightment contract with the State Trading Corporation. The ruling entitled Betamax to a payment of around MUR 5.68 billion (1.2 percent of GDP) by June 22, 2021. No other international arbitration cases are currently active, but the government should proactively monitor cases that have the potential to reach international arbitration.

Bank failures and non-guaranteed debt

Under certain circumstances, even debt that is not subject to an explicit guarantee from the state may entail an expectation that it will be covered, in full or in part, with fiscal resources. For example, a systemic shock that jeopardizes the stability of the banking sector or affects strategically important companies or sectors may create pressure for the government to intervene. While unpredictable external shocks are inevitable, proactively monitoring and addressing vulnerabilities can boost resilience and limit the implicit fiscal risks associated with non-guaranteed debt.

4. Public Finance Management Framework

4.1 Mauritius's PFM framework is among the strongest in Africa, but it remains incomplete by the standards of HICs

Sustainably regaining HIC status will require a new generation of PFM reforms. While Mauritius has experienced consistent economic growth over the past 50 years, its fiscal policies have shifted from long-term investment to short-term demand-led growth. At the same time, the institutions that served Mauritius well in the past may not be able to adequately sustain its transition from UMIC to HIC.

Strengthening the planning and implementation functions are among the most pressing needs in Mauritius.

The government will need to address these challenges by: (i) strengthening existing institutions and filling gaps in PFM and the budget processes, including by minimizing extra-budgetary spending and reducing rigidity; (ii) developing outcome monitoring and evaluation linked to both budget and planning processes; (iii) improving the efficiency of public investment by building project management skills and expanding climate adaptation policies; and (iv) creating a flexible, market-friendly planning process that supports engagement with the private sector and enables use of PPPs.

⁵⁹ To achieve its 2030 NDC goals on mitigation and adaptation, Mauritius would need to spend on average 3.6 percent of GDP per fiscal year, substantially above the current level of 2 percent per year.

⁶⁰ Simione, F.; Clifton, R. and Rial, I. (2022). "Addressing Climate Change in Mauritius: Financing and Reform Options", IMF Selected Issues, July 2022.

a) The institutional framework is sound overall, but important gaps persist

Institutional Strength

Mauritius performs well on a range of political and economic indicators, especially relative to many countries in the region. Mauritius retained the top position out of 54 African countries in the 2020 Mo Ibrahim Index on African Governance, though its score of 77.2 out of 100 points represented a decrease of 0.5 points since 2008. Mauritius also ranks 12th of 137 on the 2020 Bertelsmann Stiftung's Transformation Index. Mauritius ranks 52nd out of 180 in the 2020 Transparency International Index with a score of 53/100. Mauritius ranks as one of the top 20 places to do business globally. It moved seven places to 13th out of 190 countries on the latest World Bank Ease of Doing Business Report 2020, issued in 2019, and it continues to hold the top spot in Africa⁶¹.

Among HICs, building institutional capital is strongly associated with sustained growth. The figures below show Mauritius's institutional performance benchmarked against HICs. The methodology used for this exercise is detailed in Box 2. Of the eight measured areas, the following were assessed as having "emerging institutional capital": the business environment and trade institutions; legal institutions; public sector performance institutions; and social institutions. The remaining areas were assessed as suffering from "weak institutional capital": anticorruption, transparency, and accountability institutions; financial market institutions; political institutions; and labor market institutions, which were ranked as the weakest of all and furthest from the best performers worldwide (Figure 24). Communications between the government and labor market institutions are too weak to adequately identify what the government can do to better support the private sector.

Although performing well by regional standards, the government has scope to improve the management of public resources when compared against HICs. The benchmarking exercise reveals that in six out of 10 areas of anticorruption and transparency policy, Mauritius is evaluated as having "weak institutional capital" (Figure 25). The country performs worst on indicators of the right to information and best on indicators of rigorous and impartial policy analysis and the

transparency of government policymaking. Furthermore, Mauritius's performance on measures of anticorruption policy have been declining. The country ranked 52nd out of 180 on Transparency International's latest Corruption Perception Index, dropping four places since 2012. The Global Corruption Barometer found that 61 percent of citizens believed that corruption had increased in the past 12 months⁶². In the World Justice Project RLI Index 2020, Mauritius received a score of 0.59/1 in the absence of corruption indicator and was ranked 43rd out of 128 countries. More specifically, the legislature received the lowest score of 0.33/1 compared to the executive branch (0.6/1) and the judiciary (0.79/1). This result corresponds with the findings of the 2020 Global Corruption Barometer, which showed that 23 percent of citizens thought that most or all members of parliament were involved in corruption, and 14 percent believed the same about most or all government officials.

The government has yet to put forward a concrete reform plan to address increasingly negative views on corruption⁶³. Although the Independent Commission Against Corruption (ICAC) is authorized to investigate allegations of corruption by public officials at all levels, the findings from a recent survey reveal that citizens have a negative opinion of the ICAC's effectiveness⁶⁴. The agency is often perceived to exercise its powers in an unbalanced manner, either ignoring allegations against senior politicians, particularly those aligned with the administration in power, or advocating for their dismissal rather than conviction. The ICAC is also believed to focus on minor incidents, rather than targeting large-scale corruption⁶⁵. Such suspicions are compounded by the fact that the board of the ICAC, which carries out an initial assessment of all complaints, is appointed by the prime minister⁶⁶.

The country's performance on the World Justice Project's Rule of Law Index declined slightly from 2019 to 2021. Mauritius ranked 38 out of 128 countries, dropping by one position to become third in Sub-Saharan Africa after Namibia and Rwanda and sixth out of 42 UMICs. Mauritius's lowest rankings were on indicators of: (i) order and security (51/128); (ii) open government (50/128); and (iii) constraints on government powers (47/128). Additionally, the 2021 Economic Freedom Index shows that government integrity is the lowest ranked indicator (Figure 26).

⁶¹ World Bank. Institutional Assessment Across the Budget Cycle. August 2021.

⁶² Transparency International, Global Corruption Barometer, 2020

⁶³ Ibid.

⁶⁴ Assessing the effectiveness of the fight against public-sector corruption in Mauritius: Perception v reality. Peerthum, S; Parsad Gunpath, R.; Luckho, T; 2020.

⁶⁵ African Integrity Indicators - Indicator 012 for Mauritius (2022) available at <https://www.africaintegrityindicators.org/data>.

⁶⁶ Ibid.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Quality service delivery is a defining characteristic of high-income countries and Mauritius's performance in this area compares quite favorably with this benchmark.

Despite lagging in areas of transparency and anti-corruption, Mauritius's data benchmarked against high income countries suggests that the country is doing well in the delivery of public services (Figure 27), which is perhaps helped by the relatively small scale of the government delivery systems required. Delivery of public services is directly affected by the PFM systems and, in particular, Mauritius's steering capability at the center of government and the management of pressures of influence place Mauritius in the top 25th percentile. Regulatory governance and appointment decisions are, however, located in the bottom quartile. In terms of fiscal management, the country ranks directly in the middle – at the 50th percentile, suggesting scope for further improvement to move closer to the frontier.

Box 2: Institutional Benchmarking

The benchmarking exercise adopts the “closeness to frontier” (CTF) methodology⁶⁷. The CTF methodology allows for the assessment of a country's performance across institutional indicators by comparing it with the “global frontier,” that is, the world's best performer. For each indicator, a country's performance is rescaled on a 0–1 scale using the linear transformation $(worst - y) / (worst - frontier)$, where 1 represents the best performer and 0 the worst performer⁶⁸. The higher the score, the closer a country is to the best performer and the lower the score, the closer a country is to the worst performer, and more distant from the frontier. The best and worst performers are identified using available data from the global sample (i.e., all countries for which data are available) for the past five years. Thus, a country may set the frontier for an indicator, even though it is no longer at the frontier in the most recent year for which the indicator is available.

Figure 24. Quality of Mauritius Institutions: An Overview

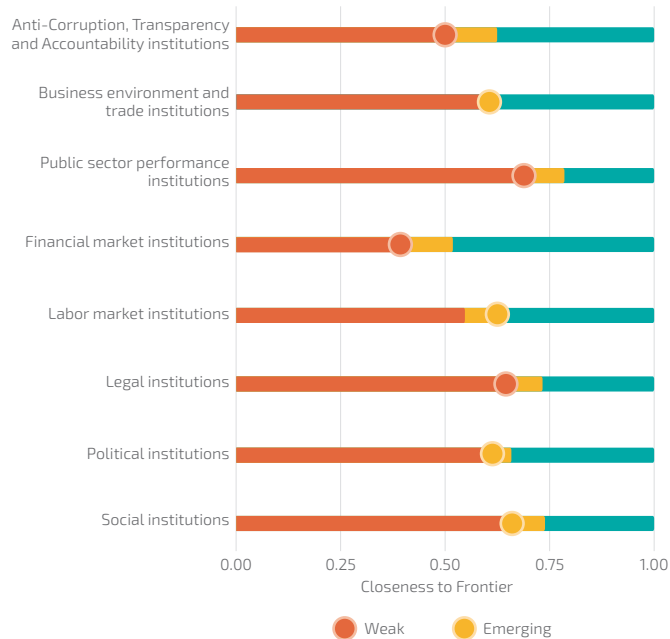
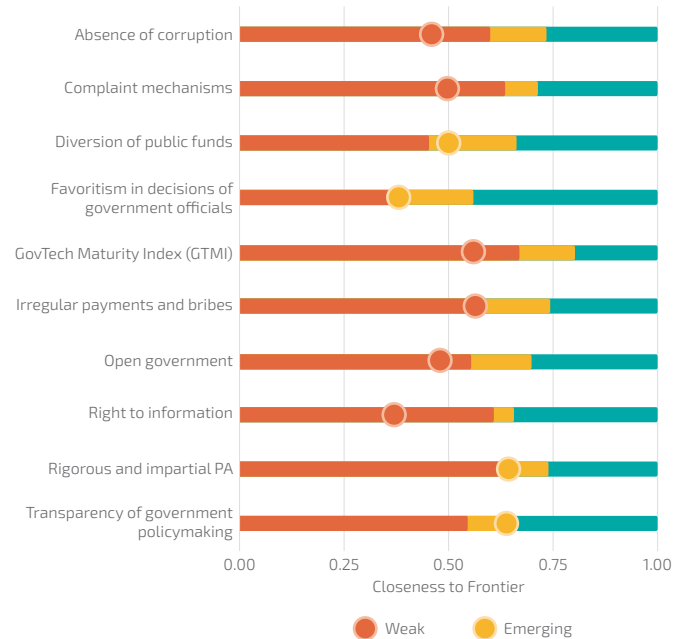


Figure 25. Anti-Corruption, Transparency and Accountability



⁶⁷An alternative method, the “stochastic frontier analysis,” was rejected in favor of the CTF.

⁶⁸This methodology is slightly different from the one used in Doing Business (www.doingbusiness.org), where the frontier is set differently for each indicator. For indicators that are bounded, by definition, between a minimum and a maximum possible value (such as the “strength of legal rights index” or the “quality of land administration index,” bounded between 0 and 1 by definition), the frontier is set at the highest possible value. For other indicators, the frontier is set at the 95th percentile or at the 99th percentile, depending on the dispersion in the distribution of the indicator.

Figure 26. Rule of Law

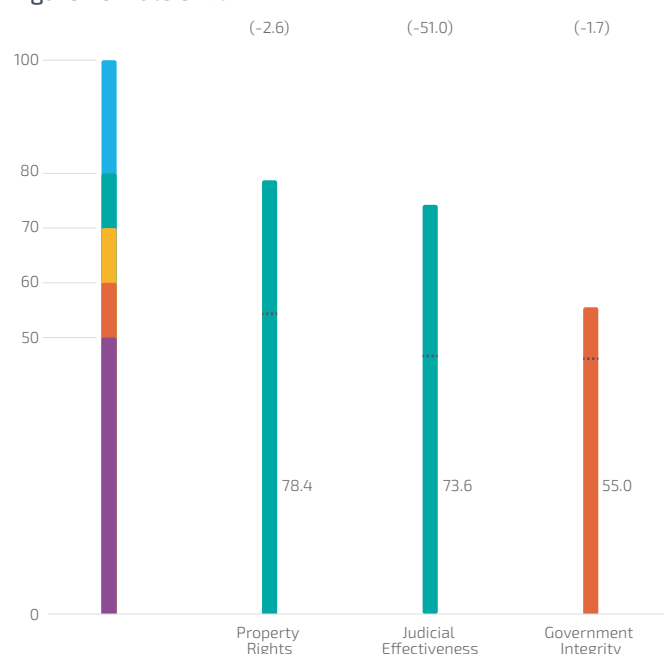
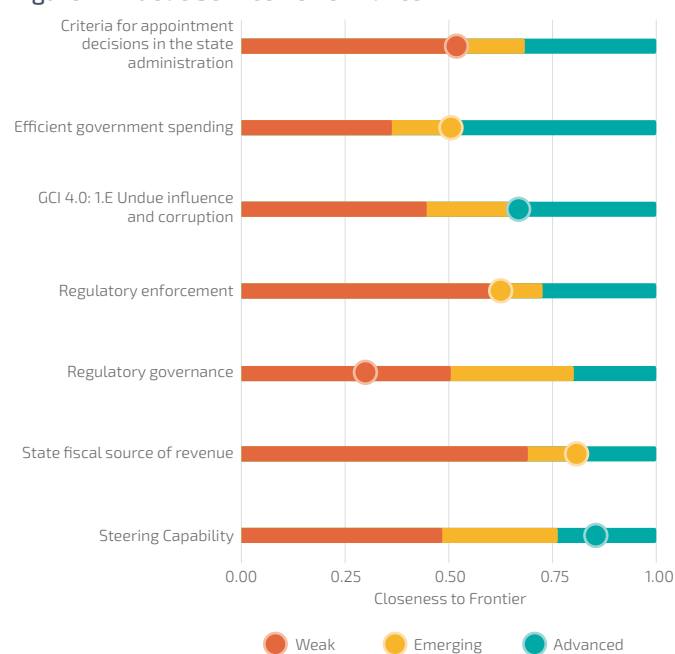


Figure 27. Public Service Performance



Source: Transparency international, Global Corruption Barometer, Transparency international, Global Corruption Barometer, WEF, Global Competitiveness Index, V-Dem, Open Data Barometer and World Wide Web Foundation, UN E-government Knowledgebase.(1)

b) Mauritius has been making steady progress on implementing reforms

Over the past decade, Mauritius has implemented or begun implementing various reform measures to strengthen PFM. Key measures included introducing a Medium-Term Expenditure Framework (MTEF), adopting accounting standards, and creating a Treasury Single Account (TSA). These reforms have had a positive impact on PFM, but continued support will be necessary for full implementation.

- **MTEF.** In 2015, Mauritius began transitioning to an METF framework. While there is evidence of good progress towards fully integrating the MTEF into the budgeting process, the 2020 AfDB Fiduciary Risk Assessment highlighted lack of costed strategies⁶⁹ to support the MTEF as a key risk.
- **Introduction of new budget classifications.** The classification system used for budget formulation, execution and reporting for budgetary central Government is based on GFS 2001 standards. The budget classification and chart of accounts included functional, administrative, program, sub-program, and economic classifications. The COFOG sub-functional classification is automatically linked to a program/sub-program code.

- **National Audit Office.** Previous reports on PFM have questioned the robustness of the National Audit Office, but the audit function has steadily improved since the PEFA and AfDB reports. The share Ministries and Departments submitting their annual report on performance rose from 40 percent in 2019/20 to 70 percent in 2020/21⁷⁰. Furthermore, the National Audit has started tracking and publishing compliance with recommendations in four categories ranging from “no action” to “fully resolved” and of the 2019/20 recommendations, 20 percent have been fully resolved and 76 percent have seen some action.
- **Introduction of accounting standards.** The financial statements are prepared in accordance with national standards based on generally accepted accounting principles (GAAP), and these are applied consistently. Additional financial assets and liabilities information (e.g., deposits, public sector debts, arrears of revenue, and foreign aid received) are disclosed in the financial statements. In 2018, the Government decided to transition to accrual based IPSAS and, thus, has been progressively incorporating assets and liabilities in its financial statements. The financial statements of the Government for the financial year 2022-2023 will be the first in which all statements will have to be prepared in compliance with International Public Sector Accounting Standards.

⁶⁹ Costed strategies align the strategic program/project planning of a government entity/cost center to the anticipated costs of implementing these programs/projects. Such costed strategies are required for a robust MTEF as they are the basis for projecting the country's medium-term expenditures.

⁷⁰ <https://nao.govmu.org/Documents/Reports/2022/AuditReportMauritius2020-21.pdf>

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

• **Better cash management through the TSA.** The Treasury maintains one main account at the Bank of Mauritius plus several foreign currency accounts. The eight self-accounting ministries/departments maintain two bank accounts (revenue and expense) at the State Bank of Mauritius (SBM). The Treasury has a direct link to the Bank of Mauritius and therefore is aware of the balance on the main account in real time.

However, other reform efforts have stalled or been rolled back over the previous decade, and implementing them will require renewed effort and support. These reforms have included a switch to and back from program budgeting, slow progress on planning and public investment management, canceling plans to improve government automation through HRMIS and e-budget, strengthening follow up on Department of Audit recommendations, and performance measurement to link expenditures with outcomes.

c) Additional reforms are necessary to improve PFM performance

PFM performance has been uneven. The 2015 Public Expenditure Financial Accountability (PEFA) assessment and the AfDB's 2020 Fiduciary Risk Assessment examined progress on various performance indicators covering several dimensions of PFM. PEFA scores range from A to D+, while the overall AfDB risk ratings range from Low to Substantial. Both assessments found a generally low risk associated with the PFM system, though gaps remain due to stalled reform efforts and insufficient plans for new reforms.

Program-based budgeting (PBB) was introduced in 2007/08, but some features have since been rolled back. Budget preparation was organized by programs and sub-programs linked to specific ministry objectives. Performance indicators for each program and sub-program were also included in the budget document, and these were reported in the Accountant-General's annual report. However, after 2015 program-based budgeting was revised to mirror the previous terminology and behavior of appropriating the discretionary budget by vote. This is not a complete reversion to the previous system but more of a hybrid approach between PBB and the previous system. PBB provided a mechanism for systematically linking funding to results. In 2015, MOFEPD leadership returned to a more familiar input-based budgeting system, limiting the government's ability to reallocate resources to priority policy objectives while also limiting the performance information presented to the public and National Assembly. However, elements of performance-based budgeting are included in recent action. For example, in 2015 amendments were brought to the Finance and Audit Act for every Department to submit to the Minister of Finance, an annual report on performance

including its intended strategic directions of the following three fiscal years. Additionally, since financial year 2016-17, strategic notes were included in the budget estimate document which comprised Key Performance Indicators and targets to provide a linkage with allocation of funds.

Public Investment Management, Green and Resilient Growth, and Monitoring and Evaluation

Addressing the root causes of the underperformance of the PIM system will be critical to improve fiscal efficiency.

Recurring lapses in the management of public capital projects increase costs and weaken service delivery⁷¹. A 2022 Thematic Audit on the Management of Capital Projects identified the following issues as root causes of underperformance of capital projects; (i) complexity of procurement rules resulting in their wrong interpretation; (ii) inadequate expertise in project management and contract administration; (iii) a lack of proper coordination among authorities engaged in procurement and project management; (iv) projects were not properly planned at design stage resulting in delays, cancellation and additional works; (v) inadequate market surveys and proper database that are vital for cost estimation and preparation of specifications; (vi) failure to assess financial and operational capacity of contractors, and; (vii) a lack of proper project monitoring to ensure works are completed within their budgets, on schedule, and in compliance with relevant requirements.

The government passed the Climate Change Act in 2020, but additional actions are needed to integrate green resilient growth into the PFM system.

The legislation provided the legal authority for, among other things, the creation of a Council on Climate Change, and Department of Climate Change, and the creation of a climate change action plan. The MOFEPD has begun to incorporate climate mitigation strategies into its infrastructure development, but more robust policies and guidance documents need to be developed. Countries can take various approaches to adapting their infrastructure and protecting their economies from the impacts of climate change. For example, the Dutch government has taken the approach of safeguarding particular services rather than facilities, while Costa Rica's government launched a long-term decarbonization plan in 2019. In Kenya, the government has developed a five-year climate change action plan that includes sector-specific PIM policies and introduces decarbonization policies where appropriate. More information on each of these approaches can be found in Annex A2. However, there is no universal approach, and each country must develop its own adaptation strategy based on its needs and targets.

Stronger monitoring could support better planning. Policy coordination, planning, and monitoring have been identified as core challenges to strengthen government effectiveness

⁷¹ <https://nao.govmu.org/Documents/Reports/2022/AuditReportMauritius2020-21.pdf>

and improve the investment climate. Recent efforts have been made to develop a national vision and a national development strategy but there is no clear institutional framework for planning. For example, in 2017 MOFEPD issued a set of instructions, Capital Project Process Manual, to simplify the framework of planning, financing and implementation of capital projects. However, there is still additional aspects that need to be strengthened. Sector strategies are either absent or incomplete. Many of these strategies lack a strong implementation focus, and they often fail to link budgeting and performance management, which prevents them from serving as statements of intent to influence and shape the government's policy and financial decisions.

The government has taken steps to improve the budget process, but a lack a connection between the budget, expenditures, and policy goals persists. In 2015, the government switched from having the fiscal year aligned with the calendar year to a July/June model for the fiscal year. A clear annual budget calendar is provided, along with a budget circular and individual expenditure ceilings for ministries and departments to use in preparing their budget submissions. After budget requests are submitted to the Cabinet they are typically approved, but without a thorough review of how the budget is connected to the country's policy goals. Due in part to the resulting misalignment between budget activities and stated policy goals, the budget preparation processes received a C in the 2015 PEFA assessment.

Some monitoring is done by line ministries and other public institutions, along with limited performance audits conducted by the National Audit Office. However, performance monitoring and evaluation are not practiced systematically, and the nascent evaluation function leaves limited room for making evidence-based decisions and taking corrective action to achieve national and sector objectives. A weak PIM system, which struggles with budget execution, compounds these challenges. PIM reforms were attempted several times over the last ten years, but were never fully implemented⁷². The execution of the capital budget has been a challenge, but improvements have been made over the past few years. While the government has increased its use of SFs in an attempt to improve and expedite execution, as discussed above there is little evidence that SFs execute at a higher rate.

Public Private Partnerships

The government continues to struggle with the implementation of capital projects. Implementation is undermined by challenges throughout the PIM cycle, including inconsistent project costing due to a lack of uniform costing guide, an optimism bias in project formulation stemming from the absence of an independent review

process, limited project management capacity, and weak linkages between the line ministries and the Finance ministry during implementation. The government has taken steps to improve several of these issues with the recent formulation of the Project Implementation and Monitoring Agency (PIMA) within the MOFEPD.

The government is still developing key elements of the PPP environment, including the legal structure, the government knowledge base, and the scope of private-sector involvement. To date, the country has only implemented one PPP but has started to develop pipeline of projects and created a PPP unit to start building knowledge. Policymakers are working to strengthen the PPP environment and increase the use of PPPs to accelerate growth and more effectively leverage the country's resources. Since PPPs are generally long-term, high-value commitments, the authorities are wisely taking a slow approach to creating a well-developed PPP environment before moving too quickly into PPP commitments.

The government will need to deepen capital markets to support the increased use of PPPs. Creating markets for project financing and other long-term investments requires designing a bankable and well-planned pipeline of projects and developing regulations, policies and financial instruments that will attract and enable the engagement of foreign and domestic institutional investors in the infrastructure sector. An effective approach will require reviewing the regulations on pension funds and insurance companies and designing policies and regulations to create a market for such financial investments.

E-Government

Improving automation and developing a strategy to guide the scope and implementation of e-government systems will help strengthen PFM efficiency. At the time of the 2015 PEFA, the government was moving toward implementing e-budgeting and e-payments systems along with an upgrade to the HRMIS. However, most of these efforts have stalled, and there are no clear plans to resume them. A 2020 National Audit report highlighted several issues with the current e-government strategy, finding that the projects were generally costly, risky, slow to implement, and subject to rapid technological change. While several projects had been delivered on time, within budget and according to specifications, other projects would have to be abandoned before completion, some are experiencing cost overruns and delays, and others have recently been implemented without any perceptible benefits⁷³. The NAO found that several key aspects of the whole-of-government approach, such as close collaboration among different stakeholders, were absent.

⁷²World Bank 2020. Governance SCOPE Note for Mauritius. Not publicly disclosed.

⁷³<https://nao.govmu.org/Documents/Reports/2020/Moving%20Towards%20E-Government%20Through%20ICT-Enabled%20Projects.pdf>

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Personnel management is generally sound but could be improved through more extensive auditing. The civil service payroll and individual personnel records are maintained manually by the Human Resources (HR) section at each ministry/department⁷⁴. Key personnel details are consolidated in staff lists. Upon receiving authorization from its respective human resources section, the finance section of each ministry and department inputs changes to the variation forms. The current payroll is checked against the previous month's payroll. While payroll processing is efficient and accurate (40,000 changes are processed per month with a 0.1% error rate) and there is an audit trail for changes to the establishment, audit reporting is not routine, exposing the system to potential changes that have no paper record. Further, no physical audit of employees is conducted to ensure they are reporting to duty. The use of manual rather than automated processing of the payroll and the weakness of the audit function present a fiscal risk in terms of public sector efficiency and size of the wage bill. However, several steps have already been taken to improve the system. In 2021, an e-payroll system was developed, and all ministries/departments are using this computerized system for the processing of salaries and wages, including the issuance of pay slips.

Digital procurement systems can lower recurrent expenditures. At the time of the 2015 PEFA, the government was moving toward implementing an e-procurement system. The 2020 AfDB Fiduciary Risk Assessment noted that the e-Procurement System had been implemented by the Procurement Policy Office (PPO). The e-Procurement System's functionality includes online preparation of bid invitations, bids receipt and evaluation, and bid award notification. However, no provisions for environmentally and socially responsible procurement are currently in place, and the existing public procurement policy in Mauritius does not formally consider issues of sustainability.

E-filing of taxes is available and commonly used. The administrative burden of tax compliance is low, but there is still room for improvement. The World Bank Enterprise Survey indicates that nearly 20% of firms are still required to visit tax officials (despite the available digital services), and over 15% of firms identify tax administration as a major constraint to carrying out business. Tax laws and regulations are of generally good quality and accessible to the public. The Mauritius Revenue Authority (MRA) is responsible for tax administration and the collection of all tax revenues. The MRA maintains a database of taxpayers that uses various

sources for taxpayer registration. In November 2020, the MRA announced that tax payments under the Advance Payment System (APS) and the Current Payment System (CPS) would be deferred, and the Tax Arrears Settlement Scheme (TASS) would be renewed to provide for full or 80 percent waiver of penalties and interests on all tax arrears due, as part of its immediate response to the COVID-19 pandemic. The TASS implies a full waiver of penalties and interest provided on tax arrears due as of October 31st, 2020, under the Income Tax Act, the VAT Act, and the Gambling Regulatory Authority Act.

Audit

The 2021 World Bank's Supreme Audit Institutions Index rated the independence of the National Audit Office as "substantial."⁷⁵ However, two factors undermine the independence of the Directorate of Audit: (i) its budget is determined as part of the normal budget process and (ii) it reports to the National Assembly via the Minister of Finance rather than directly to them. The second issue may be less of a factor, as the reports are passed through the minister, since only ministers can submit reports to the legislature, but the minister does not have the authority to amend or reject the reports. The National Audit Office has made improvement over recent years where there was little evidence shown of follow up or actions taken on audit recommendations, but its annual reports continue to highlight significant issues that remain unresolved in the areas of financial reporting, procurement management, contract management, and asset management⁷⁶. These are issues that will need to be addressed for Mauritius to improve outcomes linked to expenditures.

Strengthening internal audit mechanisms will be vital to improve transparency and efficiency. The 2015 PEFA Score for Internal Audit was a C+, indicating substantial room for improvement. Government accounting and reporting is conducted on an accrual basis, except for interest on borrowing. All departments have access to the digitized TAS⁷⁷. As of the 2015 PEFA Assessment, eight key ministries⁷⁸ were self-accounting entities responsible for inputting data into the TAS system, while the transactions of the remaining ministries are processed by the Treasury. Currently, TAS has four operational modules: (i) accounts payable, (ii) accounts receivable, (iii) cash management, and (iv) general ledger. The detailed budget at line-item level is input into the system to facilitate control and comparisons of budget against actual expenditure amounts.

⁷⁴Note that at Mauritius Revenue authority, University of Mauritius and the Private Secondary Schools Authority (PSSA) there is an integrated HRMIS, which processes the payroll automatically. (PEFA, 2015)

⁷⁵The National Audit Office is the Supreme Audit Institution for Mauritius.

⁷⁶<https://nao.govmu.org/Documents/Reports/2022/AuditReportMauritius2020-21.pdf>

⁷⁷Department is defined as ministries and other constitutional bodies at both headquarters and zonal level.

⁷⁸Ministries of Health, Education, Agro Industry and Food Security, Social Security, Infrastructure, Foreign Affairs, Police and Prisons.

State-Owned Enterprises

Without reforms, weak SOEs governance could undermine effective service delivery. The government recently established the Ministry of Financial Services and Good Governance with a mandate to provide leadership, coordination, and cohesion to the implementation and monitoring of SOE reforms. It also launched the Parastatal Information Management System (PIMS), which is a web-based system developed to capture financial and non-financial information of SOEs⁷⁹. However, the current legal framework and reporting practices of SOEs negatively impact service delivery, and the fiscal risks emanating from SOEs remain high. In addition, a lack of clear development objectives and ownership policies for SOEs results in ambiguities, as the MOFEPD and the line ministries have overlapping areas of authority⁸⁰.

4.2 The budget system faces several challenges that limit its effectiveness

a) Expenditure rigidity leaves little scope to reallocate public resources in response to changing policy priorities and economic conditions

The budget is becoming more rigid and fragmented, and expenditure execution rates are falling. An analysis of public expenditure according to the rigidity of its components suggests that Mauritius has little room for flexible reallocation of public resources in response to changing policy priorities and economic conditions. Over the past decade, highly rigid expenditures average 59.5 percent, medium rigidity categories account for an average 27.7 percent and low rigidity categories represent just 12.8 percent of total public expenditures (Table 9 and Figure 28).

Highly rigid public spending categories account for around 60 percent of total expenditures and have remained mostly stable over time. This is particularly true in the case of social benefits, which account for about a third of all highly rigid spending, while employee compensation, which accounts for another third, has exhibited slightly more variability over the years. The rising share of public debt in the final years of the period reflects principal repayments on maturing foreign loans, whereas interest costs have tended to decrease amid a favorable evolution of the terms of public debt financing in the years prior to the pandemic. The three largest expenditure categories account for over 60 percent of total public spending, and they play a critical role in restricting the ability of the budget to adapt to changing policy priorities and economic conditions (Figure 29). Of the three, two are highly rigid—social benefits (22.5 percent average) and employee compensation (20.3 percent average)—and the remaining

category, grants, has an intermediate degree of rigidity (19.2 percent average).

Medium-rigidity components average at 27.7 percent of total spending, but their share has changed more over time relative to highly rigid items. These components have fluctuated from a minimum of 21.9 percent (in fiscal year 2015/16) to a maximum of 41.7 percent in 2020/21, with a trend correction in line with the period average in 2021/22. Grants account for the largest share of medium-rigidity spending at an average of 19.2 percent and are relatively stable, while the largest increase is seen in subsidies, which grew fivefold in fiscal year 2019/20 in response to the pandemic shock, although they tapered off moderately in 2020/21 and returned to their pre-pandemic level in 2021/22. The acquisition of financial assets approximately tripled in the three years leading up to the pandemic relative to their earlier trend, and further jumped to 7 percent in 2020/21, returning to around the period average in 2021/22. Other expenses, mainly transfers, increased moderately in 2017/18 and 2018/19, then rose to 5.6 percent in 2020/21, before falling back to 2.1 percent in 2021/22.

Less rigid spending categories, including goods and services expenditures and the acquisition of non-financial assets (capital expenditures), account for just 12.8 percent of total public expenditures. This group's share in total spending fell from 18.1 percent in 2012 to 8.5 percent in 2020/21, before partially rebounding in 2021/22 (Figure 28 and Table 9). While both categories average similar shares of total public spending over the period (6.7 and 6.2 percent, respectively), the degree of year-on-year variability is relatively low for goods and services expenditures and much higher for capital investment. Investment expenditure starts off at 10.8 percent in 2012, and progressively shrinks over time, reaching the lowest point of 3.5 percent in 2020/21, and recovering moderately to 4.2 in 2021/22. This decrease in capital investment is due in part to the increasing use of SFs for infrastructure, as these expenditures become classified as grants rather than acquisition of non-financial assets.

b) Volatility and uneven execution across spending categories negatively impact overall budgetary performance

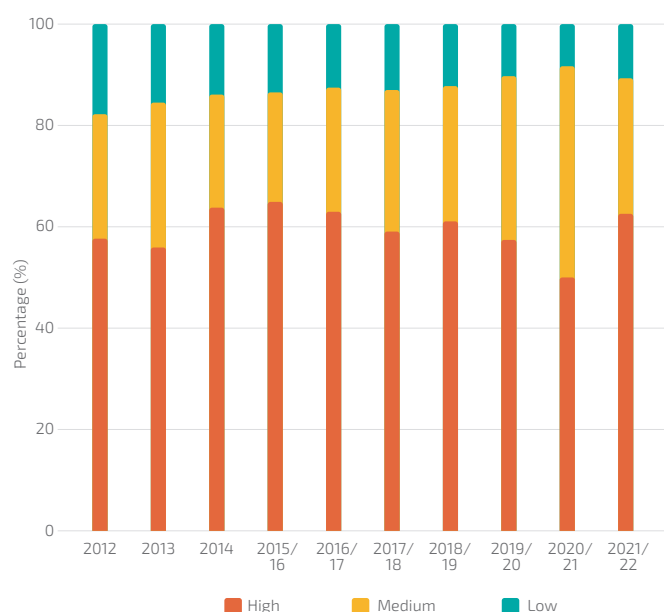
The overall budget has been broadly stable over the years. Since 2013, budget execution has exceeded 90 percent in all years except 2020, when it dropped to 72 percent due to a sudden 53 percent increase in the size of the budget (Figure 30). With such budget increase (from US\$4.6 billion in financial year 2018/19 to US\$7 billion in 2019/20), the government created the space to accommodate a flexible response to the pandemic emergency. However, while the 20 percent actual increase in

⁷⁹ 2015 PEFA. This information is available on the ministry of finance website; the budget initiatives also said that it will establish a further database on this.

⁸⁰ World Bank 2020. Gov SCOPE Note for Mauritius.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 28. Classification of Public Expenditure by Rigidity Level 2012-2022



Source: World Bank staff based on Mauritius's BOOST database.
Note: Excludes categories "N/A" and "Parent".

public spending was sizeable, it fell short from the budgeted 53 percent increase, reflecting a 28 percent budget under-execution rate. This trend corrected rapidly in subsequent years, with execution rates exceeding the pre-pandemic average.

A 2022 report by the NAO determined that improvements in cash management are needed to increase execution rates⁸¹. The report found that surplus cash that is held in SFs, the National Empowerment Foundation, various statutory bodies (while being legally transferred or temporarily held) was unnecessarily locked in unremunerated bank accounts. The NAO also found that the MOFEPD did not compute the opportunity cost of holding significant funds, nor did it consider the finance cost paid on borrowings.

The aggregate figures for budget execution obscure substantial variation across categories (Figure 31 and Figure 32). Average execution rates are highest for social benefits (99 percent), grants (97 percent) and compensation of employees (96 percent), which jointly account for the largest share of the overall budget (averaging 61.9 percent FY2012 and FY2021/22) and drive the aggregate result along with interest (96 percent). Conversely, capital spending and the acquisition

Table 9. Budgetary Rigidities, FY2012-FY2021/22 (% of Total Spending)

	Average	2012	2013	2014	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Hight rigidity	59.5	57.4	55.6	63.8	64.7	63.1	59.0	61.2	57.3	49.9	62.7
21 Compensation of Employees	20.3	21.0	19.2	19.7	25.9	24.4	21.5	20.5	16.3	14.7	19.6
24 Interest	8.3	11.4	8.2	8.3	9.5	9.4	8.4	8.6	7.1	5.7	7.0
27 Social Benefits	22.5	17.3	23.6	25.4	23.8	23.6	21.5	21.6	22.1	21.0	24.9
33 Public Debt**	8.4	7.8	4.6	10.5	5.6	5.8	7.7	10.5	11.9	8.5	11.2
Medium rigidity	27.7	24.5	28.9	22.2	21.9	24.4	28.0	26.7	32.4	41.7	26.4
20 Annual Allowance	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.4	0.0	0.0
25 Subsidies	1.8	1.3	1.2	1.3	0.4	1.3	1.2	1.0	5.3	3.6	1.0
26 Grants	19.2	18.0	19.9	17.9	17.4	18.7	18.4	16.7	19.3	25.5	20.0
28 Other Expenses*	3.0	2.7	2.5	1.6	2.1	2.8	3.9	3.6	2.8	5.6	2.1
32 Acquisition of Financial Assets***	3.7	2.6	5.3	1.4	2.0	1.6	4.4	5.2	4.5	7.0	3.4
Low rigidity	12.8	18.1	15.5	14.0	13.4	12.5	13.0	12.1	10.3	8.5	10.9
22 Goods and Services	6.7	7.3	6.0	6.2	7.8	7.5	7.0	6.8	6.3	5.0	6.7
31 Acquisition of Non Financial Assets	6.2	10.8	9.5	7.8	5.6	5.0	6.0	5.3	4.0	3.5	4.2

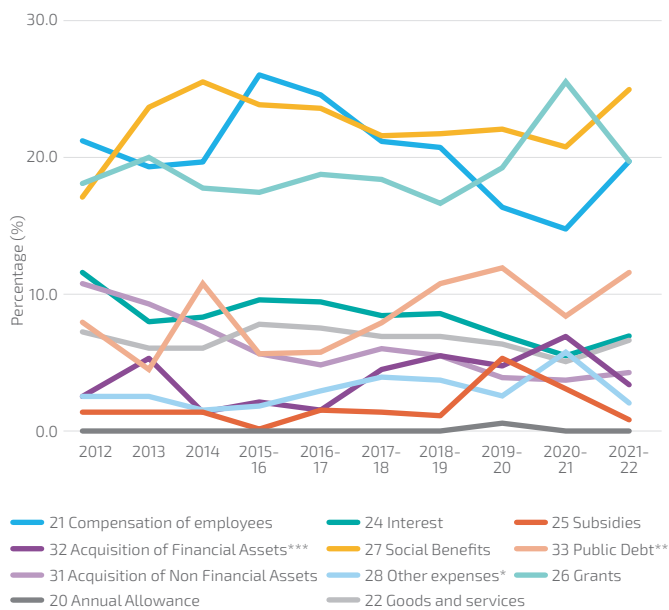
Source: World Bank staff based on Mauritius's BOOST database.

Notes: Classification based on the taxonomy from Cetrangolo et al (2010). (1) Comprises mostly transfers; (2) Comprises mostly principal repayment of foreign loans; (3) Comprises mostly reimbursement of domestic loans and domestic shares and other equity purchases.

⁸¹ <https://nao.govmu.org/Documents/Reports/2022/PerformanceReportsJune2022/Cash%20Management%20Report.pdf>

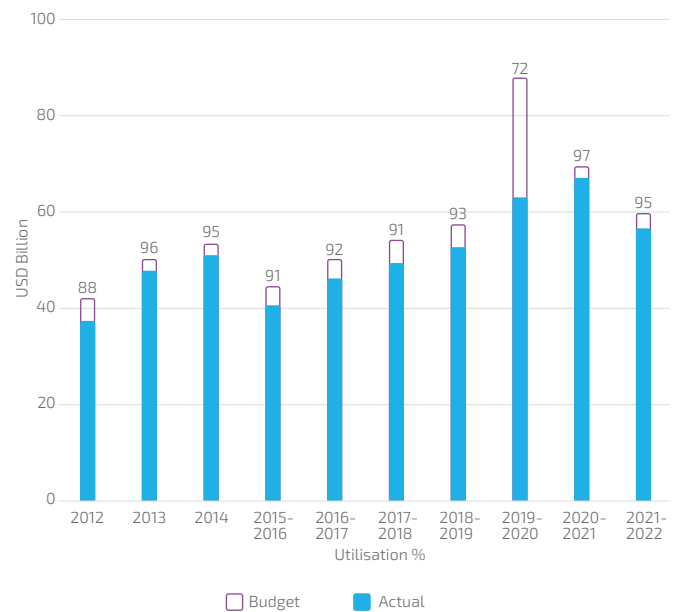
of financial assets exhibit the lowest execution rates over time, averaging 73 and 78 percent of the corresponding budgeted amounts, respectively. These are also very volatile spending categories, with budgeted and executed amounts both changing unpredictably. Another highly volatile spending category is public debt, although for the most part budgeted and executed amounts have been reasonably aligned at an average rate of 91 percent for the period, with notable exceptions in 2015/16 (54 percent) and 2019/20 (72 percent). Budgeted amounts for other expenditures are also relatively volatile and show a moderate degree of under-execution. Subsidies were relatively stable and highly executed until financial year 2019/20, when a sevenfold increase in the budget reduced the execution rate to 80 percent, though both trends had corrected completely by 2021/22. Finally, spending in goods and services has grown over the years, with a moderately high execution rate averaging 87 percent.

Figure 29. Budgetary Rigidities by Spending Category, 2012-2022 (% of Total Expenditure)



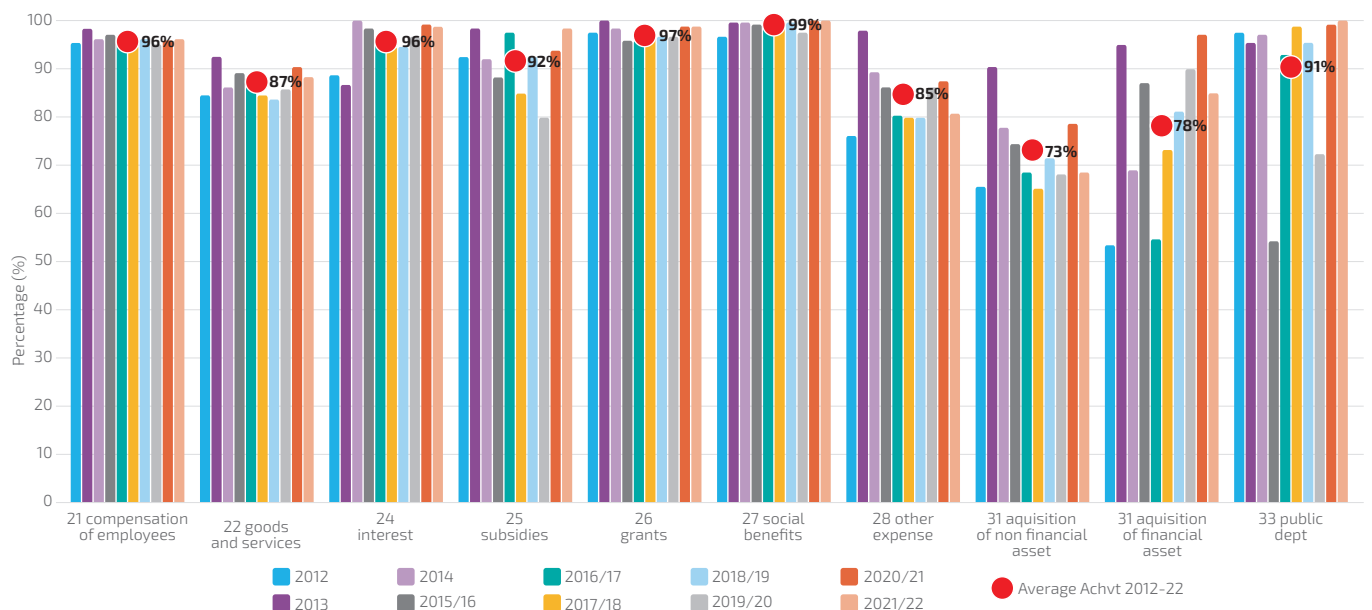
Source: World Bank staff based on Mauritius's BOOST database.
Note: Excludes categories "N/A" and "Parent".

Figure 30. Budget Planning and Execution, 2012-2022



Source: World Bank staff based on Mauritius's BOOST database.

Figure 31. Budget Execution by Economic Classification Spending Category (2012-2022)

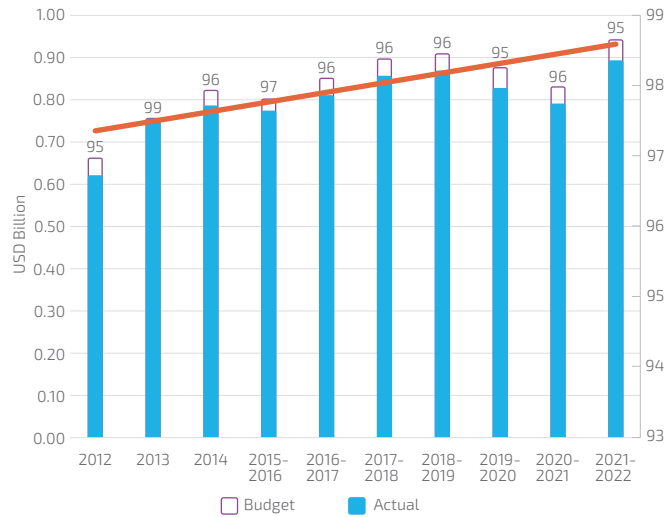


Source: World Bank staff based on Mauritius's BOOST database.
Note: Excludes "Annual Allowance" and "Parent" categories.

