Tunisia Public Expenditure Review

A New Pact for the Transition

Modernizing the State for Better and Fairer Public Spending

Overview Report
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Acknowledgments

This report was prepared by a team of experts from the World Bank (WB) and the African Development Bank (AfDB) with Tunisian and international experts. This team was composed of Abdoulaye Sy (WB), Philip Trapè (AfDB), Dalia Al Kadi (WB), Marwen Hkiri (WB), Natsuko Obayashi (WB), Ibrahim El Ghandour (WB), Lida Btieddini (WB), Montserrat Pallares-Miralles (WB), Edward Whitehouse (expert), Thomas Walker (WB), Mehdi Barouni (WB), Michael Drabble (WB), Samira Halabi (WB), Hafedh Zaafrane (expert), Fatima El Kadiri El Yamani (WB), Sylvestre Gaudin (expert), Ines Ayadi (expert), Hedi Larbi (expert), Ahmed Basti (expert), Mohamed Chebbi (expert), and Raoudha Gafrej (expert).

The report was prepared under the direction of Kevin Carey and benefited from the overall guidance of Marie Francoise Marie-Nelly, Tony Verheijen, and Yacine Fal.

The report also benefited from valuable comments from Fadila Caillaud, Ivailo Izvorski, Rajesh Advani, Yuko Okamura, Gustavo Demarco, Moez Cherrif, Tu Chi Nguyen, and Ezzedine Khalfallah.

The team is also grateful to several Tunisian public institutions who provided constructive comments and facilitated access to data, including the Ministries of Finance, Development Investment and International Cooperation, Social Affairs, Civil Service, Education, Health, Transport, and Agriculture; the National Statistical Institute (Institut Nationale de la Statistique); the Research and Social Studies Center (Centre des Recherches et Etudes Sociales); the National Institute for Competitiveness and Quantitative Studies (Institution Tunisien de la Competitivite et des Etudes Quantitatives); and the National Economic Council (Conseil de l’Analyse Economique). More specifically, the team is grateful to the Heads, General Directors, and staff in these public institutions that personally participated in the various workshops to prepare this report.
Executive Summary

Tunisia’s fiscal performance has deteriorated markedly over the past decade; public debt has increased by almost 30 percentage points of GDP since 2008 and is now above 70 percent of GDP. Contingent liabilities of state-owned enterprises (SOEs) are equivalent to 14 percent of GDP,\(^1\) while the deficit of the pension system could rise to TND 4.6 billion by 2020 (4.8 percent of GDP in 2017). While Tunisia’s fiscal space has shrunken, and fiscal risks risen, the country’s development needs are significant: regional disparities remain important, the decentralization process is in its early phases, the education and health sectors need better quality services to improve quality of life and human capital, energy and water provision need to be secured, and the country’s infrastructure must be upgraded. This public expenditure review provides evidence on the root causes of Tunisia’s weaker fiscal stance by completing an in-depth analysis of the efficiency and equity of public spending of the central government and SOEs. Such an analysis has been made possible by Tunisia’s participation in the World Bank Open Budget initiative of which Tunisia is the only member from the MENA region.\(^2\) This has allowed access to detailed data on the central government’s expenditure, which was complemented by a year-long data collection effort among key SOEs.

The report shows that at the core of Tunisia’s fiscal challenges is a vision of the State as a provider of jobs and of subsidized goods and services in an economy characterized by low value added, low wages, and a stunted private sector. This development model and social contract was maintained, while the capacity, productivity, and performance of the public administration and SOEs—responsible for spearheading the model—have weakened significantly. Among the visible and persistent signs of failures of the model are the high rate of inactivity, particularly among youth, and especially those in lagging areas. The report argues that Tunisia will need to embark on a firm and bold break from the past and devise a new pact to resolve these deep structural issues in order to make the political and economic transition a success. The report provides detailed recommendations for this pact aimed at tackling the public spending failures that have contributed to Tunisia’s fiscal challenges. The report also indicates that improved domestic resource mobilization is part of the solution and should prioritize reducing tax avoidance and evasion, making tax incentives more efficient, improving tax administration, making the tax system more equitable, and incorporating the informal sector. However, the temptation of a purely revenue-based solution through higher taxation and higher growth that ignores structural spending weaknesses is unlikely to solve Tunisia’s

\(^{1}\)Total of guarantees, on-lending, and treasury loans to SOEs in 2016.