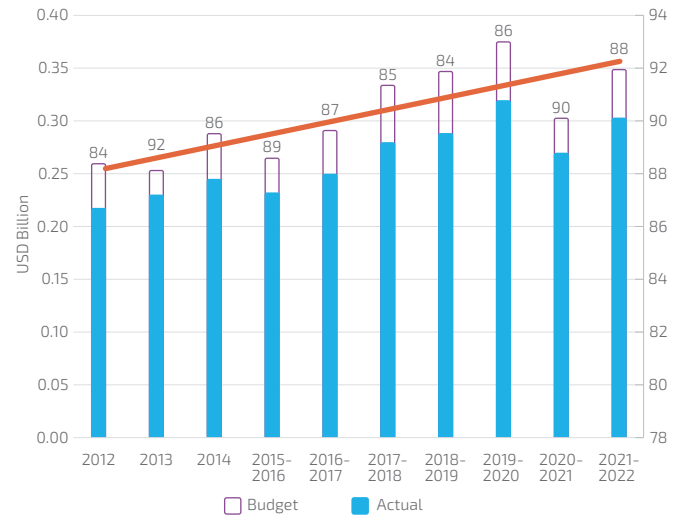
I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 32. Budgeted vs. Executed amounts by Economic Categories of Public Expenditure (2012-2022)

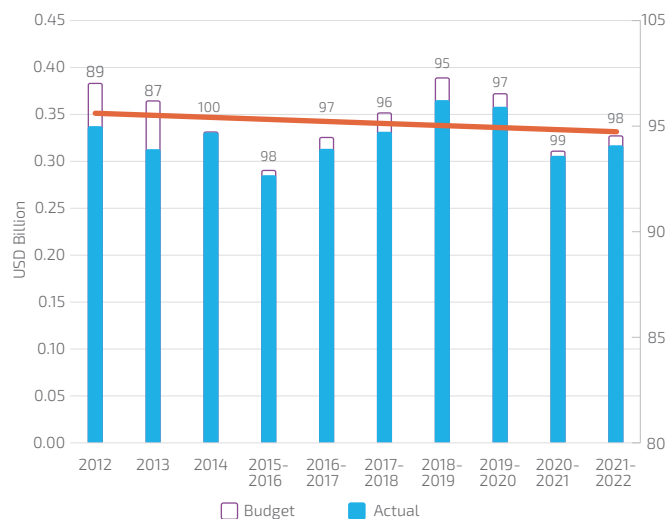
a. Compensation of Employees



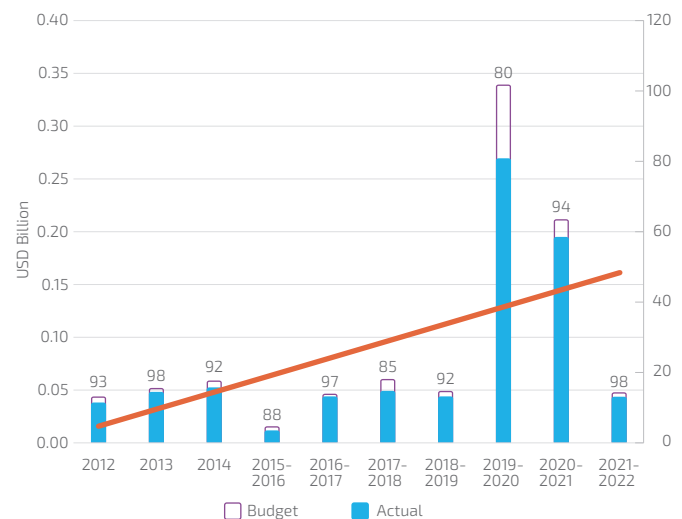
b. Goods and Services



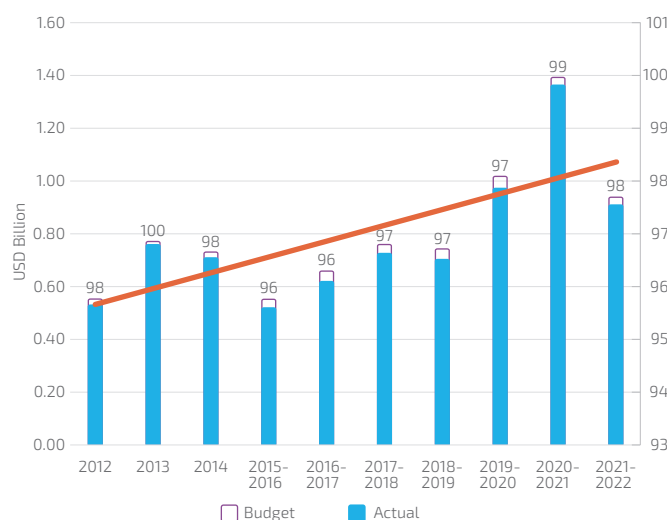
c. Interest



d. Subsidies



e. Grants



f. Social Benefits

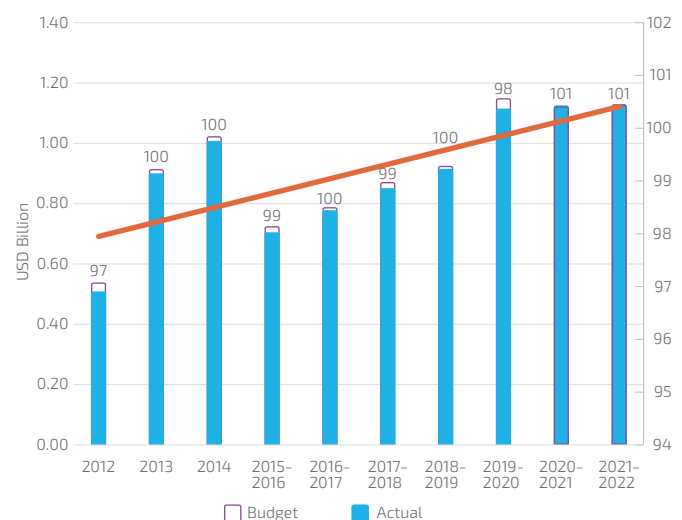
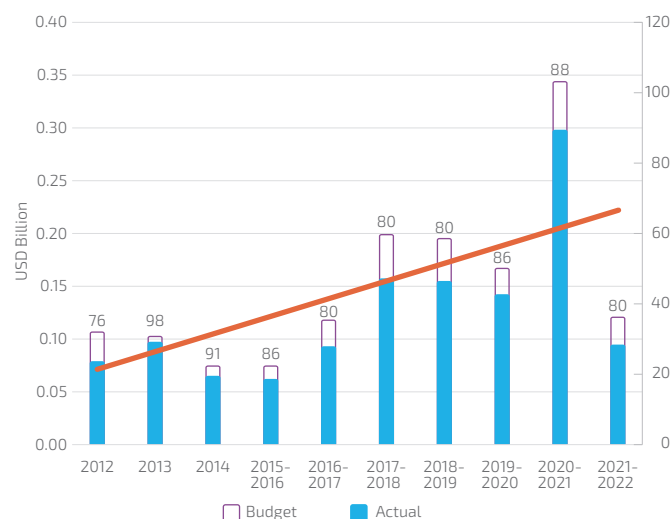
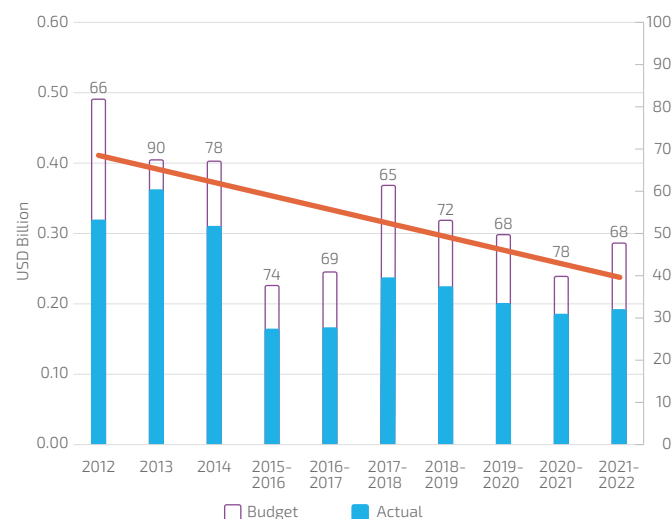


Figure 32. Budgeted vs. Executed amounts by Economic Categories of Public Expenditure (2012-2022) (Cont'd)

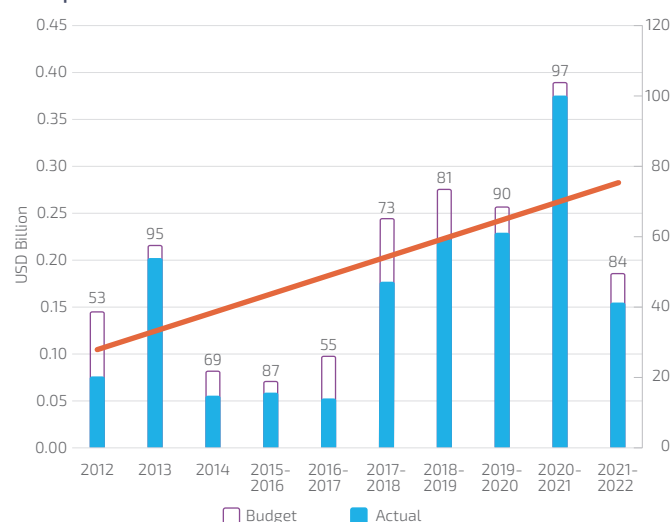
g. Other Expense



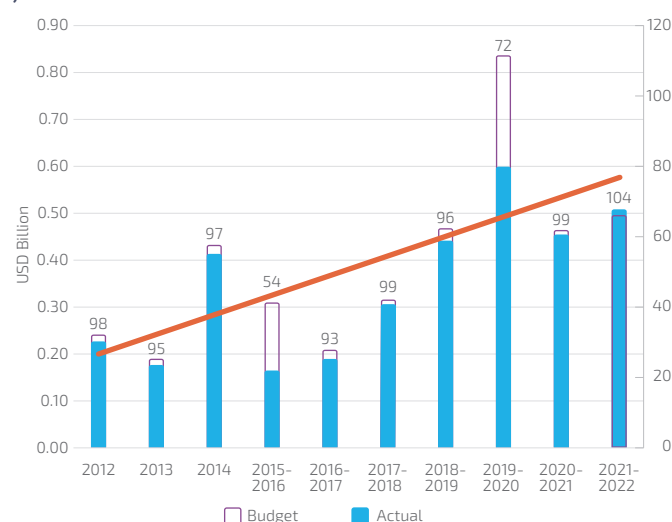
h. Capital Expenditures



i. Acquisition of Financial Assets



j. Public Debt

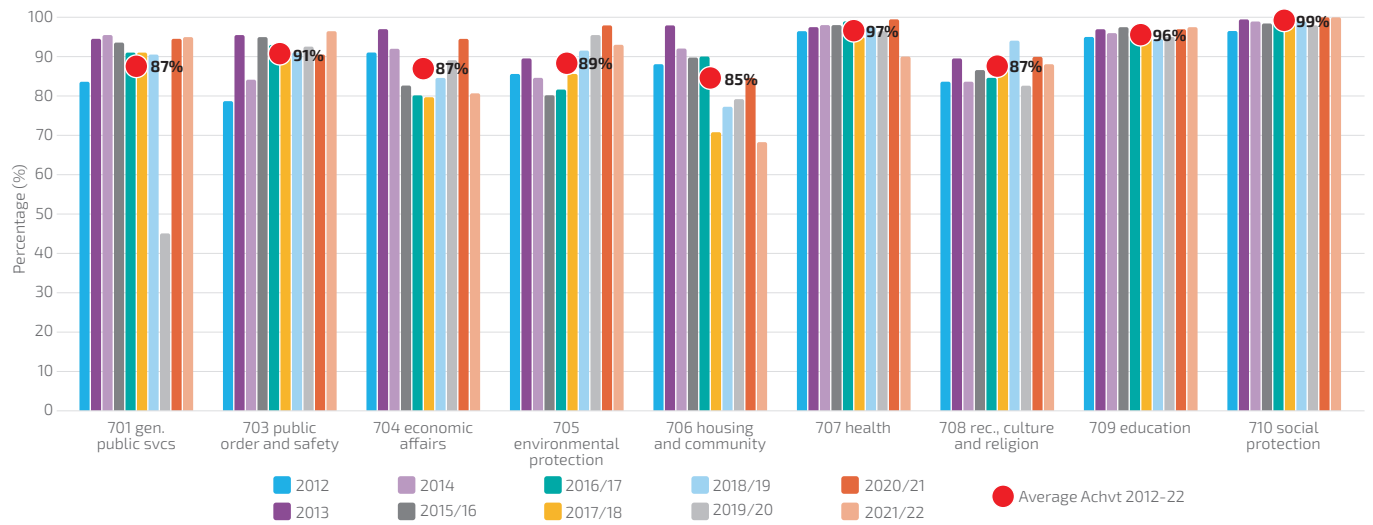


Source: World Bank staff based on Mauritius's BOOST database. Excludes "Acquisition of Financial Assets" and "Debt" categories.

When focusing on public expenditures by government functions, the highest budget execution rates are observed in social protection, health and education, denoting a high predictability of core spending that supports social capital (Figure 33 and Figure 34). Education spending has declined in the last three years relative to the pre-pandemic period, whereas spending on health and social protection increased, with the latter budget having been slightly over-executed (101 percent) in the last two years. Conversely, the government spends the least on housing and community development (average execution of 85 percent), and economic affairs, general public services, and recreation, culture and religion (87 percent each), and environmental protection (89 percent), which are also the most volatile spending categories. Budgeted amounts for environmental protection, housing and community development, as well as for recreation, culture and religion, have decreased over time, indicating that they are relatively low policy priorities. Spending on general public services, which up until fiscal year 2018/19 had been very stable and with relatively high levels of budget execution, more than doubled in the 2019/20 budget, although most of the additional allocated funds were unspent, dropping the execution rate to just 45 percent. Actual spending only moderately increased, consistent with the trend observed in previous years. Both the budgeted funds and execution rates for this spending category rapidly corrected to pre-pandemic trends over the two most recent years.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

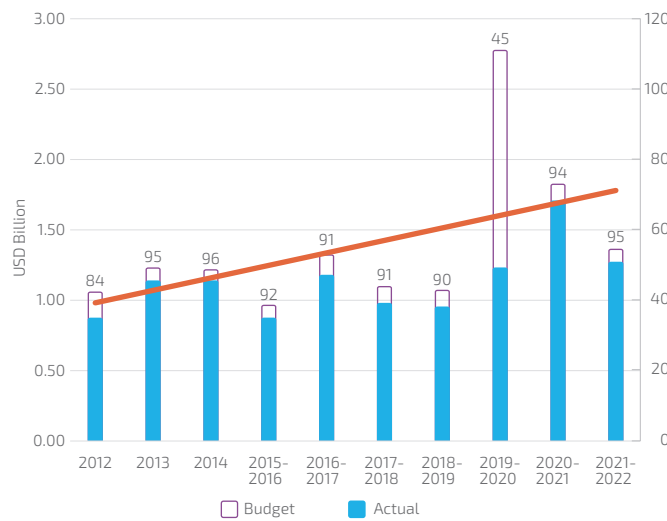
Figure 33. Mauritius's Budget Execution by Functional Classification spending category (2012-2022)



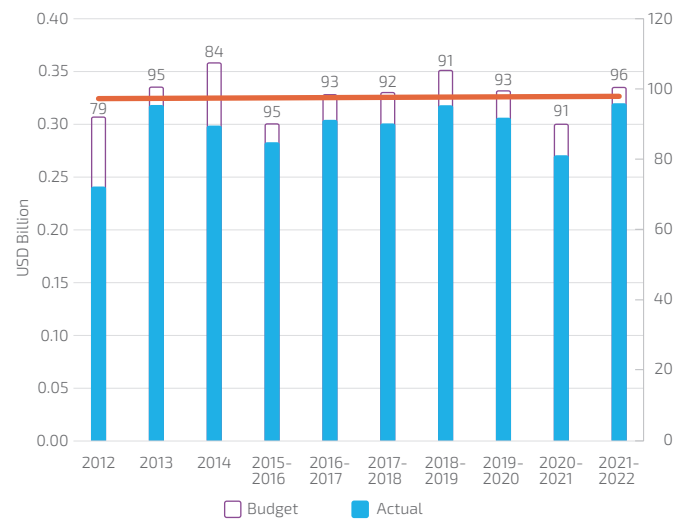
Source: World Bank staff based on Mauritius's BOOST database.

Figure 34. Budgeted vs. Executed amounts by Functional Categories of Public Expenditure (2012-2022)

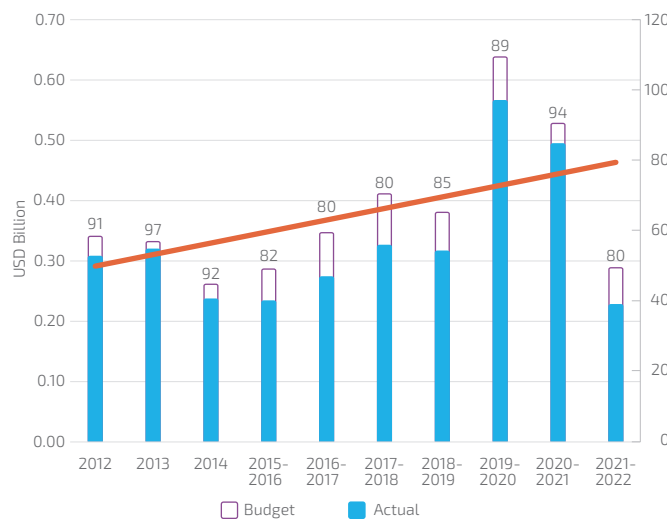
a. General Public Services



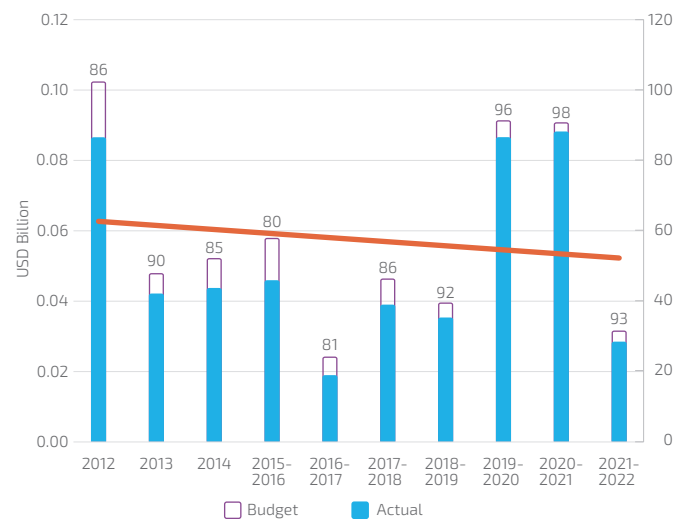
b. Public Order and Safety



c. Economic Affairs



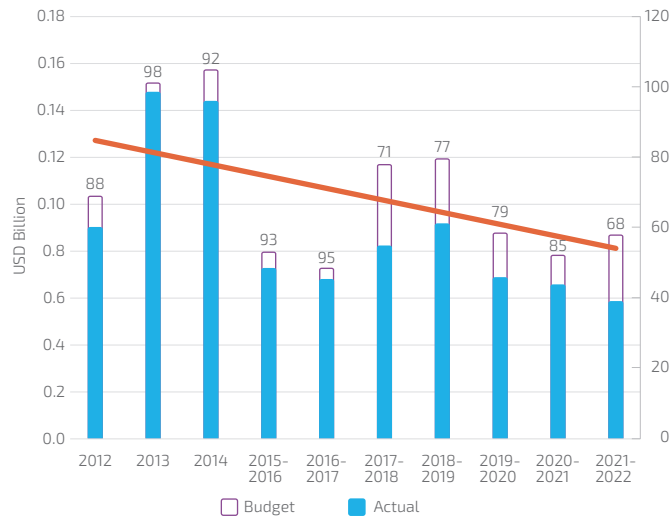
d. Environment Protection



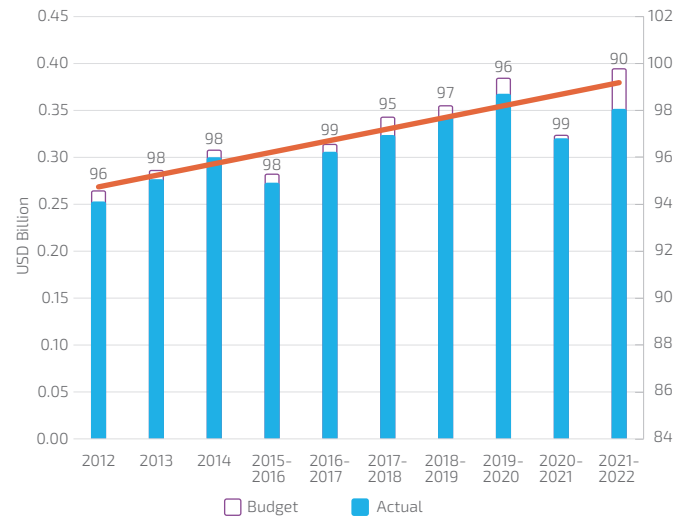
I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

Figure 34. Budgeted vs. Executed amounts by Functional Categories of Public Expenditure (2012-2022) (Cont'd)

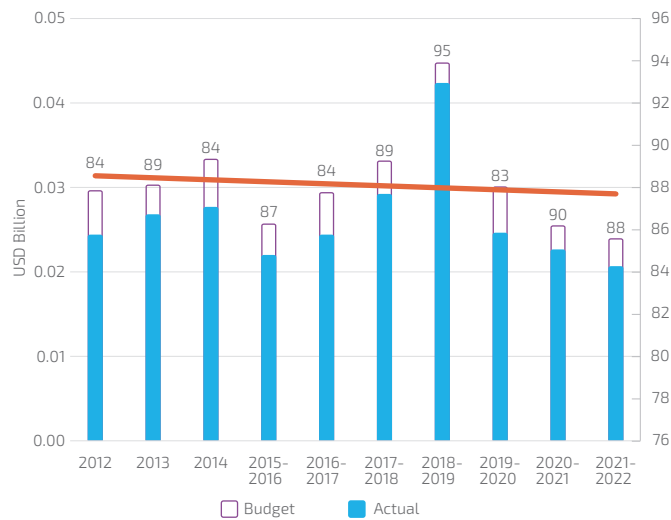
e. Housing



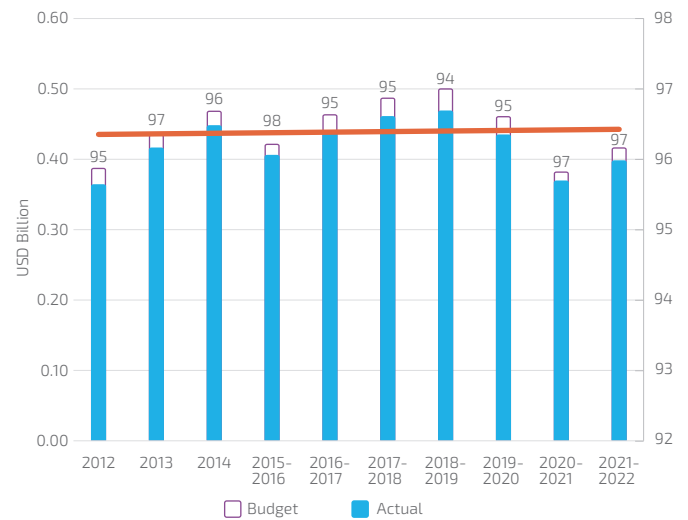
f. Health



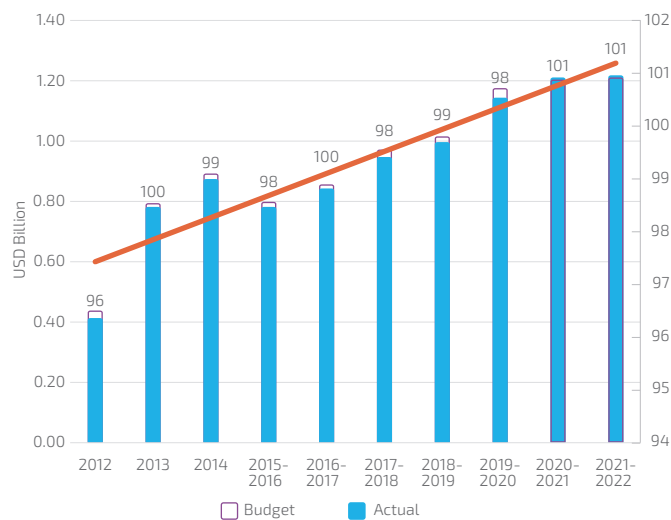
g. Recreation



h. Education



i. Social Protection



Source: World Bank staff based on Mauritius's BOOST database.

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

c) Adhering to formal budget processes and fiscal rules is vital to reestablish credible fiscal discipline

Adopting a fiscal framework that reduces the rigidity and volatility of public expenditures, curbs extra-budgetary spending, and sets forth clear fiscal rules, could improve institutional quality and strengthen resilience to exogenous shocks. For 2020/21, Special Funds aggregate expenditures amount to MUR 10.8 billion (about 5 percent of the total budget), more than twice as much the spending on environmental protection in the same year (2.3 percent of the budget) and of housing and community amenities (2.2 percent of budget spending). In 2021/22, SF expenditures climbed to MUR 14.2 billion (7 percent of the budget). When looking at allocated funds, SFs received a total of MUR 33.6 billion (15 percent of the budget) in 2020/21, and MUR 14.2 billion (7 percent of the budget) in 2021/22. While a varying portion of SF expenditures are capital expenditures designed to be disbursed over multiple years, the fact that SFs carry high cash balances instead of reallocating funds to other needs is a key source of inefficiency.

The increasing use of special funds and their carrying of high cash balances is exacerbating rigidities and fragmentation. Furthermore, as the shares of expenditures carried through special funds are non-negligible, they reduce the budget's role in public financial management and limit the resiliency of the fiscus. Strengthening the key function of the budget and MTF, which is to plan and monitor public finances in a transparent manner, will be critical for the government's ability to manage the fiscal consolidation efforts ahead and make a more efficient use of public resources. To this end, the government would benefit from minimizing the use of extra-budgetary financing by scaling back the reliance on special funds and reversing the central bank's recent involvement in fiscal activity.

The suspension of the 60 percent of GDP debt ceiling early in the pandemic was necessary to allow for emergency spending, but the absence of a fiscal rule has allowed medium-term vulnerabilities to accumulate. The IMF has recently argued that Mauritius's debt-carrying capacity may support a higher debt ceiling of about 80 percent of GDP⁸². With the pandemic crisis largely over, reinstating a debt ceiling or alternative fiscal rule would promote fiscal consolidation and reduce uncertainty. Both the specific optimum level of a new debt ceiling or alternative fiscal rule, as well as the desirable path of convergence towards it, need to be carefully calibrated to ensure that it strikes the right balance between anchoring fiscal policy to reduce vulnerabilities, and allowing adequate flexibility to support growth.

Credible efforts to increase revenue mobilization should be paired with a degree of expenditure tightening, and policymakers should avoid one-off measures and quasi-fiscal financing. While the latter may bring down debt metrics in the short term, it will not resolve the underlying structural issues around fiscal discipline. Failing to address the root cause of rising indebtedness may increase fiscal pressures over the medium term. Any new fiscal rule must be accompanied by operational guidance with robust escape clauses to allow for temporary deviations under clearly identified circumstances, in order to instill a necessary degree of flexibility to accommodate shocks, without compromising the longer-term credibility of the fiscal rule.

5. Key Messages and Policy Options

The government has effectively mitigated the economic impact of the pandemic, and it now has an opportunity to shift the focus of fiscal policy from coping with near-term crises to advancing long-term development goals. To successfully complete the transition to HIC status, Mauritius will need to rebalance public spending from supporting consumption to investing in a highly productive, knowledge-based economy. The government can reorient fiscal policy to promote long-term growth by reforming the pension system and reinvesting the savings into human capital formation and environmental adaptation and mitigation.

Restructuring the national pension system could free up considerable fiscal resources with no adverse effects on poverty or inequality. Transitioning from universal benefits to a targeted approach could ensure the sustainability of future pension outlays while yielding a net gain to the public finances. Increasing social security contributions to reduce the gap with benefit levels would further reinforce the sustainability of the system.

Reforms to enhance the efficiency of other social protection programs could further increase fiscal savings. The authorities can improve the cost-effectiveness of social spending by (i) reallocating resources from broad consumption subsidies toward targeted programs that are progressive and pro-poor; (ii) improving the tracking and monitoring of beneficiaries of social protection programs; (iii) consolidating multiple programs that share similar goals; and (iv) reorienting or eliminating programs that have outlived their usefulness.

⁸²Simione, Felix F. (2022). "Reinstating fiscal rules in the post-pandemic Mauritius: scenarios and policy options", Selected Issues paper on Mauritius, IMF, July 2022.

Protecting the resources allocated to spending categories that generate longer-term gains will be vital to achieve Mauritius's policy objectives, and will require addressing current budget shortcomings in some of these areas.

Increasing spending on categories that support human capital development, particularly health and early childhood and tertiary education, will support the transition to a knowledge-based economy. In addition, spending on environmental protection is too low to achieve the government's 2030 climate targets, and risks from climate change are rising. Given its limited fiscal space, the government could seek to access global climate funds and climate-related debt instruments, such as green bonds, which will require reforming the systems for planning, appraising, executing, and reporting on climate-related projects⁸³. Public capital investment in the development and maintenance of climate-resilient infrastructure should also be prioritized.

Strengthening macroeconomic stability and predictability will provide a strong foundation for continued growth and development of Mauritius.

Reinforcing the independence of the central bank will be vital to sustain the effectiveness of monetary policy, control inflation, and decrease the perceived level of macroeconomic risk. The government can mitigate fiscal risks by avoiding recourse to quasi-fiscal operations, while establishing strong and credible mechanisms to ensure fiscal discipline to support sustained fiscal consolidation efforts. In parallel, adhering to fiscal rules and strengthening the budget process will support predictable and efficient fiscal policies.

Aligning revenues with expenditure levels will require boosting revenue mobilization and stemming revenue losses.

The government can increase revenue mobilization by raising social contributions and both direct and indirect tax revenues. Social contributions should rise to match social spending, including pensions, to ensure the sustainability of social support systems, or at least reduce the existing gap between them to the averages observed in UMIC and HIC countries. There is also scope to increase revenues from direct taxes, as the government's heavy reliance on VAT increases the regressivity of the tax system, while the income tax regime is subject to a rapidly expanding array of exemptions. Tax exemptions are a significant source of revenue loss that could be reduced by streamlining and minimizing such measures, especially in the instances in which their expected benefits have not materialized.

A comprehensive tax-reform effort is called for, encompassing international taxes, business taxes, and personal, indirect and other taxes⁸⁴. To maintain its beneficial

network of tax treaties, Mauritius will need to concede more taxing rights to source countries and combat treaty abuse. The authorities should build upon recent policy actions in this area by strengthening adherence to international best practices for tax neutrality and efficiency. In 2006, the government successfully cracked down on excessively generous investment tax credits—which erode the tax base, distort incentives, and have proven ineffective—but in recent years new credits have proliferated. This is especially true for the manufacturing sector, where the standard depreciation allowance is already generous, and when combined with a tax credit or holiday it may result in an effective subsidy. Efficiency gains would be achieved by rolling back these incentives and treating investment more uniformly, and from being more evenhanded in the treatment of domestic firms and GBL firms. The complex and unusual tax regime applied to banks could be replaced with a standard CIT, while the presumptive tax for small businesses needs to be clearly regulated, and its eligibility limit better assessed. Streamlining and scaling back PIT exemptions could further increase revenue. Adopting a low and uniform rate for taxation of all capital income could boost revenue and while improving the equity of taxation and laying the groundwork to reduce the excessively high transfer tax rates. Finally, VAT revenue could be increased by 39 percent or about 2.5 percent of GDP without raising its standard rate by scaling back zero-rating products and exemptions, while extending its coverage through a reduction of its threshold.

In addition to these policies, Mauritius can adopt cost-effective innovations in revenue administration informed by insights from behavioral science.

Evidence from World Bank projects underscores the effectiveness of behaviorally informed strategies to improve tax compliance among individuals and businesses. These gains tend to come at a low financial and political cost and may lead to further innovations in revenue administration⁸⁵.

The government needs to assess and quantify the full spectrum of fiscal risks, beyond those arising from the fiscal deficit and the public debt stock.

To this end, establishing and regularly updating a consolidated repository of all state-guaranteed debt will be essential. A related database should compile and track cases against the government in domestic courts. An annually updated repository of causes related to taxes and pensions should be made available internally to relevant government departments and agencies, along with a repository of cases that are under international arbitration or at high risk of contesting a domestic court ruling in favor of the government. SOE debts are high and require special attention. SOE debt management should be linked to performance monitoring and efforts to improve governance and overall

⁸³ See; Simione, F.; Clifton, R. and Rial, I. (2022). "Addressing Climate Change in Mauritius: Financing and Reform Options", IMF Selected Issues, July 2022.

⁸⁴ Keen, M.; Beer, S.; Hillier, C.; Prihardini, D. and Verhoeven, M. (2021). "Tax Policy for a Changing World", IMF Technical Report, June 2021.

⁸⁵ Goodnow-Dalton et al. 2021. <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/472181576511865338/behavioral-insights-for-tax-compliance>

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

performance. Due to exchange-rate risks, the government is advised to seek a reduction in the share of state-guaranteed debt that is denominated in foreign currency, which presently accounts for three-fourths of all state-guaranteed debt and which arises entirely from SOEs. This is particularly important in the case of debts to foreign private banks, which represent a sizable share of state-guaranteed debt. It will also be critical to monitor and regularly update information on non-guaranteed debt as government might be expected under certain circumstances, such as large systemic shocks, to assume all or part of the debt even if it is not legally obligated to do so.

If properly designed and managed, PPPs could provide large net benefits over the long run. To achieve this, the government needs to develop an adequate PPP framework that clearly defines its relationship to each project and private partner. While the project selection and preparation process should assign risks to the private sector, legal provisions that conform to international best practices will still be necessary to safeguard the state from contingent liabilities. Creating successful PPPs will require strengthening the public sector's capacity to design and implement these arrangements. To this end, it will be crucial to integrate capacity-building activities into a multiyear PPP development plan, and enlist international PPP experts to provide training programs and skills-development workshops to impart the necessary knowledge and skills to public-sector staff.

Ensuring sustained compliance with international regulations and standards for the offshore sector is another priority. The management and oversight of the offshore sector is an especially critical issue in Mauritius, as a return to international watchlists could jeopardize financial inflows, with negative consequences for the stability of banks and the overall financial sector.

Closely tracking MIC lending operations will help minimize the risk of commercial failures in its portfolio, which could otherwise create sizeable indirect contingent liabilities. Because of the MIC's mandate, the failure of large or strategically important projects could generate considerable political pressure for government bailouts. As the government has committed to refraining from any additional nonrefundable central bank transfers, these funds would need to come from the national budget. In addition, the MIC should return any undisbursed and uncommitted funds to the central bank to mitigate its current under capitalization. Broader fiscal consolidation plans need to be informed by current MIC investments and comprise a payback schedule based on expected profits, to gradually return to the central bank the funds received by the government through non-refundable transfers carried out in FY19/20 and FY20/21.

The authorities can further strengthen the independence of the National Audit Office by funding it through a Legislative Committee rather than through the traditional budget process. The authorities could also enhance the efficiency of the office by creating a list of high-risk areas for audit compliance, such as procurement and contract management. Staff attention and resources could then be prioritized according to risk, both in terms of the likelihood of discovering noncompliance and the risk it would pose to overall government performance.

Restricting use of Special Funds to providing temporary financing in exceptional circumstances where the budget process is not sufficiently flexible would improve cash management, while proper consolidation of any existing special funds into the budget would help provide a more accurate fiscal picture. The budget process should be the main vehicle for addressing any recurrent and capital expenditure needs, and transfers from the consolidated fund to Special Funds should be made only when necessary to meet payment obligations, as the use of Special Funds has not been shown to improve execution, and these funds tend to carry large cash balances. Putting in place more stringent criteria and guidelines for the creation and closure of Special Funds could improve the efficiency of expenditures and execution rate of the overall budget. Decreasing administrative fragmentation could also simplify the management of public resources. Last, properly consolidating any existing special funds into the budget by considering as expenditures only the amounts spent by them, rather than the amounts transferred to the special funds as presently done, would provide a more accurate fiscal picture.

A stronger M&E framework could more closely link expenditures with outcomes. M&E should encompass the technical efficiency, allocative efficiency, and distributional equity of public spending. Resuming the use of fully program-based budgeting could clarify the relationship between expenditure planning and outcomes.

Conducting an e-government assessment and using it to develop a comprehensive e-government strategy and implementation plan would be key to improve public service delivery. Mauritius's current e-government systems are inadequate to support its growth objectives. The budget system, HRMIS and payroll, e-procurement, the interface with the private sector, and the delivery of services to the public sector all need to be overhauled and upgraded. Ad hoc improvements to these systems are unlikely to achieve the desired results, which include: (i) improving administrative and regulatory processes, minimizing bureaucracy, and facilitating tax compliance; (ii) building the government's awareness of the public services

I - Modernizing Fiscal Policies and Upgrading Public Finance Management to Strengthen Macroeconomic Stability and Boost Economic Growth (Cont'd)

demanded by the private sector and enhancing engagement through flexible planning; (iii) strengthening interagency communication and improving collaboration with labor-market institutions to help the government identify how best to support the private sector's evolving needs; and (iv) developing and implementing a reform plan to improve the public's perception of the government, build trust in public institutions, and facilitate access to government services. An effective e-government reform strategy will require reforms to laws governing the transparency and accessibility of information. As part of the assessment, the government could pilot a project management system designed to track project implementation.

A return to program-based budgeting would help strengthen strategic planning and mainstream climate-change adaptation and mitigation into the public investment cycle. National Development Plans need to be clearly linked to project selection, preparation, and implementation. Also critical would be the development and implementation of specific guidelines and budgeting processes for climate adaptation, while improving results monitoring. Finally, building the capacity of government officials involved in procurement and project management would improve the overall effectiveness of public spending.

References

- African Integrity Indicators - Indicator 012 for Mauritius (2022) available at <https://www.africaintegrityindicators.org/data>.
- BOOST database for Mauritius, World Bank.
- Fritz, Verena; Verhoeven, Marijn; Avenia, Ambra (2017). Political Economy of Public Financial Management Reforms: Experiences and Implications for Dialogue and Operational Engagement. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/28887> License: CC BY 3.0 IGO.
- Goodnow-Dalton et al. (2021). <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/472181576511865338/behavioral-insights-for-tax-compliance>
- IMF Fiscal Monitor (2021). Database of Country Fiscal Measures in Response to the COVID-19 Pandemic.
- IMF (2022). Mauritius: Staff Report for the 2022 Article IV Consultation, July 2022.
- IMF World Economic Outlook, April 2022.
- IMF GFS, May 2022.
- Keen, M.; Beer, S.; Hillier, C.; Prihardini, D. and Verhoeven, M. (2021). "Tax Policy for a Changing World", IMF Technical Report, June 2021. Not publicly disclosed.
- Mauritius Investment Corporation Ltd. Inaugural Report 2021.
- Mauritius PSIP 2021/22-2025/26.
- Peerthum, S; Parsad Gunpath, R.; Luckho, T (2020). Assessing the effectiveness of the fight against public-sector corruption in Mauritius: Perception v reality.
- PEFA (2015).
- Ruiz del Castillo, R., Cetrángolo, O., & Jiménez, J. P. (2010). Rigidities and fiscal space in Latin America: a comparative case study. ECLAC.
- Simione, Felix F. (2022). "Reinstating fiscal rules in the post-pandemic Mauritius: scenarios and policy options", Selected Issues paper on Mauritius, IMF, July 2022.
- Simione, F.; Clifton, R. and Rial, I. (2022). "Addressing Climate Change in Mauritius: Financing and Reform Options", IMF Selected Issues, July 2022.
- Statistics Mauritius, various statistical publications.
- Transparency International, Global Corruption Barometer, 2020.
- United Nations, Department of Economic and Social Affairs, Population Division (2022). World Population Prospects 2022, Online Edition.
- World Bank (2020). Governance SCOPE Note for Mauritius. Not publicly disclosed.
- World Bank (2021). Institutional Assessment Across the Budget Cycle, August 2021.
- World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.
- World Bank (2022). Mauritius Systematic Country Diagnostic Update, January 2022.
- <https://www.mic-ltd.mu/wp-content/uploads/2022/02/MIC-AR-22.pdf>
- <https://www.mic-ltd.mu/our-activities/#>
- <https://nao.govmu.org/Documents/Reports/2022/AuditReportMauritius2020-21.pdf>
- <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/472181576511865338/behavioral-insights-for-tax-compliance>
- https://www.moody's.com/research/Moodys-downgrades-Mauritius-rating-to-Baa3-changes-outlook-to-stable--PR_467667
- https://www.moody's.com/research/Moodys-downgrades-Mauritius-rating-to-Baa3-changes-outlook-to-stable--PR_467667#:~:text=New%20York%2C%20July%2028%2C%202022,outlook%20to%20stable%20from%20negative
- <https://nao.govmu.org/Documents/Reports/2020/Moving%20Towards%20E-Government%20Through%20ICT-Enabled%20Projects.pdf>
- <https://nao.govmu.org/Documents/Reports/2022/PerformanceReportsJune2022/Cash%20Management%20Report.pdf>
- <https://mof.govmu.org/Pages/Debt-Data.aspx>
- https://www.bom.mu/sites/default/files/bank_of_mauritius_act_amended_fa_2022.pdf

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development

1. Introduction

To achieve and sustain HIC status, Mauritius will need to prioritize policies that boost innovation and build human capital. Complemented by an open and competitive environment, such policies will help the country transition to a knowledge-based economy and become more resilient to climate shocks, while taking advantage of the opportunities derived from global decarbonization. As explained in Part I, Mauritius experienced an impressive growth trajectory since its independence, but it has lost dynamism in recent years. In order to regain HIC status and sustain it going forward, Mauritius will need a new generation of reforms and policies capable of fostering innovation and encouraging the development of new high value-added sectors, such as those to be favored by the transition towards a greener economy, able to sustain a higher standard of living for the population. Mauritius also needs to upgrade its education system to close the skills gap that holds back potential high-growth sectors while sustainably reducing income inequality⁸⁶. Some of the resources saved in this process could be utilized to build climate resilience, while a higher level of human capital accumulation, in turn, will contribute to a more resilient society overall.

Mauritius was one of the first countries in Sub-Saharan Africa to achieve universal primary school enrollment.

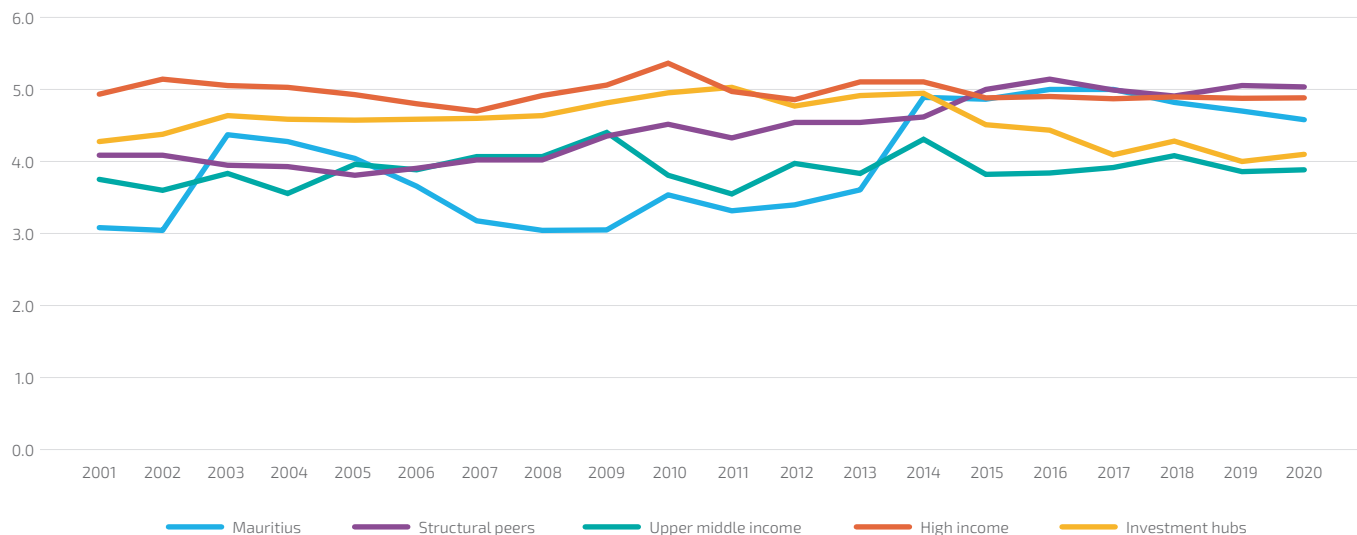
Education has long been among the main priorities of the government, which has invested considerable financial and institutional resources in improving and expanding the education system. Education has been free through the secondary level since 1976 and through the tertiary level since 1988⁸⁷. By 1985, net enrollment rates in primary school were well above 95 percent, and the country emerged as a regional leader in education⁸⁸.

Over the last 20 years, Mauritius has gradually closed the expenditure gap with HICs. Since 2001, the government has increased education spending from 3 to 5 percent of GDP (Figure 35). Aggregate public spending on education is now consistent with UNESCO recommendations and with the spending levels of aspirational peers.

Investment in education has increased, but insufficient attention has been devoted to assessing its efficiency.