\(^{2}\)World Bank Open Budget Initiative or BOOST website: http://boost.worldbank.org/
fiscal challenges. It could rather exacerbate economic challenges such as a weak private sector, low job creation, and informality.

On the eve of independence, Tunisia embarked on building a strong public administration and SOEs to impulse its state-led development model. This model delivered strong human development outcomes, including almost universal access to basic services such as education, health, water, and electricity and formed the basis of the country’s industrial and services sector. But, over the past decades, several shocks, transformation, and turning points have challenged the effectiveness and sustainability of this model. More recently, the 2007 global financial crisis, the 2007–08 commodity price increases, and the 2011 revolution have been major shocks that led to significant increases and volatility in public spending and the worsening of Tunisia’s fiscal stance. The report shows that the two arms of the state-led development model, the public administration and SOEs, are no longer able to sustain this social contract and need deep reform.

The first arm of the State, the public administration (central and local governments), employs an estimated 645,000 people or 7.4 percent of the working-age population, which is equivalent to 18.5 percent of employment. The central government wage bill alone has grown by 4 percentage points of GDP since 2010 and stood at 14.7 percent in 2017 (more than 60 percent of government revenues). This was due to rising staff hiring in the aim to create jobs and maintain social peace following the 2011 revolution, as well as promotions and general wage increases. Administered prices of food and services were frozen for several years. Consequently, budget allocations for food and energy subsidies peaked at 5 percent of GDP in 2013 (the equivalent of central government investment spending) and those for transport doubled to about 0.5 percent of GDP, while social assistance in the form of direct cash transfers rose to 0.8 percent of GDP although still below the levels in peer countries.

While the State spent more on recruitments, wage increases, and other inputs for the functioning of a large civil service (office space and infrastructure, utility, etc.), the performance and productivity of the public sector deteriorated. Surveys indicate that citizens and firms have a negative perception of and experience with the public administration due to high bureaucracy, low productivity, unequal treatment and privileges, and corruption. Several international assessments of institutional and policy performance, such as the World Bank Doing Business Report (2019) and the Worldwide Governance Indicators (2019), point to a degradation of public sector performance and efficiency, translating into lower public service quality and a higher cost of doing business for firms.

The education sector provides a telling example of the disconnect between high spending (around 6.7 percent of GDP or 22 percent of central government spending), weak performance, and declining quality of public services (high repetition rates particularly in underprivileged areas, and high dropout and repetition rates in transition between cycles primary–secondary, secondary–high school, etc.). This highlights the inefficient spending and need to reform the public sector, in particular its human resource (HR) management policies. Wage bill spending in the education sector has increased significantly due to hiring, promotions, and wage increases, accounting for over
95 percent of education spending. Between 2005 and 2017, the pupil to teacher ratio dropped from 20.1 to 17.2 in primary education (compared to 27.6 in Morocco), and from 17.4 to 11.9 in secondary education (compared to 18 in Morocco) such that today, there are 1.4 teachers per class in primary education, and 2 teachers per class in secondary education. These evolutions have occurred while the hourly workload of teachers remains low (15 hours per week of teaching compared to 24 hours in Morocco and France). In addition, there are spatial differences in the allocation of the most experienced teachers, which mirrors differences in learning outcomes and student achievements. Similar spatial inequities exist in the health sector with most physicians and specialists located on the coast, leaving interior regions without much-needed specialists and highlighting the need to formulate sound human resource policies to improve efficiency and lower regional disparities.