The education deep-dive in Part II of the PER examines the efficiency of education public spending in Mauritius and identifies opportunities to improve the allocation of resources. The education deep-dive: (i) analyzes recent trends

Figure 35. Public Spending on Education, 2001-2020 (% of GDP)



Source: Own elaboration based on WDI.

Notes: (a) Averages for structural peers, investment hubs, upper middle income and high income countries are computed based on all countries with data available or able to be interpolated in the whole period, using interpolation for missing data imputation. (b) Structural peers: Costa Rica, El Salvador, Uruguay, Dominican Republic, Albania, Fiji, Namibia and Panama. (c) Investment hubs: Barbados, Cyprus, Hong Kong SAR, China, Ireland, Luxembourg, Malta, the Netherlands, Seychelles, Singapore, and the United Arab Emirates.

⁸⁶ Skills shortages have been consistently identified as one of the critical obstacles to business in Mauritius for many years, leading to high wage premiums that fuel income inequality and rising unemployment as the labor market continues to evolve towards the services sector and more skill intensive activities, having gone from below 3 percent in the 1990s to above 6.5 percent over the past decade (Mauritius: Through the Eye of a Perfect Storm – Coming Back Stronger from the COVID crisis, World Bank Group, 2021). Education can address both the labor market constraint to value-added growth and the income distribution challenge at once, by effecting broad-based gains in productivity.

⁸⁷ Ajaheb-Jahangeer, Shamim, and Jahangeer, Abdul Cayum (2004). "School Culture in a Private Secondary Institution in Mauritius." *International Education Journal* 5 (2), 247-254.

⁸⁸ UNESCO Institute for Statistics.

in education spending and assesses its adequacy to achieve education goals by performing different benchmarking exercises; (ii) points out opportunities to improve efficiency in the allocation of education spending across levels and inputs; (iii) analyzes the distributive impact of key categories of education expenditure based on a benefit-incidence analysis; (iv) assesses the impact of the projected demographic trends on key determinants of unit costs; and (v) discusses policy options for improving equity and efficiency in education.

Mauritius's impressive economic development was supported by a strong institutional and policy framework that enabled effective public-private collaboration.

Following independence in 1968, a pragmatic industrial policy framework successfully channeled resources towards new export-oriented sectors, including garments and tourism, that supported economic diversification and job creation⁸⁹. Export processing zones were established and developed in the 1970s and 1980s, aided by relatively restrictive overall import policies paired with duty free access to imported inputs, tax incentives, and a segmented labor market. Exports of textiles and sugar grew, supported by competitive exchange rates and the negotiation of various preferential trade agreements. The Double Taxation Avoidance Treaty signed with India in 1982 paved the way for the development of an internationally integrated financial sector. The standard of living of the population rose, supported by increases in labor productivity, as the economy continued to grow and develop at a fast pace. Concomitantly, sustained public investment in free education and health programs contributed to cementing a strong human capital base that supported the emergence of a large middle class⁹⁰, and a comprehensive social protection network was established to protect vulnerable households.

However, during the decade that preceded the COVID-19 pandemic, industrial policy became less effective, and the transition towards a knowledge-based economy languished.

State support measures focused on traditional activities, while those geared towards transformational activities, such as the R&D tax credit, the Mauritius Africa Fund, and a series of tax holidays targeting specific economic sectors, had limited uptake. Over the past decade, declining competitiveness across most of its established export sectors, including tourism, has shown that Mauritius can no longer rely on comparative advantage based on low labor costs⁹¹.

The COVID-19 pandemic spurred rapid and profound changes to the country's private-sector development policies. The government responded to the severe shock from the pandemic by introducing several private sector support

programs geared toward protecting productive assets and jobs by fostering firm survival, which were followed by an extensive array of programs seeking to relaunch bruised traditional sectors and develop new ones to promote the transformation of Mauritius into a competitive knowledge-based economy. Measures under the two most recent budgets initiated the transition into the post-pandemic era, with programs strongly oriented toward fostering a green recovery and turning the green energy industry into a new economic growth pole. Now with the recovery well under way, Mauritius has an opportunity to reassess its private sector development strategy and perform necessary adjustments to realign it with the country's vision and high-level aspirations. A new generation of reforms and policies to foster private sector innovation will be necessary for the development of businesses in new higher value-added activities, at a large enough scale to compensate for losses in traditional, less sophisticated sectors. This will push forward the process of structural transformation required to compete effectively in the knowledge-based economy.

Part II of this PER is composed by two main chapters. Chapter 2 takes a sectoral deep dive in education, analyzing options to improve the equity and efficiency of the Mauritian education system.

Chapter 3 develops the special topic of public support to the private sector development, and explores avenues to optimize it. In sum, improving the efficiency of public spending on education and private sector development programs could greatly enhance the prospects for green and inclusive growth, by providing the building blocks to attain competitiveness that is not based on low labor costs, and encouraging the development of new high-value sectors that will be necessary to sustain growth as a HIC.

Chapter 2 on education is structured as follows. Section 2.1 is an overview of Mauritius's educational system. Section 2.2 presents an international benchmarking analysis in public spending and educational outcomes. Section 2.3 shows a distributive incidence analysis of education public expenditure. Section 2.4 presents the estimate of the relative efficiency of the education system. Section 2.5 identifies potential sources of inefficiencies in the education sector. Finally, section 2.6 concludes with policy options to improve the efficiency of public spending on education.

Chapter 3 on optimizing public support to private sector development follows the following structure. Section 3.1 provides an overview of the impact of COVID-19 on Mauritius's state support programs. Section 3.2 streamlines the landscape of Mauritius's state support programs alongside

⁸⁹ World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank

⁹⁰ World Bank (2015). Mauritius Systemic Country Diagnostic. World Bank, Washington, DC.

⁹¹ World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development

a series of key dimensions, comprising the objectives pursued, targeting in terms of sectors and firm sizes, the instruments used, and implementing institutions. Section 3.3 reviews Mauritius's innovation performance data and main institutions funding incremental and radical innovation. Section 3.4 evaluates the alignment of Mauritius's state support programs with international best practice for the development of high value-added sectors. Section 3.5 wraps up the main conclusions and offers policy options.

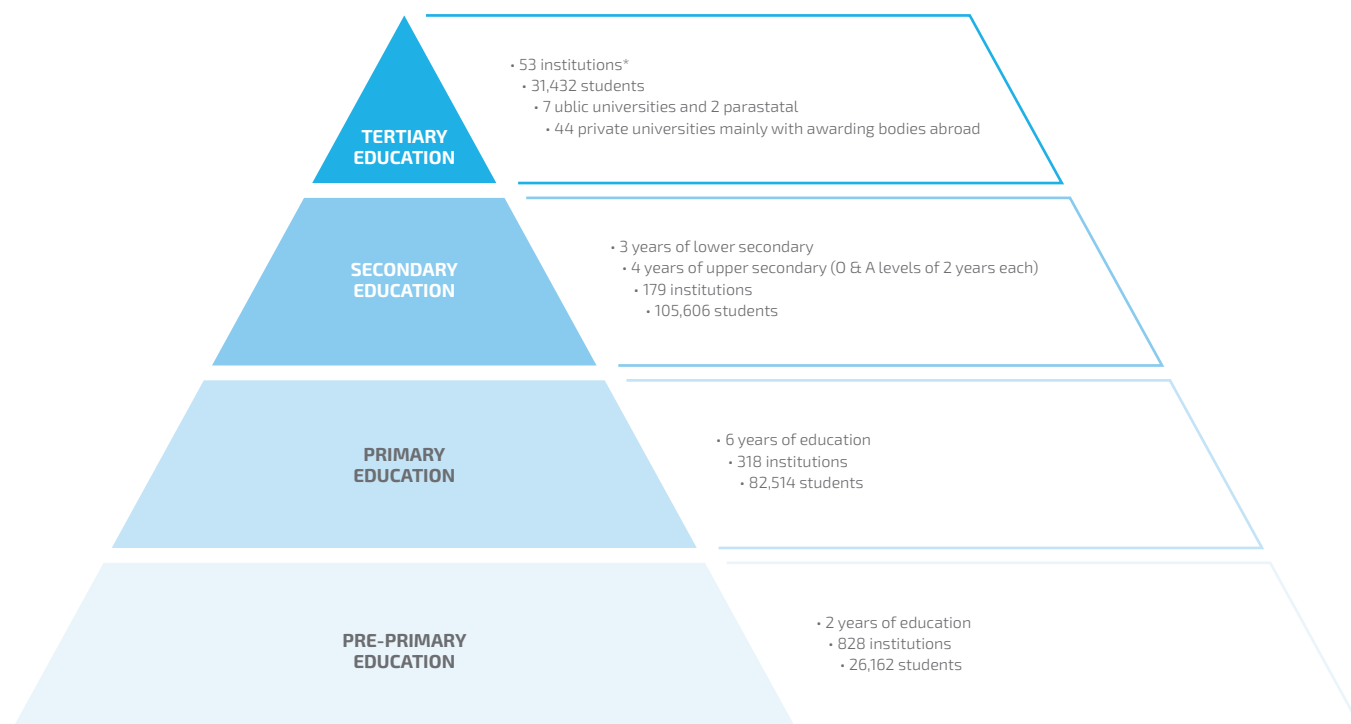
2. Sectoral Deep Dive: Improving Equity and Efficiency in Education

2.1 Overview of the education system

a) Mauritius has a solid structure of educational institutions, where the private sector plays a key role

Mauritius has a wide network of educational institutions ranging from the pre-primary to the tertiary level. Education is compulsory from age five to sixteen. The system offers two years of pre-primary education starting at the age of three, six years of primary schooling, three years of lower secondary schooling, four years of upper secondary (O & A levels) and various post-secondary programs (Figure 36). Primary and secondary schools are accessible across the whole country, while public and parastatal tertiary institutions are concentrated in the north and east (Figure 37). In addition, there are 492 technical and vocational education and training (TVET) institutions, including 22 Mauritius Institute of Training and Development (MITD) centers, three polytechnics, and 467 training institutions registered with the Mauritius Qualifications Authority that offer programs at the secondary, post-secondary, and tertiary levels^{92,93}.

Figure 36. Structure of the Education System in Mauritius



Source: Own elaboration based on Mauritius's annual report of Education Statistics - Year 2020 and World Bank (2021b), "Mauritius Country Economic Memorandum 2021".

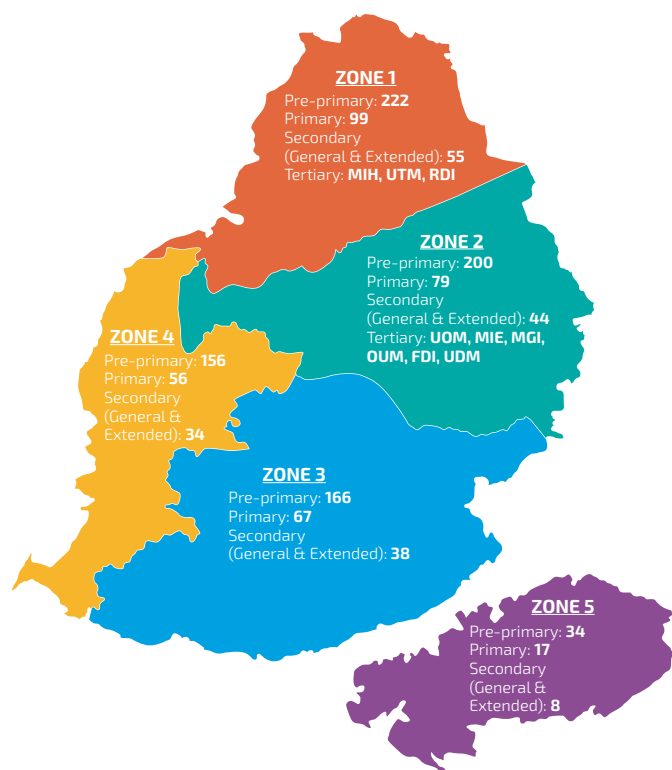
* There is also a circuit of 492 Technical and Vocational Education and Training (TVET) institutions.

⁹² World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

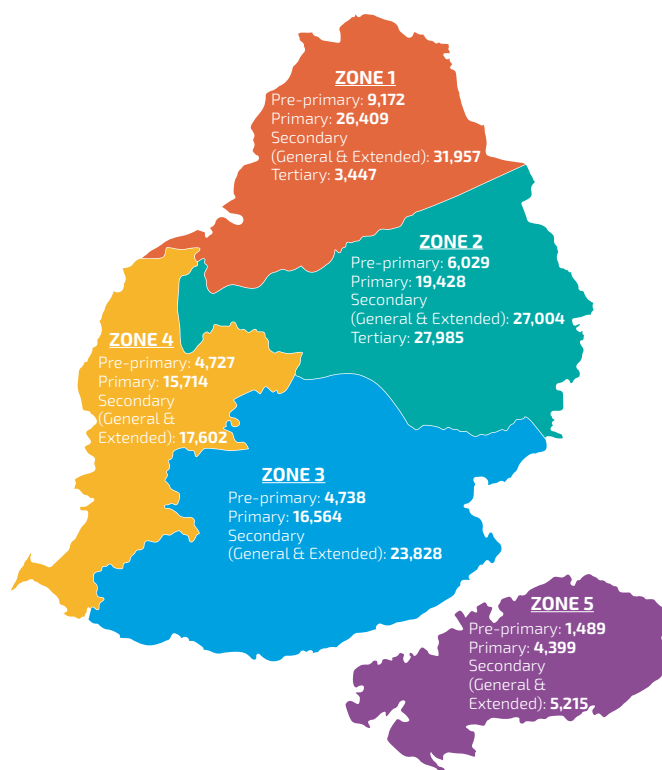
⁹³ However, a 91 percent of the training institutions offer short-term, non-awarding courses.

Figure 37. Educational Institutions and Students by Zone, 2020

a) Educational institutions



b) Number of students



ZONE

1. Port Louis and North
2. Beau Bassin - Rose Hill, Centre and East
3. Curepipe and South
4. Quatre Bornes, Vacoas - Phoenix and West
5. Rodrigues

- UOM:** University of Mauritius
UTM: University of Technology, Mauritius
OUM: Open University of Mauritius
UDM: Université des Mascareignes
MIE: Mauritius Institute of Education
MGI: Mahatma Gandhi Institute
MIH: Mauritius Institute of Health
FDI: Fashion and Design Institute
RDI: Rabindranath Tagore Institute

Source: Source: Gov. of Mauritius (2021). Annual Report of Education Statistics, 2020.

Note: There is also a circuit of 492 TVET institutions not included in this picture.

Private institutions represent a large share of the supply of education services, especially at the pre-primary level. More than six out of ten educational institutions are not administered by the government, with enrolments in private schools being relatively high, slightly above 50 percent on aggregate. The high share of private provision is particularly notable at the pre-primary level, where private providers concentrate 77 percent of educational institutions and 80 percent of total enrollments (Figure 38). On the other hand, students enrolled in public institutions represent a larger share of the total at the primary and tertiary levels, even when the number of educational institutions in the public sector is relatively low in tertiary education. However, these two levels are precisely the ones who have experienced a growth in private participation since 2004: the share of enrollment in private institutions increased 12 and 5 percentage points in primary and tertiary education, respectively, while it decreased from 82 to 80 percent in pre-primary and from 67 to 57 percent in secondary⁹⁴.

⁹⁴ Statistics Mauritius: Historical Series of Main Indicators on Education.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Figure 38. Percentage of Educational Institutions and Enrollment in the Private Sector by Education Level



Source: Own elaboration based on Mauritius's annual report of Education Statistics - Year 2020 and World Bank (2021b), "Mauritius Country Economic Memorandum 2021". Note: In pre-primary, the private sector includes schools of Municipal/Village Council, NGO, Roman Catholic/Hindu Education Authority and Private individual.

2.2 International benchmarking

a) Total public spending on education in Mauritius is at the expected and recommended levels

Public investment on education as a share of GDP is in line with the levels of structural and aspirational peers and the level predicted by its GDP per capita. According to UNESCO⁹⁵, public expenditure on education in Mauritius was 4.7 percent of its GDP in the last pre-pandemic year (2019)⁹⁶, equal to the median value for structural peers and slightly below the average of high-income countries, which was 4.9 percent (Figure 39). This represents 18.7 percent of the government's budget and, as such, is higher than that the average value in high-income countries (11.8 percent) and also than the share of the budget devoted to education in most of its structural peers, but it is still aligned with the levels recommended by UNESCO⁹⁷. When compared to the level predicted by its GDP per capita (Figure 40), Mauritius's overall expenditure on education is also in line with the expected level as a percentage of GDP, but significantly higher when measured as a share of government total expenditure. The effective amount spent per student ascends to US\$4,899 at purchasing power parity, above all its structural peers but still below high-income countries and other investment hubs.

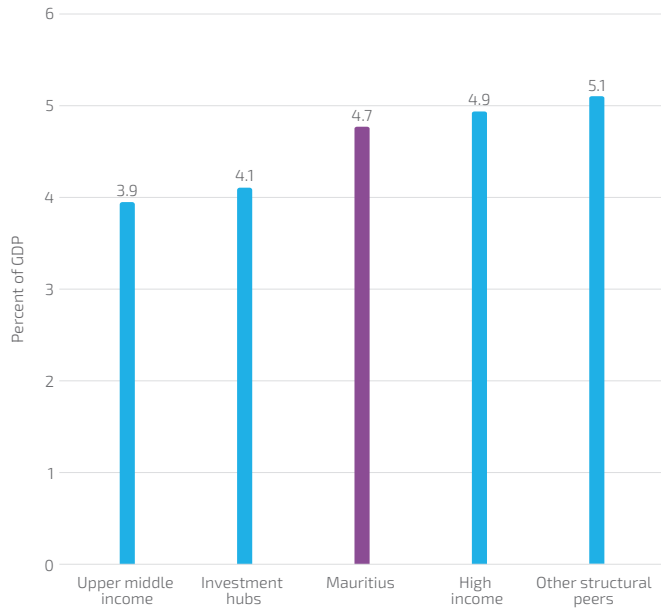
⁹⁵ The international benchmarking exercise relies on expenditure data from UNESCO (WDI data have UNESCO as ultimate source), whose values in the case of Mauritius are higher than the official estimates reported by the government of this country (around 1 percentage point higher when expressed as percentage of GDP). Official estimates of government expenditure on education in Mauritius are almost exclusively restricted to expenditures from the Ministry of Education, which makes them significantly lower than expenditures on education reported by UNESCO which, unlike official estimates from the Ministry of Education, comprehend expenditures incurred by all levels of administration and, more importantly, by all concerned ministries. Moreover, spending from UNESCO includes "Transfers and payments to the non-educational private sector" that are not spent by the Ministry of Education, such as public subsidies in cash or in kind that are only contingent on student enrollment and payments to private entities such as commercial companies and non-profit organizations (for instance, subsidies to private companies, or labor organizations, or associations of such entities, for the provision of training at the workplace). As it is important to use a consistent methodology for cross country comparisons, this section relies on expenditure data from UNESCO for both Mauritius and the rest of countries under consideration.

⁹⁶ The analysis uses pre-covid data to focus on the structural spending patterns. However, very similar values for Mauritius are obtained if the most recent data is used instead (2020 in panels (a) and (b) and 2021 in panel (c) of Figure 5). Expenditure in Mauritius would be 4.6 instead of 4.7 as a percentage of GDP, 16.1 instead of 18.7 as percentage of government expenditure, and US\$4,796 instead of US\$4,899 as PPP\$ per student. More importantly, the rankings remain almost unchanged, and conclusions do not vary.

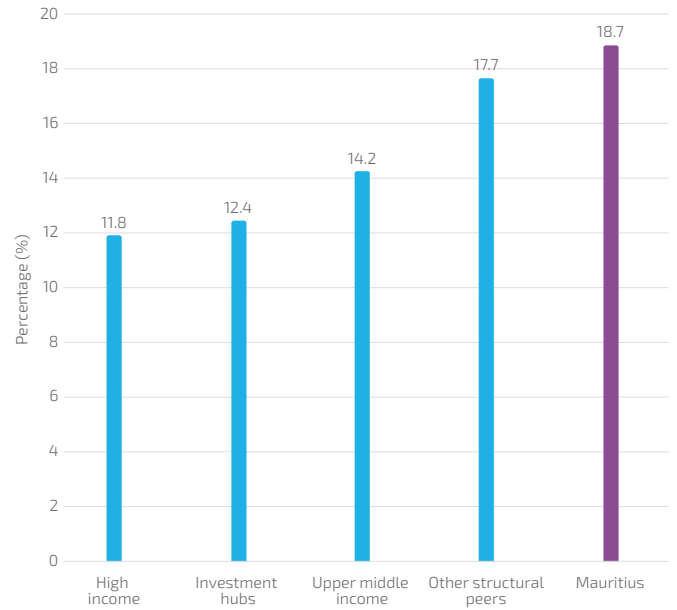
⁹⁷ UNESCO (2016). "Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all".

Figure 39. Public expenditure on education in Mauritius, high-income countries, upper middle income, investment hubs, and other structural peers, 2019 averages

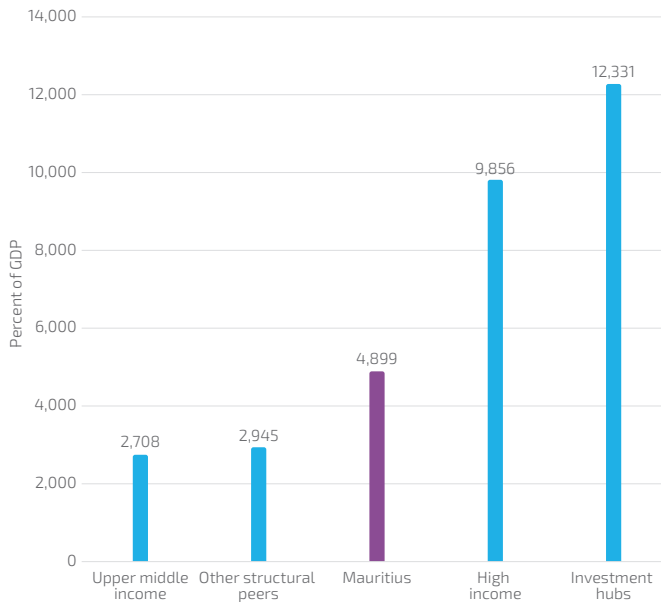
(a) As % of GDP



(b) As % of total government expenditure



(c) Per student in basic education in constant PPP US\$



Source: Own elaboration based on WDI (panels (a) and (b)) and UNESCO (panel (c)).

Notes: Data correspond to year 2019, except Investment hubs and High income countries for which 2018 was used instead (year 2017 was used in panel (c) for Investment Hubs). Basic education: pre-primary, primary and secondary education.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Figure 40. Public expenditure on education and GDP per capita



Source: Own elaboration based on WDI (panels (a) and (b)) and UNESCO (panel (c)). Notes: Last available data per country. Basic education: pre-primary, primary and secondary education.

Investment in education is key to provide the population with the necessary skills demanded in the labor market if it actually translates into improvements in school completion and student learning. However, this is not always the case, and therefore any analysis of public expenditure on education needs to be complemented with a detailed description of the outcomes achieved by the educational system.

b) Mauritius is close to universal coverage in preschool and primary education but faces challenges at the secondary and tertiary levels

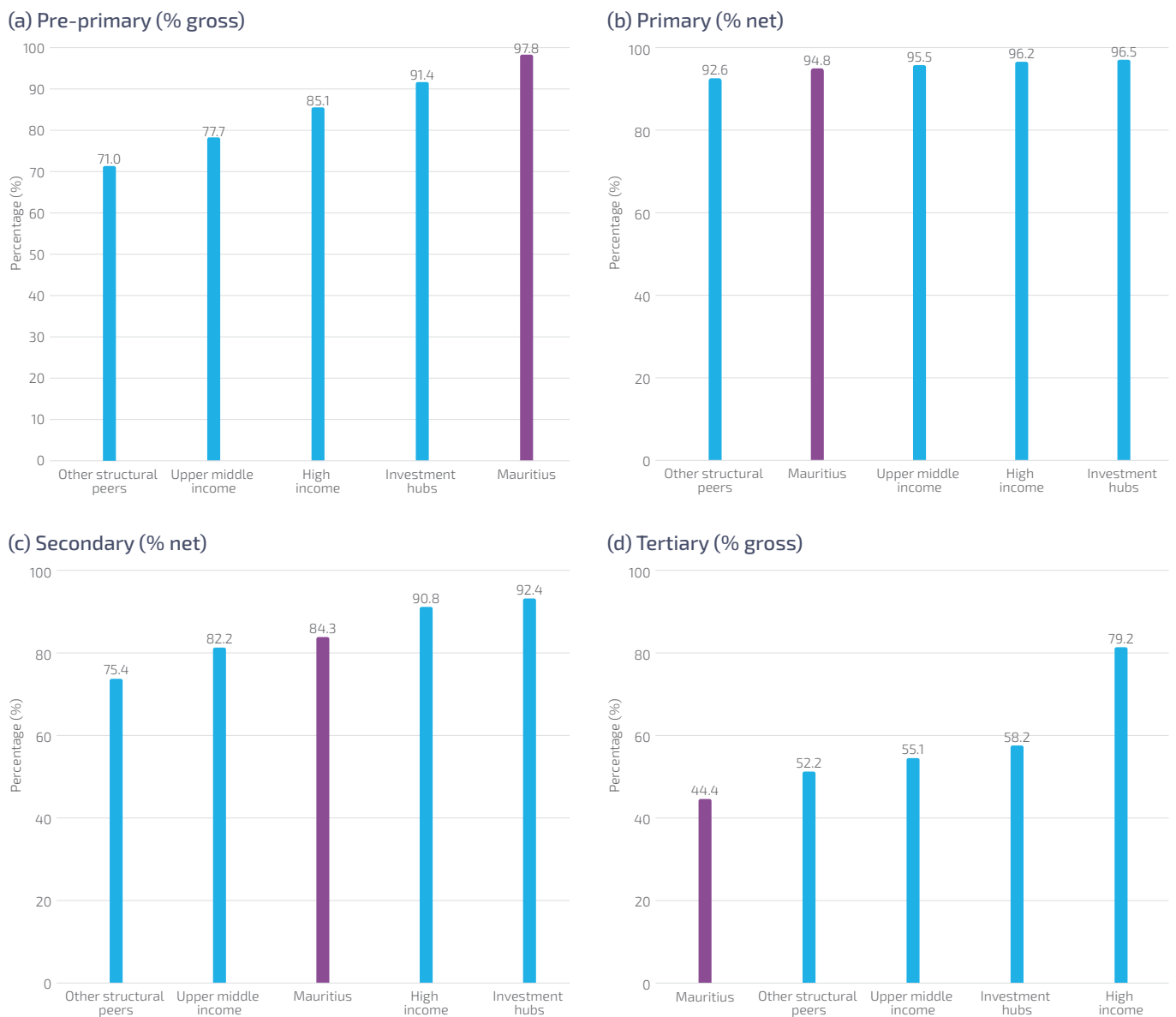
Mauritius is close to achieving universal coverage at the preschool and primary levels, but there is scope to increase enrollment rates in secondary and especially tertiary levels⁹⁸. On the one hand, gross enrollment rates

⁹⁸ Enrollment rates consider children of official school age who are enrolled in school, irrespective of whether they are enrolled in public or private institutions. While net enrollment rates are the ratio of children of official school age who are enrolled in school to the population of the corresponding official school age, gross enrollment rates are the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown.

in pre-primary at 97.8 percent are well above the average in high-income countries and structural peers, while net enrollment rates in primary around 95 percent may be considered as universal coverage and comparable to the levels prevailing in high-income countries and most structural peers (Figure 41). On the other hand, net enrollment rates are 84.3 percent in secondary education, 6.5 percentage points below the average in high-income countries, and gross enrollment rates in tertiary are relatively low at 44 percent compared with all structural and aspirational peers.

Grade repetition is negligible in primary education but is twice as large as in high-income countries in lower secondary. An insignificant percentage of students repeat a grade in primary education, with Mauritius outperforming the average for upper middle income and high-income countries, investment hubs, and other structural peers (Figure 42). However, grade repetition becomes more frequent in lower secondary education, with 5 percent of students in that level repeating a grade, more than twice the average repetition rate observed among HICs.

Figure 41. School Enrollment by Education Level, Mauritius and Comparators, circa 2019

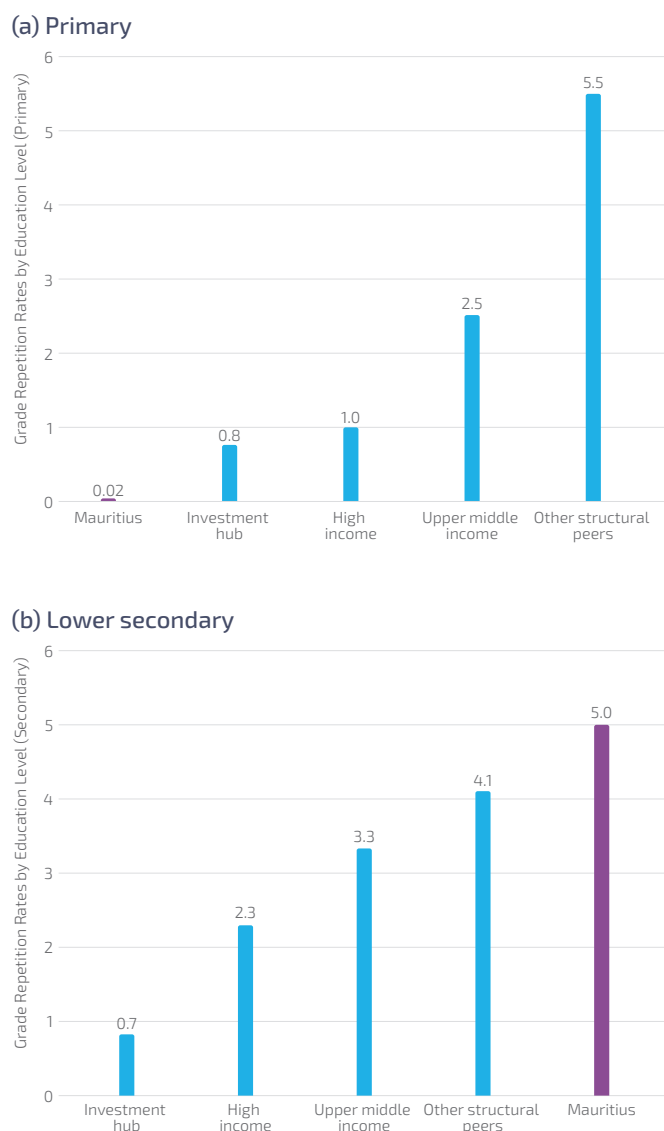


Source: Own elaboration based on WDI.

Note: Data corresponds to 2019. When data for this year is not available, the most recent data are used. For other structural peers (investment hubs), data corresponds to 2018 (2017).

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Figure 42. Grade Repetition Rates by Education Level, Mauritius and Comparators, circa 2018



Source: Own elaboration based on EdStats.

Note: Data for Mauritius corresponds to 2018. In the other cases, data correspond to 2017 to guarantee a large number of countries to compute the averages.

c) Learning outcomes are high compared to the region, but low for Mauritius's aspirations

Mauritius is a top performer in regional assessments of student learning, but its outcomes lag those of aspirational peers. The country is consistently a leader among the 14 or 15 African countries that participate at six-year intervals in the Southern and Eastern Africa Consortium for Monitoring Education Quality (SACMEQ) learning assessment of 6th graders. In the latest assessment in 2013, nearly 80 percent of pupils achieved an acceptable level of competency in both reading and math (Figure 43). However, data from its last participation in PISA⁹⁹ reveal that students in Mauritius performed almost 90 points below the OECD average, a gap in learning that is equivalent to three years of schooling (Figure 44). Mauritius has not participated in PISA since 2010, preventing an updated comparison with aspirational peers¹⁰⁰.

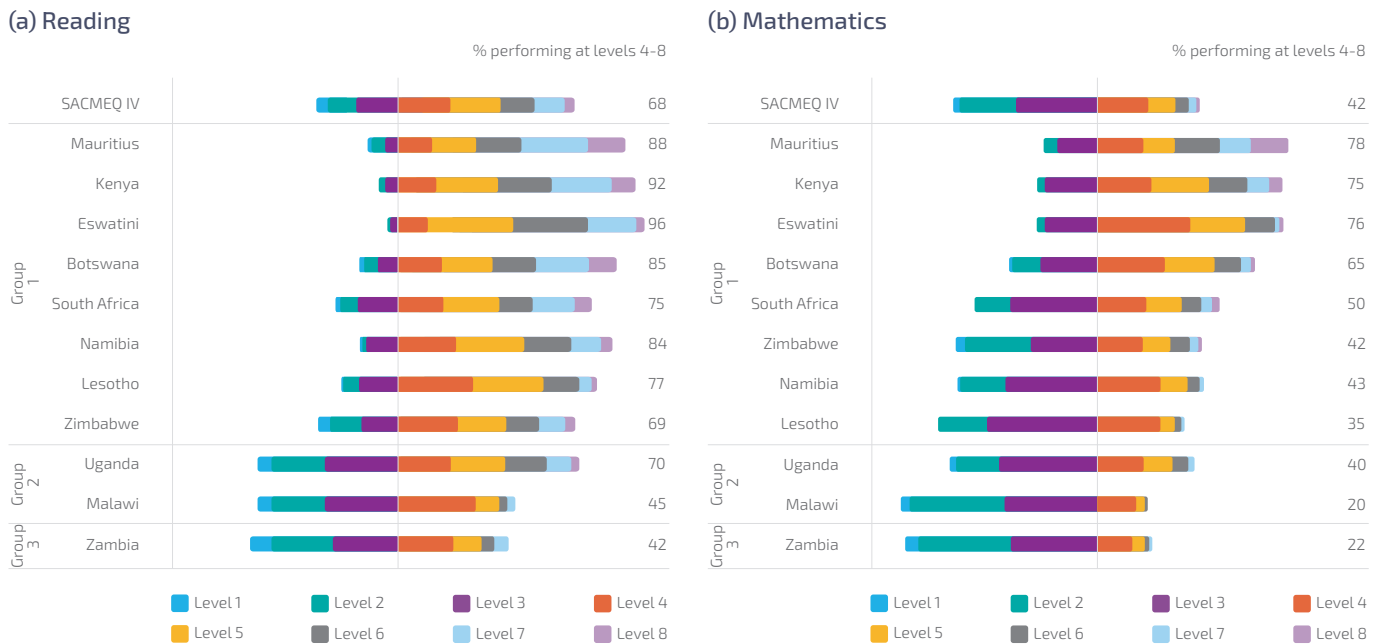
d) Education and learning outcomes are highly unequal across Mauritius

The relatively high levels of coverage in basic education mask important inequalities in terms of access to secondary education. Such inequality is further deepened in tertiary education. School attendance is universal in primary education across the whole income distribution, but attendance rates at the secondary level are 14 percentage points lower for the poorest quintile compared to the richest quintile, reflecting inequalities in dropout rates (Figure 45). By the age of attending tertiary education, this gap between the poorest and the richest quintile widens to 26 percentage points. A similar attendance gap is evident between public and private schools. Attendance to private schools is significantly higher for the fifth quintile in both the primary and secondary level, which means that the richest students benefit less from expenditures on public schools, especially in primary education.

⁹⁹ The population in the PISA assessment are students aged between 15 years 3 months and 16 years 2 months at the time of assessment who have completed at least 6 years of formal schooling. It includes those who pursue academic and vocational programs, enrolled in any type of institution, participate in full-time or part-time education, and attend either public or private schools, including foreign schools within the country.

¹⁰⁰ While the comparisons presented here, including some later ones, rely on data from Mauritius' last participation in PISA, which might be considered outdated, the patterns and trends described remain valid. This is because the existing educational gaps are substantial, and significant changes in educational outcomes take time to materialize. To ensure the robustness of our findings, we conducted robustness exercises of the results, although they are not always presented. For instance, in the case just described, even under the most optimistic scenario where Mauritius ranked among the top 10% of countries with the greatest improvements in learning outcomes in the world between its last participation and the most recent available PISA test (2018), the country's average learning outcomes would still fall significantly well below the OECD average by 40 PISA points.

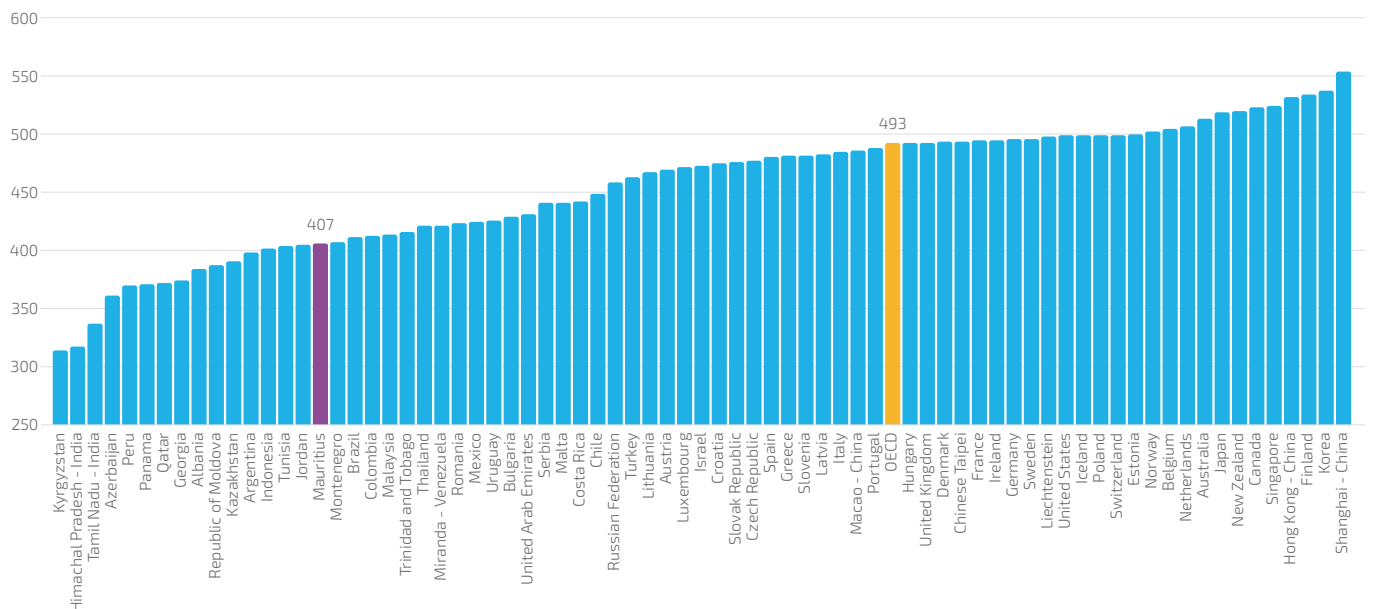
Figure 43. Percentage of Grade Six Students Performing at SACMEQ IV (2013) Performance Levels



Source: Bashir et al. (2018; figures 2.9 and 2.10).

Note: SACMEQ countries are grouped in Bashir et al. (2018) into three groups, according to coverage of enrollment in primary education, with Mauritius and other Group 1 countries demonstrating sustained universal coverage.

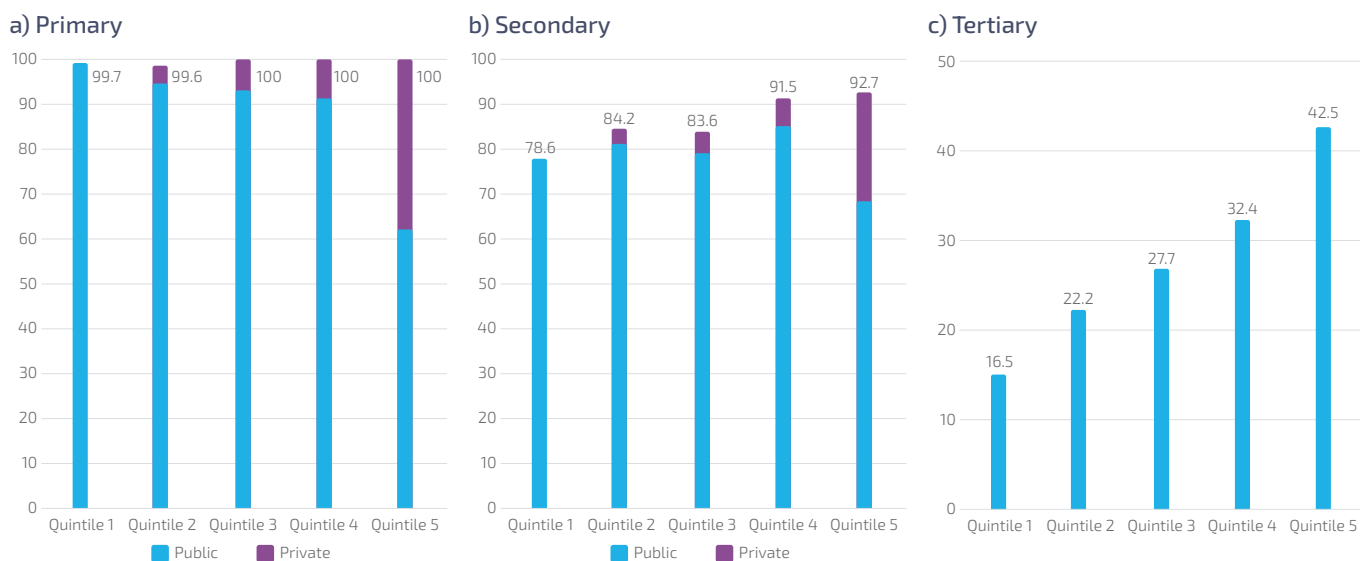
Figure 44. PISA average score in Reading, 2009



Source: Own elaboration based on microdata from PISA 2009 and PISA 2009 plus.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Figure 45. Public and private school attendance rates by quintile of per capita market income in Mauritius, 2017

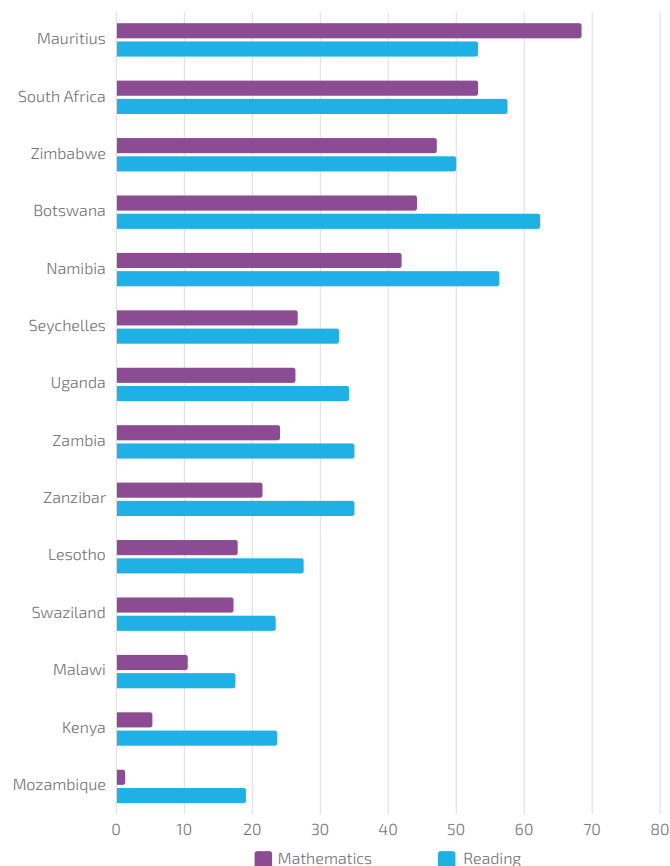


Source: Figure 3.10 in Ranzani (2019), based on data of 2017 Household Budget Survey.

Moreover, gaps in learning outcomes by socioeconomic status are among the widest in the region and are also large by international standards. In mathematics, students with high socioeconomic status outperformed students with low socioeconomic status by around 0.7 standard deviations, the greatest gap among the SACMEQ countries (Figure 46). In reading, this gap exceeds 0.5 standard deviations and is also among the highest in the region. When computed with data from its last participation in PISA, the gap between the highest and lowest socioeconomic quartile widens to 111 PISA points, equivalent to 3.7 years of schooling (Figure 47). Consequently, disparities in learning outcomes are relatively high by international standards, with Mauritius ranking 23rd out of 75 countries.