Therefore, after achieving almost universal access to schooling, the next challenge of the education sector will be to enhance quality of learning. This will require significant human resource management reforms, including better deployment (and redeployment) of well-trained teachers combined with a rationalization of the network of schools, particularly in areas with very small class sizes, and readjustment of the hourly workload, as well as efforts to attract the best qualified and motivated young diploma holders. These HR reforms would need to be combined with a reallocation of spending toward greater coverage for the preparatory year (5-year olds) in public primary schools and access to pre-school education for 3- and 4-year olds. Moreover, more resources to education cycles that will experience higher attendance given demographic trends (particularly middle school) will be needed. Additionally, it will be important to introduce evaluation frameworks at each stage of the education system to measure student learning and guide decision making, modernize school administration, strengthen their autonomy and capacity, and seize the opportunities offered by information and communication technologies.

In fact, many of the public sector and HR reforms needed in the education sector cut across the public administration and can be classified in three key objectives: improving strategic staffing, accountability, and strengthening the link between performance, pay, and promotion. Strategic staffing is key to adequately assessing and anticipating current and future skills and competencies needed. In this context, it will be necessary to stimulate and facilitate redeployment and mobility as key measures to improving the allocation of human resources, notably in the context of fiscal constraints and still significant regional disparities in the quality of services. The weak link between performance, pay, and promotion in Tunisia is highlighted by the seniority-based promotion system and the almost universal attribution of “performance bonuses” to all civil servants. This calls for strengthening the measurement of performance at the level of civil servants and administrative units, but also at the level of government. This fundamental change is key to making civil servants accountable to their superiors and governments to citizens. For accountability to develop, information should be produced and transmitted in a timely manner, and the most relevant aspects made available to citizens.

However, today, there is a large information systems gap in the Tunisian administration (e.g., there is no integrated payroll database, no HR management system, no commercial information system
in several agencies and SOEs). Where they exist, such information systems are often not interlinked across critical segments of the administration, which accentuates existing institutional fragmentation and lowers efficiency (e.g., there is no systematic exchange of data and interoperability of systems between the tax and social security administrations). In addition, the interactions of the public administration with citizens and firms remain dominated by “the paper and the pen.” Therefore, key ingredients for the transformation of the public sector include the development and strengthening of information systems and their governance, as well as the urgent deployment of an ambitious digital government program. The Tunisian society appears ready for this change provided there are further improvements in access to digital technology (physical access and affordability) to minimize potential divides: Tunisia has 15 million mobile cellular subscriptions (1.2 subscriptions per capita), 8 million Internet subscriptions on mobile phones, and over 7 million Facebook accounts, but only about 56 percent of the population uses Internet (compared to 62 percent in Morocco and 88 percent in Estonia). According to the World Bank Enterprise Surveys (2013), about 94 percent of firms use e-mail to communicate with their suppliers and clients (91 percent among firms with less than 20 employees) and 66 percent have their own website (59 percent among firms with less than 20 employees).

The second arm of the State, SOEs and parastatals, are present in several sectors, including banking, telecommunications, water, energy, transport, and logistics, etc. They employ an estimated 190,000 workers or 2.2 percent of the working-age population, which represents 5 percent of employment. The government estimates that they make up between 9 and 10 percent of GDP. Despite affecting the performance and productivity of the entire economy, their own performance and financial viability have deteriorated markedly in the past years.

The top 20 largest SOEs incurred financial losses equivalent to TND 1.3 billion in 2016 (1.5 percent of GDP), of which 26 percent originated from the power utility SOE, Tunisian Company of Electricity and Gas (STEG), one of the main loss-making SOEs over the past years. We estimate that the deficit of all SOEs in the water and sanitation sector, excluding government subsidies, stood at TND 300 million in 2015 (representing 50 percent of the SOEs revenues or about 0.4 percent of GDP). The State provided significant financial support through budget transfers to transportation SOEs amounting to TND 564 million in 2016 (0.6 percent of GDP). This report provides some quantitative and qualitative evidence explaining the deteriorated performance of SOEs and key challenges moving forward, with examples from the energy, water, and public transport sectors.