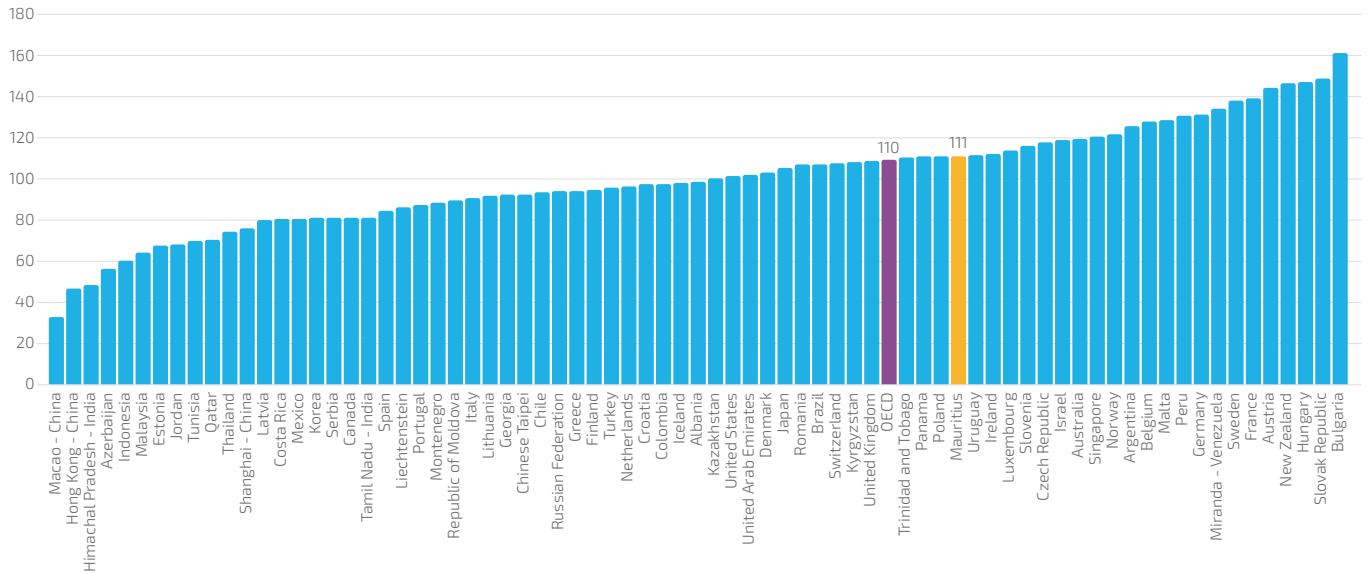
Finally, large gaps in learning outcomes across regions of the country, between public and private schools, and between boys and girls, are other important sources of inequality. In the latest SACMEQ assessment, the average pupil score in public schools in Beau Bassin and the East region was well below the rest in both reading and mathematics (Figure 48). In the public subsector, an average student living in Beau Bassin and the East has learning outcomes more than one standard deviation below an average student in the Curepipe and the South (the region with the highest scores). The score obtained by private schools was above that of all regions comprising public schools in reading, and only slightly below public schools in the region with the highest attainment in math (Curepipe and the South). Moreover, boys outperform girls in Mauritius by 0.1 standard deviations in mathematics and 0.3 standard deviations in reading. These gaps are the third largest among the 14 participating countries in the latest SACMEQ assessment.

Figure 46. Average Gap in Grade Six Mathematics and Reading Scores by Students' Socioeconomic Status, SACMEQ 2013



Source: Own elaboration based on Awich, M. (2021). SACMEQ IV, International Report (tables 7.10 and A7c). Note: The horizontal axis measures gaps in SACMEQ test scores of the highest versus the lowest socioeconomic status (100 points=1 standard deviation).

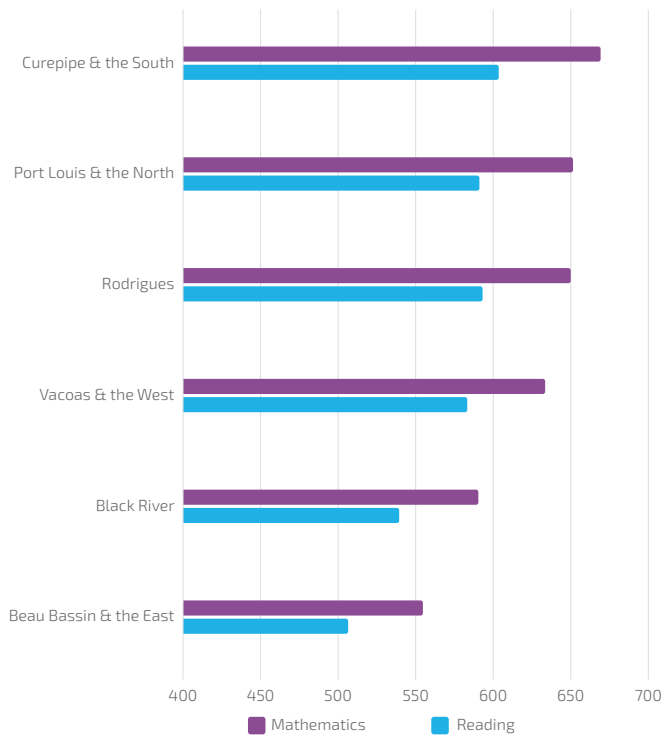
Figure 47. Average Gap in Reading Scores by Students' Socioeconomic Status in PISA



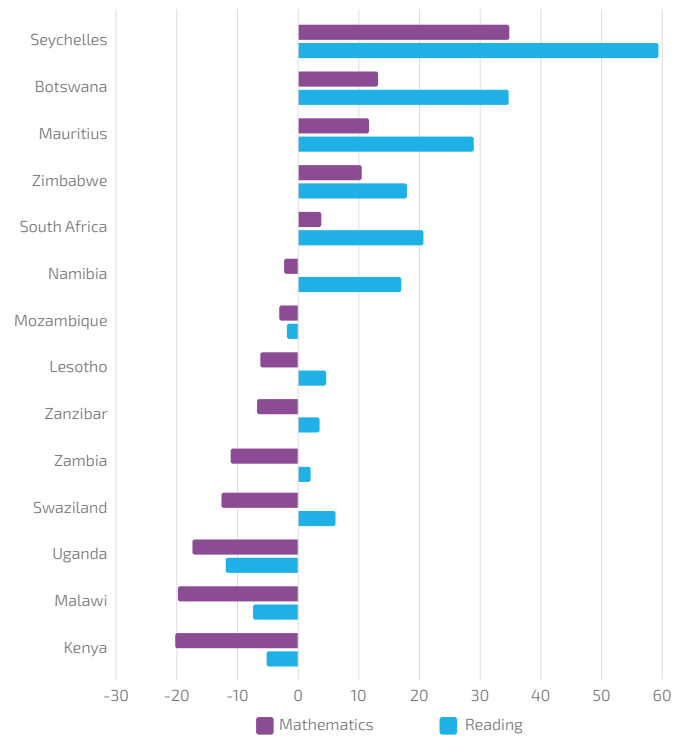
Source: Own elaboration based on PISA 2009 microdata. Note: The horizontal axis measures gaps in PISA test scores of the highest versus the lowest socioeconomic quartile of the PISA index of economic, social and cultural status (100 points=1 standard deviation).

Figure 48. Average Grade Six Mathematics and Reading Scores by Region and Gap by Gender (boys-girls), SACMEQ 2013

(a) Average scores by region



(b) Average score gap by gender



Source: Own elaboration based on Dwarkan, L. (2017). SACMEQ IV, National Reports, Mauritius, Tables 7.1 and 7.3 (panel a) and Awich, M (2021). SACMEQ IV, International Report, Tables A7b and A7e (panel b). Note: gaps in SACMEQ test scores are computed as the difference between the average score for boys less the average score for girls (100 points=1 standard deviation). * Estimates for Rodrigues and Black River include both government and private schools, while the separate estimate for Private schools refer to the average score in private schools in the four other regions.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

2.3 Distributive Incidence

a) Total public spending on education is progressive and pro-poor, but a pro-rich bias is evident at the highest education levels

Public education spending has a mixed distributive incidence for three reasons. First, low-income households have a larger share of children enrolled at the primary and secondary levels, implying that spending benefits low-income households (i.e., a demographic effect). Second, children from low-income households are more likely to be enrolled in public schools relative to their counterparts from affluent households (i.e., a public provision effect). Third, the lack of substantial differences in the share of students of tertiary education age coupled with higher rates of attendance in tertiary education among students belonging to high-income households, makes such spending benefit high-

income households (i.e., a participation effect). The overall distributive effect of public spending on education depends, therefore, on the magnitude of each of these three effects. To assess the distributional incidence of public expenditure on education, this section builds on a recent benefit incidence analysis (Box 3) conducted by Ranzani¹⁰¹.

Overall, the benefit of public education expenditure in Mauritius is progressive and pro-poor, with differences across education levels. On the one hand, public expenditure on pre-primary, primary and secondary education is progressive and pro-poor, benefiting low-income households to a larger extent both in absolute and relative terms. On the other hand, public expenditure on tertiary, technical and vocational education¹⁰² is progressive but pro-rich, meaning that the benefit received in relation to pre-fiscal income decreases as income rises but the per capita amount received is greater for more affluent households (Figure 49).

Box 3. Benefit Incidence Analysis Methodology

A Benefit Incidence Analysis aims to answer the question of how the benefits of a policy are distributed and how this policy modifies the distribution of income. The standard distributive incidence analysis estimates the benefit of a program providing an in-kind transference (e.g. access to school) by its cost, it equally distributes this benefit among users, and finally estimates how these benefits are distributed and how much this affects the market distribution of income.

Formally, let the income when the program exists be

$$Y_i^c = Y_i^{mc} + t_i^e$$

where Y_i^c represents the total income of the individual, Y_i^{mc} stands for their market activities, and t_i^e stands for the monetary value of the in-kind transference from the government. Assuming the market income is the same with and without a program, the redistributive impact of the in-kind transference can be measured as:

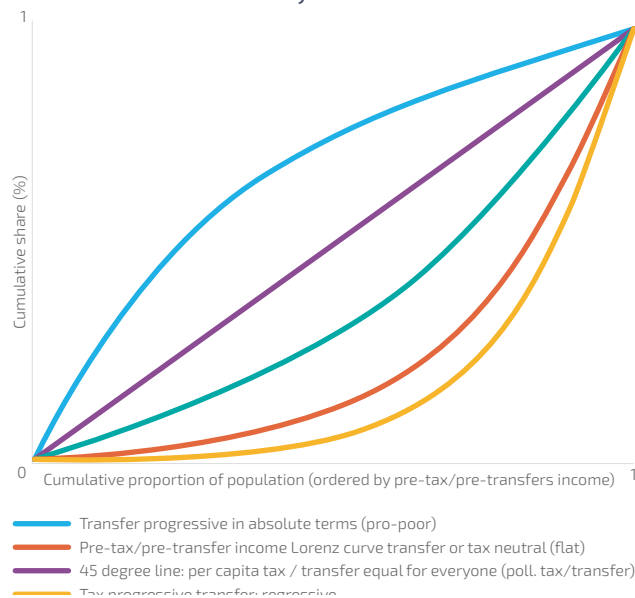
$$I(\{Y_i^{mc} + t_i^e\}) - I(\{Y_i^{mc}\})$$

where I is an index of inequality.

Then, a program is considered: a) pro-poor, if the per capita amount received decreases as income rises; b) pro-rich, if the per capita amount received increases as income rises; c) progressive, if the proportion received in relation to pre-fiscal income decreases as income rises; d) regressive, if the proportion received in relation to pre-fiscal income increases as income rises. This can also be seen graphically by comparing the concentration curve of the program, which shows the cumulative proportion of transfer received by the cumulative proportion of the population (ordered by market

income), with the 45° degree line and the Lorenz curve (which shows the cumulative proportion of market income received by the cumulative proportion of the population also ordered by market income). The program is pro-poor (pro-rich) if the concentration curve is above (below) the 45° line and progressive (regressive) if the concentration curve is above (below) the market Lorenz curve.

Distributive Incidence Analysis

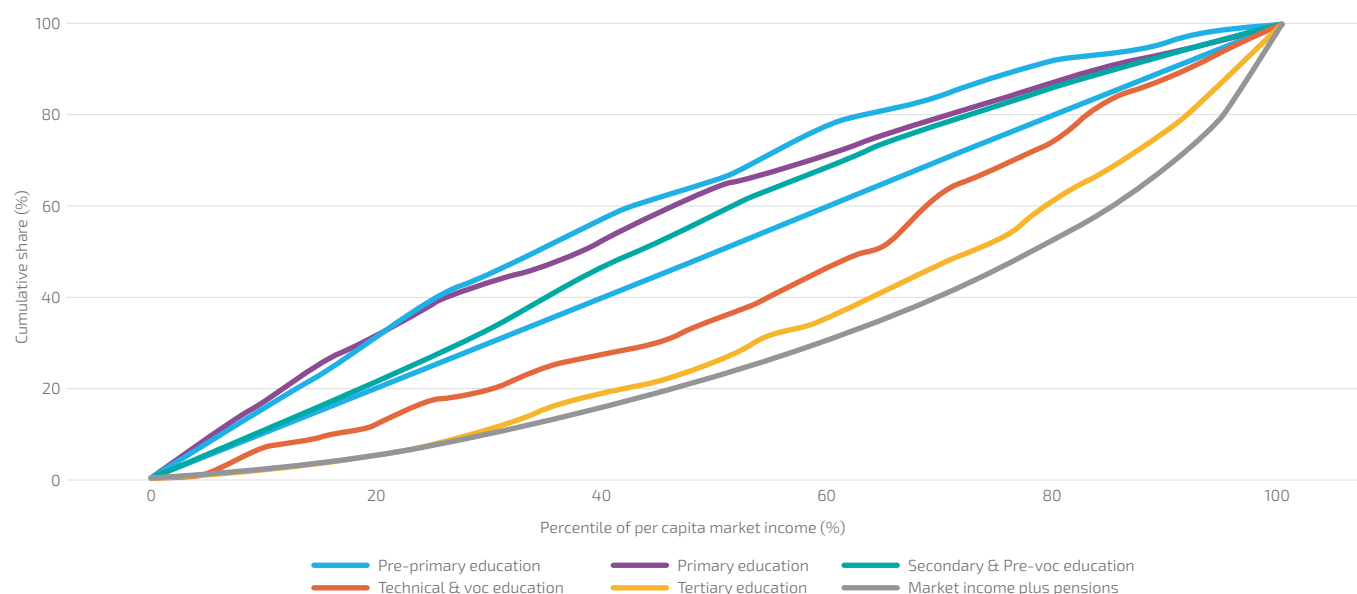


Source: Higgins, Sean, and Lustig, N. (2016). "Can a Poverty-Reducing and Progressive Tax and Transfer System Hurt the Poor?" *Journal of Development Economics* 122 (September): 63–75.

¹⁰¹ Ranzani, M. (2019) "The Effects of Taxes and Social Spending on the Distribution of Household Income in Mauritius." Washington, DC: World Bank.

¹⁰² Unfortunately, the analysis for technical and vocational education in Ranzani (2019) was not done separately for technical education (leading to post-secondary qualifications) and vocational education, which could possibly provide a different picture as the proportion of students from high and low-income households are very different between these two modalities.

Figure 49. Lorenz and concentration curve for in-kind education transfer and market income



Source: Figure 3.11 (a) in Ranzani (2019), based on data of 2017 Household Budget Survey

2.4 Estimating the Efficiency of Education Spending

a) A More Efficient Use of Resources Could Yield Significant Gains in Learning

This section analyzes the impact of education spending on learning outcomes. A data envelopment analysis (DEA) approach is used to assess the efficiency with which spending translates into outcomes (Box 4). The DEA estimates, for a given expenditure level (input), how far are the learning outcomes (output) that a country is obtaining from those that are attainable based on the best outcomes that are obtained by countries with a similar level of expenditure. If a country is obtaining less than the maximum attainable learning outcomes given its expenditure level, it is said to be inefficient, and the magnitude of this inefficiency can be quantified.

The analysis suggests that there is room for improving the efficiency of public spending. Learning outcomes could be increased by at least 7.3 percent by improving the efficiency of education expenditure, which is equivalent to an average addition of 1.1 years of schooling for each student¹⁰³. Based on the latest PISA scores and expenditures from that year, Mauritius is well below the efficiency frontier and could obtain efficiency gains of the abovementioned magnitude. However, since Mauritius has not participated in international student assessments for some time, these estimates are based on outdated information.

¹⁰³ The percentage increase in learning outcomes is obtained from the efficiency indices in the Data Envelopment Analysis using the formula $[(1 / \text{efficiency index}) - 1] \times 100$. The conversion to years of schooling is based on the OECD's rule of thumb that 30 PISA points is approximately equal to one additional year of schooling (Filmer et al. 2018, Jerrim and Shure, 2016).

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

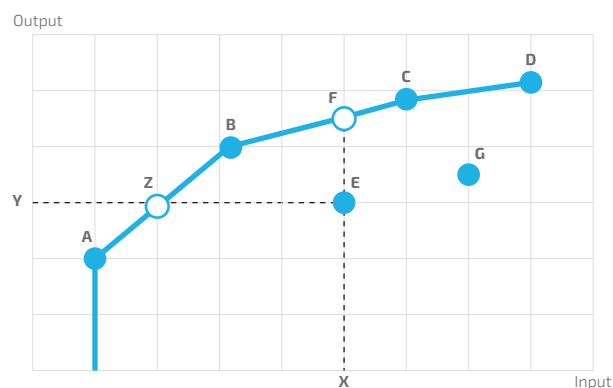
Box 4. Data Envelope Analysis Methodology

Relative efficiency is assessed using a cross-country approach that measures the effectiveness of spending in producing outcomes. The relative efficiency of spending (input) to achieve an outcome in each country is assessed using the Data Envelope Analysis (DEA) technique developed by Farrell (1957) and recently used by academics and international organizations to estimate efficiency of public expenditures in several sectors (OECD, 2015; Dutu and Patrizio Sicari, 2016).

Based on the assumption of a convex production possibilities set, an "efficiency frontier" is constructed as the linear combination of efficient input and output pairings in the cross-country sample. Figure below illustrates an efficiency frontier that connects points A to D as these countries dominate other input-output pairs, such as countries E and G in the interior. The convexity assumption allows an inefficient input-output pair such as point E to be assessed relative to a hypothetical position on the efficient frontier such as point Z, by taking a linear combination of efficient country pairs, such as points A and B.

In this manner, an input-based technical efficiency score that is bounded between zero and one can be calculated as the ratio of YZ to YE. The score corresponds to the proportional reduction in spending consistent with a relatively efficient production of a given outcome. Similarly, an output-based technical efficiency score for point E can be calculated as the ratio of XE to XF, consistent with the proportional increase in the outcome indicator given current spending if production is relatively efficient. This would correspond to the hypothetical point F that is calculated as a linear combination of the actual countries B and C. The analysis in this chapter limits its focus to input-based efficiency in line with the policy focus on medium-term expenditure rationalization.

Data Envelope Analysis in a single Input and Output Diagram

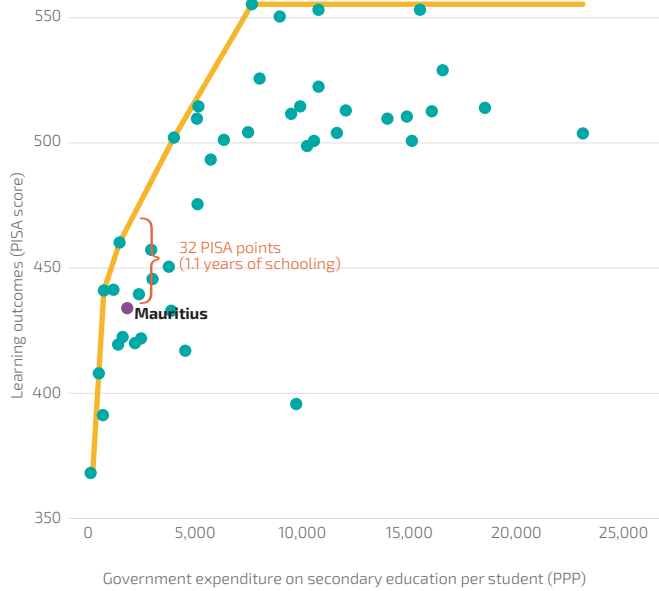


Simple simulations suggest that these estimates are a lower-bound for inefficiency, and the current inefficiency might be significantly larger. Since 2009, expenditure per secondary student in Mauritius tripled (from US\$2,211 to US\$6,757 in purchasing-power-parity terms). With that level of expenditure, Mauritius would need to have gained 103 PISA points from 2009 to 2018 to be on the previous efficiency frontier or 71 points for efficiency to remain constant (Figure 50). However, learning outcomes tend to increase much more slowly, even among the countries with the largest improvements, and therefore it is likely that the efficiency of public spending on education in Mauritius has decreased in the last decade. In a pessimistic scenario in which learning outcomes remained stable over the last decade, the current inefficiency level could be as high as 103 PISA points or 3.4 years of schooling. But even in an optimistic scenario where learning outcomes in Mauritius increased as much as in those countries in the 90th percentile of change in PISA scores between 2009 and 2018, the potential inefficiency remains as high as 90 PISA points or 3 years of schooling¹⁰⁴.

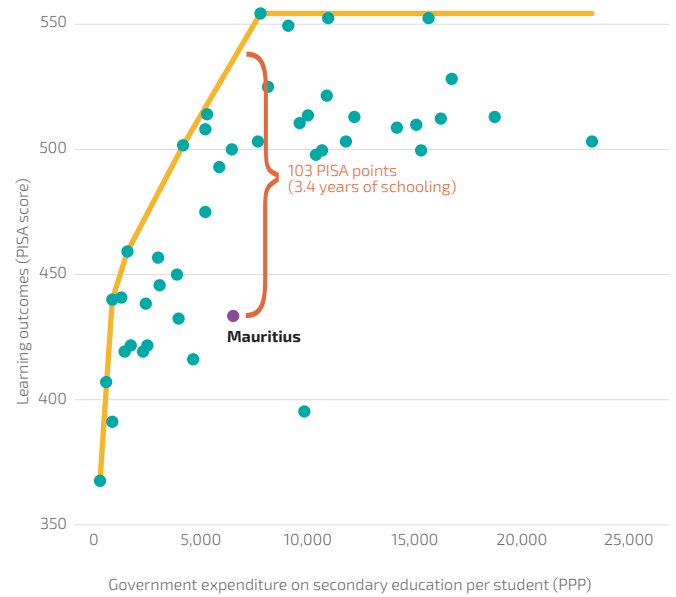
¹⁰⁴ In practice, an inefficiency of 3 years of schooling implies that if current educational resources were optimally allocated, all students in the country could have a learning gain equivalent to three times the learning that an average student obtain during a whole year at school.

Figure 50. Efficiency frontier of public spending based on Mauritius's latest participation in PISA and some simulated scenarios

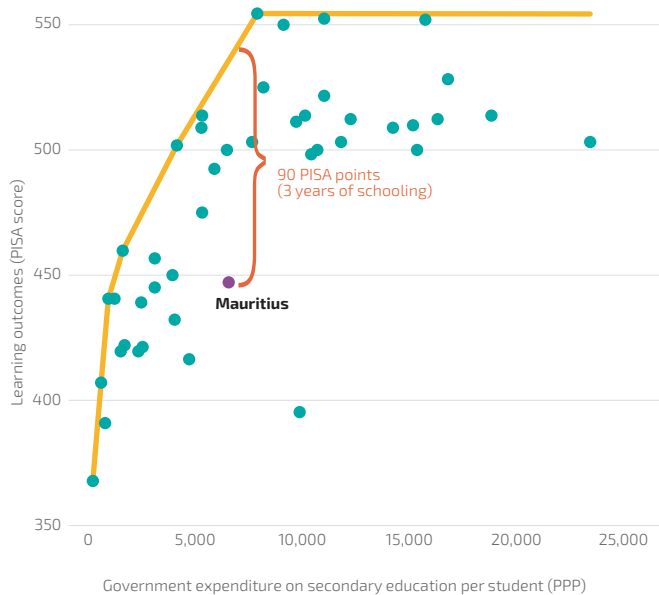
(a) Based on Mauritius's spending at the time of the assessment



(b) Simulation I: no increase in learning from last assessment (pessimistic scenario)



(c) Simulation II: increase in learning equal to the 90th percentile (optimistic scenario)



Source: Own elaboration based on UNESCO and PISA. Notes: (a) Each point in the graph represents a country. (b) Learning scores are calculated as averages across all subjects in PISA (mathematics, reading and science). (c) The efficiency frontier is computed using a Data Envelopment Analysis in two steps with output orientation and variable returns to scale. (d) Data corresponds to circa 2010 (2009 unless PISA scores or expenditure is not available in which case 2012 is used instead for both variables and 2006 otherwise). (e) In panels (b) and (c), expenditure in Mauritius corresponds to the last available pre-pandemic data in UNESCO (2018), while PISA scores for Mauritius are simulated assuming either no increase in learning between the 2009 and 2018 PISA editions (panel (b)), or an increase equal to the 90th percentile change in PISA scores for participating countries between 2009 and 2018 (13.5 PISA points) (panel (c)).

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

2.5 Potential Sources of Inefficiency

a) Allocative inefficiency in public spending across education levels weakens education outcomes

Too many resources are allocated to secondary education to the detriment of other levels, especially pre-primary and tertiary education. Even though total public expenditure on education is in line with Mauritius's GDP per capita, it is significantly above the predicted level in the case of secondary education, and below it in all the other educational levels, especially in pre-primary and tertiary, where the levels of expenditure are very low (Figure 51). Moreover, most of the growth in public expenditure on education (as percentage of GDP) in the last two decades has been driven almost entirely by a substantial increase of spending in the secondary level. As a result, Mauritius spends a disproportionate amount of its education budget in secondary education, with low levels of expenditure in pre-primary and tertiary education (Figure 52). Unlike its structural and aspirational peers, the country spends more than half of its budget in secondary education, devoting only a negligible 1.4 per cent to pre-primary education, when HICs invest an average of 10 percent of their budgets in this level. Mauritius only spends 7.7 percent of its budget in the tertiary level, while upper-middle- and high-income countries, investment hubs, and other structural peers, spend at least around a fifth of the budget on it.

Increasing the share of resources invested in pre-primary education could improve learning outcomes and public expenditure efficiency. International evidence has found that investing in child development as early as possible has a high rate of return, particularly for disadvantaged children, which contributes to improvements in both efficiency and equity¹⁰⁵. Indeed, countries that assign a higher proportion of their education budget to the pre-primary level show on average higher indices of efficiency (see Annex A5). In Mauritius, given the relatively high share of the education budget spent on the secondary level, funds reallocations from the secondary to the pre-primary level could generate efficiency gains. Although the private sector plays a role in the provision of education at the pre-primary level, further efforts are necessary to improve service quality, particularly for disadvantaged families.^{106,107}

Reallocating funding to tertiary education and readapting expenditure in this level will be necessary to support and sustain a greener, resilient, knowledge-based growth strategy. Expenditure in tertiary education is not only low as a percentage of total education expenditure (Figure 52), but also as percentage of GDP for Mauritius's per capita income level (Figure 51(a)). Moreover, it has been relatively stagnant over the last two decades (Figure 51(b)). Not surprisingly, gross enrollment rates in this level are low compared to benchmark country groups (Figure 41(d)), and there are also high inequalities in the access to this educational level for different socioeconomic groups (Figure 45(c)). Underinvestment in tertiary education is combined with mismatches in the labor market for social sciences fields (e.g., relatively high unemployment rates six months after graduation from the fields of administration and management, and social sciences), as well as undersupply in STEM fields, given that 1 out of 3 students in STEM fields are trained in foreign universities¹⁰⁸. The skills developed in the tertiary level are also crucial to define the type of growth that Mauritius's economy will experience in the future, and the economic return of each dollar spent. The efficiency of public expenditure in tertiary education can be increased by improving the alignment of the skills developed in this level with those required by the labor market within the country's growth strategy. In addition, this may also help to reduce the brain drain of high-skilled workers to other countries¹⁰⁹.

¹⁰⁵ See Cunha, F., Heckman, J. J., Lochner, L. J., and Masterov, D.V. (2006). "Interpreting the Evidence on Life Cycle Skill Formation." In *Handbook of the Economics of Education*, edited by Eric A. Hanushek, and Frank Welch, chap. 12. Amsterdam: North-Holland, pp. 697-812; Almond, Douglas, and Currie, Janet (2011). "Killing Me Softly: The Fetal Origins Hypothesis." *Journal of Economic Perspectives* 25(3), 153-172.; Duncan, Greg J., and Katherine Magnuson (2013). "Investing in Preschool Programs." *Journal of Economic Perspectives* 27(2), 109-132.; Elango, Sneha, García, Jorge Luis, Heckman, James J. and Hojman, Andrés (2016). "Early Childhood Education." In *Economics of Means-Tested Transfer Programs in the United States*, vol. 2, edited by Robert A. Mott, chap. 4. Chicago: University of Chicago Press, pp. 235-297.

¹⁰⁶ See for instance Currimjee, A. (2021). "Early Childhood Care and Education in Mauritius." Washington, DC: World Bank.

¹⁰⁷ Some of the challenges in Mauritius include the perceived low prestige of education and early childhood care professions, which makes it difficult to attract high performing graduates into the sector, and the obstacles faced by vulnerable families to bridge the cost gap to access services of sufficient quality (Devercelli and Beaton-Day, 2020; Diaz and Rodriguez-Chamussy, 2013). In addition, as with other levels, positive social externalities exist for high-quality early childhood education that are not taken into account by the private sector and could lead to suboptimal investment by it.

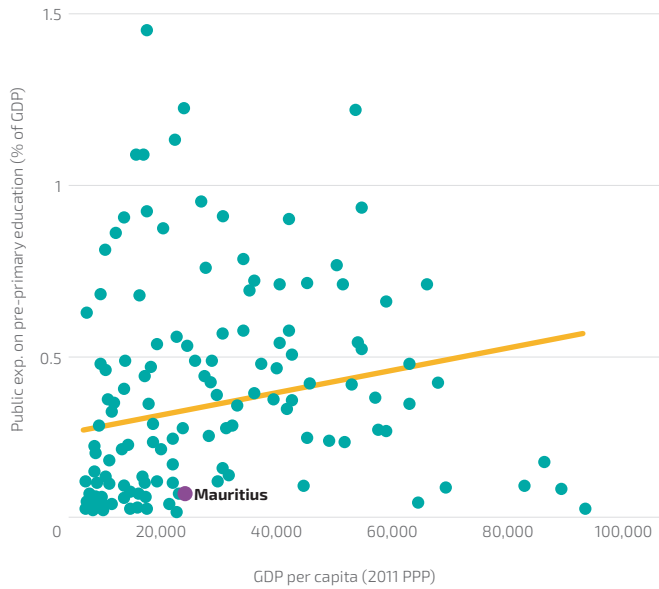
¹⁰⁸ World Bank (2021a). "Closing the Skills Gap in Mauritius". Washington, DC: World Bank.

¹⁰⁹ Mauritius has one of the highest emigration rates of high-skilled workers to OECD destinations in the world, with 67 percent of the working age population (25+) with at least one year of tertiary education migrating to OECD countries in 2010. See Kerr, S., W. Kerr, Ç. Özden, and C. Parsons (2016). "Global Talent Flows." *Journal of Economic Perspectives*, 30 (4): 83-106.

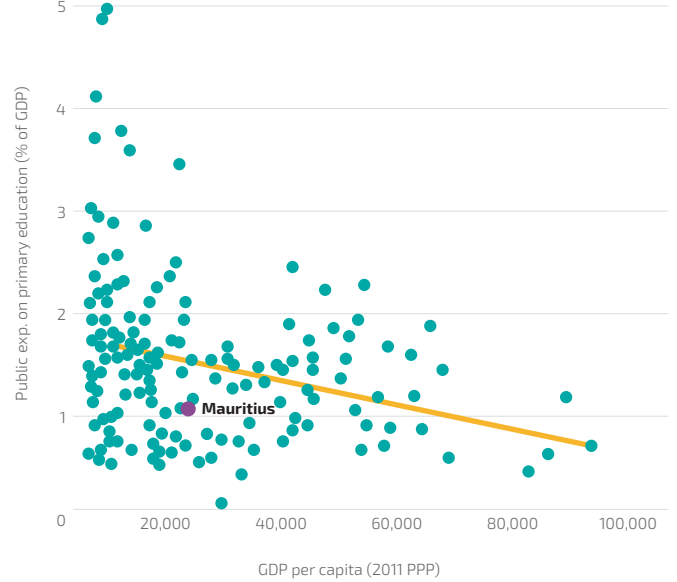
Figure 51. Levels and trends in public expenditure on education (as % of GDP), by level of education

(a) Public expenditure on education and GDP per capita

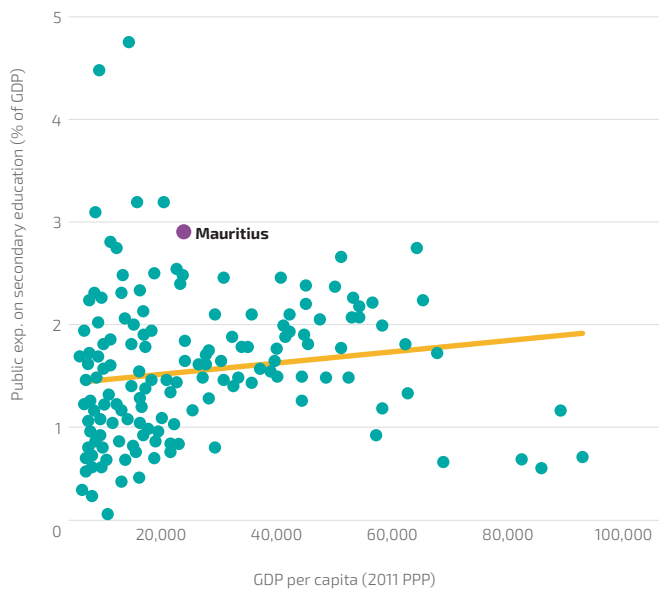
Pre-primary



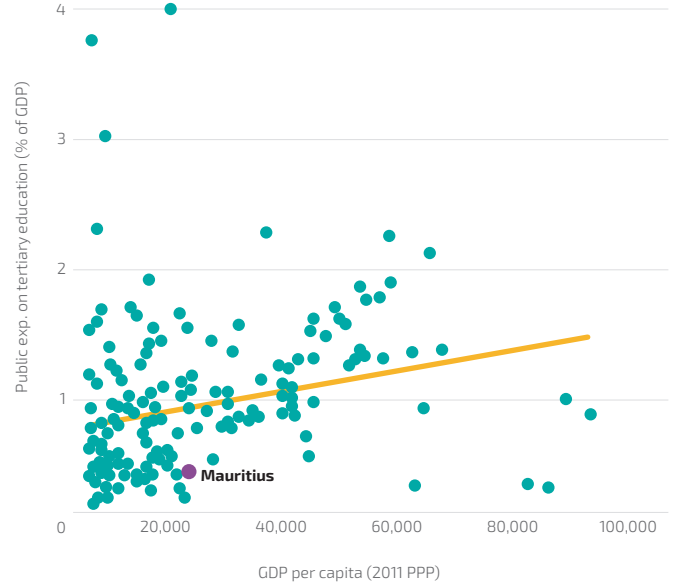
Primary



Secondary



Tertiary



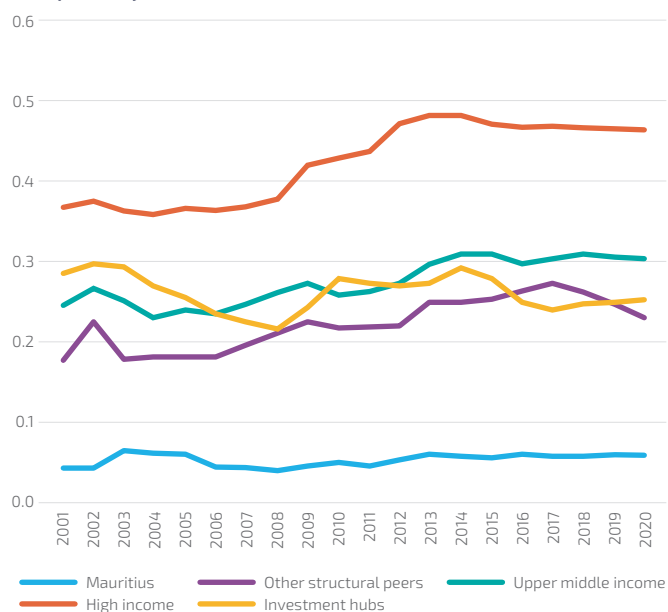
Source: Own elaboration based on UNESCO (panel (a)) and WDI (panel (b)). Notes: (a) In panel (a), each point represents the last available year in each country. (b) In panel (b), averages for upper middle income, high income countries, investment hubs, and other structural peers are computed based on all countries with data available or able to be interpolated in the whole period, using interpolation for missing data imputation (c) Investment hubs: Barbados, Cyprus, Hong Kong SAR, China, Ireland, Luxembourg, Malta, the Netherlands, Seychelles, Singapore, and the United Arab Emirates. (d) Other structural peers: Costa Rica, El Salvador, Uruguay, Dominican Republic, Albania, Fiji, Namibia and Panama.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

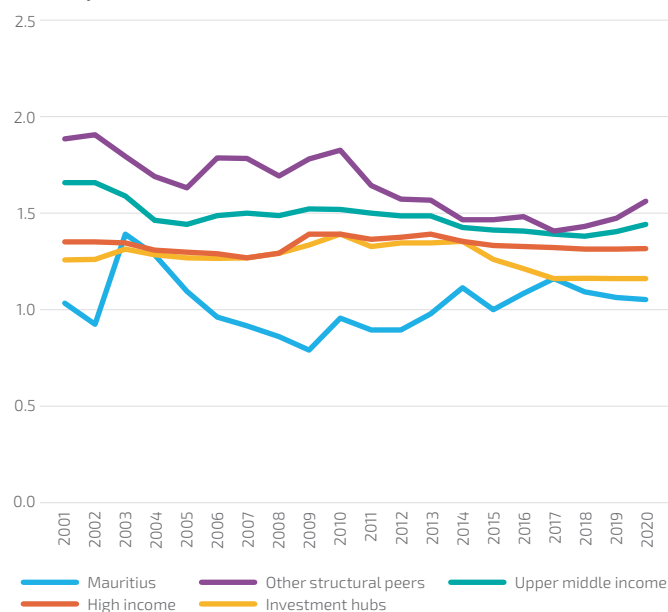
Figure 51. Levels and trends in public expenditure on education (as % of GDP), by level of education (Cont'd)

(b) Trends in public expenditure on education (as % of GDP)

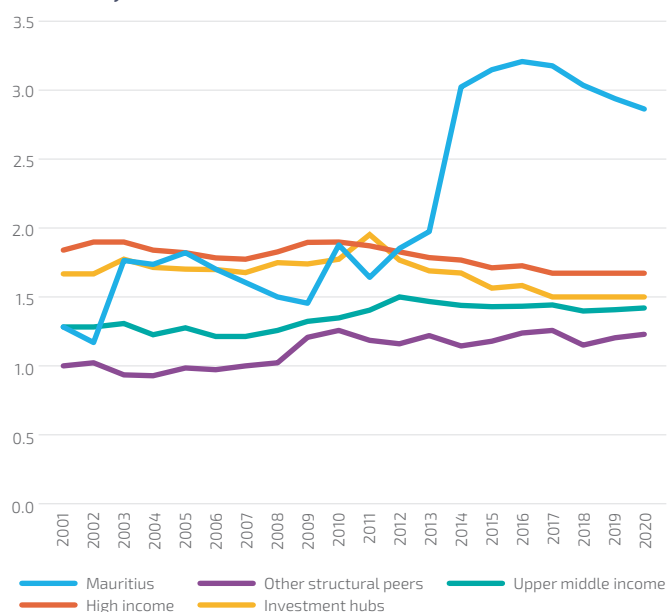
Pre-primary



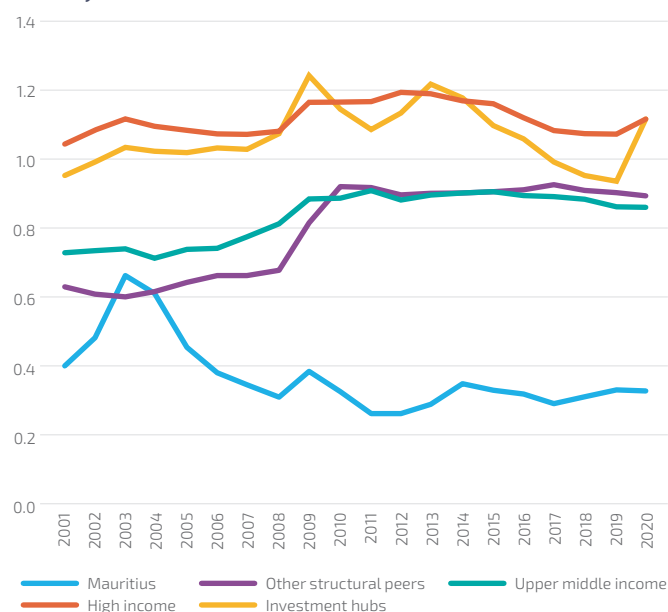
Primary



Secondary



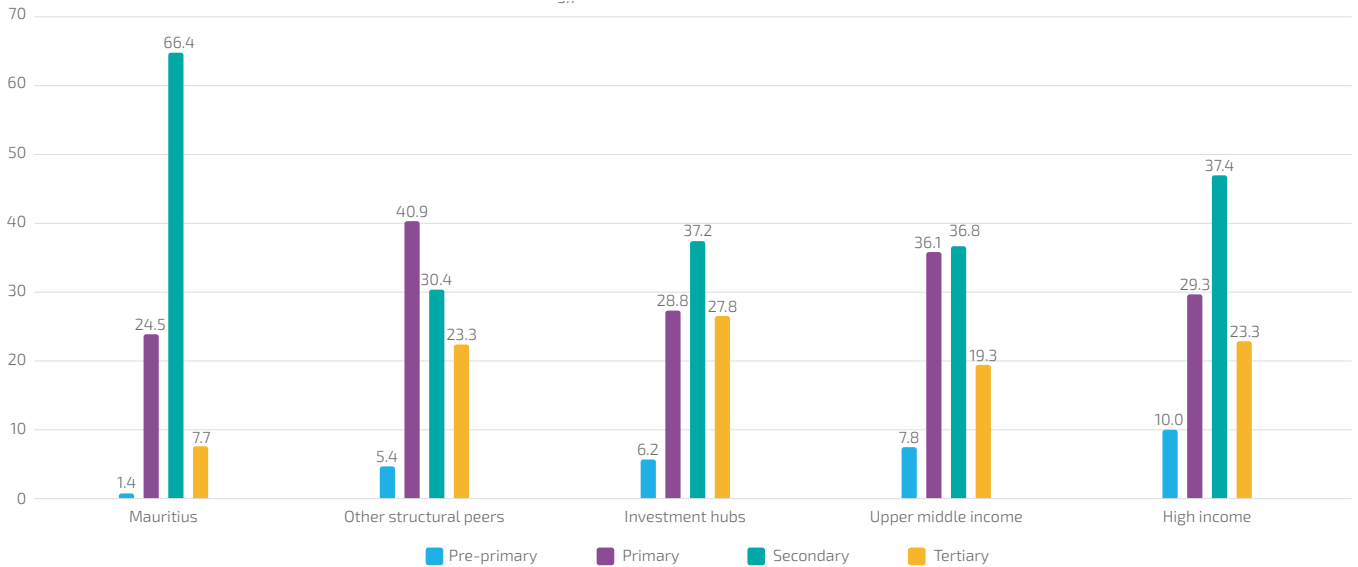
Tertiary



Source: Own elaboration based on UNESCO (panel (a)) and WDI (panel (b)). Notes: (a) In panel (a), each point represents the last available year in each country. (b) In panel (b), averages for upper middle income, high income countries, investment hubs, and other structural peers are computed based on all countries with data available or able to be interpolated in the whole period, using interpolation for missing data imputation (c) Investment hubs: Barbados, Cyprus, Hong Kong SAR, China, Ireland, Luxembourg, Malta, the Netherlands, Seychelles, Singapore, and the United Arab Emirates. (d) Other structural peers: Costa Rica, El Salvador, Uruguay, Dominican Republic, Albania, Fiji, Namibia and Panama.

Figure 52. Distribution of public expenditure on education by level in Mauritius, upper-middle-income countries, high-income countries, investment hubs, and other structural peers

Percentage of public expenditure on education allocated to each level

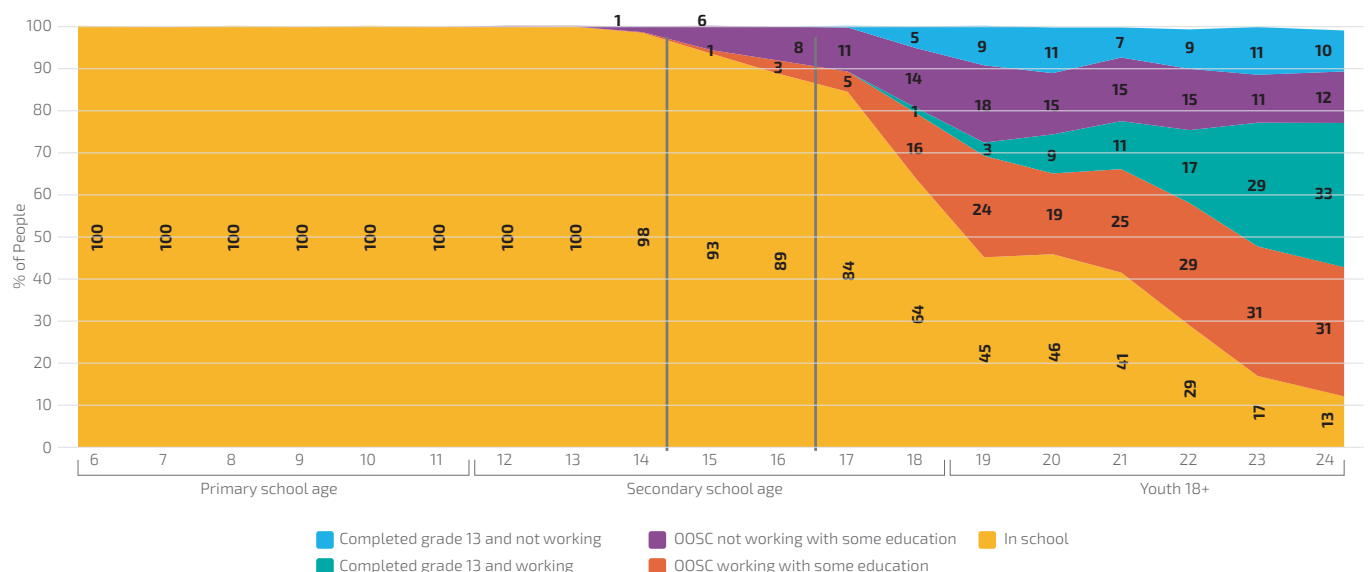


Source: Own elaboration based on UNESCO. Note: The bars show government expenditure as percent of GDP in each level in the last available year as a proportion of the sum across all levels.

b) High dropout rates in secondary education reduce equity and efficiency

Dropout rates at secondary school ages are relatively high, affecting both the equity and the efficiency of spending on education. A significant share of students drop-out before completing their secondary education, resulting in a waste of resources as expenditure does not translate into educational attainment for these students. On average, 11 percent of 16-year-old students and 30 percent of 18-year-old students leave school prematurely (Figure 53). Many of these young persons will attempt to join the workforce without the necessary skills required to access high productivity jobs. Dropout is concentrated at the end of compulsory education and as discussed above, it is particularly high for disadvantaged students.

Figure 53. Educational Enrollment and percentage of people In School and Out of School working and not working in Mauritius



Source: World Bank (2021a). "Closing the Skills Gap in Mauritius". Based on Statistics Mauritius, 2018. Notes: The blue lines show the theoretical age when SC (15 years old) and HSC (17 years old) examinations take place. Out-of-school children (OOSC).

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Dropout rates in secondary school have many causes, and contribute both to the low access rates to tertiary education and to the pro-rich bias of expenditure in that level. Global evidence points to multiple drivers of dropout, including the need to work, irrelevant or unappealing content at school, low perceived returns or lack of information on returns, poor school environments, and learning deficits that accumulate over time¹¹⁰. These factors tend to be most acute among students from poor households. High dropout rates usually signal low efficiency in education spending (since the system is not delivering the expected outcomes associated with the investment made) and are also a bottleneck to increase coverage in tertiary education. Moreover, high dropout rates in secondary education among poor households contribute to the pro-rich bias of tertiary education. A more targeted expenditure in secondary education that tackles the dropout problem could therefore result in both efficiency and equity gains. However, further research is necessary to provide a thorough diagnostic of the main drivers of dropout in Mauritius for different socioeconomic groups.

c) Low pupil-teacher ratios driven by the demographic transition are rising unit costs

Between 2015 and 2021, the number of students in primary and secondary schools in Mauritius decreased by 13 percent (or by 2 percent per year on average), dragging down the ratio of pupils to teachers (PTR). In the public subsector, the PTR ratio declined from 19.3 to 13.9 in primary and 14.6 to 10.7 in secondary education¹¹¹. These rates are among the lowest in the SSA region and they are even below those in high-income countries in most levels (see Annex A6). Low pupil-teacher ratios imply a higher unit cost of provision per student which does not necessarily translate into better outcomes. Indeed, data at the secondary level from PISA suggest that the highest scores in math are obtained by those schools in Mauritius with a pupil-teacher ratio around 15, which is far above the country average of 10.7 students per teacher in secondary schools (Figure A5 in Annex A6)¹¹². Therefore, further decrease in students' enrollment due to the expected rapid demographic decline could result in a worsening of the system's efficiency by increasing unit costs without necessarily improving educational outcomes.

Enrollment projections and cost estimates presented below are drawn from a Simulation Model developed for this study by the World Bank team. The tool presents estimates of the cost of basic education, which comprises primary and secondary levels, up to 2030, based on enrollment estimates employing population and GDP projections and recent trends in promotion and retention; education financing data is obtained from the official reports of the Ministry of Education.

The projections employ a reconstructive cohort method to calculate the enrollment flow, using several key assumptions on the inputs. The assumptions are: (i) the growth in the appropriate age for each particular level of education –ages 5-10 for primary education, ages 11-17 for secondary education– follows the UN projections; (ii) the current pattern of student flow (intake, promotion, repetition, and transition rates) is extrapolated based on the trend from the 2016–2021 data; and (iii) the share of students directly enrolled in private schools remains unchanged in all levels of education.

According to the simulation results, current demographic trends will cause enrollment to decrease by 8 percent at the primary level and 16 percent at the secondary level by 2030 (Figure 54). Keeping the pupil-teacher ratio constant would require releasing 7 percent of teachers in primary education and 20 percent of teachers in secondary education. If all teachers stay, primary PTR will decrease from 13.9 in 2021 to 12.8 in 2030, and secondary PTR will decrease from 10.7 in 2021 to 8.5 in 2030. Declining PTR will affect the unit cost: government spending per student will likely increase by 9 percent in primary education and 26 percent in secondary education between 2021-2030. Sustaining the system's efficiency might require releasing teachers from schools while providing jobs in education-related areas such as tutoring, school counseling, and curriculum development. The new positions of Support Teacher and Holistic Education Teacher created by the Nine Years of Continuous Basic Education (NYCBE) reform¹¹³ could also be used for this purpose.

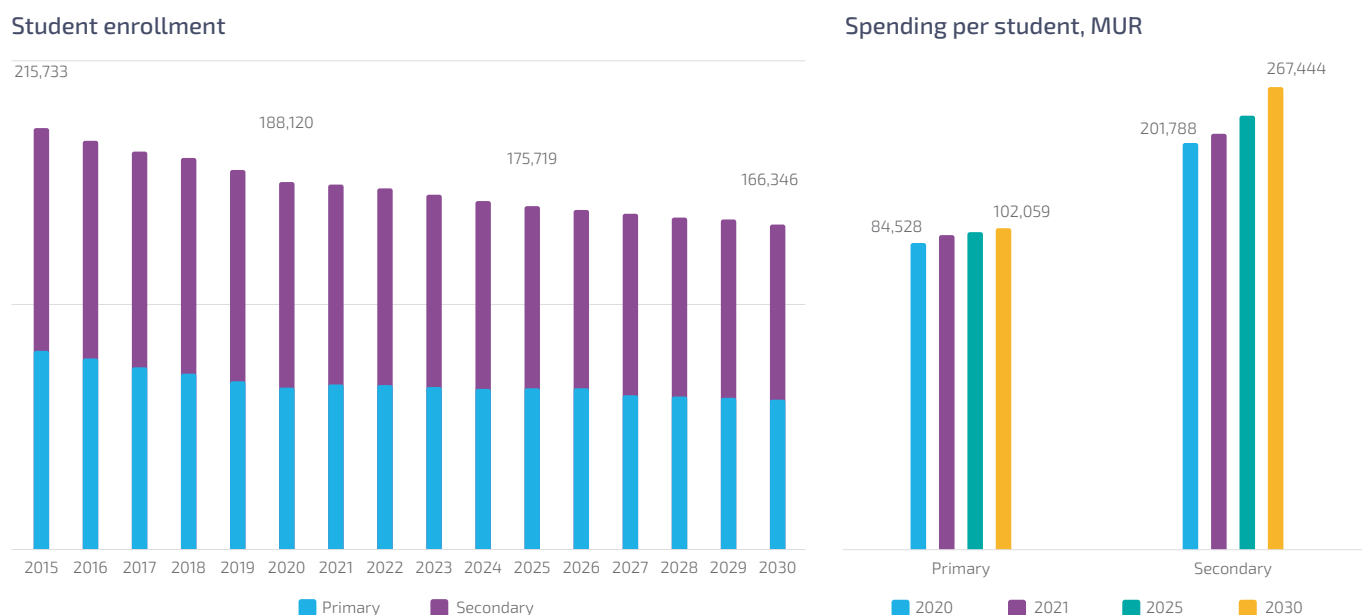
¹¹⁰ Adelman, Melissa, and Miguel Székely (2016). "School Dropout in Central America: An Overview of Trends, Causes, Consequences, and Promising Interventions." Policy Research Working Paper no. 7561. Washington, DC: World Bank.

¹¹¹ Estimates using EMIS data based on the total number of teachers in 2021 and ratio of teachers in public/private schools in 2020.

¹¹² A more rigorous analysis is required to isolate the impact of pupil-teacher ratios from other variables, but this is strong suggestive evidence that lower pupil-teacher ratios are highly likely to translate into high inefficiency.

¹¹³ In 2018, Mauritius launched the Nine-Year Continuous Basic Education (NYCBE) program, which aims for all students to successfully complete nine years of basic schooling and the secondary education cycle. The NYCBE is a comprehensive reform program of primary and secondary education under which all children will follow the same curriculum for nine years. Elements of the reform included: a number of initiatives to improve the professional development of teachers and their pre-service training; the Early Digital Learning Program, which distributed tablets to students and teachers to introduce and facilitate the use of digital technologies for learning; an enhanced connectivity initiative, which aimed to provide every secondary school with Internet connectivity; creating a new set of institutions, including 12 academies (converted from national colleges) with additional autonomy relative to other schools; the Extended Programme (EP), designed for students who entered lower secondary education with failing grades, giving them an extra year of schooling with a modified curriculum, instruction in smaller classes, and individualized support from teachers assigned to the program to catch up; and an Early Support Program to assist young learners who were falling behind in their learning, by separating them from mainstream classes for instruction in smaller classes taught by newly-appointed support teachers.

Figure 54. Projected Enrollment (number of students, left panel) and Public Spending per Student (MUR, right panel)



Source: authors' estimates based on the simulation model.

d) Closely monitoring outcomes can provide key insights to guide policy decisions

Increasing expenditures without adequately monitoring outcomes can result in inefficiency, and Mauritius lacks regular assessments of students' learning to guide policy decisions. As a consistent top performer in the regional SACMEQ assessments, Mauritius should measure its performance against international standards as it strives to join the ranks of HICs. However, the last time the country participated in an internationally benchmarked learning assessment beyond the regional SACMEQ was in 2010, when it administered a PISA plus exam. As shown above, public education spending increased substantially from that year onwards, but insufficient information on learning outcomes prevents an analysis of whether these additional resources yielded significant improvements in education quality. Nevertheless, Mauritius has recently requested to participate in PISA 2025, which would provide valuable information on learning outcomes.

Monitoring outcomes periodically and from the earliest grade levels enables the timely detection of learning difficulties and can trigger support for lagging pupils. In a system with automatic promotion, detecting and correcting underperformance in the earliest grades has been neglected, and remediation is only now receiving explicit attention. Learning deficits, both in cognitive and socio-emotional skills, accumulate from the earliest ages, and early interventions

are usually the most effective. Moreover, the impact of recent reforms and interventions has not been rigorously evaluated, leaving more scope for inefficiencies to appear. Closely monitoring these changes would help guide policy development and promote cost-effective implementation¹¹⁴.

2.6 Policy Options for Increasing the Returns to Public Investment in Education

Mauritius has substantial scope to improve the efficiency of public spending on education. Efficiency gains could improve learning outcomes by an estimated 7.3 percent, equivalent to an additional 1.1 years of schooling per student. Policymakers should prioritize four main dimensions of efficiency: (i) improving the allocation of resources across education levels; (ii) lowering dropout rates at the secondary level; (iii) increasing the pupil-to-teacher ratio by consolidating the education workforce; and (iv) closely monitoring outcomes to guide policy decisions.

Increasing the share of resources allocated to early childhood education and development, with a focus on disadvantaged children, would be highly cost-effective. A large body of evidence highlights the importance of investing in high-quality early education and development, especially among vulnerable groups¹¹⁵, yet Mauritius allocates a small share of its education budget to early education compared to its structural and aspirational peers. Budget-neutral reallocations from the secondary education level towards early education to reach the UNICEF-recommended

¹¹⁴ For instance, the government implemented an important reform recently - the Nine Years of Continuous Basic Education (NYCBE) reform— without designing a robust evaluation strategy to assess the effectiveness and cost-effectiveness of the changes introduced. Strengthening the M&E strategy can help improve the efficiency of public spending on Education

¹¹⁵ See for example, World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

10 percent¹¹⁶ could improve the overall efficiency of the system by decreasing grade retention rates, overage enrollment and dropout rates. Global evidence also shows that investing in early education is among the most effective tools to improve distributional equity, and pre-primary education has been shown to be the most pro-poor type of education spending. Increased spending should not necessarily be used to eliminate tuition payments¹¹⁷ but rather to improve the quality of service provision, including through workforce training and professional development, as well as increased remuneration. A combination of cost-effective interventions, outcome indicators and service-quality metrics, and the increased involvement of parents in their children's education could help lay the foundation for lifelong academic success.

Increasing the investment in tertiary education and readapting spending at this level will support innovation and build the skills required for greener, more resilient, and knowledge-based growth. Mauritius's investment in tertiary education is low compared to its structural and aspirational peers and has been relatively stagnant over the last two decades. Increasing the investment in this level could also lead to more and better skills for the workforce to support innovation and growth. To that end, a complementary policy could be to increase funding for research excellence and relevance, and to reform programs offered by the Research Fund towards promoting applied Research and Development (R&D), R&D commercialization, and innovation. Within the tertiary sector, public universities could adjust to the growth strategy through improvements in delivery methods, application of modern technology, and curriculum offerings that are relevant to the private sector. In that sense, quality training in the country should be strengthened for STEM fields, as well as the provision of digital and green skills among higher education graduates. To prevent that these changes in the budget increase efficiency at the expense of equity, a complementary strategy should be applied to improve access to tertiary education for low-income students¹¹⁸.

Dropout prevention is critical for an efficient education system. High dropout rates waste public resources while reducing worker productivity. They also reveal important inequalities, as school dropout is concentrated among

the poorest students. Creating an early warning program, implementing low-cost demand interventions, and offering alternative education programs can help reduce dropout rates. Because preventing students from dropping out of school is far more cost-effective than reintegrating them, prevention strategies are critical¹¹⁹. Public programs that provide students with information on the returns of schooling are a cost-effective means of reducing dropout rates. Expanding career options and improving the job relevance of education, including through investment in TVET, can further reduce dropout rates by increasing the anticipated returns to education. The new strategy to develop a technical education academic path at the upper secondary level is a step in the right direction. The high rates of academic failure at the final certificate exams for Grade 11 and Grade 13 appear to be pushing adolescents into the labor market too early. Therefore, increasing the number of alternative programs that do not require those certificates could make continued education accessible for students who might otherwise drop out¹²⁰. Lowering the dropout rate at the upper secondary level could increase enrollment in post-secondary education, particularly among disadvantaged groups, helping reduce the pro-rich bias of post-secondary education spending, improving equity. As a first step, a thorough study of the main causes of school dropout could be necessary, to provide a clear diagnostic and determine which are the most adequate policies that should be prioritized.

The rapid decline in the school-age population requires a medium-term strategy for reallocating education resources with an equity perspective. This strategy should include teacher recruitment and deployment policies. Due to the ongoing demographic transition, Mauritius has now one of the lowest pupil-to-teacher ratios among its structural and aspirational peers, particularly at the pre-primary and secondary levels. As the demographic transition is projected to continue, a further decline in the pupil-teacher ratio will increase the marginal cost of education. While smaller class sizes are often desirable, because they allow teachers to focus more attention on individual students, there is little evidence to suggest that an even lower pupil-teacher ratio in Mauritius would have a significant impact on the quality of teaching and learning¹²¹. Moreover, a further decrease in

¹¹⁶ UNESCO (2016). "Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"

¹¹⁷ However, at the time of publishing this document, the budget for 2023/24 announced that pre-primary education would be provided free starting from January 1st, 2024, as a measure to make Mauritius a country with a complete cycle of free education

¹¹⁸ The government of Mauritius has indeed prioritized Higher Education Development and Transformation and is taking steps in the right direction. The government's vision for transforming the Mauritian higher education system to enhance its competitiveness, relevance, and alignment with the future needs of industry and the workforce revolves around five key pillars: 1) Technology-driven Higher Education; 2) An agile regulatory framework and robust Quality Assurance (QA); 3) Flexible pathways and stackable micro-credentials; 4) Research as an enabler of innovation and socioeconomic advancement; 5) Internationalization and cross-border Higher Education. In line with this vision, the country is in the process of developing a strategic plan for its implementation.

¹¹⁹ Adelman, Melissa, Haimovich, Francisco, Ham, Andres, and Vazquez, Emmanuel (2018). "Predicting school dropout with administrative data: new evidence from Guatemala and Honduras." *Education Economics* 26(4), 356-372. <https://doi.org/10.1080/09645292.2018.1433127>

¹²⁰ The government is addressing the issue of a lack of diversified pathways for skills acquisition by introducing two new pathways in pre-tertiary education focused on the country's emerging economic sectors. Recent reforms include the creation of: (a) Diploma-level programs through Polytechnics Mauritius Limited (PML), which has successfully graduated its first cohort of students, with a 100% pre-graduation employment rate; (b) Certificate-level programs through the Institute of Technical Education and Technology (ITET) centers operating under METEST. To strengthen the pipeline of candidates for courses at PML and ITET, the government is launching a new Technology Stream in Grades 10-11. This stream is scheduled to debut in the initial batch of 12-14 schools in January 2024.

¹²¹ See OECD (2010). "The high cost of low educational performance: The long-run economic impact of improving PISA outcomes." Paris: OECD.

the pupil-to-teacher ratio would be unlikely to prove more cost-effective than alternatives such as evidence-based interventions in the professional development of teachers or investments in educational technology. A medium-term strategy for reallocating education resources with an equity perspective could include measures to slow down the hiring rate for new teachers, including more advanced qualification requirements, which could lower the cost of the workforce while improving the quality of teaching. Teachers that are released from their current roles could be redeployed to support other interventions, such as tutoring and early remedial education for disadvantaged students, teacher training and mentorship, or the new teaching-related jobs created by the NYCBE reform. Other transition countries succeeded in rationalizing its school network by imposing an obligation on all municipalities to adopt network consolidation strategies and combining this with the provision of incentives through the application of a per capita financing formula¹²². Further research, including thorough technical analyses and extensive stakeholder consultations, will be necessary to assess the technical and political feasibility of these reforms and to develop an appropriate medium-term strategy.

Building M&E capacity, including through the regular implementation of national and international standardized learning assessments, would help inform sound policy decisions. Mauritius has significantly increased public investment on education over the past decade, but important gaps in the M&E system prevent a thorough assessment of the efficiency, equity, and cost-effectiveness of education spending. Data from national annual examinations offer only limited information on student learning¹²³, and the most recent international standardized learning assessment was conducted more than a decade ago. Regularly administering national and international standardized learning assessments would allow policymakers to track progress on key outcomes, benchmark performance against aspirational peers, and increase accountability among education staff and institutions. It will be important to invest in improving the government's capacity to collect and analyze data, including via rigorous impact evaluation strategies designed to assess the relative cost-effectiveness of educational programs and reforms, and their effects on educational equity.

Increasing the efficiency of spending on education can contribute to long-term fiscal sustainability while accelerating Mauritius's transition to a knowledge-based economy. Bringing all students in Mauritius to an average PISA test score one standard deviation below the OECD

average could massively increase GDP over the long term (see Annex A7). The educational gains that would result from improvements at the bottom of the distribution in Mauritius are greater than the ones that could be achieved by any OECD country, and almost as great as those that would result from shifting the entire achievement distribution to bring Mauritius to the top of the global rankings. Therefore, improving the quality and equity of education to build universal academic skills and competencies should be prioritized. Implementing the policies described above could produce improvements in the efficiency and equity of education spending while contributing to long-term fiscal sustainability.

3. Special Topic: Optimizing Public Support for Private-Sector Development

3.1 The COVID-19 pandemic had a profound and lasting impact on Mauritius's private sector development programs

When the COVID-19 pandemic hit Mauritius, the government launched a proactive fiscal response designed to safeguard productive assets and jobs during the ensuing crisis. This included the implementation of a large array of new support programs for the private sector, and the extension of others that were already in place. While some of these programs experienced wide and immediate take up, several did not manage to disburse the full amounts of resources earmarked to them. In subsequent budget cycles, various of these programs with underspent earmarked funds were extended, and new ones were introduced.

The objectives pursued by newly introduced private sector development programs evolved as the economic conditions changed. At the start of the pandemic, the initial wave of government support to the private sector was channeled primarily through a series of new programs launched under the umbrella of the Plan de Soutien, announced in March 2020. The Plan de Relance, announced in the 2020/21 budget, included another wave of ambitious support programs. The government also extended several preexisting schemes to mitigate the impact of the crisis on firms and protect jobs and the productive base. Several of the support programs were extended at the start of the 2021/22 budget cycle, and a majority remain active, with substantial unspent funding. In parallel, the 2021/22 budget started pivoting the policy focus toward fostering a green recovery and developing the green energy industry. The 2022/23 budget reinforced this shift,

¹²² Per student funding formulae provide schools with fixed amounts of financing based on the numbers of students enrolled, but also tend to incorporate adjustment factors to tackle equity issues, either based on schools' or students' characteristics. See for instance the cases of Armenia and Georgia as examples of formulae that include few adjustment factors, and Lithuania and Poland as cases with many of them. The formulae also differ in the degree to which they cover the school budget, i.e., whether they include capital expenditures in addition to recurrent expenditures, and which elements of the latter. For a complete description of per capita financing reforms in other transition countries, see for instance Alonso, J.D. and Sanchez, A. (2011). "Reforming Education Finance in Transition Countries." Washington, DC: World Bank.

¹²³ See World Bank (2021c). "Investing in Foundational Skills in Mauritius." Input to the World Bank's 2021 Systematic Country Diagnostic Report. Washington, DC: World Bank.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

announcing a new set of programs and schemes geared toward increasing the adoption of green technologies and scaling up the use of renewable energy sources by private businesses.

a) Measures under the *Plan de Soutien* aimed to provide immediate support to firms and workers affected by COVID-19

The *Plan de Soutien* was launched at the onset of the COVID-19 crisis and aimed to give the necessary support to workers and firms across all sectors, including local manufacturing and SMEs. The plan entailed the mobilization of MUR 9 billion, out of which MUR 1 billion came from the Consolidated Fund and the remaining MUR 8 billion came from public bodies. The plan included provisions at the macroeconomic and sectoral levels.

At the macroeconomic level, the *Plan de Soutien* implemented a series of measures to boost financial support, safeguard labor, and boost SMEs. The cross-cutting financial support measures included a reduction of the Key Repo Rate on March 10, 2020, from 3.35 to 2.85 percent; a Special Relief Programme for an amount of MUR 5 billion through commercial banks from March 16th to end-July 2020; the provision of loans under very favorable conditions¹²⁴ to meet the cash flow and working capital requirements of operators being affected by COVID-19, across all sectors of activities including local manufacturing and SMEs; a moratorium on repayment of existing loans for firms affected by COVID-19; easing of banking guidelines to allow banks to lend to enterprises facing cash flow and working capital difficulties in the wake of COVID-19; the introduction of a Bank of Mauritius 2020 Savings Bond; an Equity Participation Scheme launched by the State Investment Corporation (SIC) to assist enterprises to overcome their financial difficulties in the wake of COVID-19; several support measures by the Investment Support Programme Ltd (ISP Ltd) and SME Equity Fund Ltd, (i.e., the Enterprise Modernization Scheme, SME Factoring Scheme, Corporate Guarantee, and Equity Financing); a Revolving Credit Fund of MUR 200 million established at the Development Bank of Mauritius Ltd to help companies with turnover of up to MUR 10 million to ease cash flow difficulties up to December 31st, 2020; and a double tax deduction on investments in plant and machinery between March 1st and June 30th, 2020 for firms affected by COVID-19. The cross-cutting provisions regarding labor comprised the automatic extension of all labor permits expiring in 2020 until the end of 2021; full government support to promote the Work at Home Scheme announced in the 2018/19 budget speech; and the establishment of an e-government Digital Bureau to fast track the provision of public services through electronic means. Last, the cross-cutting support to SMEs included, apart from these measures, a series of new schemes being launched by SME Mauritius, comprising the Internal Capability Development

Scheme; the Technology and Innovation Scheme; the SME Marketing Support Scheme; the Inclusiveness and Integration Scheme; and the SME Utility Connection Assistance Scheme.

In addition of the above discussed cross-cutting support, the *Plan de Soutien* also included a number of provisions specifically directed to the support of firms in systemically important sectors. These included tourism, manufacturing and trade, agroindustry, and health, which were supported by sector-specific policy measures and various targeted state support programs (see Section 3.2 and Annex A8)¹²⁵.

b) The *Plan de Relance* fostered a revival of bruised traditional economic sectors, supported SMEs survival economywide, and provided incentives for the emergence of new economic activities

The government announced the *Plan de Relance de L'Investissement et de L'Économie* in the 2020/21 budget speech. The plan earmarked more than MUR 100 billion for projects and programs to help the economy recover from the COVID-19 crisis and accelerate growth. The plan included several measures designed to revive and boost traditional sectors, as well as others seeking to facilitate the emergence of new sectors expected to support Mauritius's transformation into a knowledge-based economy.

As part of the government's ambitious efforts to revive traditional economic sectors, several schemes aimed at supporting economywide SMEs survival were introduced or extended. Measures to relaunch traditional sectors spanned across construction, agriculture, manufacturing, tourism, and financial services (Box 5). Programs to support SME survival included (i) earmarking MUR 10 billion for the DBM Ltd to support distressed SMEs and Cooperative Societies; (ii) the provision of loans by the Development Bank of Mauritius (DBM) Ltd of up to MUR 10 million per enterprise at a concessional rate of 0.5 percent per annum; and (iii) DBM loan facilities to taxi operators based at hotels; (iv) scaling up of the DBM Ltd Campus Entrepreneur Challenge competition to finance the first 10 best projects by university students at a concessional rate of 0.5 percent per annum for an amount of up to MUR 500,000; (v) to encourage local production, the one-off grant towards certification under the "Made in Moris" label was increased from MUR 5,000 to a maximum of MUR 50,000, and the margin of preference for SMEs holding the "Made in Moris" label was increased from 30 to 40 percent; (vi) access to factoring facilities through Maubank was broadened to ease cash flow of SMEs; (vii) a fifty percent subsidy by ISP Ltd of the factoring fee per invoice for SMEs was introduced, accompanied by the requirement of the Procurement Policy Office to Public Bodies to procure specific goods and services from SMEs only, whenever possible; (viii) a grant of 15 percent on cost of

¹²⁴ Maturity of two years at an interest rate of 2.5 percent per annum inclusive of a moratorium of six months on capital and interest payments.

¹²⁵ Additionally, a comprehensive list of all existing private sector development programs, alongside their main objectives is included in Annex A8.

assets of up to a maximum of MUR 150,000 under the DBM Enterprise Modernization Scheme for SMEs and cooperative societies was launched; and (ix) a grant of up to MUR 50,000 was announced from the Cooperatives Development Fund to cooperative societies for purchasing livestock or acquiring equipment involved in the production of food items.

Some measures to promote the emergence and development of new sectors and to incentivize innovation and adoption of new technologies were also introduced. These policies included programs seeking to stimulate the development of the data economy; diversify and deepen the blue economy value-chain; build a strong biomedical and pharmaceutical industry; and reinforce Mauritius's regional partnerships.

To lay the foundation for a data-driven economy and accelerate the innovation process, the government set up a Data Technology Park at Côte d'Or. The Data Technology Park encompasses 12 highly skilled and specialized centers, from additive manufacturing to deep artificial intelligence, and with a Carbon Neutral Green Certified Tier 4 data center. Such data center is expected to provide the necessary support for start-ups, existing businesses and government services to achieve a major digital transformation. Government also announced that a Technology and Innovation Fund would be created to invest up to MUR 2 million (USD 50,826) as equity in projects recommended by the Mauritius Research and Innovation Council (MRIC).

As part of its efforts to develop new high-value economic sectors, the government directed the MIC to invest in projects related to the pharmaceutical and medical devices industry, as well as the blue economy. The MIC was directed to invest in the production of pharmaceutical products, medical devices, and personal protective equipment through a PPP, and a Medical Products Regulatory Authority Bill was to be developed to ensure conformity with international norms and standards. To encourage research and development, the government waived the registration duty on acquisition of immovable property in the life sciences sector, exempted medical R&D centers from VAT on construction materials and specialized equipment, and granted a double deduction on R&D expenditures. The government also announced that a regulatory framework would be set up for telemedicine platforms and that the Human Tissue Act would be fully implemented. The MIC was also directed to invest in the blue economy, by means of joint ventures engaged in fishing activities and its value chain. An inland aquaculture support scheme was also announced, encompassing an eight-year tax holiday as well as duty and VAT exemptions on equipment. As ship registration is considered by government as another segment of the blue economy, the plan also supported the introduction of a single license for chartered yacht calls in Mauritius encompassing multiple berthing options, rights for helicopter flights, and gaming¹²⁶.

Box 5: Support measures targeting traditional sectors under the *Plan de Relance*

Some of the most prominent measures to support traditional main stake sectors included several projects and initiatives to boost the construction sector, seen as the engine of the recovery. MUR 41.1 billion were earmarked to develop several projects and initiatives including the construction of social housing, a dam, expansion of the public transport network, construction of roads and bridges, port infrastructure, as well as programs to stimulate private investment in general, and in the construction sector specifically.

General measures and support schemes were also introduced to promote investment in smart agriculture and bring more land under cultivation, comprising grants, subsidies, compensation schemes, concessional loans, and price guarantees, as well as rising the rate of the customs duty on imported sugar from 80 to 100 percent to support planters.

Several policies and programs were launched to support manufacturing industries, including imposing a minimum shelf space of 10 percent for locally manufactured goods in supermarkets; provision of financial support; extending the investment tax credit of 15 percent over 3 years to all manufacturing companies; provision of a double deduction on the cost of acquisition of patents and franchises and also on the costs incurred to comply with international quality standards and norms; and several measures to boost manufacturing exports.

To revive the tourism sector, which came to a complete stop during the pandemic, government deployed an extensive support program, which comprised the provision of financial support for the national airline, the development of a new tourism branding strategy by the MTPA and EDB, and extensive financial support to tourism operators and firms in related activities.

Last, to consolidate the financial services sector and boost its competitiveness, government committed to completing the five remaining recommendations under the Financial Action Task Force (FATF) Action Plan for Mauritius by September 2020; introducing a new AML/CFT (Miscellaneous Provisions) Bill to complement the existing legislative framework; and setting up a dedicated and specialized Financial Offences Court. It also committed to the introduction of various new products in line with the recommendations of the 10-Year Blueprint to further enhance competitiveness of the Financial Services Sector; the development of new frameworks by the Bank of Mauritius for digital banking, private banking, and wealth management by banks; and the creation of a dedicated Venture Capital Market at the Stock Exchange of Mauritius for start-ups and SMEs.

¹²⁶ Last, to reinforce Mauritius's partnerships with the rest of Africa, the MIC earmarked MUR 10 billion to invest in African projects, including Special Economic Zone (SEZ) projects under a G2G framework.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

c) Measures under the 2021/22 and 2022/23 budgets marked a shift in the policy focus, pivoting toward green growth-oriented policies

Measures under the 2021/22 and 2022/23 budgets were strongly oriented toward fostering a green recovery and turning the green energy industry into a new source of economic growth. The 2021/22 budget allocated MUR 2.2 billion over a five-year horizon to the National Environment and Climate Change Fund to rehabilitate the coastlines, strengthen environmental monitoring, clean-up the country, and promote greening of the economy to achieve the target of producing 60 percent of the country's energy needs from green sources by 2030, with the use of coal totally phased out before 2030. The 2022/23 budget reinforced the commitment to transition to a sustainable and inclusive development model with the launch of a green transformation package to increase the share of electricity supply from local renewable sources, as well as measures oriented to reduce the reliance on non-renewable energy sources. In this vein, several overarching green policy measures were announced, including the implementation of the Bus Modernization Scheme to purchase electric buses only, with the acquisition of 200 electric buses to renew half of the fleet of the National Transport Corporation (NTC); the introduction of a sustainable city scheme; and the announcement that a carbon credit trading framework would be developed. These measures were accompanied by a series of new support programs and schemes to promote scaling up of green energy by both residential and productive consumers. These comprised various leasing facilities to transport operators and firms to acquire electric vehicles and charging infrastructure; duty-free on all hybrid and electric vehicles imports; introduction of a negative excise duty scheme of 10 percent for the purchase of electric vehicles; a loan facility of MUR 250,000 to domestic consumers for the acquisition of solar PV systems; purchase of electricity under the Medium Scale Distributed Generation Scheme (MSDG); waiving of existing rental fee for production meters of Renewable Energy Schemes; accelerated annual allowance on "green technology equipment" expenditure under TOS; and support to boost mechanization, innovation and sustainability in agriculture.

3.2 Analyzing private-sector development programs can help determine their contribution to high-level policy objectives

The present analysis of private-sector development programs is based on data shared by the MOFEPD and the MRIC. The dataset did not include information on program results, and therefore the findings represent an ex ante assessment of the initial allocation of funds. Gaps in data on earmarked funds and disbursements limit the scope of the analysis and the conclusions that may be drawn from it. The analysis also excludes a majority of the investments made through the MIC, as comparable information at a sufficiently detailed level is not available¹²⁷.

This section analyzes five dimensions of state support programs: (i) program objectives; (ii) beneficiaries by sector; (iii) beneficiaries by firm size; (iv) instruments used; and (v) implementing institutions. Within and across these five dimensions, several indicators are used to assess the overall efficiency of the state support programs' network, programs' costs and budget-execution rates, and their alignment with the government's overarching objectives of fostering innovation, transitioning to a knowledge-based economy, boosting employment, and promoting sustainability¹²⁸.

At least 105 programs oriented towards the private sector have been launched in recent years, corresponding to more than MUR 47,746 million (equivalent to US\$1.055 billion or 9 percent of GDP) of earmarked budgetary funding¹²⁹. Of these programs, 29 pre-dated the 2020/21 budget, whereas the rest were implemented after it. A total of 17 programs (16 percent) were part of the *Plan de Soutien*, another 48 programs (46 percent) were part of the *Plan de Relance*, while the remaining 29 programs (28 percent) were included in the 2022/23 budget released in June 2022. Most programs were implemented through the Development Bank of Mauritius (34 percent), followed by the Industrial Finance Corporation of Mauritius (IFCM, 11 percent), MRIC (11 percent), the Economic Development Board (EDB, 6 percent), SME Mauritius Ltd (5 percent), SME-EF (3 percent), and NTC (3 percent). Most of the programs involved loans (41 percent). Other instruments used were cost subsidies

¹²⁷ Few support programs that have been implemented through the MIC have been included in the statistical analysis of this section, to the extent appropriate quantitative information was available to the team, but the bulk of MIC investments have not been covered due to lack of sufficiently disaggregated information.

¹²⁸ For the purpose of this study, two definitions of innovation are used, namely incremental innovation and radical innovation. Incremental innovation refers to minor improvements by an enterprise to existing products, services, processes, and tools. It encompasses technology adoption and adaptation of already existing technologies (modernization) and product, process, marketing or organizational innovations that are "new to the firm" (Bell, M., & Pavitt, K. (1993). Technological accumulation and industrial growth: contrasts between developed and developing countries. *Industrial and corporate change*, 2(2), 157-210). In turn, radical innovation relates to a significant breakthrough - a new business model, technology, process, or concept that disrupts the existing market (Christensen, C. M. (1997). *Marketing strategy: learning by doing*. *Harvard business review*, 75(6), 141-151). Typically, radical innovation is related to R&D activity and demonstrates revolutionary changes in technology which push the technological frontier forward.

¹²⁹ Some of the programs do not have an associated earmarked amount available in the data made available by the MOFEPD, while for other programs a single earmarked amount is available for a group of programs, without specifying the amount assigned to each individual program. This complicates the task of matching funds to programs under specific dimensions, as sometimes a single earmarked amount spans across several programs pursuing different objectives, sectors, etc. Even for the aggregate landscape of programs, the sum of all earmarked amounts (MUR 47,746 million) does not provide the full picture of budgetary and extra-budgetary allocations, since for several programs information on earmarked amounts is not available. A majority, but not all of the programs launched prior to the FY2022/23 budget, have an associated number of applications and the corresponding monetary amounts, which is useful to help quantify the resources allocated and effectively disbursed for different groups of programs in terms of objectives pursued, sectors supported, and other criteria. However, this information is unavailable for all of the programs introduced under the FY2022/23 budget.

(11 percent), grants (9 percent), leasing (9 percent), tax breaks (5 percent) and other miscellaneous instruments (12 percent). Several of the support programs were extended beyond the initial terms, and 90 percent remained ongoing by October 2022.

Overall, a total of at least 25,371 applications had been received from the private sector by early September 2022, for an aggregate amount of MUR 22,040 million. Of these, 18,276 had been approved (totaling MUR 17,196 million) and 1,116 were in progress of evaluation (MUR 3,298 million), while 18,337 had committed funds (MUR 13,056 million). Although the programs' beneficiaries comprise a wide range of economic actors, including households and businesses of different sizes, a large share of the programs are directed to micro, small and medium enterprises (22 percent) or exclusively micro enterprises (15 percent), totaling 37 percent of all programs directed exclusively to microenterprises and SMEs. If programs open to mid-market firms¹³⁰ are included, this share rises to 44 percent. Programs open to firms of any size account for 46 percent of all, whereas those offering support to large firms exclusively represent 3 percent, and those directed to households comprise the remaining 7 percent. Figures 55-58 show the breakdown of programs by the size of targeted beneficiaries, by implementation instruments, by implementing institutions, and by the status of applications as of early September 2022.

Figure 55. Programs by Beneficiaries Size

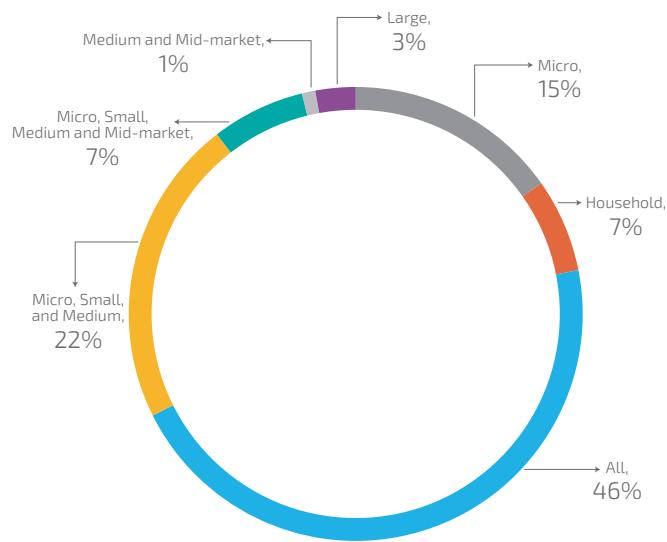


Figure 56. Programs by Implementation Instruments

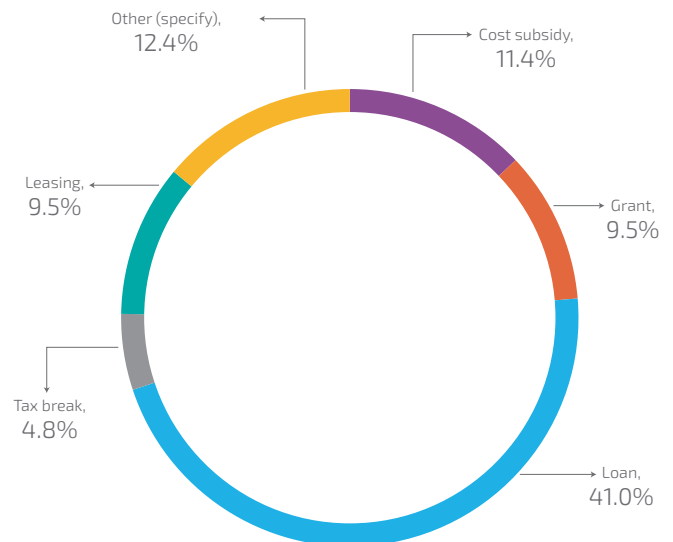


Figure 57. Programs by Implementing Institution

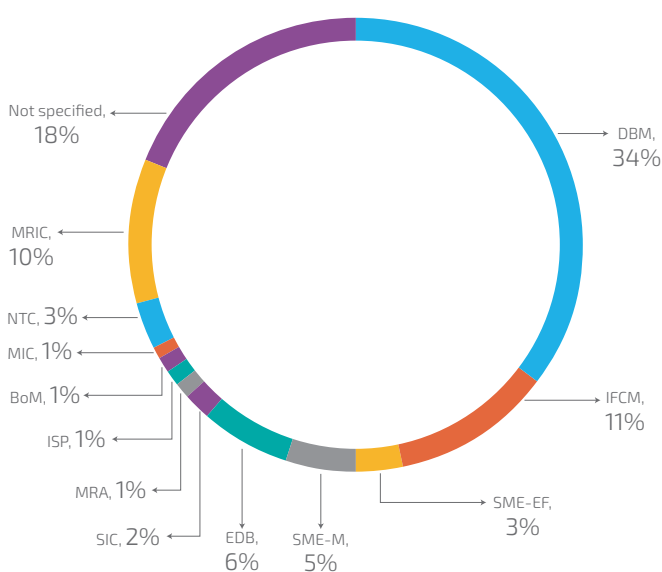
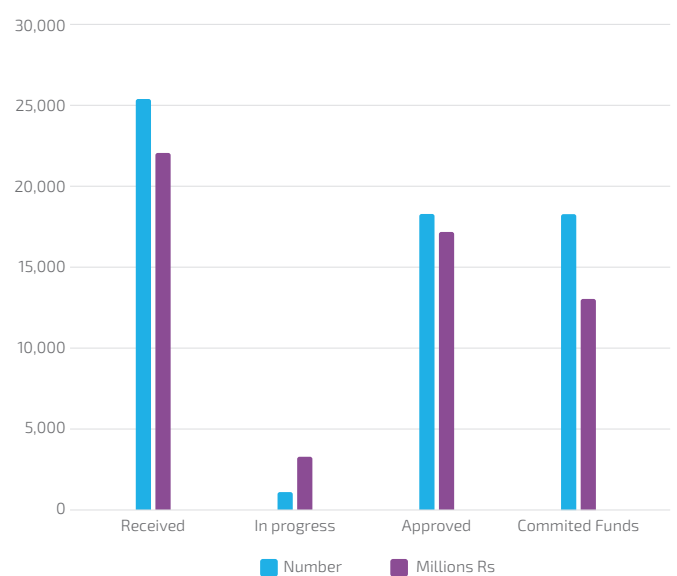


Figure 58. Status of Applications (by early September 2022)



Source: WB staff based on data from the MOFEPD and MRIC.

¹³⁰ Newly introduced category in the 2022/23 budget (firms with turnover up to MUR 250 million).

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Figure 59 shows the breakdown among the 105 support programs in terms of their explicit stated objectives. The highest share is accounted for by programs providing financial support (32 percent), fostering incremental innovation or modernization (30 percent of programs), promoting investment in equipment (25 percent) or other forms of investment (15 percent), promoting use of green energy (11 percent), radical innovation (10 percent), boosting competitiveness (10 percent), protecting or bolstering employment (10 percent), export promotion (8 percent), aid provision facing negative effects from COVID-19 (8 percent), facilitating co-investment (public or private, 4 percent), rainwater harvesting and recycling (3 percent), promoting female empowerment (2 percent), providing targeted support to specific types of beneficiaries (8 percent), and all other (3 percent). More than two thirds of the programs have two or more stated objectives, with some programs pursuing up to four or five objectives simultaneously.

In terms of productive sectors targeted, more than half of the programs are open to firms conducting business in any area of the economy (Figure 60). Among programs directed to specific sectors, a considerable degree of overlap is noted, with some of the programs targeting up to six different specific productive sectors simultaneously. These programs target agriculture (25 percent), manufacturing (20 percent), construction (12 percent), tourism (10 percent), transportation (9 percent), services (7 percent), ICT (6 percent), export-oriented activities (4 percent), the blue economy (4 percent), and trade (3 percent). About 5 percent of the programs target very specific sectors, whereas 7 percent are directed to firms in any sector with very specific exceptions, and 10 percent of the programs are directed to households rather than firms.

3.3 Mauritius invests both in incremental and radical innovation, but it lags peer countries

One of Mauritius's stated objectives is to build a knowledge-based economy, but it lags far behind other UMICs in R&D spending. The most common measure of overall support for the development of the knowledge economy is R&D spending as a share of GDP. Global innovation leaders such as Israel or Korea spend about 5 percent of GDP on R&D (Figure 61) while high income countries spend about 3 percent. UMICs spend an average of about 2 percent of GDP on R&D, while Mauritius spends just 0.4 percent—below the average for lower middle-income countries (0.5 percent) and regional comparators such as South Africa (0.6 percent). Importantly, most of Mauritius's R&D spending comes from the public budget, with the private sector contributing just 4.4 percent. Typically, in innovative economies the private sector is responsible for most R&D spending. For example, in South Korea and Japan the private sector accounts for 79 percent of total country spending on R&D (Figure 62).

This very low level of R&D spending is reflected in the low number of international patents received each year. In 2021, Mauritius filed 65 patent cooperation treaty applications, versus 162 by Estonia and 4,254 by Singapore. The low number of patents is a result not only of scarce expenditure on R&D, but also of an underdeveloped Intellectual Property (IP) framework, undersupply of adequate skills, and lack of policies fostering research excellence and collaboration between businesses and research institutions, among others.