One of the key drivers of the SOEs’ weak financial performance is the deterioration of their technical and commercial performance. Technical losses in the electricity distribution network have increased from 12 to 14 percent of generated power between 2010 and 2016 in a context of increasing and large energy trade and current account deficit. We estimate that reducing losses from 15 to 10 percent would be equivalent to savings of TND 200 million (5.3 percent of the revenues of the power utility STEG). Water system losses (as a ratio of mobilized resources) have increased from 24 to 36 percent between 2005 and 2016, while losses in the irrigated perimeters vary between 30 and 50 percent of mobilized water. In a context where Tunisia is facing acute water scarcity, water
losses are expected to become more severe with the projected impact of climate change. The rate of operationally functional buses in the public transport company for the Tunis area (Transtu) dropped from 82 to 52 percent between 2010 and 2015. Commercial losses have also increased due to arrears from public entities and households, as well as theft. The deterioration of SOEs’ technical performance denotes in most cases poor investment efficiency due to weaknesses in the planning and prioritization of investment projects, delays in execution, and a gap in maintenance.

A second key driver of the SOEs’ loss of performance is the inadequate adjustment of administered prices to reflect the level and evolution of the cost of supplying public services. In the energy sector, despite recent progress, several energy products remain highly subsidized. These include socially-sensitive products such as LPG (prices are only at 30 percent of cost recovery in 2018), electricity and gas (between 60 and 70 percent of cost recovery in 2018), particularly for certain groups of users such as industry and to a lesser extent gasoline and diesel (over 80 percent of cost recovery). Budget payments for electricity and gas subsidies averaged 3.2 percent of GDP between 2011 and 2014 or 82 percent of STEG’s revenues and more than three times its investments. We estimate that drinking water prices cover around 60 percent of production, but irrigation prices cover only between 10 to 15 percent of the cost of production (irrigation accounts for over 80 percent of water consumption). In the case of sanitation, revenues from user fees covered around 50 percent of operating costs in 2015.

Resolving governance failures will be critical to put SOEs on the right track. The current governance framework is severely outdated and does not provide the foundation for good SOE governance, particularly on the objectives or rationale for state ownership, the government’s expectations of SOEs, the process for nominating and appointing SOE boards, etc. The ownership structure is fragmented across several ministries and agencies which often lack specialized capabilities in commercial and financial matters that are at the core of SOE operations. In addition, potential conflicts arise when line ministries act as supervisors, policy makers, and regulators which can often lead to anticompetitive behaviors and inefficiencies. Composed almost entirely of government representatives, SOE boards lack the objectivity, skills, and industry specific knowledge required for effective operations. Most SOEs do not have modern management information systems. Various ex-ante and ex-post controls (HR, procurement, etc.) place a heavy burden on SOEs that limit their autonomy and performance, particularly SOEs evolving in commercial or competitive sectors.

Clearly, substantial investments are needed for the production, distribution, loss reduction, and quality improvement of energy, water, and transport services (and in general) in all SOEs. In this context, and given the limited fiscal space, reforms will be needed to improve SOEs’ performance and promote greater private sector participation for efficiency gains and alternative financing. First, for structurally unprofitable SOEs in commercial and competitive sectors, a deep restructuring will be necessary, which could involve the entry of a private operator or investor. Second, in sectors or subsectors where significant private investment is needed to reach the State’ objectives, such as in the case of renewable and nonrenewable energy production, important reforms will be needed to transform the administration and strengthen the enabling environment. These reforms include:
1. **Strengthening the legal, institutional, and economic framework for private investments:**
   through the establishment of independent regulatory bodies where private sector participation will increase substantially and develop adequate financing, and guarantee schemes to lower risks for the private sector;

2. **Capacity building:** strengthen the planning and management capacity of sectoral institutions (adapt human resource profiles, develop capacity and skills), develop tools to prepare, commission and evaluate quality feasibility and technical studies to provide decision makers relevant analyses on the most appropriate investment financing option (purely public, purely private, or public private partnership), and rapidly upgrade the information systems across the sector;

3. **Reforming SOEs:** improving the financial performance and viability of SOEs by strengthening the governance of the sector, but also reforming administered prices to reduce subsidies while protecting the poor and vulnerable populations.