Figure 59. Stated Objectives of State Support Programs

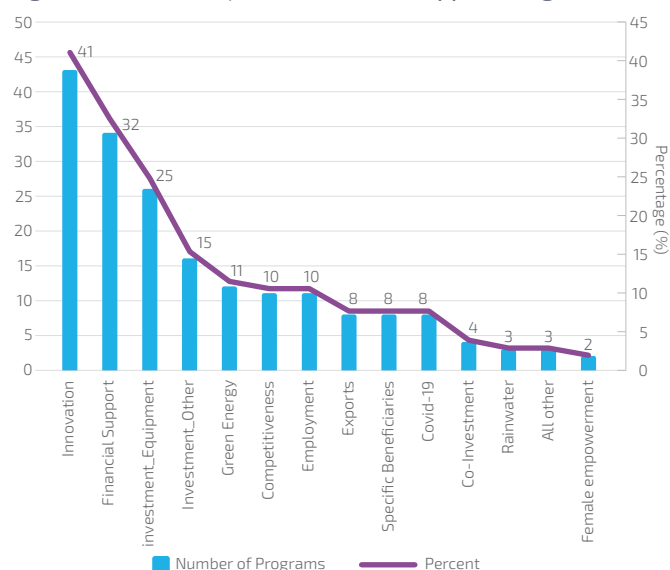
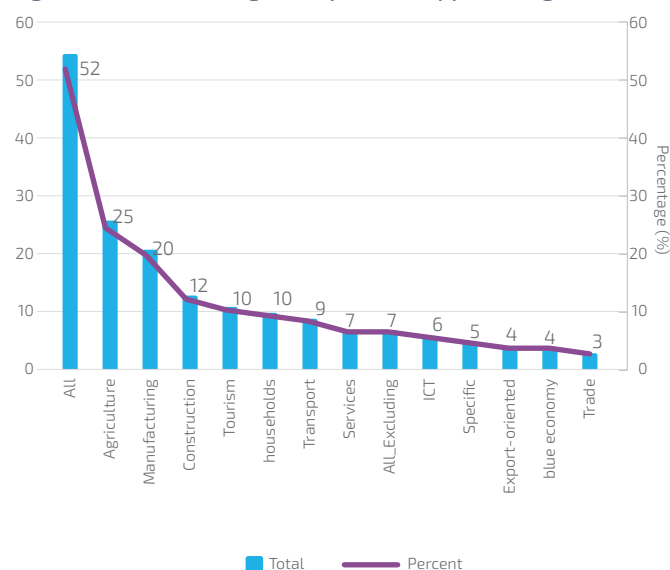


Figure 60. Sectors Targeted by State Support Programs



Source: WB staff based on data from the MOFEPD and MRIC.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Figure 61. Gross Expenditure on R&D, 2020* (% of GDP)

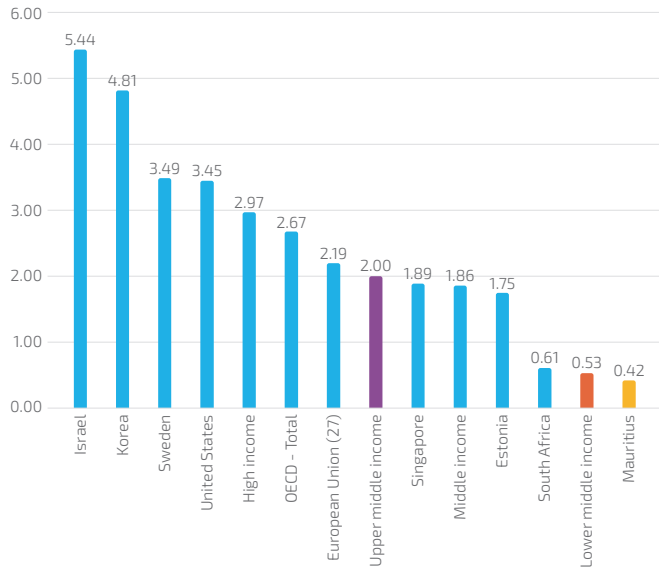
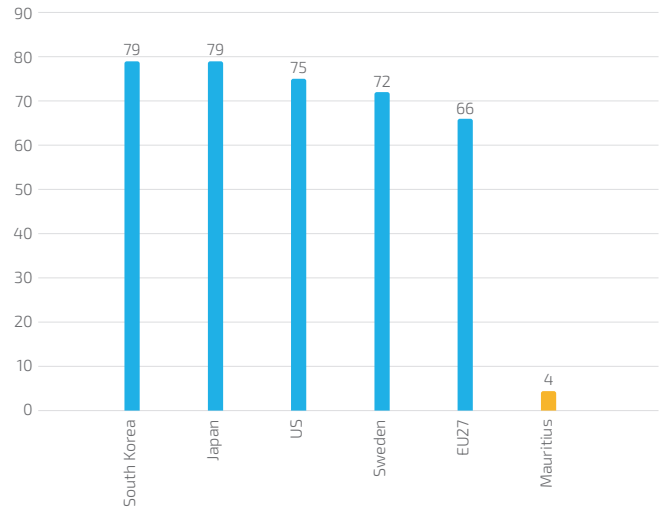


Figure 62. Private R&D as a Share of Total R&D Spending, 2020 (%)



Source: WDI, UNESCO, OECD, Eurostat databases.
* GERD data for Singapore and South Africa is for 2019.

Figure 63. GII Rankings, 2021

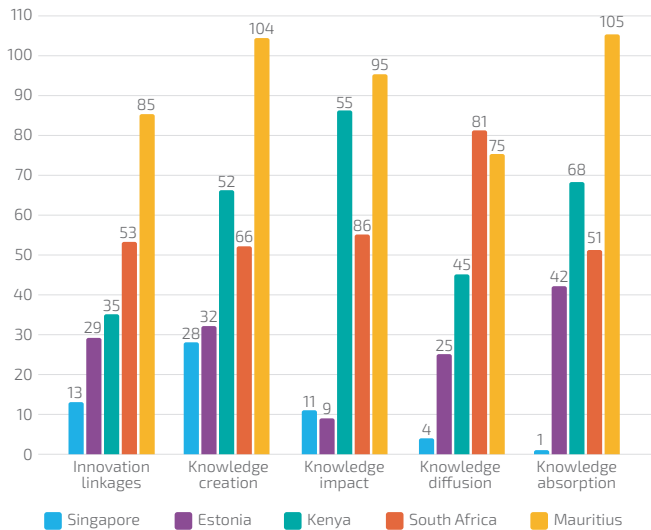
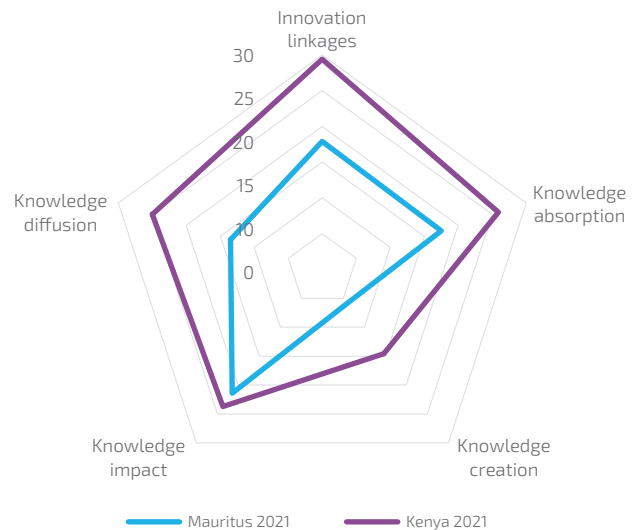


Figure 64. GII Scores, 2021



Source: WIPO (2021). Global Innovation Index 2021: What is the future of innovation-driven growth? Geneva: World Intellectual Property Organization.

Notes:

Innovation linkages are measured by: University-industry R&D collaboration, GERD financed by abroad, State of cluster development and depth, Joint venture/strategic alliance deals, Patent families bn PPP\$ GDP.

Knowledge creation is measured by: National and international Patents, Utility models, Scientific and technical articles, Citable documents H-index.

Knowledge impact is measured by: Labor productivity growth, New businesses, Software spending, ISO 9001 quality certificates, High-tech manufacturing.

Knowledge diffusion is measured by: Intellectual property receipts, Production and export complexity, High-tech exports, ICT services exports.

Knowledge absorption is measured by: Intellectual property payments, High-tech imports, ICT services imports, FDI net inflows, Research talent in businesses.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Mauritius has experienced a decline in its overall rank in the Global Innovation Index (GII). The Country briefly improved its rank from the 52nd position in 2021 to the 45th position in 2022, but dropped to the 57th position in 2023. The country lags in innovation outputs¹³¹. Although Mauritius has gained the status of innovation leader in the Africa region according to the GI, several important weakness areas persist in which Mauritius already lags some of its African peers such as Kenya and South Africa (Figures 63 and 64). Gaps primarily relate to innovation output, demonstrated by innovation linkages (e.g., university-industry R&D collaboration), knowledge creation (e.g., Intellectual Property Rights, IPR), knowledge impact (e.g., high-tech manufacturing), knowledge diffusion (e.g., high-tech exports), and knowledge absorption (e.g., research talent in businesses). To become a knowledge-based economy and maintain its leading position in Africa, Mauritius will need to address these issues (Box 6).

SME-Mauritius is the main entity supporting incremental innovation through the development of SMEs absorptive capacity and internal capabilities. It implements four matching-grant programs¹³² with a total budget of MUR 30 million, that provide access to training, access to business advisory services (BAS), support in digital transformation, development of e-commerce, connectivity to global value chains, enhancing of production capabilities, and others. The type of programs offered by SME-Mauritius are aligned with international evidence showing that access to knowledge through BAS is an important mechanism to build technological know-how and skills, as it can enhance the absorption of new technologies and build capacity for further learning¹³³. Improving managerial capabilities increases firm productivity and growth¹³⁴, while business training programs increase profits and sales¹³⁵.

The Mauritius Research and Innovation Council is the main stakeholder funding radical innovation in Mauritius. The MRIC was established in September 2019 through the transformation of the Mauritius Research Council, which was primarily supporting academic research projects. The MRIC's mandate is to advise the government on applied research, innovation, and R&D. It manages eight matching-grant programs encouraging applied research, collaboration between the private sector and higher education institutions, research commercialization, and the development of an entrepreneurial culture by funding business incubators. Additionally, the MRIC announces special thematic calls on issues determined by its board, such as fighting diabetes in the workplace, or transforming the public sector. The MRIC's funding rose from MUR 32 million in 2019/20

to MUR 57 million in 2020/21, and exceeded MUR 60 million in 2021/22. In 2022/23, the MRIC estimated that demand for innovation programs would call for a budget of MUR 100 million per year, well above the allocated budget of MUR 70 million for that year. A limited budget is the main constraint on the MRIC's activities. Due to lack of funding, the MRIC cut its program promotion budget, and as a result, the number of applications dropped from 395 in 2020/21 to 21 in 2021/22. The MRIC could channel more resources towards innovation, and an increased budget would enable it to launch special thematic calls for proposals, execute dedicated marketing campaigns to attract applications, and fund more projects per year.

Box 6: Digital Government and Entrepreneurship in Estonia*

Estonia, with a population of 1.3 million people, transformed from a Soviet republic to one of the most advanced digital societies in the world over the course of just a few decades, thanks to a government-backed technology investment in the early 1990s. The Estonian government made a commitment to digitally transform the Estonian society, starting with widening the access to internet. By the late 1990s, all Estonian schools were online and large investments were made in computer networking and infrastructure. Estonia has since made massive investments toward designing school curricula with a technology and innovation theme. Children learn how to write code from the age of seven. Internet access was declared a human right in 2001, and e-identity became the cornerstone of the country's e-state. Today, around 99 percent of government services are run online via the e-Estonia.com state portal.

The government also paved the way for the establishment of a digital ecosystem that allowed startups to thrive. The most recent initiative is the e-residency program, which allows e-resident entrepreneurs from all over the world start an EU-based company and manage business from anywhere, entirely online.

Estonia is leading in Europe in terms of startups, unicorns and investments per capita. So far, Estonia has been the birthplace of 10 unicorns: Skype (2005), Playtech (2007), Wise (2015), Bolt (2018), Pipedrive (2020), Zego, ID.me and Gelato (2021), Veriff and Glia (2022).

Source: <https://www.e-resident.gov.ee/>; <https://e-estonia.com/>; investinestonia.com.

*The world's foremost and well-studied example of a startup nation is Israel, while Estonia represents a more recent case demonstrating that well targeted policy enables economic transformation in a relatively short period of time.

¹³¹ WIPO (2023). Global Innovation Index 2023: Innovation in the face of uncertainty.

¹³² Internal Capability Development Scheme, Technology and Innovation Scheme, SME Marketing Support Scheme, and Inclusiveness and Integration Scheme.

¹³³ Cohen, W. and Levinthal, D. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, 35, 128-152.

¹³⁴ Bloom, N., Eifert, B., Mahajan, A., McKenzie, D., and Roberts, J. (2013). "Does management matter? Evidence from India." *The Quarterly Journal of Economics*, 128(1), 1-51; Bruhn, M., Karlan, D., and Schoar, A. (2013). "The impact of consulting services on small and medium enterprises: Evidence from a randomized trial in Mexico." *World Bank Policy Research Working Paper 6508*, 2013; Iacovone, L., Maloney, W., and McKenzie, D. 2019. "Improving Management with Individual and Group-Based Consulting: Results from a Randomized Experiment in Colombia." *World Bank Policy Research Working Paper 8854*. World Bank, Washington, DC.

¹³⁵ McKenzie, D. (2020). "Small Business Training to Improve Management Practices in Developing Countries: Reassessing the Evidence for 'Training Doesn't Work.'" *World Bank Policy Research Working Paper 9408*.

Table 10. MRIC budget allocation and funding for radical innovation programs

Financial year (June-July)	Annual MRIC Capital Budget for Innovation Programs (Budget Vote from Govt)	Funding committed for Programs (ongoing projects and new projects)	Number of applications	Number of approved applications for funding
2022-2023 (forecast)	70,000,000	62,316,724	7	0***
2021 – 2022	50,000,000	60,877,384	21	5**
2020 – 2021	83,000,000	57,237,004	395*	72
2019 – 2020	100,000,000	32,095,898	275*	28
SUM	303,000,000	212,527,010	698	101

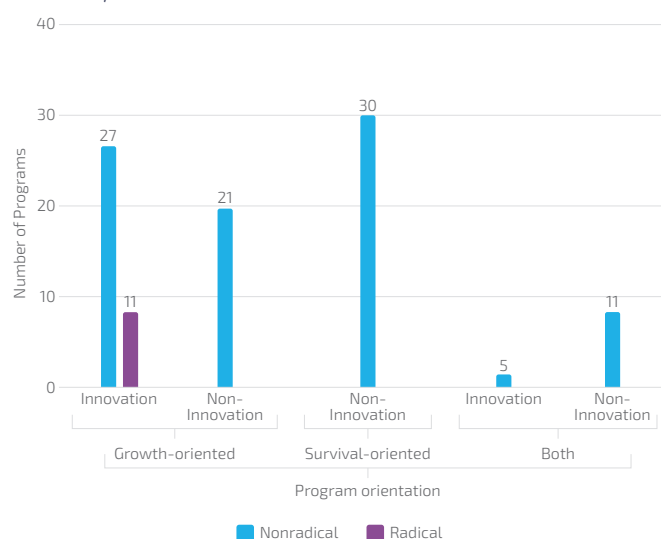
Source: MRIC.

Notes: *High number of applications in 2020-2021 and 2019-2020 was due to special calls during COVID-19 and dedicated program promotion campaign. ** There are additional six applications in the evaluation process. ***6 applications are currently in the evaluation process.

3.4 State support programs need to align with international best practices for developing high-value-added sectors

The distribution of business support programs shows that Mauritius primarily fosters firms' survival and incremental innovation, while support for radical, disruptive innovation is negligible. Out of 105 programs, 59 are growth oriented¹³⁶, 16 are both growth and survival oriented, and 30 specifically support business survival¹³⁷ (Figure 65). Within the 75 programs with a growth or growth and survival orientation, 32 programs (43 percent) support incremental innovation, while just 11 programs (15 percent) fund radical innovation. A change in the focus of public support measures toward fostering radical innovation is needed to enable Mauritius's development as a knowledge-based economy. Supporting SMEs survival was justified during the pandemic to protect jobs and assets amid a sudden and unprecedented crisis, and it was aligned with government policies in most countries during the initial pandemic shock. However, with the recovery now well underway, it is time for the government to rethink this policy and consider a new approach. International empirical research on the effectiveness of SMEs support programs shows that SMEs policies that do not improve firm productivity are likely to generate a misallocation of resources, thereby reducing aggregate productivity. Therefore, SMEs interventions should support the expansion of firms that are able to grow and that can build their capacity to drive this growth. Supporting SMEs survival may go

Figure 65. Distribution of Measures Supporting Firm Growth, Survival, and Growth & Survival



Source: WB staff based on data from MOFEPD and MRIC.

counter to the jobs and economic transformation agenda in the medium to longer term. Empirical research indicates that the predominance of low-productivity SMEs (and self-employed workers) in total employment may be an obstacle to the growth of high-potential firms, and therefore impede the sustainable creation of more and better jobs¹³⁸.

¹³⁶ Streamlined individual program objectives associated with growth-orientation include fostering innovation (incremental and radical), incentivizing investment (in equipment, other investments, and co-investment), enhancing competitiveness, boosting exports, boosting green energy, promoting female empowerment, promoting rainwater harvesting and use, and all other objectives not elsewhere specified. The full list of state support programs obtained from the MOFEPD and the MRIC that underlie this analysis, alongside their stated and streamlined objectives and type of orientation (survival, growth, or both) is available in Annex A9.

¹³⁷ Programs associated with survival-orientation include those whose objectives are fostering or protecting employment, provision of financial support or assistance (includes for working capital, cashflow, and lowering interest), programs that explicitly mention COVID-19 in their stated objectives, and programs targeted to very specific beneficiaries (such as urban terminal hawkers, taxi operators, etc.). The full list of state support programs obtained from the MOFEPD and the MRIC that underlie this analysis, alongside their stated and streamlined objectives and type of orientation (survival, growth, or both) is available in Annex A9.

¹³⁸ Akgigit, U., Alp, H. and Peters, M. (2016). "Lack of Selection and Limits to Delegation: Firm Dynamics in Developing Countries," NBER Working Papers 21905, National Bureau of Economic Research.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

Mauritius needs an overarching innovation policy strategy to guide the development of specific plans for SMEs, skills, higher education, and specific sectors. The country would benefit from a clear vision specifying a limited number of priority sectors and an action plan with allocated resources. As a result, a variety of entities implement programs in an uncoordinated way, pursuing their own agendas and with little collaboration or coordination among them (for example, the DBM, IFCM, SME-M, MRIC, higher education institutions, Human Resource Development Council, MIC, and others). Existing public programs support a wide range of economic sectors, with most programs concentrated in agriculture (25 percent of entire portfolio of analyzed programs) and manufacturing (20 percent), but the rationale for the rules guiding the sector selection process is unclear. While the COVID-19 crisis may have justified supporting a wide range of sectors, it is time to rethink this approach for the post-pandemic era.

Institutional and programmatic fragmentation weakens the effectiveness of the state support measures and render them prone to overlaps that can cause inefficiencies, given the similarities in programs' objectives, targeted sectors, and the pool of enterprises that may apply for support. To address the fragmentation challenge, Finland, Japan, and the United Kingdom have established innovation councils led by their respective prime ministers (Box 7). These councils supervise the development of an integrated approach to private sector development and meet regularly to monitor progress in achieving set goals. They ensure coordination and coherence between national policies targeting business competitiveness, innovation, R&D, and advanced human capital formation. Innovation councils are more likely to have a strategic advisory role than a decision-making role, but are useful to ensure that a wider range of views is captured.

Box 7. Examples of Coordination Councils

The Council for Science and Technology of the UK¹³⁹

The Council provides strategic advice for the Prime Minister and plays a coordination role across ministries in defining innovation policies that require a consistent science, technology and research approach to policymaking. Since its establishment in 2010, the main areas of expertise are high-level priorities for science and technology on a national level, the development of a STEM (science, engineering, technology and mathematics) academic ecosystem, and horizontal analysis of opportunities and risks associated with technological advancement. The Council includes up to 20 members who are academics and directors of research institutes, and is supported by a dedicated secretariat based in the Government Office for Science. Meetings of the Council are held every 3 months, or more often if the need arises to take a position on urgent matters of significant importance for the science and technology ecosystem. One of the most important achievements of the Council is the establishment of the Chief Scientific Advisers (CSAs) network, whose members provide ongoing R&D advisory in each governmental department, facilitating the interdepartmental coordination of policies.

Finnish Innovation Council¹⁴⁰

The Research and Innovation Council is an advisory body chaired by the Prime Minister. The Council discusses key issues relating to the development of research and innovation policies that support the wellbeing, growth and competitiveness of the Finnish economy. The Vice-Chairs as well as three more ministers are appointed by government (e.g., Minister of Education, Minister of Justice, Minister of the Interior). In addition to the ministers, the Council has about seven other members appointed by the Government for the duration of the parliamentary term, including university rectors and COEs of firms. The Council members must have extensive expertise in research, development and innovation activities.

Japanese Council for Science and Technology¹⁴¹

In 2001 Japan redefined the role of the Japanese Council for Science and Technology Policy, bringing together five ministries (Science and Technology Policy; Internal Affairs and Communications; Finance; Education, Culture, Sports, Science and Technology; Economy, Trade and Industry) with academics and businesspeople. The head of the Council is an independent member of the Council of Ministers. The secretariat has more than 100 professionals. In practice, the Council has become a horizontal Ministry of Innovation, with strong coordination and involved in detailed policy-making across all the sectors linked to research, technology development and innovation. It is responsible for publishing "The Science and Technology Basic Plan" every five years, which sets national priorities, and annual strategic documents tracking its implementation. The Council manages the science and technology budget and the allocation of human resources, and evaluates nationally important R&D initiatives.

¹³⁹ <https://www.gov.uk/government/organisations/council-for-science-and-technology/about#who-we-are>

¹⁴⁰ <https://valtioneuvosto.fi/en/research-and-innovation-council/composition>

¹⁴¹ <http://www8.cao.go.jp/cstp/english/policy/index.html>

The intellectual property rights system is nascent. In 2019, Mauritius adopted the Industrial Property Act, which entered into force on January 31, 2022. The new regulations make provision for the accommodation of the Patent Cooperation Treaty (PTC) for the international registration of Patents, the Madrid Protocol on facilitation of registration of Trademarks, and the Hague Agreement on for the international registration of industrial designs. Nonetheless, the Mauritius Patent Office does not have expertise in the area of patenting including evaluation of patent applications; instead, it uses assistance of foreign patent offices for IP examination. The country lacks the IPR enforcement regime and understanding of IPR in the broader communities of academia, the business sector, and policymakers.

Public higher education institutions are highly academic and lack mechanisms to promote cooperation with the private sector and to encourage research commercialization.

The University of Mauritius and other institutions lack the capacity to develop IP rules and appropriate incentives for commercialization of research. Research is funded through 13 research schemes managed by the Higher Education Commission (HEC). Yet, the annual research budget is limited, accounting for about MUR 30 million concentrated primarily on individual academic researcher projects. A welcome development is that support to relevant and impactful research is one of the objectives of the HEC's strategic plan for 2022-2025. Yet, it will be critical to develop an action plan, design research programs according to global best practice, and support their implementation with the allocation of sufficient budget.

Data reveal several weaknesses in program design processes applied by institutions supporting private development programs in Mauritius. To create impactful

public support measures, program design processes would benefit from the application of international best practice across all the agencies responsible for program design and implementation. Available data demonstrate that some schemes have overly general objectives that may lead to ambiguity. For example, the stated goal of the Innovation and Technology Fund is "to provide financing to technology and innovation-oriented companies". Moreover, some programs have had little uptake among the business community, such as selected loan schemes offered by the DBM (Table 11) which obtained zero, two or five applications (respectively for the Car Wash Operators scheme; Seeds & Seedlings; Construction of Water Tank; and Mechanization). Those programs resulted in total committed funds of MUR 0 (US\$0) for car-wash operators, MUR 330,000 (US\$7,590) for providers of seeds and seedlings; and MUR 115,000 (US\$2,645) for the construction of water tank and purchase of irrigation systems in Rodrigues. Potential impediments hindering the number of applications could be a low relevance of the programs in relation to firms' needs, exceedingly rigorous eligibility criteria, highly bureaucratic application processes, or insufficient promotion of the programs, to name a few. These bottlenecks point to weaknesses in program design. The international experience highlights the importance of clearly defined programs' origins and justification, the consideration of alternative policy instruments, presence of appropriate logic frameworks, clear programs' objectives and selection criteria, and a sound M&E framework, among others.

Some institutions are already applying elements of international good practice in their approach to program design. Although the comprehensive analysis of program design for all the existing private sector development support measures was outside the scope of this report, the process followed by the MRIC was reviewed with illustrative purposes,

Table 11. Selected Programs Funding the Purchase of Machinery and Equipment

Program Name	Entity	Type of support	Maximum funding per beneficiary (in US\$)	Number of applications	Accepted projects	Committed funds in MUR (in US\$)
Mechanisation	DBM	loan	1,000,000 (US\$23,000)	5	5	Rs 2 610 000 (US\$60,030)
Seeds & seedlings	DBM	loan	1,000,000 (US\$23,000)	2	2	Rs 330 000 (US\$7,590)
Car Wash Operators Scheme (2021)	DBM	loan	1,000,000 (US\$23,000)	0	0	0
Construction of Water Tank and purchase of Irrigation System in Rodrigues	DBM	loan	200000 (US\$4,600)	2	2	Rs 115 000 (US\$2,645)
Solar kit for Domestic Purposes	DBM	loan	100,000 (US\$2,300)	21	14 (7 under evaluation)	Rs 1 000 000 (US\$23 000)
Innovation and Technology Fund	SME Equity Fund	loan	46,000	2	2	Rs 3 500 000 (US\$80,500)

Source: WB staff based on data from the MOFEPD.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

based on its flagship Collaborative Research and Innovation Grant Scheme (Table 12). A number of MRIC practices are aligned with international standards, including the analysis of the policy mix, specificity of programs' objectives, a clear project selection process, and the M&E methodology. There are also areas with a potential for improvement. Those in particular relate to rules and regulations that are missing and shall be set up at the government or Ministry level, and comprise: national strategies (as each program should support implementation of specific objectives defined in a national strategy); requirement for all public institutions to use a logic model for program design (this practice is not currently applied in Mauritius); and performance of impact evaluations for key public support programs.

There is a need for a solid monitoring and evaluation (M&E) framework to be applied by all institutions managing public resources. The presence of a sound M&E is essential to enable the government to evaluate ongoing initiatives and to take informed decisions on the strategic distribution of scarce public resources, which should be allocated to programs with proven capacity to generate tangible results and contribute to higher enterprise productivity and economic growth. Mauritius currently has over 105 business support programs, some of which were organically designed during the COVID-19 pandemic to combat the impacts of its unprecedented shock and then were extended for a period of time beyond the acute phase of the crisis. Since Mauritius is now well on the recovery path, there is a need to evaluate the effectiveness and the justification for the continuity of various existing support programs, and to agree on the desirable structure of the policy mix of the country going forward.

Table 12: Selected Good Practices for the Design of Innovation Policy Programs versus MRIC Practices

Thematic area	MRIC experience and practice based on the Collaborative Research and Innovation Grant Scheme (CRIGS)
<p>Origin and Justification</p> <p><i>Is the instrument explicitly linked to the strategic objectives of the policy?</i></p> <p><i>Is there a documented market or system failure to be addressed?</i></p> <p>The policy instrument should be based on a documented, evidence-based diagnosis, addressing the specific policy problem and established through due process under the rule of law. The goals of the instrument must be aligned with the identified problem. The case needs to be made that the goals and the means selected to address the problem are linked. Ideally, this should be explicitly documented.</p>	<p>Program origin and justification were not specifically linked to a national strategy because such strategy does not exist. Similarly, program justification was not connected to a documented diagnostics on market failures. Rather, the concept for program design came from a consultative process between the MRIC, the private sector, and the Ministry of Finance, which identified a gap in the business support system. The program was established based on the need/opportunity to foster cooperation between private businesses and the research sector.</p>
<p>Relation to the policy mix</p> <p><i>How does the proposed solution interact with the rest of the policy mix?</i></p> <p>The policy design calls for an analysis of potential interactions across all instruments, either by identifying policies for which the one in question is a good complement, or by refining the instrument so that it focuses on either features or outcomes that do not undermine other policies.</p>	<p>Since the MRIC is the only entity responsible for the promotion of radical innovation in Mauritius, its programs are unique and do not interfere with the mandate of other entities. Over time, the MRIC has developed a portfolio of programs that are mutually reinforcing and target different stakeholders. Schemes have been improved over the years based on the application of lessons learned from the implementation processes of the respective programs.</p>
<p>Alternative policy instruments</p> <p><i>Does the proposed solution take into account how the local context may make an alternative policy more efficient?</i></p> <p>The diagnosis of the problem that motivates the policy often restricts the menu of available instruments, before reaching the decision-making phases, due to either existing conditions or limited knowledge of which instruments are available¹⁴². A good practice is to consider alternative instruments based on comparative criteria that include efficiency, effectiveness, cost-benefit ratios, and appropriateness to the context.</p>	<p>When designing programs with the objective to foster cooperation between businesses and academia, the MRIC studied the practice of international agencies responsible for the promotion of innovation. As a result, a matching grant program was proposed with an obligatory private sector contribution. Such approach is aligned with international good practice.</p>

¹⁴² Haapanen, M., Lenihan, H., & Mariani, M. (2014). Government policy failure in public support for research and development. *Policy Studies*, 35(6), 557-575.

Table 12: Selected Good Practices for the Design of Innovation Policy Programs versus MRIC Practices (Cont'd)

Thematic area	MRIC experience and practice based on the Collaborative Research and Innovation Grant Scheme (CRIGS)
<p>Objectives</p> <p><i>Are the stated objectives explicit and measurable?</i></p> <p>The definition of objectives should reduce ambiguity and potential for conflict. To accomplish this, goals must be clearly articulated, realistic, observable, and measurable, as opposed to abstract and generic.</p>	<p>The explicit objectives of the program are stated in the program manual, according to which the GRIGS overarching objective is to expand the partnership between research and industry, while the more specific objective is to develop innovative products, processes, and/or techniques for higher commercial competitiveness and sustainability of enterprises. At the program level, the objectives are explicit, but not measurable. Instead, measurable objectives are defined at the level of applications along with all the necessary indicators to verify the achievement of projects' objectives.</p>
<p>Logic model</p> <p><i>Is there a logical model integrating theory, assumptions, and how inputs lead to outcomes and impacts?</i></p> <p>The logic model articulates the theory of change behind the policy and the assumptions underlying the way that inputs, activities, and outputs lead to outcomes and impacts, as well as the impact on specific stakeholders and audiences.</p>	<p>The concept of logical model/theory of change has not been applied in Mauritius, and is not recognized in official government documents and rules for program design.</p>
<p>Criteria for selecting participants</p> <p><i>Are there clear, coherent and transparent selection criteria?</i></p> <p>The design of the policy instrument must explicitly establish criteria that are coherent with the policy goals and suitable for reaching the targeted population. Instruments must target the population of participants that is most likely to produce the effects intended by the policy, and all potential participants must have a fair chance of entering the selection process and receive clear feedback on the viability of their candidacy.</p>	<p>The Program Manual clearly defines eligibility criteria that are coherent with the objectives of the GRIGS. Eligibility criteria are defined separately for both a local company and collaborating entities (public and/or private Academic/Research/Tertiary Education Institutions that are involved in research).</p>
<p>Monitoring and evaluation (M&E) methods</p> <p><i>Are there M&E approaches set up at the design stage? Are there clear procedures for M&E feedback to inform the evolution of policy?</i></p> <p>A clear M&E framework should be in place with appropriate indicators. This will facilitate the use of evaluation results for progressive learning and to improve future policy design. Furthermore, the implementation of future versions of the same instrument depends heavily on the inclusion of an M&E framework in the design phase. Evaluating the impacts embedded in the design phase will generate important information, especially in cases where the instrument starts as a pilot.</p>	<p>The MRIC has developed its M&E system, and for the purpose of tracking KPIs and projects' advancement in implementation it uses a dashboard. The MRIC has clear processes to track the execution of funded projects. Projects are monitored according to milestones and deliverables. Applicants are required to present technical and financial reports at least every 6 months. While the MRIC does not conduct impact evaluations, it has recognized the need to carry them out for its flagship programs and applied for external assistance (e.g., EU) to perform impact evaluations.</p>

Source: Cirera and Maloney (2017). The Innovation Paradox: Developing-Country Capabilities and the Unrealized Promise of Technological Catch-Up. The World Bank; Cirera, Frías, Hill, and Yanchao L (2020). A Practitioner's Guide to Innovation Policy; Rogers (2017); Wu and Ramesh (2014).

Mauritius needs to analyze its existing private sector support measures relative to those of UMICs and HICs. Common policy instruments supporting incremental and radical innovation vary across countries at different income levels (Figure 66). Countries with income levels similar to that of Mauritius are typically characterized by stage 2 or stage 3 in terms of the maturity of their National Innovation Systems (NIS). The transition from stage 1 to the following stages in the process of NIS advancement is directly related to the increase in the share of measures targeting the development of radical innovation. This could comprise an improvement in the quality of R&D, strengthening of the cooperation between the private sector and academia, increase of funding for R&D through R&D grants, and large collaborative R&D projects. These are precisely the areas that have been identified by the GII as Mauritius's key weaknesses (Figure 66).

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

An analysis of the type of support programs promoted in Mauritius indicates that the NIS is at stage 1 rather than stages 2 or 3, as would be expected for its income level. The current portfolio of programs mainly supports incremental innovation by targeting managerial and organizational capabilities (e.g., those implemented by SMEs-Mauritius). MRIC programs have started supporting radical innovation through measures requiring private sector cooperation with knowledge providers (e.g., universities), but their funding is insufficient, and should be complemented by reforms at the higher education level. Mauritius also lacks programs providing small grants to fund collaboration between enterprises and educational institutions, technology extension programs, and global quality accelerators and incubators.

Box 8: Green Innovation Policy

To address global warming, the European Union pledged to achieve climate neutrality by 2050. Achieving a societal goal such as climate neutrality requires a radical transformation requiring new, sustainable technologies¹⁴³. To achieve this, governments need to act as market makers to 'kick-start' green technologies^{144,145}. Both the mission and the market failure inform policymakers to direct innovation policy to align with climate policy goals and in support of green technologies. This is because to achieve net-zero emissions, policymakers not only need to support green technologies, but also must price negative externalities (e.g., carbon pricing) to incentivize the reduction of emissions and foster innovations in green technologies^{146,147}.

The EU is the leader in promoting green innovation. The EU's new growth strategy, i.e., the European Green Deal, aims to transform the EU into a fair and prosperous society, with a modern, resource-efficient, and competitive economy with no net emissions of greenhouse gases in 2050. The main goal is to harness the significant potential in global markets for low-emission technologies, and sustainable products and services. As such, in 2020, the European Commission (EC) adopted the EU Industrial Strategy to lead in climate neutrality and digital transitions with an aim to help industry to reduce its carbon footprint by providing affordable clean technology solutions, and by developing new business models.

R&D and innovation are crucial for the achievement of the Green Growth strategic goals. As such, the EC launched the Innovation Fund, with a budget of around EUR 10 billion for the period spanning 2020-2030 for the commercial demonstration of innovative low-carbon technologies. The Innovation Fund focuses on the following themes: renewable energy, energy storage, carbon capture and storage, carbon capture and utilization (conversion into usable fuels and products), and cross cutting projects and industrial symbiosis.

Policy options for supporting green innovation may be divided into three groups of instruments: supply-side instruments aimed at relaxing liquidity constraints (grants, tax credits, among others), demand-side instruments (e.g., subsidies encouraging the take-up of green products, public procurement that includes environmental standards), and regulation (environmental regulation including for instance renewable energy certificates and standards, financial regulation facilitating funding for green companies).

Other factors affecting green innovation are (i) carbon pricing, to encourage green innovation and provide incentives to move away from environmentally damaging products and technologies; (ii) innovation subsidies, to be used for green technologies and not brown innovation; and (iii) stable and credible climate goals, to provide the business sector with regulatory predictability and clarity¹⁴⁸.

Successful policies require regulatory incentives to be aligned with the public interest. Providing support to whole sectors or sub-sectors, while encouraging competition within them, can ensure efficiency and limit rent-seeking by specific firms¹⁴⁹. Past experience shows that initiatives with generous funds and uncertain outcomes have led to rent-seeking and lobbying¹⁵⁰.

Source: <https://ec.europa.eu/>; <https://climate.ec.europa.eu/>; CPB Netherlands Bureau for Economic Policy Analysis (2021). CPB Background Document – Green innovation policies: a literature and policy review.

¹⁴³ Bloom, N., Eifert, B., Mahajan, A., McKenzie, D., and Roberts, J. (2013). "Does management matter? Evidence from India." *The Quarterly Journal of Economics*, 128(1), 1-51.

¹⁴⁴ Mazzucato, M., 2013, *The Entrepreneurial State: Debunking the Public Vs. Private Myth in Risk and Innovation*. Anthem Press: London, UK.

¹⁴⁵ Mazzucato, M. (2021). *Mission economy: A moonshot guide to changing capitalism*. Penguin UK.

¹⁴⁶ Acemoglu, D., Aghion, P., Bursztyn, L., & Hemous, D. (2012). The environment and directed technical change. *American economic review*, 102(1), 131-166.

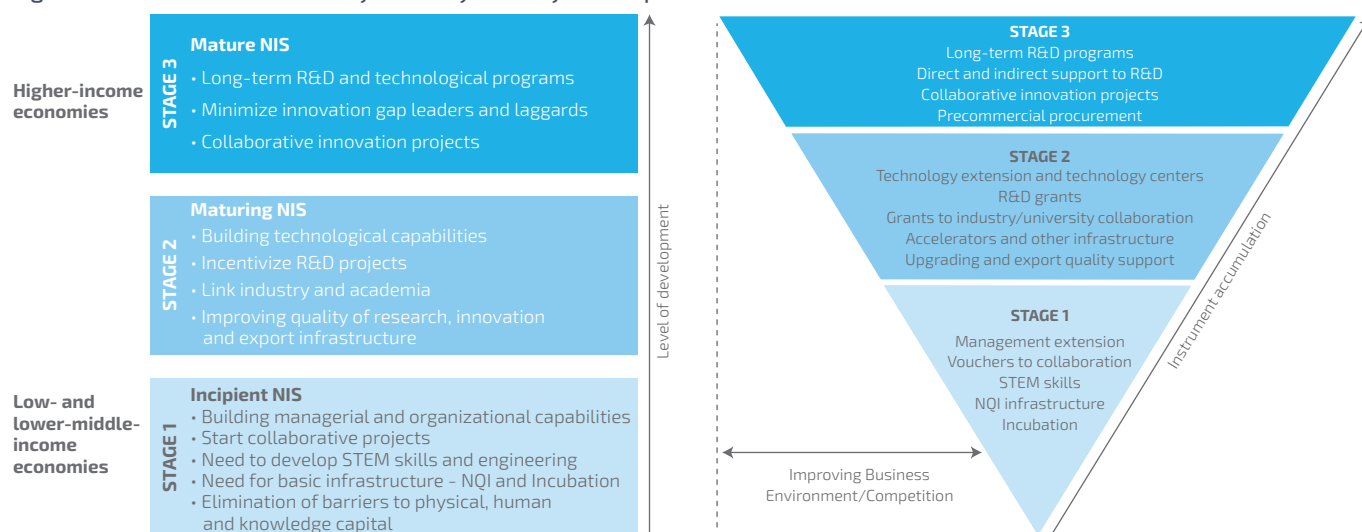
¹⁴⁷ Aghion, P., Dechezleprêtre, A., Hemous, D., Martin, R., & Van Reenen, J. (2016). Carbon taxes, path dependency, and directed technical change: Evidence from the auto industry. *Journal of Political Economy*, 124(1), 1-51.

¹⁴⁸ Rogge, K. S., & Schleich, J. (2018). Do policy mix characteristics matter for low-carbon innovation? A survey-based exploration of renewable power generation technologies in Germany. *Research Policy*, 47(9), 1639-1654.

¹⁴⁹ Rodrik, D. (2014). Green industrial policy. *Oxford review of economic policy*, 30(3), 469-491.

¹⁵⁰ Foray, D., Mowery, D. C., & Nelson, R. R. (2012). Public R&D and social challenges: What lessons from mission R&D programs?. *Research policy*, 41(10), 1697-1702.

Figure 66. National Innovation Systems by Country Development Level



Source: Cirera, X. and Maloney, W. (2017). The Innovation Paradox: Developing-Country Capabilities and the Unrealized Promise of Technological Catch-Up. The World Bank.

Note: NIS = National Innovation System; NQI = national quality infrastructure; R&D = research and development; STEM = science, technology, engineering, and mathematics.

3.5 Key Messages and Policy Options

The deep economic contraction caused by the COVID-19 pandemic prompted an extensive government response that effectively protected lives, jobs and firms, but is now in need to evolve to support Mauritius's long-term development goals in the post-pandemic era. Many of Mauritius's numerous business-support measures were designed to address the social and economic exigencies of the pandemic crisis. Now that the recovery is well underway, there is a need to evaluate the effectiveness of these measures and reform or eliminate those that no longer address a near-term challenge or advance a long-term objective.

Several gaps remain to be addressed for Mauritius to become a knowledge-based economy. The current structure of public support programs primarily channels funding towards firm survival and enterprise modernization, while very limited resources are allocated to the kind of radical innovation that would push Mauritius towards the global technology frontier. Additionally, the country lacks a strategic vision document to guide the transition to a knowledge-based economy with clearly defined objectives and priority sectors. The institutions tasked with supporting SMEs are highly fragmented, and the IPR framework is underdeveloped. The scope of M&E is limited, especially concerning support programs. Higher education institutions lack an effective system promoting research excellence and a commercialization agenda. The international experience yields lessons for addressing these and other challenges associated with reaching and sustaining high-income status.

Private-sector development policies need to be updated to reflect Mauritius's aspiration to become a knowledge-based economy. The current policy mix includes a large share of programs that are still oriented to promoting firm survival, and the economy exhibits very low levels of radical innovation. To foster competitiveness in new high-growth sectors, more firm entry and growth are needed, which government can support through the development of risk capital and competition as complementary policies. In addition to realigning private-sector support programs under an overarching strategic vision, it will be essential to reduce programmatic fragmentation and redundancy. Individual programs can be strengthened by incorporating clearly defined objectives with appropriate performance metrics and implementation schedules, ensuring consistency between the instruments used and the objectives pursued, and embedding stronger M&E arrangements throughout the program cycle. An in-depth analysis of existing policies could provide detailed insights on how to strengthen their contribution to the country's development aspirations.

Creating a national innovation strategy with concrete objectives and indicators that can be monitored consistently could provide the basis for reorienting and consolidating existing programs. Identifying a limited number of strategic sectors to prioritize could help Mauritius leverage its national strengths and capitalize on international market opportunities.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

The World Bank and International Finance Corporation are currently preparing a Country Private Sector Diagnostic (CPSD), which will be published in 2023. Preliminary findings from this analysis indicate that investing in four sectors—healthcare, renewable energy, tertiary education, and innovation—could drive Mauritius's transition into a knowledge-based economy.

The government can improve interinstitutional coordination by establishing an innovation council led by the prime minister. Modelled on the innovation council of Finland, this body would help align business innovation policies with the larger framework for science and technology and advanced human capital formation. An innovation council could play a strategic role in prioritizing policies, allocating resources, and assigning accountability for policy implementation. Private-sector participation will be vital to build an agenda on innovation that meets the needs of businesses and investors. As the leader of the innovation council, the prime minister would encourage stakeholders in the public and private sectors to collaborate effectively and hold them accountable for delivering results. The council would also facilitate policy coordination between the Ministry of Information Technology, Communication and Innovation, the Ministry of Education, Tertiary Education, Science and Technology, the Ministry of Energy and Public Utilities, and the Ministry of Industrial Development, SMEs and Cooperatives.

Gradually increasing private- and public-sector R&D expenditures as a share of GDP to reach the average levels observed in upper-middle-income economies will be crucial to place Mauritius onto a higher growth path. Policymakers should prioritize investment in environmentally responsible technologies, such as renewable energy, energy storage, and the circular economy. To boost private R&D spending, the government could increase the supply of complementary funding for joint projects. Science and technology programs should encourage the private sector to inform the selection of national priorities for investment, contribute a larger share of investment in advanced R&D, and integrate the output of collaborative R&D into business operations. The government could expand the best-performing programs led by the MRIC and introduce the kind of radical-innovation support programs that are common among UMICs and HICs. These include technology extension programs, collaborative vouchers, R&D consortia, global quality accelerators, and startup incubators.

Reform efforts at higher education institutions, with a focus on promoting research excellence and fostering a strong connection between the research community and the private sector, will be key to building a knowledge-based economy. In line with international best practice, resources for applied research projects should be provided through multi-disciplinary and multi-year programs that

enable teams of local and international researchers to build a self-sustaining body of work. Universities should be encouraged to develop a commercialization agenda that sets out clear rules and procedures for university IP policy, IP management, revenue-sharing arrangements, and the commercialization of scientific results. Further details will be provided in the forthcoming CPSD.

To strengthen the national intellectual property framework, the government will need to build the institutional capacity of the Mauritius IP office, which is responsible for enforcing the Industrial Property Act. Promoting respect for intellectual property rights through capacity-building activities among higher education institutions, the business community, and policymakers will help cement the status of intellectual property as the basis for the knowledge economy in Mauritius. Additional training programs and workshops could intensify the involvement of the WIPO office in promoting the national IP agenda.

Ensuring that all entities responsible for designing and implementing public support programs apply international best practices will be critical, and adopting a sound M&E framework will be particularly important. Each program's design should reflect the government's strategic objectives and the program's role in the overall policy mix. Program designers should consider alternative instruments, establish explicit and measurable objectives, utilize cutting-edge logic models, employ appropriate selection criteria, and integrate sound M&E mechanisms into the structure of new programs.

References

- Adelman, Melissa, Haimovich, Francisco, Ham, Andres, and Vazquez, Emmanuel (2018). "Predicting school dropout with administrative data: new evidence from Guatemala and Honduras." *Education Economics* 26(4), 356-372. <https://doi.org/10.1080/09645292.2018.1433127>
- Ajaheb-Jahangeer, Shamim, and Jahangeer, Abdul Cayum (2004). "School Culture in a Private Secondary Institution in Mauritius." *International Education Journal* 5 (2), 247-254.
- Akcigit, U., Alp, H. and Peters, M. (2016). "Lack of Selection and Limits to Delegation: Firm Dynamics in Developing Countries," NBER Working Papers 21905, National Bureau of Economic Research.
- Almond, Douglas, and Currie, Janet (2011). "Killing Me Softly: The Fetal Origins Hypothesis." *Journal of Economic Perspectives* 25(3), 153-172.
- Alonso, J.D. and Sanchez, A. (2011). "Reforming Education Finance in Transition Countries." Washington, DC: World Bank.
- Bashir, Sajitha; Lockheed, Marlaine; Ninan, Elizabeth; Tan, Jee-Peng (2018). "Facing Forward: Schooling for Learning in Africa." Washington, DC: World Bank.
- Bloom, N., Eifert, B., Mahajan, A., McKenzie, D., and Roberts, J. (2013). "Does management matter? Evidence from India." *The Quarterly Journal of Economics*, 128(1), 1-51.
- Bruhn, M., Karlan, D., and Schoar, A. (2013). "The impact of consulting services on small and medium enterprises: Evidence from a randomized trial in Mexico." *World Bank Policy Research Working Paper* 6508 (2013).
- Cirera, X., Frías, J., Hill, J. and Li, Y. (2020). *A Practitioner's Guide to Innovation Policy*; Rogers (2017); Washington, DC: World Bank.

II - Improving Equity and Efficiency in Education and Optimizing Public Support to Private Sector Development (Cont'd)

- Cirera, F. and Maloney, W. (2017). *The Innovation Paradox: Developing-Country Capabilities and the Unrealized Promise of Technological Catch-Up*. Washington, DC: World Bank.
- Cohen, W. and Levinthal, D. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, 35, 128-152.
- Cunha, F., Heckman, J. J., Lochner, L. J., and Masterov, D.V. (2006). "Interpreting the Evidence on Life Cycle Skill Formation." In *Handbook of the Economics of Education*, edited by Eric A. Hanushek, and Frank Welch, chap. 12. Amsterdam: North-Holland, pp. 697-812.
- Currimjee, A. (2021). "Early Childhood Care and Education in Mauritius." Washington, DC: World Bank.
- Devercelli, A. E. (2020). "Better Jobs and Brighter Futures: Investing in Childcare to Build Human Capital." Washington, DC: World Bank.
- Diaz, M. M., and Rodriguez-Chamussy, L. (2013). "Childcare and Women's Labor Participation: Evidence for Latin America and the Caribbean." Technical Note No. IDB-TN-586. Washington, DC: IDB (Inter-American Development Bank).
- Duncan, Greg J., and Katherine Magnuson (2013). "Investing in Preschool Programs." *Journal of Economic Perspectives* 27(2), 109-132.
- Elango, Sneha, García, Jorge Luis, Heckman, James J. and Hojman, Andrés (2016). "Early Childhood Education." In *Economics of Means-Tested Transfer Programs in the United States*, vol. 2, edited by Robert A. Mott, chap. 4. Chicago: University of Chicago Press, pp. 235-297.
- Fawcett, C., El Sawi, G., and Allison, C. (2014). "TVET models, structures and policy reform. Evidence from the Europe & Eurasia region." United States: United States Agency for International Development.
- Gov. of Mauritius (2021). *Annual Report of Education Statistics, 2020*. Port Louis: Ministry of Education.
- Higgins, Sean, and Lustig, N. (2016). "Can a Poverty-Reducing and Progressive Tax and Transfer System Hurt the Poor?" *Journal of Development Economics* 122 (September): 63-75.
- Iacovone, L., Maloney, W., and McKenzie, D. 2019. "Improving Management with Individual and Group-Based Consulting: Results from a Randomized Experiment in Colombia." *World Bank Policy Research Working Paper 8854*. World Bank, Washington, DC.
- Kerr, S., W. Kerr, Ç. Özden, and C. Parsons (2016). "Global Talent Flows." *Journal of Economic Perspectives*, 30 (4): 83-106.
- McKenzie, D. (2020). "Small Business Training to Improve Management Practices in Developing Countries: Reassessing the Evidence for 'Training Doesn't Work'." *World Bank Policy Research Working Paper 9408*.
- OECD (2010). "The high cost of low educational performance: The long-run economic impact of improving PISA outcomes." Paris: OECD.
- Ranzani, M. (2019) "The Effects of Taxes and Social Spending on the Distribution of Household Income in Mauritius." Washington, DC: World Bank.
- UNESCO (2016). "Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all"
- WIPO (2021). *Global Innovation Index 2021. Tracking Innovation through the COVID-19 Crisis*.
- WIPO (2023). *Global Innovation Index 2023: Innovation in the face of uncertainty*.
- World Bank (2015). *Mauritius Systemic Country Diagnostic*. World Bank, Washington, DC.
- World Bank (2018). "World Development Report: Learning to Realize Education's Promise." Washington, DC: World Bank.
- World Bank (2021a). "Closing the Skills Gap in Mauritius". Washington, DC: World Bank.
- World Bank (2021b). "Mauritius Country Economic Memorandum 2021". Washington, DC: World Bank.
- World Bank (2021c). "Investing in Foundational Skills in Mauritius." Input to the World Bank's 2021 Systematic Country Diagnostic Report. Washington, DC: World Bank.
- World Bank (2022). *Reference Guide for Climate Smart Public Investment*. <https://doi.org/10.1596/38390>
- Wu, X. and Ramesh, M. (2014). Market Imperfections, Government Imperfections, and Policy Mixes: Policy Innovations in Singapore. *June 2014 Policy Sciences* 47(3):305-320.

Websites:

- www.e-resident.gov.ee/;
- www.e-estonia.com/;
- www.investinestonia.com.
- www.gov.uk/government/organisations/council-for-science-and-technology/about#who-we-are
- www.valtioneuvosto.fi/en/research-and-innovation-council/composition
www8.cao.go.jp/cstp/english/policy/index.html

Annex A1 - Distributional impacts of alternative compensation measures in the context of inflation in Mauritius

Context

Mauritius's cash transfers present some limitations in terms of poverty and inequality impacts due to the focus of the policy mix on universal pensions and subsidies, which results in a low percentage of poor households receiving the targeted benefit. Furthermore, the transfers are also relatively small compared to the pension. Applying a methodology based on the Fiscal Incidence Analysis (FIA) under the Commitment to Equity (CEQ), it is shown that support measures targeted to vulnerable groups are much more efficient than blanket indirect subsidies on goods, and can achieve equivalent or better poverty and inequality reduction results at a lower cost for the state.

Following the measures implemented by the Government of Mauritius to help the population in the face of the hike in the prices of various commodities, the FIA produced in 2017 was applied to compare the impact on poverty and inequality of reacting to the Ukraine crisis impact on prices alternatively through subsidies or social cash transfers. The FIA allows to identify and carefully assess the trade-offs between the burden of any new or modified tax effort, and the economic benefits of cash transfers to people at different parts of the income distribution. A form of FIA that has been commonly used over the last decade is the Commitment to Equity (CEQ), developed by the CEQ Institute at Tulane University. The main purpose of CEQ is to inform governments of how their fiscal policy affects their equity goals, recommend practical measures, and enhance accountability and transparency through better data collection and evaluation systems. To achieve this, CEQ Assessments use incidence analysis and a specially designed diagnostic questionnaire to address at least the following questions:

1. How much redistribution and poverty reduction is being accomplished through social spending, subsidies, and taxes, and by individual fiscal instruments in those categories? How effective are fiscal instruments in achieving those ends?
2. What is the net fiscal position (after both taxes and transfers) of disadvantaged individuals, groups, or regions?
3. How progressive are revenue collection and government spending?
4. Within the limits of fiscal prudence, what fiscal policy reforms would increase redistribution and poverty reduction?

Methodology

To assess the impact of blanket indirect subsidies on goods as opposed to the expansion of cash transfers to the poor, the methodology establishes four "compensation" scenarios based on two alternatives: the expansion of social protection channeled through the Marshall Plan Social Contract (MPSC) vs. the expansion of indirect subsidies on rice, flour, LPG and bus transport. Each alternative includes 4 scenarios based on budget increases as follows:

Social Protection ¹⁵¹ (channeled through the Marshall Plan Social Contract)	Indirect Subsidies (flour, rice, LPG, bus fare)
Scenario 1A: Increase of 430 mill MUR (USD 10 mill) in the SP budget	Scenario 1B: Increase of 430 mill MUR (USD 10 mill) in the indirect subsidies' budget
Scenario 2A: Increase of 2,150 mill MUR (USD 50 mill) in the SP budget	Scenario 2B: Increase of 2,150 mill MUR (USD 50 mill) in the indirect subsidies' budget
Scenario 3A: Increase of 4,300 mill MUR (USD 100 mill) in the SP budget	Scenario 3B: Increase of 4,300 mill MUR (USD 100 mill) in the indirect subsidies' budget
Scenario 4A: Increase of 8,600 mill MUR (USD 200 mill) in the SP budget	Scenario 4B: Increase of 8,600 mill MUR (USD 200 mill) in the indirect subsidies' budget

¹⁵¹ Includes the following items: Basic Retirement Pension; Basic widow's pension/child allowance; Basic invalid's pension/caregiver allowance; Social Aid; Other transfers (excl. Marshall Plan); Marshall Plan; Subsistence allowance of MSPC.

The methodology uses the MUS- Excel Fiscal Microsimulation Tool, which is based on the latest available Household Budget Survey (HBS 2017) and the rules of the fiscal system from 2017. Under the baseline scenario, the fiscal parameters are the same as in the MUS-CEQ 2017, except that the Marshall Plan Social Contract (MPSC) is adjusted to the latest coverage (4,992 beneficiaries) from 2021. Under the reform scenarios, alternative compensation measures (social protection vs. indirect subsidies) are assessed in the excel tool. The analysis is evaluated at 2017 prices. The budget increases are deflated by the cumulative inflation between 2017-22 (1.1992, based on WEO/IMF April 2022).

For each scenario of the social protection budget increase, the funds are channeled 100 percent through the MPSC (this results in a coverage increase, keeping the average transfer size per beneficiary constant). The excel tool allows to change the MPSC number of beneficiaries in each simulation. For each scenario of the increase of indirect subsidies, the funds are increased proportionally to the budget shares in the main subsidized items (flour, rice, LPG, bus fare). The excel tool allows to change the total indirect subsidies budget in each of the aforementioned items. All simulations are static: no behavioral or general equilibrium effects are considered.

Results

Estimations from the FIA report and tool (CEQ) show a clear advantage of transfers over indirect subsidies in response to the price hikes resulting from the war in Ukraine. Results clearly show that expanding transfers rather than increasing subsidies is much more efficient in terms of poverty reduction and distributional outcomes for any given level of investment. In average, for the four scenarios considered, transfers are almost three times more effective in reducing poverty and inequality than subsidies (Figures A1 and A2).

Figure A1. Reform simulations (A): Distributional impacts resulting from an increase in Social Protection budget

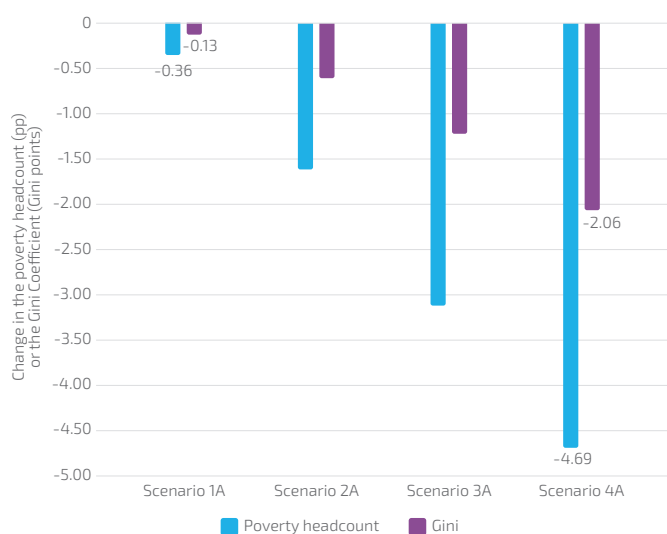
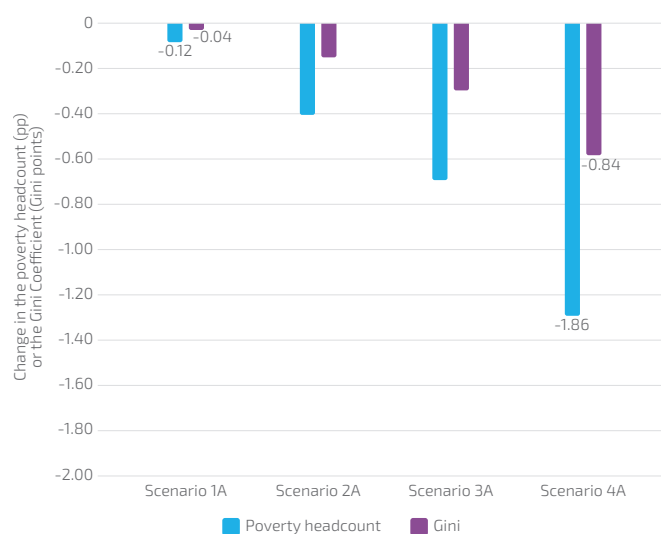


Figure A2. Reform simulations (B): Distributional impacts resulting from an increase in the Indirect Subsidies' budget



Source: World Bank elaboration based on the MUS-Excel Fiscal Microsimulation Tool, using HBS 2017 and fiscal administrative data.
 Note: Both figures show the reduction in the poverty headcount and Gini at consumable income (change with respect to the baseline).
 Consumable income = market income - direct taxes - direct transfers - indirect taxes - indirect subsidies.

Annex A1 - Distributional impacts of alternative compensation measures in the context of inflation in Mauritius (Cont'd)

Main findings

The results of the simulations show that an increase in the social protection budget is significantly more efficient in reducing poverty and inequality than a similar increase in the budget allocated to indirect subsidies. When the social protection budget increase (via an increase in the MPSC coverage), the reduction of the poverty rate at consumable income ranges from -0.36pp (Scenario 1A) to -4.69 percentage points (Scenario 4A) relative to the baseline, and the reduction in the Gini at consumable income ranges from -0.13pp in Gini (Scenario 1A) to -2.06 Gini points (Scenario 4A) relative to the baseline. Alternatively, if the indirect subsidies budget increases (for flour, rice, LPG, bus fare), the reduction of the poverty rate at consumable income is much lower, ranging from -0.12 (Scenario 1B) to -1.86 percentage points (Scenario 4B) relative to the baseline. The reduction in the Gini coefficient at consumable income is also lower, ranging from -0.04 Gini points (Scenario 1B) to -0.84 Gini percentage points (Scenario 4B) relative to the baseline.

In addition to the above superiority shown by social protection budget increases, another advantage they provide is that they would allow to increase the coverage of the MPSC among the poor. On average, the coverage of the MPSC among the bottom 5 deciles would increase by +3.3 percentage points (Scenario 1A) until +61 percentage points (Scenario 4A) relative to the baseline. Using the same budget increase, the poverty and inequality reduction of the social protection compensation scenarios are on average 2.8 times larger than those of the indirect subsidies compensation scenarios. Considering that the increase in the social protection budget would be channeled through the targeted MPSC program, which is currently small, the compensation measures through the social protection budget would be more effective and efficient relative to the compensation measures of increasing general indirect subsidies.

In sum, the exercise clearly shows and quantifies the extent to which support measures targeted to vulnerable groups are much more efficient than blanket indirect subsidies on goods, and can achieve equivalent or even better poverty and inequality reduction results at a lower cost for the national budget.

Detailed Distributional Impacts

INCREASE IN SOCIAL PROTECTION BUDGET Changes at Consumable Income (Simulation vs Baseline)					
	Poverty headcount	Poverty gap	Poverty Severity	Gini	Theil
Scenario 1A	-0.36	-0.15	-0.01	-0.13	-0.14
Scenario 2A	-1.62	-0.60	-0.22	-0.61	-0.64
Scenario 3A	-3.11	-1.06	-0.40	-1.22	-1.26
Scenario 4A	-4.69	-1.49	-0.57	-2.06	-2.10

INCREASE IN INDIRECT SUBSIDIES BUDGET Changes at Consumable Income (Simulation vs Baseline)					
	Poverty headcount	Poverty gap	Poverty Severity	Gini	Theil
Scenario 1B	-0.12	-0.03	-0.02	-0.04	-0.05
Scenario 2B	-0.58	-0.16	-0.08	-0.22	-0.25
Scenario 3B	-1.00	-0.30	-0.15	-0.43	-0.50
Scenario 4B	-1.86	-0.56	-0.28	-0.84	-0.98

Source: World Bank elaboration based on the MUS-Excel Fiscal Microsimulation Tool, using HBS 2017 and fiscal administrative data

Annex A2 - Climate mitigation and adaptation strategies in the Netherlands, Costa Rica and Kenya

Dutch approach to identifying critical infrastructure to adapt to emerging risks

In 2014, the Netherlands adopted a process strategy for identifying critical infrastructure to adapt to the growing variety of risks and increasingly networked nature of critical services.

There are two risk levels for critical processes: (i) level B, when failure is likely to have an economic impact of €5 billion, to cause over 1,000 casualties, or to significantly affect the lives of 100,000 people; and (ii) level A, when any of these impacts increase by a magnitude of 10, or if failure is likely to result in the breakdown of at least two other sectors.

Processes	Cat.	Product, service or location	Sector	Ministry		
National transport and distribution of electricity	A	Electricity	Energy	Economic Affairs		
Regional distribution of electricity	B					
Gas production	A	Natural gas				
National transport and distribution of gas						
Regional distribution of gas	A					
oil supply	A	Oil				
Internet access and data traffic	TBD				IT/Telecom	Economic Affairs
Speech-communication services (mobiles and landlines)						
Satellite						
Time and location services (satellite)						
Drinking water supply	A	Drinking water	Drinking Water	Infrastructure and the environment		
Flood defenses and water management	A	- primary flood defenses - regional flood defenses	Water	Infrastructure and the environment		
Air traffic control	B	Schiphol Airport	Transport	Infrastructure and the environment		
Vessel traffic service	B	Port of Rotterdam				
Large-scale production/processing and/or storage of chemicals and petrochemicals	B	Chemical and petrochemical industry	Chemistry	Infrastructure and the environment		
Storage, production and processing of nuclear materials	A	Nuclear Industry	Nuclear	Infrastructure and the environment		
Retail transactions	B	Financial transactions	Financial	Finance		
Consumer financial transactions	B					
High-value transactions between banks	B					
Securities trading	B					
Communication with and between emergency services through the 112 emergency number and C2000	B	Maintaining public order and safety	Public Order and Safety	Security and Justice		
Police deployment	B					
E-government: the availability of reliable personal and corporate data about individuals and organizations, the ability to share such data, and the availability of data systems which multiple government agencies require in order to function	B	Digital government	Public Administration	The Interior and Kingdom Relations		

Source: Hamelink, Sven, and Jeroen Mutsaers (2015). "Critical Infrastructure Protection: From Protection to Resilience." European CIIP Newsletter 9 (3): 21–23.

Annex A2 - Climate mitigation and adaptation strategies in the Netherlands, Costa Rica and Kenya (Cont'd)

Costa Rica's long-term national decarbonization plan¹⁵²

Costa Rica launched its long-term national decarbonization plan in 2019¹⁵³. This made the Central American country one of the first in the world to showcase a comprehensive roadmap and policy package to achieve net-zero emissions by 2050. The plan covers three periods: beginning (2018–2022), inflection point (2023–2030), and massive deployment (2031–2050). The plan is ambitious, calling for the generation of all electricity from renewable sources by 2030, then making electricity the main source of energy for the transportation, residential, commercial, and industrial sectors by 2050. It also lays out countrywide solutions for solid waste management. The cost of implementation is currently estimated to be US\$6.5 billion over the next 11 years alone, to be shared between the private and public sectors. Costa Rica built its plan through a combination of back-casting (goal-driven projections), open-source energy modeling tools, policy roadmaps, socioeconomic integration, and participatory processes. The framework includes both a scientific and a citizen advisory council, which equally provide evidence to the government on planning and progress.

Kenya's strategic documents and plans for climate change mitigation and adaptation

National Framework	Description
Kenya Vision 2030 (2008) and its Medium-Term Plans	The country's long term development blueprint: this recognized climate change as a risk that could slow the country's development. The Third MTP (2018–2022) elevated climate change to a cross-cutting thematic area and mainstreamed climate change actions in sector plans. MTIPs are prepared to support implementation of the MTPs.
National Climate Change Response Strategy (2010)	The first national policy document on climate change: this aimed to advance the integration of climate change adaptation and mitigation into all government planning, budgeting, and development objectives.
National Climate Change Action Plan 2013–2017	A five-year plan: this aimed to further Kenya's development goals in a low-carbon climate resilient manner. The plan set out adaptation, mitigation, and enabling actions.
Kenya's NDC (2016)	The country's formal climate commitments adopted after the Paris Agreement: this includes adaptation actions aligned to the Vision 2030 and the MTPs. Its mitigation objectives seek to abate GHG emissions by 30 percent by 2030. Its success will depend on international support in the form of finance, investment, technology development and transfer, and capacity development.
Climate Change Act (No. 11 of 2016)	The first comprehensive legal framework for climate change governance for Kenya: this Act has the state objective to "enhance climate change resilience and low-carbon development for sustainable development of Kenya". It established the National Climate Change Council (Section 5), the Climate Change Directorate (Section 9), and the Climate Change Fund (Section 25).
Kenya Climate-Smart Agriculture Strategy (2017–2026)	A 10-year plan focused on agriculture: the objectives of this strategy are to adapt to climate change and build the resilience of agricultural systems, while minimizing GHG emissions. The actions will lead to enhanced food and nutritional security, as well as improved livelihoods.
Climate Risk Management Framework (2017)	This integrates disaster risk reduction, climate change adaptation, and sustainable development. It ensures that these goals are pursued in a way that is mutually supportive rather than in a stand-alone fashion.
National Climate Change Action Plan (2018–2022)	Successor to the country's first Action Plan (2013–2017): this updated plan provides mechanisms and measures to achieve low-carbon, climate-resilient development in a manner that prioritizes adaptation. It provides a framework for Kenya to deliver on its NDC under the UNFCCC's Paris Agreement. The Plan guides the climate actions of Kenya's national and county governments, the private sector, civil society, and other actors as the country transitions to a low-carbon, climate-resilient development pathway. In addition to the above (Volume I), it consists of an Adaptation Technical Analysis Report (Volume II), and a Mitigation Technical Analysis Report (Volume III).

Source: Kenya, Government of. (2018). "National Climate Change Action Plan (NCCAP) Volume II: Adaptation Technical Analysis Report (ATAR) 2018–2022." Ministry of Environment and Forestry, Nairobi.

¹⁵² Source: Government of Costa Rica, adapted from World Bank (2020a). "Supporting Countries to Meet Long-Term Goals of Decarbonization. World Bank Outlook 2050: Strategic Directions Note." World Bank, Washington, DC

¹⁵³ <https://cambioclimatico.go.cr/plan-nacional-de-descarbonizacion/>.

Annex A3 - Legal and institutional framework for PFM in Mauritius

This Annex discusses the key pieces of legislation forming the legal and regulatory framework for PFM in Mauritius.

The Constitution. Chapter X of the Mauritian Constitution deals with finances including the Consolidated Fund; authorization of expenditure; contingencies; the appointment, payment and reporting lines for Director of Audit and whose office shall be a public office; and public debt.

Finance & Audit Act 2008 (as amended in 2015) and supporting regulations. The Finance and Audit Act of 2008 has been amended on a number of occasions, most recently in 2015.¹⁵⁴ This provides the basics for public financial management. The legislation is supported by a number of Financial Instructions (which have the status of a legislative instrument and Treasury and MOFEPD Circulars plus the Financial Management Manual (1990) and subsequent volumes on internal control (audit), Public-Private Partnerships (PPP), and Programme-Based Budgeting (PBB). There is no separate Audit Act. The role and responsibilities of the Director of Audit are set out in Section 17 of the Finance and Audit Act. The National Audit Office is established as a department of government.

Public Debt Management Act No. 5 of 2008 as amended in 2012. This Act sets out the Government's definition of public sector debt, the ceiling and any specific exclusions, provisions for maintenance of debt records and on-lending/guarantees.

Public Procurement Act 2006 (as subsequently amended), regulations and Code of Ethics. The Act sets out the basic procurement principles on procurement methods, bidding process, challenge and appeal, as well as the establishment of a procurement policy office and a central procurement

board. It is supported by several sets of regulations including the main public procurement regulations of 2008, the public procurement (suspension and debarment regulations) of 2008, the public procurement (disqualification) regulations of 2009, the public procurement (framework agreement) regulations of 2013, and the public procurement (diplomatic missions Mauritius) regulations of 2014. The Act sets procedures for a non-discretionary process and requires that participants in public procurement observe the Code of Ethics (public officials and bidders). The Code sets the standard for the management of relations with suppliers and business gifts, and defines the circumstances under which members of a committee should declare conflict of interest. The Act allows for suspension and debarment of bidders and suppliers, and the Regulations provide for exclusions for criminal or corrupt activities, administrative debarment under the law subject to due process, and prohibition of commercial relations. The Act also sets the penalties for breach of the Code of Ethics.

Revenue Administration. There is currently no revenue administration Act. Individual tax revenues are set out in their own legislation e.g. Customs Tax, VAT, Income Tax, Gaming Tax Act, etc.

Other. For statutory bodies, the Statutory Bodies (Accounts and Audit) Act (as subsequently amended) sets out governance and reporting issues. Some of the individual Acts establishing the various EBU's (including some of the Funds) and some of the public corporations also contain financial management, audit- and governance-related clauses. Other public corporations are established under the Companies Act. There is an Independent Commission Against Corruption (ICAC) created under its own Act. Currently, there is no Freedom of Information Act.

¹⁵⁴ The 2015 PEFA assessment summarizes the changes contained in the 2015 amendments as: "(i) a change to the financial year; (ii) a change to the basis of budget estimates and appropriation from programme to Vote; (iii) new definitions for department, estimates and head (vote) of expenditure; (iv) the ability to carry over unused capital expenditure at the end of a fiscal year for a period of up to two months in the following fiscal year without the need for further appropriation; (v) extension of the vote on account to six months (previously 4 months) in the event that the estimates have not been appropriated; (vi) changes to the advance account, in terms of removal of car loans to public officers from the ceiling for advance amounts and 'sufficient leeway' to government to manage the advance account; (viii) Minister of Finance empowered to issue financial instructions with respect to virement of funds from one item to another subject to specified limitations and conditions; (ix) requirement for all 'departments' to prepare a performance report by October following the end of the FY (to take effect from July 2017); and (x) the provision for a transitional six month accounting period, January-June 2015.

Annex A3 - Legal and institutional framework for PFM in Mauritius (Cont'd)

Summary of laws forming the legal and regulatory framework for PFM in Mauritius

	Name of Law (Year, Status)	Robustness
Budgeting and Accounting	Consolidated Finance and Audit Act, the Financial Management Manual (FMM) 1990 as amended, and the Treasury Instructions and Circulars.	The Act provides the basics for public financial management. The legislation is supported by Financial Instructions (which have the status of a legislative instrument) as well as Treasury and MOFEPD Circulars, plus the Financial Management Manual (1990) and subsequent volumes on internal control (audit), Public-Private Partnerships (PPP), and Programme-Based Budgeting (PBB).
Audit	Chapter X of the Constitution sets out the appointment, payment and reporting lines for Director of Audit. The Finance and Audit Act of 2008 as amended. Internal Audit Policy and Operations Manual, supported by an Internal Audit Charter for each Ministry. Prevention of Corruption Act 2002.	There is no separate Audit Act. The role and responsibilities of the Director of Audit are set out in section 17 of the Finance and Audit Act. The National Audit Office is established as a department of government. The Prevention of Corruption Act established the Independent Commission Against Corruption.
Revenue Administration	N/A	Currently there is no revenue administration Act. 16 Individual tax revenues are set out in their own legislation, e.g., Customs Tax, VAT, Income Tax, Gaming Tax Act etc.
Procurement	The Public Procurement Act 2006 (PPA), along with the public procurement regulations of 2008, the public procurement (suspension and debarment regulations) of 2008, the public procurement (disqualification) regulations of 2009, the public procurement (framework agreement) regulations of 2013, and the public procurement (diplomatic missions Mauritius) regulations of 2014. The Build Operate Transfer (BOT) Projects Act 2016. The Public Private Partnership (PPP) Projects Act 2004 (as amended)	The legal provisions of the PPA are based on the principles set in the United Nations Commission on International Trade Law (UNCITRAL) Model Law on Public Procurement, which has the main objective to harmonize public procurement legislation in the UN Member States. The Act sets out the basic procurement principles on procurement methods, bidding process, challenge and appeal, as well as the establishment of a procurement policy office and a central procurement board.
Debt	Public Debt Management Act No.5 of 2008 as amended in 2012.	This Act sets out the government's definition of public sector debt, its ceiling and any specific exclusions, provisions for maintenance of debt records, and on-lending/guarantees.
EBUs and SOEs	The Statutory Bodies (Accounts and Audit) Act (as subsequently amended) and Companies Act. Individual Acts establishing the various EBUs.	The Statutory Bodies (Accounts and Audit) Act (as subsequently amended) sets out governance and reporting issues. Some of the individual Acts establishing the various EBUs (including some of the Funds) and some of the public corporations also contain financial management, audit and governance related clauses. Other public corporations are established under the Companies Act.

Functions related to PFM in Mauritius fall largely, but not exclusively, under the remit of the Ministry of Finance and Economic Development (MOFEPD), extra-budgetary units and funds, the Treasury, the Department of Audit, the Executive, and the Legislature. This section discusses each of these organizations and their remits in turn.

The MOFEPD is responsible for the formulation of sound and effective national economic policies, and for managing and coordinating the distribution of the Government's financial resources. Volume I of the 2011 Financial Management Kit (FM Kit) sets out the responsibilities of other organizations in government, including the role of the accounting officer and the chief finance and chief procurement officers seconded from the MOFEPD.

The MOFEPD's FM Kit defines its key functions.

These include:

- i. Developing the macro-fiscal framework and formulating the fiscal policy;
- ii. formulating an Economic and Social Transformation Plan (ESTP);
- iii. developing and preparing a Public Sector Investment Programme (PSIP), and monitoring the projects falling under such plan;
- iv. preparing and supporting departments in the planning, execution, and monitoring of their PBB Estimates, in collaboration with departments;
- v. determining budgetary allocations in consultation with Ministry of Civil Service and Administrative Reforms;
- vi. managing public sector debt and developing active debt management strategies; and
- vii. ensuring the issuance of best practice guidelines in relation to all aspects of public-private partnership projects.

Extra-budgetary units (EBUs) and extra-budgetary funds (EBFs) are self-accounting.

EBUs include entities carrying out specialized functions of government, such as the Mauritius Revenue Authority and social security schemes, as well as special funds. Special funds do not form part of the Consolidated Fund. There are two main types of special funds: (i) trust funds, which hold funds for a specific purpose from monies donated; and (ii) ordinary funds, which include a variety of social security/social assistance schemes, including the National Pension Fund. Budgeted transfers to EBUs are shown in the budget of the individual ministries for each individual EBU. Most EBUs have been established under their own legislation and are required to prepare their own separate financial statements, both under their enabling legislation as well as the Statutory Bodies Act. Statistics Mauritius also maintains a separate sub-classification of ordinary funds known as extra-budgetary funds (EBF).

Treasury is responsible for maintaining the main account for the budgetary central government, as well as several foreign currency accounts. Treasury has a direct link to the Bank of Mauritius and can access account data in real time. Account funds are not swept nightly. However, minimal balances are left overnight in the bank accounts of self-accounting ministries/departments are only replenished daily. Extra budgetary funds (EBF) are not included in this process.

Audit coverage for the central government is broad. Internal audit functions in ministries and departments are carried out by internal control cadre, under their own Director in the MOFEPD. The National Audit Office undertakes a comprehensive independent annual financial audit of the government financial statements. The annual financial statement for the budgetary

central government (which includes ministries, constitutional bodies, and departments only) is audited annually using international standards for supreme audit institutions. For the central government as a whole, not all extra-budgetary units (EBUs) and special funds are audited annually. Since the budgetary central government represents 75 percent of total central government expenditures, central government entities representing at least 75 percent but less than 100 percent of total central government expenditures are audited annually. A wide range of audits is carried out and these appear to be risk-based.

Internal audit functions in ministries and departments are carried out by internal control cadre, under their own Director in the MOFEPD. The internal audit function is established in 16 major ministries/departments of the budgetary central government, with the remaining departments covered by a roving team based in the MOFEPD. These remaining departments may not all be covered on an annual basis.

Executive authority is established in the office of the Prime Minister, who is responsible for the day-to-day running of government affairs. According to the 2015 PEFA, there is no evidence of the systematic follow-up on audit reports from the Executive, nor from the executive offices of central ministries.

The Legislature does not have a specialized budget committee, but it has one standing committee on finance-related matters, the Public Accounts Committee (PAC).

The PAC has nine members appointed by the Speaker. The Chairperson is a member of the Opposition. According to the Assembly's Standing Orders, the mandate of the Committee is "to examine the audited accounts showing the appropriation of the sums granted by the Assembly to meet the public expenditure and such other accounts as laid before the Assembly, as the Assembly may refer to the Committee together with the Director of Audit's report thereon." The legislature currently focuses its review on expenditure estimates. The budget review and approval process is essentially a "rubber stamp", with limited scrutiny on the technical rationale for budget requests and proposals. The Parliament's PAC reviews the Director of Audit's annual report, but there is a lack of legislative scrutiny of the audits of EBUs, as well as any performance audits conducted. There is little evidence that the reports and recommendations from the PAC receive follow-up or that the corrective actions taken, or that penalties are applied. The 2015 PEFA noted that legislative scrutiny could be strengthened, especially for budgets, audits for EBUs and performance audits, and the MTFF. In practice, there appears to be limited impact of PAC's reports in terms of follow-up actions.

Annex A4 - Anticorruption, transparency, and accountability institutions

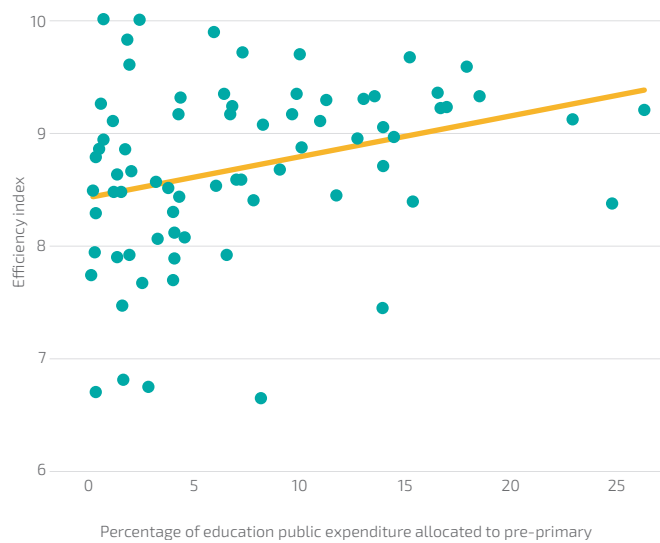
Indicator	Description	Source
Corruption perceptions index	The CPI Score relates to perceptions of the degree of corruption as seen by businesspeople, risk analysts and the general public, and ranges between 100 (highly clean) and 0 (highly corrupt).	Transparency international, Global Corruption Barometer
Absence of corruption	Government officials in the executive branch do not use public office for private gain; Government officials in the judicial branch do not use public office for private gain; Government officials in the police & the military do not use public office for private gain; Government officials in the legislative branch do not use public office for private gain.	World Justice Project, Rule of Law
Open government	Publicized laws & government data; Right to information; Civic participation; Complaint mechanisms.	World Justice Project, Rule of Law
Favoritism in decisions of government officials	In your country, to what extent do government officials show favoritism to well-connected firms and individuals when deciding upon policies and contracts? (1 = show favoritism to a great extent; 7 = do not show favoritism at all)	WEF, Global Competitiveness Index
Irregular payments and bribes	In your country, how common is it for firms to make undocumented extra payments or bribes connected with (a) imports and exports; (b) public utilities; (c) annual tax payments; (d) awarding of public contracts and licenses; (e) obtaining favorable judicial decisions? (1 = very common; 7 = never occurs).	WEF, Global Competitiveness Index
Diversion of public funds	In your country, how common is diversion of public funds to companies, individuals, or groups due to corruption? (1 = very commonly occurs; 7 = never occurs)	WEF, Global Competitiveness Index
Transparency of government policymaking	In your country, how easy is it for businesses to obtain information about changes in government policies and regulations affecting their activities? (1 = extremely difficult; 7 = extremely easy)	WEF, Global Competitiveness Index
Rigorous and impartial public administration	It measures the extent to which public officials generally abide by the law and treat like cases alike, or conversely, the extent to which public administration is characterized by arbitrariness and biases (i.e., nepotism, cronyism, or discrimination). The question covers the public officials that handle the cases of ordinary people. If no functioning public administration exists, the lowest score (0) applies.	V-Dem, Variety of Democracy database
Open Data Barometer Index	It measures how governments are publishing and using open data for accountability, innovation and social impact (readiness and impact).	Open Data Barometer and World Wide Web Foundation
E-government Index	It considers the website development patterns in a country as well as access characteristics, such as the infrastructure and educational levels, to reflect how a country is using information technologies to promote access and inclusion of its people.	UN E-government Knowledgebase
E-participation Index	It represents the use of online services to facilitate provision of information by governments to citizens ("e-information sharing"), interaction with stakeholders ("e-consultation"), and engagement in decision-making processes ("e-decision making").	UN E-government Knowledgebase

Annex A5 - The relation between efficiency and budget allocations to pre-primary education

In this Annex, cross-country data is used to show that the share spent on pre-primary education is positively correlated with the efficiency of education public expenditure. A one percentage point increase in the percentage of expenditure allocated to pre-primary education is associated with a significant increase of 0.36 percentage points in overall efficiency (Figure A3), while the same increase in secondary education does not have a significant effect on efficiency. Based on these numbers, a back of the envelope calculation suggests that reallocating 19 percent of the total budget from secondary towards pre-primary would be one way to put Mauritius on the efficiency frontier. However, the estimates should be interpreted with caution since they are only correlations and not causal estimates.

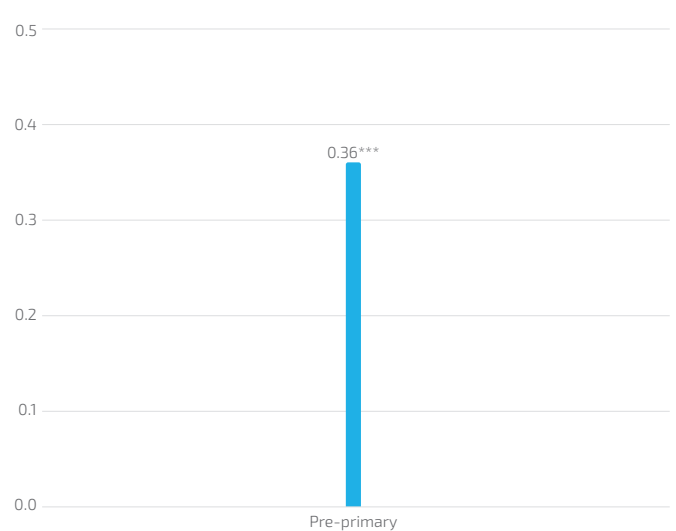
Figure A3. Relation between budget allocations to pre-primary education and efficiency

(a) percentage of public expenditure on education allocated to pre-primary education and efficiency of public expenditure on education



Source: Own elaboration based on UNESCO and EdStats (World Bank). Notes: (a) Each point in the graph represents a country. (b) The efficiency indices are comprised between 0 and 1, with 1 being a point on the efficiency frontier, and are estimated using a Data Envelopment Analysis in two steps with output orientation and variable returns to scale, where the input is the Government expenditure on primary and secondary education per student (PPP) and the output is the Harmonized Learning Outcome (Patrinos and Angrist, 2018), both in the last available year.

(b) Average change in efficiency associated to a one percentage point increase in the percentage of education public expenditure allocated to pre-primary education



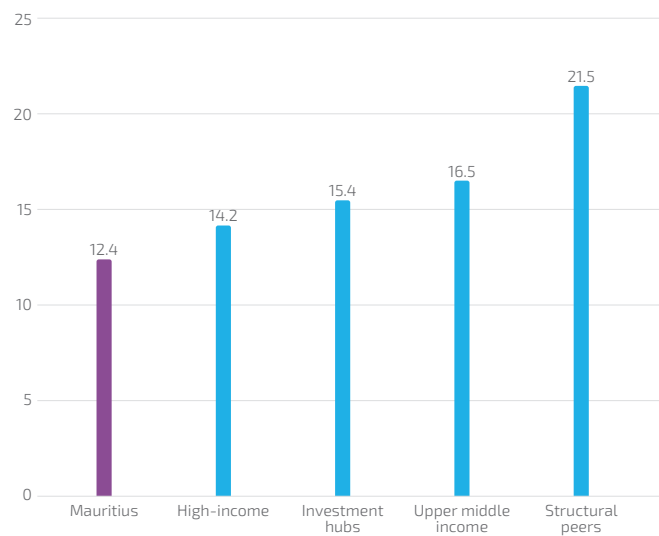
Source: Own elaboration based on UNESCO and EdStats (World Bank). Notes: Average increases in efficiencies estimated as the coefficient of a cross-country regression of the efficiency index estimated for Harmonized Learning Outcomes and per student expenditure on primary and secondary (on a 0-100 scale) on the percentage of education public expenditure allocated to the pre-primary level. *** Statistically significant at 1%, ** Statistically significant at 5%, * Statistically significant at 10%.

Annex A6 - Pupil-teacher ratios in Mauritius

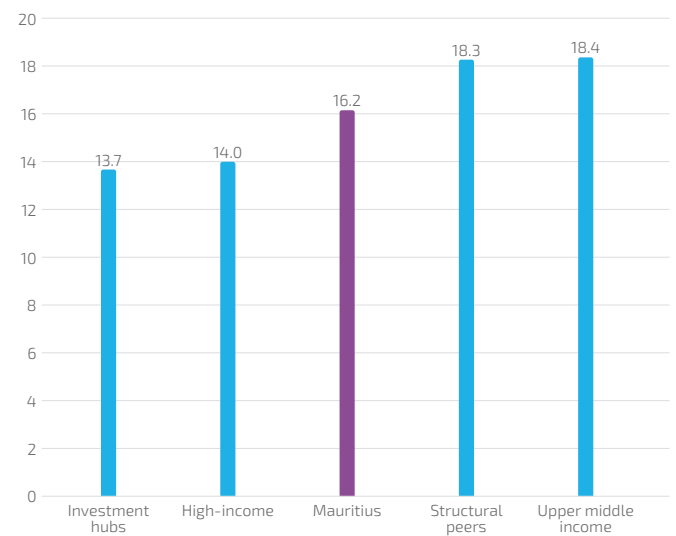
In this Annex, pupil-teacher ratios from the World Development Indicators, whose ultimate source is UNESCO, are presented for Mauritius, investment hubs, upper middle-income countries, high-income countries, and other structural peers circa 2019. Mauritius' PISA 2009 microdata are also used to show average math scores at the schools level by the pupil-teacher ratio prevailing in them. Figure A4 shows that except for the primary level, Mauritius has the lowest pupil-teacher ratio compared to the average of investment hubs, upper-middle income countries, high-income countries, and other structural peers (high-income countries). Figure A5 shows that the highest average math score in Mauritius was obtained by those schools with a pupil-teacher ratio of around 15, with lower pupil-teacher showing no improvement on average in learning scores.