Indeed, Tunisia’s social protection system will need to be strengthened significantly to protect the poor and vulnerable from the potential impact of reforming subsidies. As indicated above, Tunisia’s social assistance system remains dominated by energy, food, and transport subsidies, which have been reformed in past decades to contain their cost, including through spatial targeting and to a lesser extent through price adjustments and greater use of targeted cash transfers. Despite these efforts, subsidies remain large and are regressive or neutral relative to the income distribution; in addition the distortions and inefficiencies they create (including waste, and negative health outcomes) provide a good rationale for reform. This report shows that the reform of energy and food subsidies should be considered on a product-by-product basis given their heterogeneity. Such reforms would engender significant fiscal savings and efficiency improvements but would require a targeted expansion of the coverage of cash transfers to fully compensate poor and vulnerable households. The existing cash transfer program (*Programme National d’Aide aux Familles Necessiteuses*, PNAFN) covered around 285,000 households in 2018, or 8 to 9 percent of households, but only reached 16.9 percent of the poorest (bottom quintile).

At the same time, there is an urgent need to safeguard Tunisia’s social protection system given the dire financial situation of the pension system. The pension schemes have exhausted their reserves, face liquidity shortfalls, and are increasingly draining government resources. Consequently, the schemes have increasingly used contributions for family benefits to pay for pensions and withheld contributions destined for the health-insurance scheme, jeopardizing the social security system. The report shows that the parametric reform to improve the sustainability and equity of the pension system will need to address (i) the relatively high contribution rates which act as a tax on labor; (ii) the implicit incentives for early retirement (there is no penalty for early retirement); and (iii) the iniquities between different career and wage profiles given that the pension calculation is based on a few years’ salaries. In addition, respecting the principle of accrued pension rights (no application of parametric changes to past years of work and contribution) means that financial improvements on the benefit side of pension accounts will have a delayed effect. There is a need to
implement measures to deal with short-term financial pressures. Lastly, the roadmap for pension reform should involve improving the coverage of the pension system by incorporating the informal sector and reducing the scope for transitions in and out of informality, as well as underreporting.

To sum up, these findings have important implications for Tunisia’s economic and development model and the ingredients for the transition to succeed. First and foremost, Tunisia will need to revisit its social contract and devise a more focused and effective role for the State. Additionally, the State will need to build modern, performant, and user-centric public administration and SOEs, and improve the enabling environment for greater public-private partnership to provide quality public infrastructure and services to all Tunisians. This transformation will require a new political and social pact to make Tunisia’s democratic transition a success. To be impactful, this pact would need to be led by reform champions guided by the need to restore the credibility of the State’s priorities and actions, and rebuild trust between the State, its citizens, and the private sector. The pact should be founded on an action-oriented engagement with a pluralistic civil society conscious of the strategic priorities of the country and representing the interests of all segments of the population.

Moreover, the frequent and volatile social tensions, and political instability over the past years have not created a favorable environment for the public administration and SOEs. Moving forward, greater political and government stability, and credibility will be necessary given the difficult and pluriannual nature of the reforms suggested in this report. Lastly, while the analysis of this report focused on the spending side, this new pact for a successful transition will require important tax reforms to improve the mobilization of domestic resources, but more importantly to ensure that all citizens and firms pay their fair share, adhere, and contribute to the new pact.
Introduction

Today, Tunisia faces the challenge of improving the quality of its public spending and maintaining fiscal sustainability following a decade of weak economic performance. Tunisia’s economic performance has weakened due to a combination of low growth, a slow pace of economic reforms, a weak global economy, and several political, security, economic, and social shocks. Economic growth dropped from 4.5 percent per annum in the 2006–10 period to 1.7 percent per annum in 2011–17. Concomitantly, its fiscal position deteriorated markedly; the fiscal deficit averaged 5.4 percent of GDP in 2011–17 (excluding grants) compared to 2.1 percent in 2006–10. Consequently, public debt reached 70.3 percent of GDP in 2017 compared to 40 percent of GDP in 2010, resulting in high interest payments (2.5 percent of GDP in 2018). Tax revenues held relatively well amid the growth slowdown while nontax revenues dropped slightly due to weak performance of SOEs and despite the sale of some state assets. In the meantime, spending increased by 2 percentage points of GDP during the same period. The composition of spending has deteriorated and is dominated by recurrent spending, particularly wages (14.7 percent of GDP in 2017), and subsidies and transfers (6 percent of GDP on average in 2017), while public investment (5.5 percent of GDP in 2017) suffered from both adjusting to meet budget constraints and bottlenecks in the execution of projects.