Figure A4. Pupil-teacher ratio in Mauritius, structural peers, investment hubs, upper middle-income and high-income countries, circa 2019

(a) Pre-primary



(b) Primary



(c) Secondary

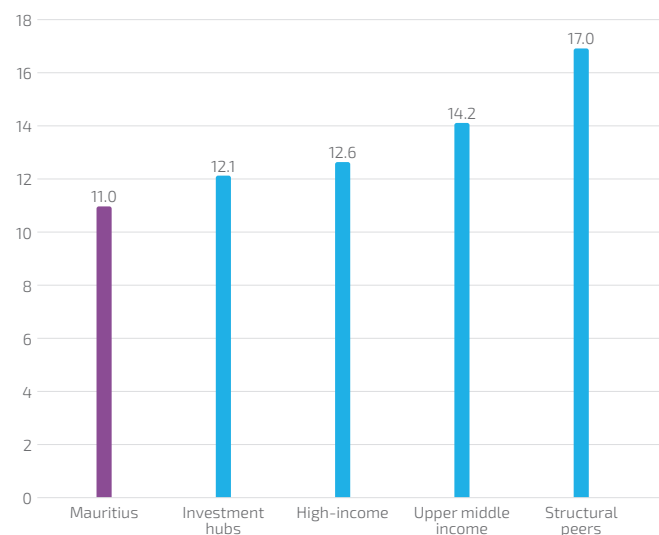
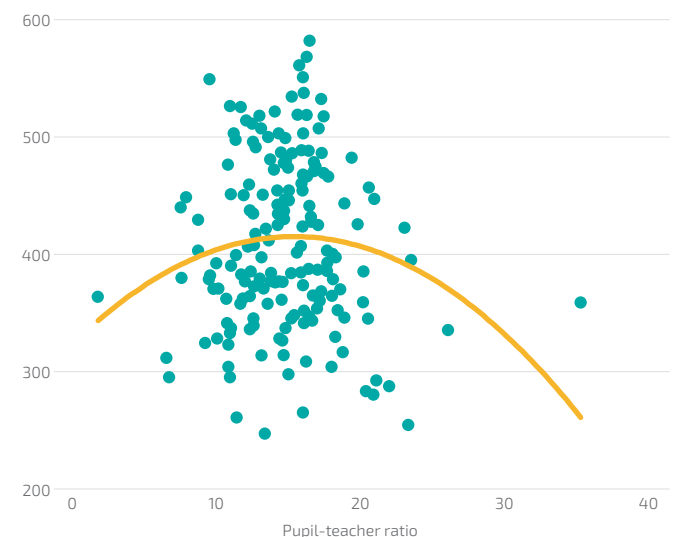


Figure A5. Pupil-teacher ratios and average math scores in secondary schools in Mauritius, PISA 2009

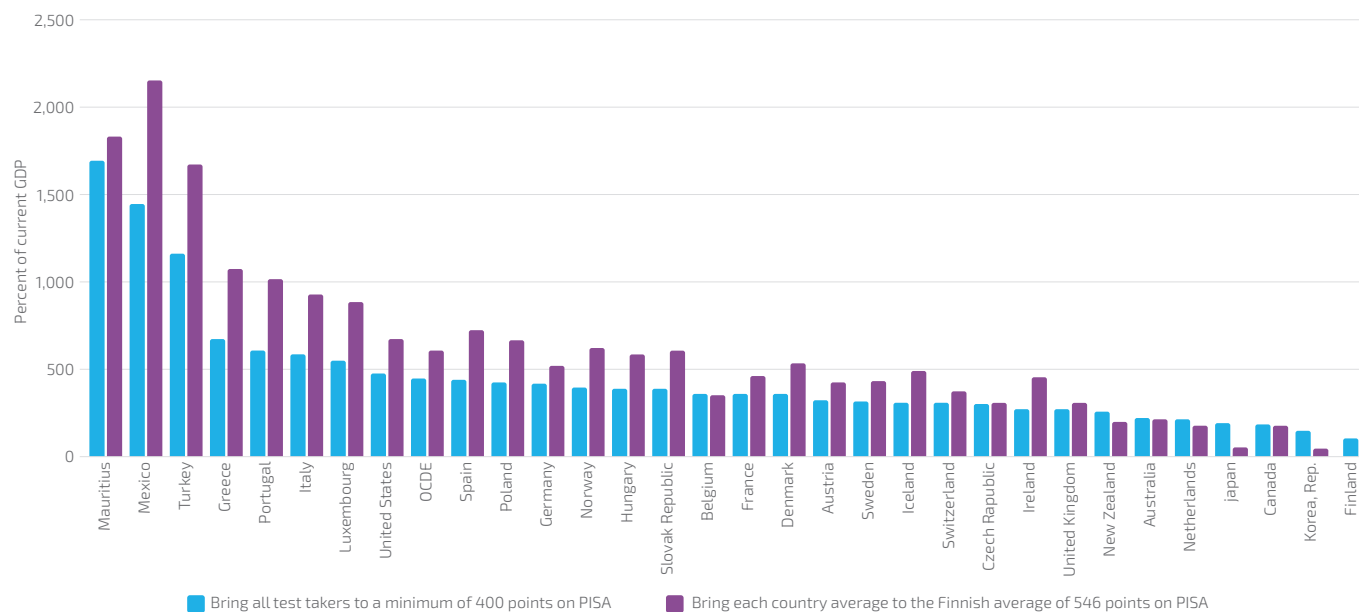


Source: Own elaboration based on WDI (ultimate source: UNESCO).
 Note: Data corresponds to 2018, except for structural peers and investment hubs, where 2017 data was used to guarantee a large number of countries to compute the averages.

Annex A7 - The potential gains from increased learning

In this Annex, the analysis in the 2018 World Development Report is reproduced with the sole addition of a separate calculation for Mauritius, using exactly the same methodology as in this report. The details of this methodology can be found in OECD (2010). Figure A6 shows the results which are described in the main text, and highlight the substantial gains in terms of GDP that could be achieved by increasing the quality of education in Mauritius.

Figure A6. Simulated additional GDP in 80 years attributable to increased learning (relative to current GDP), by scenario



Source: World Bank (2018). World Development Report: Learning to Realize Education's Promise, based on data from OECD (2010). "The high cost of low educational performance: The long-run economic impact of improving PISA outcomes." Paris: OECD. Data for Mauritius are from own elaboration based on identical methodology, with PISA average in reading, math and science and percentage of students below 400 points in reading corresponding to PISA 2009.

Annex A8 - Description of support programs in terms of objectives pursued, targeted beneficiaries by sector and firm size, instruments used, and implementing institutions

Support programs seeking to incentivize investment are the most numerous when pooled together, adding up to 44 percent of all programs. This total is broken down between programs incentivizing the investment in equipment (25 percent); other types of investment (15 percent); and programs incentivizing co-investment (4 percent). Twenty-six programs (25 percent) include fostering the acquisition of equipment as one of its objectives, with an earmarked money amount of MUR 18.006 million¹⁵⁵. 58 percent of these programs have been implemented under the *Plan de Relance*, 15 percent under the *Plan de Soutien*, and 27 percent were announced in the budget for FY2022/23. Only one of these programs pre-dated the 2020/21 budget, and all were ongoing as of December 2022. Almost half of these programs (46 percent) have been executed through the Development Bank of Mauritius, another 35 percent through the Industrial Finance Corporation of Mauritius, and 4 percent through SME Mauritius Ltd. The instruments used to implement the programs are mainly loans (54 percent) and leasing facilities (38 percent), with minor recourse to cost subsidies (8 percent), grants (8 percent), and tax breaks (4 percent), and some overlap among them. A majority of the programs are directed toward micro and SMEs (35 percent) or micro enterprises only (8 percent), representing the largest share of the portfolio. Another 31 percent of programs are open to all firms regardless of size, 12 percent are targeted to large firms, whereas the remaining programs are open to SMEs and mid-market firms (8 percent), medium and mid-market firms (4 percent), and households (4 percent).

Sector-wise, close to half of the programs seeking to foster investment in equipment are open to any firms operating in the economy (46 percent). The remaining programs target specific sectors, with a significant degree of overlap (i.e., several programs are directed to firms belonging to a defined subset of productive sectors). Among the sectors with more programs open to them are agriculture (50 percent), construction (27 percent), and manufacturing (27 percent). Transport is targeted by 12 percent of the programs, while all other sectors are covered by a significantly lower number of programs (8 percent or less), and two of the programs (8 percent of all) are directed to households. As of early September 2022, 2,443 applications had been received (MUR 1,706 million), 81 were in progress (MUR 451 million), 2,251 were approved (MUR 1,244 million), and there were 2,230 with committed funds (MUR 1,168 million), substantially below the funds earmarked prior to the 2022/23 budget.

Of the sixteen programs supporting other forms of investment, all of which were ongoing as of December 2022, only two existed prior to the 2020/21 Budget. Ten were part of the *Plan de Relance* (63 percent), one was part of

the *Plan de Soutien* (6 percent), and five were announced in the 2022/23 budget (31 percent). The earmarked amount, not including the latter, reached MUR 11,000 million. More than half of these programs are open to firms of any size (56 percent), whereas 31 percent can only receive applications from micro and SMEs, and 13 percent are directed to SMEs and mid-market firms. Two thirds of these programs (63 percent) have been executed through the Development Bank of Mauritius, another 13 percent through the State Investment Corporation, and 6 percent through the Economic Development Board. More than two thirds of the programs provide loans (69 percent), while a quarter of the programs employ different types of miscellaneous instruments (25 percent). In terms of beneficiary sectors, almost two thirds of the programs target agriculture (63 percent), almost one third construction (31 percent), and one fourth tourism (25 percent), while manufacturing and services are targeted by 19 percent of all programs each. Other sectors of the economy receive substantially less coverage, including ICT and blue economy (13 percent each), export-oriented sectors, trade, and transport (6 percent each), while 2 programs (13 percent) are open to all sectors, and one (6 percent) only to households. Some degree of overlap in terms of sectors covered by individual programs is also noted. As of early September 2022, 531 applications had been received (MUR 1,166 million), 42 applications were in progress (MUR 76 million), 507 applications were approved (MUR 865 million), and 517 had committed funds (MUR 802 million). This relatively low number of applications not only evidences a low level of uptake of the programs by private actors, but also a substantial under-execution in terms of the funds earmarked prior to the 2022/23 budget, signaling inefficiency in the implementation and potential misalignment of incentives.

The four programs seeking to promote co-investment (2%) have an earmarked money amount of MUR 5,010 million, and include the acquisitions of stocks or registrations in crowdlending platforms. Half of these programs belonged to the *Plan de Relance*, with one pre-dating the 2020/21 budget and the other introduced then, while the remaining two programs have been announced in the budget for 2022/23. All four programs were ongoing as of December 2022. Three programs (75 percent) are directed to micro and SMEs, and the remaining program to micro enterprises exclusively. Two of the programs provide loans, another one provides tax breaks, and the remaining program provides venture capital. One program has been executed through the Development Bank of Mauritius, another one through the SME Equity Fund Ltd, and a third through the Mauritius Investment Corporation, while the implementation institution is not yet known for one of the programs announced in the 2022/23 budget. Three of

¹⁵⁵ Earmarked amounts indicated for subsets of programs grouped under specific objectives or sectors are approximations, as the available data is not disaggregated enough to compute the exact amounts.

Annex A8 - Description of support programs in terms of objectives pursued, targeted beneficiaries by sector and firm size, instruments used, and implementing institutions (Cont'd)

the programs are open to firms operating in any economic sector (75 percent), while construction, transport, services, and trade, are specific sectors also covered individually under one program. As of early September 2022, 346 applications had been received (MUR 154 million), 19 applications were in progress (MUR 38 million), 345 applications were approved (MUR 121 million), and 369 had committed funds (MUR 94 million), evidencing a relatively low take up by private actors, and substantial under execution of the earmarked amounts.

Fostering incremental innovation (modernization) is a very frequent objective of the existing support programs.

Thirty-two programs (30 percent of all support programs) either include innovation explicitly in their stated objectives (12 programs) or support it implicitly (20 programs), with a combined earmarked amount of MUR 18,445 million. Half of these programs were introduced or extended under the Plan de Relance, while another 13 percent were part of the Plan de Soutien, and the remaining 38 percent were announced in the budget for FY2022/23. 38 percent of the programs pre-dated the 2020/21 budget, another 56 percent were introduced at that point. Almost half of the programs (41 percent) are open to firms of any size, whereas 19 percent of the programs are directed to micro enterprises exclusively, another 19 percent to micro and SMEs, 3 percent to SMEs and mid-market firms, another 3 percent to medium and mid-market firms, and 9 percent are only open to large firms. Two of the programs (9 percent) target households.

Almost two-thirds of the programs seeking to foster incremental innovation (63 percent) are open to firms operating in any areas of the economy.

Among programs directed to specific economic sectors, the most frequently targeted sectors are manufacturing (31 percent), agriculture (28 percent), and construction (19 percent). The share of programs directed toward more modern sectors such as ICT and the blue economy is significantly lower (9 percent and 6 percent, respectively), whereas the remaining programs target transport (9 percent), and services (9 percent). It is interesting to note that 6 percent of the programs fostering incremental innovation are directed to households rather than firms, which suggests an ample interpretation of the term "innovation", which may not be well aligned with best practices. In terms of instruments chosen for implementation of the programs, leasing stands out as the most frequently used (31 percent), followed by loans (28 percent) and cost subsidies (25 percent), whereas grants and tax breaks were used significantly less (in only 13 percent and 9 percent of all incremental innovation programs). All of these programs were ongoing as of December 2022, and as

of early September 2022, a total of 6,990 applications had been received (MUR 2,569 million), 75 applications were in progress (MUR 384 million), 2,563 applications were approved (MUR 1,919 million), and 2,559 applications had committed funds (MUR 1,917 million). The fact that the sum of these amounts (MUR 6,788 million) is less than half of the total amount earmarked prior to the 2022/23 budget¹⁵⁶ for programs fostering innovation points out to the existence of ample room for improvement in the degree of take up by private actors. Substantial fragmentation is observed in terms of implementing institutions, with 28 percent of the programs executed through the Industrial Finance Corporation of Mauritius, 19 percent through the Development Bank of Mauritius, 13 percent through the SME Mauritius Ltd, another 9 percent through the Economic Development Board, 9 percent through the NTC, and 3 percent through SME-EF. Paired with the large number of programs under the incremental innovation objective, and the different types of incremental innovations incentivized, both explicitly and implicitly, this points out to opportunities to streamline and consolidate the programs to avoid duplication and enhance efficiency in the allocation of public resources.

Supporting radical innovation, in turn, is the objective of 11 programs, all of them implemented by the MRIC, accounting for 10 percent of all support programs and with an earmarked amount of MUR 50 million for the year 2021/22.

All the MRIC programs are matching grant programs for projects between one to two years with required co-funding by the private sector, and open to firms in any sector of the economy. Two of the programs have closed, and the remaining 9 were ongoing as of December 2022 (82 percent). As of November 2022, these programs had received 999 applications, of which 359 were approved and 592 had committed funds.

Another frequently stated objective of support programs is the provision of financial support to firms, with thirty-four programs (32 percent) citing this as one of their objectives, and an earmarked money amount of MUR 36,050 million.

Almost half of these programs (47 percent) were launched or extended under the Plan de Relance, another 26 percent under the Plan de Soutien, and another 26 percent of these programs were announced in the budget for 2022/23. Close to half of the programs (44 percent) already existed prior to the 2020/21 budget, and another 41 percent of the programs were launched then. A large majority of the programs were ongoing as of December 2022 (88 percent). Most of these programs target micro and SMEs (38 percent) or micro enterprises exclusively (15 percent), adding up in total to more than half of the programs. Another 18 percent of the

¹⁵⁶ Earmarked amounts indicated for subsets of programs grouped under specific objectives or sectors are approximations, as the available data is not disaggregated enough to compute the exact amounts. Similarly, monetary amounts associated to applications for groups of programs under specific objectives or sectors are also approximations, as complete data has not been received for all the programs.

Annex A8 - Description of support programs in terms of objectives pursued, targeted beneficiaries by sector and firm size, instruments used, and implementing institutions (Cont'd)

programs are open to SMEs and mid-market firms, 6 percent to households, and almost one fourth of the programs (24 percent) are open to all firms, irrespective of size. None of these programs seek specifically to support large firms.

More than half of the programs providing financial support to private actors (56 percent) are open to firms belonging to any productive sectors, whereas manufacturing (29 percent), agriculture (26 percent), construction (18 percent), and tourism (15 percent) are the sectors most frequently targeted by programs restricted to firms operating in certain activities. ICT, services (12 percent each), export-oriented sectors, trade (9 percent each), transport, the blue economy (6 percent each), very specific sectors (3 percent) and households (9 percent) are also beneficiaries of programs targeted specifically to them, indicating in the aggregate an overall cross-cutting nature of the financial support provided, despite the fragmentation of its implementation through a multitude of programs executed by various institutions. Indeed, execution of the programs has been mainly through the Development Bank of Mauritius (41 percent), with fewer programs coordinated by the Industrial Finance Corporation of Mauritius (9 percent), the SME Equity Fund Ltd (6 percent), the SIC (6 percent), the EDB, the ISP, the Bank of Mauritius, and the Mauritius Investment Corporation (3 percent each). While half of the programs provide loans, some provide grants (9 percent), tax breaks (6 percent), and cost subsidies (3 percent), and close to one third of the programs (29 percent) have been implemented through a variety of other specific instruments. As of early September 2022, a total of 13,769 applications had been received (MUR 18,560 million), 888 applications were in progress (MUR 2,816 million), 12,919 applications were approved (MUR 14,712 million), and 12,688 had committed funds (MUR 10,606 million), adding up to a total of MUR 46,694, substantially above the initially earmarked amount of MUR 36,050 million prior to the 2022/23 budget.

Eleven programs (10 percent) specify that protecting or bolstering employment is among their stated objectives, with earmarked funds of MUR 6,000 million for programs in this category reaching up to the 2021/22 Budget. 36 percent of these programs belonged to the *Plan de Soutien*, another 36 percent to the *Plan de Relance*, and the remaining 27 percent were announced in the budget for 2022/23. Of these programs, 27 percent already existed before the 2020/21 budget, and 82 percent were still ongoing as of December 2022. Most programs (45 percent) have been implemented through the Development Bank of Mauritius, while 18 percent have been implemented through the State Investment Corporation, and 9 percent through the Mauritius Revenue Authority. The instruments used are mostly loans (46 percent), and to a lesser extent grants (9 percent), while the remaining programs have been implemented through a variety of specific instruments. 36 percent of all programs are accessible to firms of any size, while another 36 percent

are only open to micro and SMEs, and 9 percent exclusively to micro enterprises, while 18 percent of programs are open to SMEs and mid-market firms. While more than half of all programs (55 percent) are open to firms operating economywide, among those directed to specific sectors the higher frequency is observed in tourism (36 percent), manufacturing (36 percent), and agriculture (27 percent), followed by construction, services, export-oriented sectors, ICT, and blue economy (2 programs, or 18 percent of the total each). This evidences a substantial degree of overlap in terms of sectors covered by different programs. As of early September 2022, and excluding programs announced in the budget for 2022/23, a total of 2,983 applications had been received (MUR 4,822 millions), 185 applications were in progress (MUR 151 millions), 2,798 applications had been approved (MUR 3,459 millions), and 2,798 had committed funds (MUR 3,459 millions), exceeding the funds earmarked prior to the 2022/23 budget.

Eight programs (8 percent) explicitly mention COVID-19 as one of their objectives, with an earmarked money amount of MUR 12,500 million. Seven of these programs (88 percent) were implemented under the umbrella of the *Plan de Soutien*, and the remaining program (12 percent) was part of the *Plan de Relance*. Six of these programs (75 percent) existed prior to the 2020/21 budget, and all had at least one other stated objective. These programs were implemented during the initial, toughest phase of the COVID-19 shock, but at least half of them were still ongoing as of December 2022. 38 percent of the programs were open to firms of any size, and another 38 percent were destined exclusively to micro enterprises, while 13 percent targeted households, and another 13 percent SMEs and mid-market firms. Almost two thirds of the programs were instrumented through loans (63 percent), whereas grants were provided by 13 percent of programs, and the remaining programs used various specific instruments. While half of the programs were open to any firms economywide, several programs targeted specific sectors, with a significant degree of overlap. The most frequently targeted sectors were tourism, agriculture, manufacturing, and export-oriented sectors (2 programs or 25 percent each), followed by construction, transport, services, ICT, and blue economy (1 program or 13 percent each). Additionally, one of the programs (13 percent) was directed to households. The Development Bank of Mauritius implemented the largest share of these programs (25 percent), while others were executed through the State Investment Corporation Limited, the Mauritius Revenue Authority, and the Investment Support Program (13 percent each). The latest available data from early September 2022 indicate that since the start of the programs, 1,901 applications had been received (MUR 14,884 million), 405 applications were in progress (MUR 2,554 million), 1,496 applications were approved (MUR 11,516 million), and 1,199 had committed funds (MUR 7,463 million). These amounts add up to a total of MUR 36,417 million, about three times the amount earmarked prior to the 2022/23 budget.

Annex A8 - Description of support programs in terms of objectives pursued, targeted beneficiaries by sector and firm size, instruments used, and implementing institutions (Cont'd)

Eleven programs (10 percent) include boosting competitiveness as one of their stated objectives, with earmarked funds for an amount of MUR 10,030 million.

One of the programs already existed before the 2020/21 budget, and the rest were added thereafter; all were still ongoing as of December 2022. Four programs (36 percent) were implemented under the *Plan de Soutien*, another six (55 percent) under the *Plan de Relance*, and the remaining program (9 percent) was announced in the budget for 2022/23. Three programs are directed to micro enterprises exclusively and another three to large firms (27 percent each), whereas two programs (18 percent) are open to firms of any size. Of the remaining programs, one targets SMEs, another SMEs and mid-market firms, and the remaining one medium and mid-market firms (9 percent in each case). The instruments used have been mostly leasing (55 percent of programs), followed by loans and grants (18 percent each), and cost subsidies (9 percent). The IFCM implemented more than half of the programs (55 percent), while the Development Bank of Mauritius and the SME Equity Fund Ltd executed 2 programs (or 18 percent) of all each, and the Economic Development Board implemented the remaining program (9 percent). A majority of the programs target several sectors with considerable overlap, with the sectors most frequently targeted being manufacturing construction (64 percent of programs each), agriculture (55 percent), ICT, and blue economy (18 percent each). Only one program is open to firms in all sectors (9 percent), and two programs are open to firms in all sectors "except pure trading" (18 percent). Nevertheless, most of the programs directed to specific sectors indicate that firms in "other" sectors may also apply, rendering the eligibility criteria under the sectoral dimension less clear, and possibly open to some degree of discretionary allocation. As of early September 2022, 3,167 applications had been received (MUR 1,307 million), 20 applications were in progress (MUR 342 million), 375 applications were approved (MUR 801 million), and 375 applications had committed funds (MUR 801 million), signaling substantial under execution of the funds earmarked prior to the 2022/23 budget.

Eight programs (8 percent) include boosting exports as one of their stated objectives, with earmarked funds of MUR 2,450 million.

Six of these programs (75 percent) existed prior to the 2020/21 budget, one was introduced at that point, and another one in the 2022/23 budget. They were all ongoing as of December 2022. One of the programs was implemented under the *Plan de Soutien*, and another six under the *Plan de Relance*. Three quarters of programs are open to firms of any size, while one program (13 percent) is directed to micro enterprises exclusively, and another program (13 percent) to micro and SMEs more generally. A majority of the programs have been implemented through the Economic Development Board (63 percent), whereas the Development Bank of Mauritius has implemented one program (13 percent) and the SME Equity Fund Ltd another program (13 percent). The programs most often provide a cost subsidy (63 percent),

but grants and loans are also used (13 percent each). A large majority of programs are directed to manufacturing firms (88 percent), but agriculture (25 percent), export-oriented sectors (25 percent), and services (13 percent) are also among the targeted sectors, with some degree of overlap across programs. Only one program (13 percent) is open to firms operating in any economic sector. As of early September 2022, 2,469 applications had been received (MUR 3,630 million), 61 applications were in progress (MUR 55 million), 1037 applications were approved (MUR 2,679 million), and 1037 had committed funds (MUR 2,679 million). This exceeds the earmarked amount prior to the 2022/23 budget.

Twelve programs (11 percent) include promoting the use of green energy as one of their objectives, with a non-specified earmarked money amount.

One of these programs (8 percent) was launched in the 2020/21 budget under the *Plan de Relance*, whereas the remaining eleven (92 percent) were announced in the budget for 2022/23. All of the programs were ongoing as of December 2022. Most programs are open to firms of any size (83 percent), while two are geared to households (17 percent). A majority of programs provide a cost subsidy (42 percent), while others issue loans or leasing facilities (25 percent each), and some provide tax breaks (17 percent). One fourth of the programs have been executed through the Industrial Finance Corporation of Mauritius, another fourth through the NTC, and one program through the Development Bank of Mauritius (8 percent), while for several programs this information is not yet available. A large majority of the programs are open to firms operating economywide (58 percent), while two programs (17 percent) are directed to households. Information on application status is not available at the time of writing for programs launched under the budget for 2022/23. As of early September 2022, the one program that preceded this budget had received a total of 21 applications (MUR 3 million), had 7 applications in progress (MUR 2 million), 14 applications approved (MUR 1 million), and 10 with committed funds (MUR 1 million).

Eight programs (8 percent) provide support to very specific beneficiaries, such as urban terminal hawkers, taxi and pleasure craft operators based at hotels, various transport operators, and import-oriented businesses, with earmarked funds in the amount of MUR 200 million.

Six of the programs (75 percent) started prior to the 2020/21 budget, with two being implemented under the *Plan de Soutien* and four under the *Plan de Relance*, and the remaining two programs were announced in the 2022/23 budget. Most programs have been executed through the Development Bank of Mauritius (63 percent) and the Industrial Finance Corporation of Mauritius (25 percent). Three quarters of the programs provide loans and a quarter provide leasing facilities. The large majority of programs are open to any size firms (75 percent), but some target exclusively micro enterprises (25 percent). In terms of supported productive sectors, most programs are directed to transport (75 percent)

Annex A8 - Description of support programs in terms of objectives pursued, targeted beneficiaries by sector and firm size, instruments used, and implementing institutions (Cont'd)

and tourism (50 percent), with some degree of overlap, whereas one program targets urban hawkers, and another one targets import-oriented businesses. Two of the programs have already been phased out, and the other six were ongoing as of December 2022. As of early September 2022, 455 applications had been received (MUR 45 million), 455 applications were approved (MUR 45 million), and 488 had committed funds (MUR 45 million).

Three programs (3 percent) seek to promote rainwater harvesting and recycling, and two programs (2 percent) seek to promote female empowerment, in both cases with non-specified earmarked money amounts. Regarding the promotion of rainwater harvesting and recycling, two of the programs were introduced in the 2020/21 budget, and one already existed previously. All of the programs have been implemented under the *Plan de Relance*, by the Development Bank of Mauritius, and at least two of the programs through the issuance of loans. Two of the programs are open to firms of any size, while the remaining program is directed to households. Sector-wise, one program targets agriculture, another one services, and another two are for households. As of early September 2022, 11 applications had been received, 1 was in progress, 10 were approved, and 10 had committed funds; in all cases, corresponding money amounts are very small. Regarding the programs seeking to promote female empowerment, one of the programs was introduced in the 2020/21 budget and the other already existed. Both programs pertain to the *Plan de Relance*, and were

ongoing as of December 2022. Both programs are executed through the Development Bank of Mauritius through the provision of loans. Both programs are open to households and one of them also to micro enterprises operating in any sectors. As of early September 2022, 415 applications had been received (MUR 80 million), 26 were in progress (MUR 10 million), 389 were approved (MUR 71 million), and 493 had committed funds (MUR 69 millions).

Last, a total of three programs (3 percent) have stated objectives which are not covered under any of the previously discussed categories. These programs have non-specified earmarked money amounts. Two of the programs, launched in the 2022/23 budget, seek to improve education outcomes, one by training teachers in innovative subjects, and the other one by supporting private schools in disadvantaged regions, while the third program, introduced in the 2020/21 budget under the *Plan de Relance*, seeks to foster micro enterprises' connectivity to utilities. All three programs were ongoing as of December 2022. The older program has been implemented through the SME-M, whereas for the two newer programs this information is not yet available. Two of the programs provide grants, and the third one provides a cost subsidy. The two newer programs are open to firms of any size in the education sector, while the older program is open to micro firms operating in any sector. As of early September 2022, the older program had received 1,112 applications (MUR 85 million), of which 82 were approved and had committed funds (MUR 4 million).

Annex A9 - List of all state support programs covered in the analysis

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
1	Micro Credit Scheme	Boost value-added generation.	Financial Support	Survival-oriented
2	Backyard Gardening (Revised)	Help to meet costs of setting up a backyard/ rooftop garden.	Female empowerment	Growth-oriented
3	Computer Loan	Help to meet cost of purchase of computers, laptops printers and individual internet connections.	Investment in Equipment	Growth-oriented
4	Rainwater Harvesting System	Help to meet purchase cost of rainwater harvesting systems in order to encourage households to collect rainwater and reduce water run-offs from roof tops into drains.	Rainwater Harvesting	Growth-oriented
5	Urban Terminal Hawkers	Purchase of commercial slot for hawkers willing to buy their own stalls in the new urban terminals at Victoria and Immigration Square Stations in Port Louis.	Specific Beneficiaries	Survival-oriented
6	Women Entrepreneur	Support any project excluding trade, transport, construction & related projects.	Female empowerment	Growth-oriented
7	Multipurpose loan	Provision of short term financial assistance to existing DBM clients. Projects not financed under other schemes will be considered under the Multi-Purpose Loan Scheme.	Financial Support	Survival-oriented
8	Loan Schemes to Taxi based at hotels	Provision of financial support to transport operators operating from hotels in the form of income subsistence.	Specific Beneficiaries	Survival-oriented
9	Loan Schemes to Pleasure Craft based at hotels	Provision of financial support to transport operators operating from hotels in the form of income subsistence.	Specific Beneficiaries	Survival-oriented
10	Loan Schemes to Vans and Minibus operators based at hotels	Provision of financial support to transport operators operating from hotels in the form of income subsistence.	Specific Beneficiaries	Survival-oriented
11	Enterprise Modernisation Scheme	Provide micro and small entities with leasing facilities in order to facilitate innovation through the acquisition of modern equipment, to be more productive and efficient thereby lowering their cost of production and becoming more competitive.	Innovation, Investment in Equipment, Competitiveness	Growth-oriented
12	New Agricultural Loan	Help to meet cost of construction of greenhouse, plantation, purchase of irrigation/fertigation system and other allied inputs, fencing, breeders and poultry farming, aquaponic, etc.	Investment in Equipment, Other Investments	Growth-oriented
13	Mechanization	Help to meet the purchase cost of machinery and equipment.	Investment in Equipment	Growth-oriented
14	Agro-industry	Help to meet purchase cost of machinery, equipment for transformation / processing packaging equipment, construction of warehousing and transfer of technology.	Innovation, Investment in Equipment, Other Investments	Growth-oriented
15	Seeds & seedlings	Help to meet plantation cost, construction of storage facility / purchase of machinery equipment.	Investment in Equipment, Other Investments	Growth-oriented
16	Upgrade IT infrastructure of private and private colleges	Help to meet cost of purchase of IT equipment such as laptops, printers, overhead projectors and other network accessories.	Innovation, Investment in Equipment	Growth-oriented

Annex A9 - List of all state support programs covered in the analysis (Cont'd)

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
17	MSME Financing	Finance capital expenditure for MSMEs in manufacturing, services, tourism, agri-business, and ICT sectors.	Financial Support	Survival-oriented
18	Business Loan Scheme	Provide support for working capital, purchase of stock, purchase of land for agriculture and commercial use, construction of commercial building and purchase of vehicle.	Investment in Equipment, Other Investments, Co-Investment, Financial Support	Both
19	DBM Factoring	Help SMEs trading on a business-to-business to cash their credit sales and improve their cash flow.	Financial Support	Survival-oriented
20	COVID-19 Special Support Scheme	Support any project creating value or employment with any working capital requirement.	Employment, Financial Support	Survival-oriented
21	SME Interest Free Loan	Provide support to entrepreneurs (SMEs).	Financial Support	Survival-oriented
22	Special Loan Scheme for Retailers	Provide support for renovation of shop, purchase of equipment, and working capital.	Investment in Equipment, Financial Support	Both
23	Car Wash Operators Scheme	Provide support for setting up a system for rainwater harvesting, storage and recycling.	Innovation, Rainwater Harvesting	Growth-oriented
24	Construction of Water Tank and purchase of Irrigation System in Rodrigues	Help meet the cost of construction of water storage facility for domestic and agricultural purposes including irrigation system.	Investment in Equipment, Other Investments, Rainwater Harvesting	Growth-oriented
25	Solar Kit for Domestic Purposes	Support the purchase/installation of solar kits for domestic use.	Innovation, Green Energy	Growth-oriented
26	Sugar Cane Replantation Loan Scheme	Support sugar replantation.	Other Investments	Growth-oriented
27	Tourism Business Continuity	Support the renovation of premises, purchase of equipment, and working capital.	Investment in Equipment, Other Investments, Financial Support	Both
28	Wage Support Scheme for Pleasure Crafts Operators based at Hotels	Help to meet cost of wages and salaries of employees.	Employment	Survival-oriented
29	Support to Distressed Enterprises	Help to meet restructuring costs, investment in new equipment, digitalization of operations, transfer of technology cost, consultancy costs, and financing of working capital.	Innovation, Investment in Equipment, Other Investments, Financial Support	Both
30	Export Factoring	Provide cash-flow to companies by discounting their credit sales invoices.	Financial Support	Survival-oriented
31	Crowdfunding	Co-invest in commercially viable projects put up for fund raising on a registered crowdfunding platform.	Co-Investment	Growth-oriented
32	Innovation and Technology Fund	Provide financing to technology and innovation-oriented companies.	Innovation, Financial Support	Both

Annex A9 - List of all state support programs covered in the analysis (Cont'd)

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
33	Internal Capability Development Scheme (ICDS)	Help SMEs improve through professional or technical input: i) their efficiency of their value chain; ii) their responsiveness to customer requirements and market dynamics; and iii) their overall competitiveness.	Innovation, Competitiveness	Growth-oriented
34	Technology and Innovation Scheme (TINNS)	Enable SMEs to i) continuously invest in technology and automated production capabilities; and ii) create technology based integrated and sustainable SMEs.	Innovation, Investment in Equipment	Growth-oriented
35	SME Marketing Support Scheme (MSS)	Support SMEs in i) improving their market accessibility and competitiveness in both local and export markets; and ii) responding to more stringent requirements of diverse customer bases.	Innovation, Competitiveness, Exports	Growth-oriented
36	Inclusiveness and Integration Scheme (INC)	Encourage SMEs i) to work together, favor inclusiveness, inter-linkages, and networking; and ii) to collaborate and synergize for mutual benefit.	Innovation	Growth-oriented
37	SME Utility Connection Assistance Scheme (UCA)	Connect SMEs operation sites to mains of utility suppliers (CEB and CWA).	All other	Growth-oriented
38	SME Participation in International Fairs Refund Scheme	Provide financing and assist SMEs to expand their businesses through their participation in export promotion activities via international fairs.	Innovation, Exports	Growth-oriented
39	Support for Trade Promotion & Marketing Scheme (TPMS)	Give a boost and support to manufacturing companies in their quest to penetrate the eligible markets faster by making use of air shipment and hence, to enhance product delivery in terms of speed to market and increase competitiveness of local manufacturing products.	Innovation, Exports	Growth-oriented
40	Freight Rebate Scheme to Africa	Ensure competitiveness of exports to the Indian Ocean Commission and African regions vis a vis exports from Asia. Catalyze exports to the region and Africa. Help create the necessary conditions for the establishment of a feeder shipping facility in Africa with reduced transit time and at lower costs. Induce an increase in the volume of containers, that should in a few years' time be enough to support a viable commercial feeder facility.	Exports	Growth-oriented
41	Export Credit Guarantee Insurance Scheme	Provide a subsidy on the cost of credit guarantee insurance premium to eligible companies subscribing for credit insurance cover for their direct exports worldwide in order to encourage them to take an insurance cover to secure trading and hence, boost up exports from Mauritius.	Exports	Growth-oriented
42	Africa Warehousing Scheme	Government will support the first two years of operations of "Made in Mauritius" warehouses set up in Tanzania through a subsidy on the rental and administrative costs in order to ease access and increase competitiveness of locally manufactured products in Tanzania.	Innovation, Competitiveness, Exports, Financial Support	Both

Annex A9 - List of all state support programs covered in the analysis (Cont'd)

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
43	Equity/Quasi Equity Financing Scheme	Provide financing not exceeding 49 percent of business' equity capital.	Financial Support	Survival-oriented
44	Leasing Equipment Modernization Scheme (LEMS) I	Enhance competitiveness through upgrading of technology and modernization of production equipment and business processes, and reduce interest burden.	Innovation, Investment in Equipment, Competitiveness	Growth-oriented
45	Leasing Equipment Modernization Scheme (LEMS) II	Enhance competitiveness through upgrading of technology and modernization of production equipment and business processes, and reduce interest burden.	Innovation, Investment in Equipment, Competitiveness	Growth-oriented
46	Leasing Equipment Modernization Scheme (LEMS) III	Enhance competitiveness through upgrading of technology and modernization of production equipment and business processes, and reduce interest burden.	Innovation, Investment in Equipment, Competitiveness	Growth-oriented
47	Leasing Equipment Modernization Scheme (LEMS) FOREX	Enhance competitiveness through upgrading of technology and modernization of production equipment and business processes, and reduce interest burden.	Innovation, Investment in Equipment, Competitiveness	Growth-oriented
48	Modernization and Transformation (MTF) Scheme for Factoring (Export)	Provide cashflow to companies by factoring their credit sales invoices.	Financial Support	Survival-oriented
49	Modernization and Transformation (MTF) Scheme for Leasing	Enhance competitiveness through upgrading of technology and modernization of production equipment and business processes, and reduce interest burden	Innovation, Investment in Equipment, Competitiveness	Growth-oriented
50	Modernization and Transformation (MTF) Scheme for Leasing	Enhance competitiveness through upgrading of technology and modernization of production equipment and business processes, and reduce interest burden.	Innovation, Investment in Equipment, Competitiveness	Growth-oriented
51	Equity Participation (COVID-19 affected Companies)	Support for working capital requirements, expansion, and renovation, to help the enterprise rebound post COVID-19 while saving employment.	Other Investments, Employment, Financial Support, COVID-19 support	Both
52	Loan Scheme to SMEs for the Payment of End of Year Bonus 2021 - DBM	Help to meet cost of EOY Bonus 2021.	Employment	Survival-oriented
53	Batsirai Rehabilitation Loan Scheme - DBM	Provide support for the rehabilitation of sugar cane, vegetable, fruits and flower cultivation and hydroponic units affected by cyclone Batsirai. The purpose of the loan is to provide financial assistance to sugar cane planters and to vegetable, fruits and flower growers, to relaunch their agricultural activities.	Other Investments, Financial Support	Both
54	COVID-19 Working Capital Loan Scheme	Extension of the COVID-19 Working Capital Loan Scheme to contract bus/minibus/vans operators. Help to meet short-term working capital requirements (up to a maximum of 3 months).	Specific Beneficiaries, COVID-19 support	Survival-oriented

Annex A9 - List of all state support programs covered in the analysis (Cont'd)

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
55	COVID-19 Wage Assistance During Confinement / Curfew Period	Enterprises will be entitled to receive an amount equivalent to the 15 days' basic wage bill for all of its employees drawing a monthly basic wage of up to MUR 50,000 subject to a cap of MUR 12,500 per employee.	Employment, COVID-19 support	Survival-oriented
56	Special Relief Fund	Help to meet cash flow and working capital requirements of economic operators directly impacted by COVID-19.	Financial Support, COVID-19 support	Survival-oriented
57	DBM Wage Support Scheme for Export-Oriented Enterprises	Provide financial assistance to export-oriented enterprises (goods) impacted by COVID-19 for the payment of wages of their employees.	Exports, Employment, Financial Support, COVID-19 support	Both
58	DBM Revolving Credit Fund	Help to meet short-term working capital requirements and preserve jobs.	Employment	Survival-oriented
59	SIC Equity Participation/CG	Provide financial support for working capital requirements, expansion, and renovation which help the enterprise to rebound post COVID-19, whilst saving employment.	Other Investments, Employment, Financial Support	Both
60	SIC Corporate Guarantees referred to Commercial Banks	Issue corporate guarantees to banks to enable them to grant loans to companies affected by COVID-19, on a case-to-case basis.	Financial Support, COVID-19 support	Survival-oriented
61	ISP - SME Factoring Scheme	Provide cash-flow to companies by factoring their credit sales invoices through non-bank financial institutions	Financial Support	Survival-oriented
62	Special foreign currency (USD) line of credit	Support households and businesses impacted financially by COVID-19, and to ensure that the Mauritian Rupee and foreign exchange markets continue to operate smoothly.	Financial Support, COVID-19 support	Survival-oriented
63	SWAP arrangement to support import-oriented businesses	Enable commercial banks to support import-oriented business, except for the State Trading Corporation, which will be dealing directly with the BoM for its foreign currency requirements.	Specific Beneficiaries	Survival-oriented
64	Shared ATM services	Provide free access to the ATMs of any bank.	Financial Support	Survival-oriented
65	Support to households on debt costs	Pay interest on outstanding household loans for the period spanning April 1 st , 2020, to June 30 th , 2020.	Financial Support, COVID-19 support	Survival-oriented
66	Reduction in port charges (50 percent)	Boost manufacturing activity and manufacturing exports.	Exports, Financial Support	Both
67	Allocation of MUR 5 billion to support SMEs	Provide support to SMEs.	Financial Support	Survival-oriented
68	Set up a Venture Capital Fund	Provide support to SMEs.	Co-Investment, Financial Support	Both
69	Waived penalties accrued for late submission of income tax returns & payments	Provide support to SMEs.	Financial Support	Survival-oriented

Annex A9 - List of all state support programs covered in the analysis (Cont'd)

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
70	Provision of financial assistance to SMEs who paid salary compensation to their employees for the period from Jan 2022 to June 2022 (excl. export-oriented SMEs and those in tourism sector already benefitting from SME Salary compensation Refund program)	Provide support to SMEs.	Employment, Financial Support	Survival-oriented
71	Angel investors providing seed equity financing to SMEs will benefit from a tax allowance on their investment	Provide support to SMEs by boosting seed equity financing to SMEs from private investors.	Co-Investment, Financial Support	Both
72	25 percent grant on the amount incurred to purchase locally manufactured products from a small enterprise	Provide support to SMEs by promoting procurement from SMEs by large manufacturers with annual turnover greater than MUR 100 million.	Employment, Financial Support	Survival-oriented
73	Monetary support to the private construction sector (MUR 200 billion)	Provide support to the private construction sector.	Other Investments	Growth-oriented
74	Loan Facility of up to MUR 25 million at a concessional rate of 3.5 percent annually	Improve competitiveness of local construction companies.	Other Investments, Competitiveness, Financial Support	Both
75	Leasing facilities to transport operators to acquire electric vehicles and charging infrastructure. (3 percent annually over 10 years)	Boost green energy use.	Innovation, Investment in Equipment, Green Energy, Specific Beneficiaries	Both
76	Leasing facilities to companies to renew their company fleet to electric only (3.5 percent annually)	Boost green energy use.	Innovation, Investment in Equipment, Green Energy	Growth-oriented
77	Leasing facilities to taxis and van operators over a period of 7 years for the purchase of electric vehicles	Boost green energy use.	Innovation, Investment in Equipment, Green Energy, Specific Beneficiaries	Both
78	Implementation of the Bus Modernization Scheme to electric buses only	Boost green energy use.	Innovation, Green Energy	Growth-oriented

Annex A9 - List of all state support programs covered in the analysis (Cont'd)

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
79	Duty-Free on all hybrid and electric vehicles as from 1 July 2022	Boost green energy use.	Innovation, Green Energy	Growth-oriented
80	Introduction of a negative excise duty scheme of 10 percent for the purchase of electric vehicles	Boost green energy use.	Innovation, Green Energy	Growth-oriented
81	Support hotels with refurbishment with the 50 percent lease rent waiver	Boost tourism.	Other Investments	Growth-oriented
82	Provision of financial assistance to enterprises in the tourism sector who paid salary compensation to its employees for the period Jan 2022 to June 2022	Boost tourism.	Employment, Financial Support	Survival-oriented
83	Loan facility of MUR 250 thousand to domestic consumers for the acquisition of solar PV systems	Boost green energy use.	Innovation, Green Energy	Growth-oriented
84	Purchase of electricity under Medium Scale Distributed Generation Scheme (MSDG)	Boost green energy use.	Innovation, Green Energy	Growth-oriented
85	Waive existing rental fee for production meters of Renewable Energy Schemes	Boost green energy use.	Innovation, Green Energy	Growth-oriented
86	Accelerated annual allowance on "green technology equipment" expenditure under TOS	Boost green energy use.	Innovation, Investment in Equipment, Green Energy	Growth-oriented
87	Establishing a carbon credit trading framework	Boost green energy use.	Innovation, Green Energy	Growth-oriented
88	Mechanization, innovation and sustainability	Boost agriculture.	Innovation, Investment in Equipment	Growth-oriented
89	Incentives to promote sheltered farming include the exemption of payment of BLUP fees in dedicated zones	Support food security strategy.	Other Investments	Growth-oriented
90	30 percent subsidy on the purchase of equipment for production of locally produced pasteurized milk	Support food security strategy.	Investment in Equipment	Growth-oriented

Annex A9 - List of all state support programs covered in the analysis (Cont'd)

Program Number	Program Name	Summary of Stated Program Objectives	Streamlined Program Objective	Orientation of the Program
91	Goat Farming Scheme for cooperatives for purchase of goats and construction of sheds up to a maximum of MUR 200 thousand	Support food security strategy.	Other Investments	Growth-oriented
92	Grant for acquisition of semi-industrial fishing vessels by registered cooperatives rose from MUR 4 million to MUR 6 million	Support food security strategy.	Investment in Equipment	Growth-oriented
93	One-off grant of MUR 50 thousand to 125 private schools in disadvantaged regions	Support private schools.	All other	Growth-oriented
94	50 percent refund on costs incurred to train educators in fields like AI, blockchain and new technologies	Support education specialization in innovative fields.	All other	Growth-oriented
95	Pole of Innovation Grant Scheme	Support radical innovation.	Innovation	Growth-oriented
96	National SME Incubator Scheme	Support radical innovation.	Innovation	Growth-oriented
97	Proof of Concept Scheme	Support radical innovation.	Innovation	Growth-oriented
98	Collaborative Research and Innovation Grant Scheme	Support radical innovation.	Innovation	Growth-oriented
99	Research and Innovation Bridges	Support radical innovation.	Innovation	Growth-oriented
100	Social Innovation and Research Grant Scheme	Support radical innovation.	Innovation	Growth-oriented
101	Special Call for Proposals	Support radical innovation.	Innovation	Growth-oriented
102	Public Sector Transformation Scheme	Support radical innovation.	Innovation	Growth-oriented
103	Rodrigues Research and Innovation Grant Scheme	Support radical innovation.	Innovation	Growth-oriented
104	Fighting Diabetes at the Workplace	Support radical innovation.	Innovation	Growth-oriented
105	MRIC-TIA Joint Technology and Innovation Program	Support radical innovation.	Innovation	Growth-oriented