At the same time, it is critical for Tunisia to strengthen the quality of infrastructure and services, and to support inclusive growth and private sector job creation. Tunisia has historically been heralded for the quality of its basic services, which played a critical role in improving the country’s human and physical capital since independence. However, the quality of public services has stagnated or deteriorated in the last decades. Consequently, Tunisia must resolve several challenges to improve the quality of infrastructure and services for citizens and foster private sector growth and job creation. First, the public administration has gotten larger and more costly for the State, while its planning, execution, regulatory capacity, and performance have weakened significantly. The experience of the private sector with the public administration is also documented as cumbersome, slow, and costly. Second, the education and health sectors do not sufficiently raise the human capital of citizens. A Tunisian born today will only achieve about 51 percent of its potential productivity as an adult (World Bank Human Capital Project 2018). Third, the electricity and water sectors both face a twin sustainability challenge. On the one hand, there is the financial and macroeconomic sustainability challenge due to significant subsidies, large energy imports with volatile prices, and declining performance of state enterprises, and on the other hand there is an
environmental sustainability challenge due to the reliance on fossil fuels despite significant renewable energy potential and high losses of mobilized water in a country with limited water endowment. The human, technical, and financial capacity needed to tackle these challenges are substantial which highlights the need for improving efficiency and fairness, and ensuring more partnership between the public and private sectors for the provision of infrastructure and services.

The aim of this Public Expenditure Review (PER) is to identify structural policy options to help Tunisia tackle its economic and social challenges through more effective and equitable public spending. The fragility of the social, political, and economic environment requires actions to address the fiscal situation while ensuring that expenditures are allocated to improve the quality of infrastructure and services. This would be crucial in fostering private sector growth and job creation, and protect the poor and vulnerable. Therefore, this PER focuses on the key issues and sectors that are critical to Tunisia’s fiscal stance and economic performance and analyzes them through a lens of efficiency, sustainability, and equity. The report identifies short and medium-term efficiency and equity-enhancing package measures to improve Tunisia’s fiscal growth and job performance.

This PER employs a rich set of detailed spending data at the level of the central government and SOEs to analyze how public expenditures in Tunisia can be allocated and spent in a more effective and equitable manner. Access to detailed spending data has been made possible by Tunisia’s participation in the open budget initiative. This provides us with information on the level and evolution of spending line-by-line for almost a decade through the so-called BOOST database. The report also assembles detailed expenditure, operational, and financial data from SOEs with a focus on the energy, water, roads, and public transport sectors. These data allow us to analyze and benchmark Tunisia’s spending trends, effectiveness, and equity, and to identify areas in which spending growth could be contained, where spending gaps exist, where resetting of spending priorities is needed and reallocation of expenditures necessary, and where spending should be more balanced to reduce inequities.

The PER is organized in three blocks. The first block—composed of Chapters 1 to 4—analyzes the macro-fiscal profile and the two largest spending items, namely wages, energy, and food subsidies, as well as the single largest liability, namely pensions, and the social protection system which is critical for protecting vulnerable households from shocks and from the potential negative effects of certain reforms. The second block—composed of Chapters 5 and 6—covers the education and health sectors, the two most important social services for human capital development, which account for the largest share of social spending. The third and final block—composed of Chapters 7 to 9—analyzes the issues of public investment efficiency and SOE performance in the

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3Tunisia is the only MENA country to participate in this transparency initiative.
electricity, water, roads, and transport sectors. These sectors were selected given their impact on the budget either through subsidies, transfers, or state guarantees, and because they are critical for growth throughout the economy, for productivity and employment.

The remainder of this synthesis provides a summary of the main findings and policy implications of the different chapters.
The 2007 global financial crisis, the increases in commodity prices between 2007–2008, and the 2011 revolution marked turning points in the gradual deterioration of Tunisia’s macroeconomic and fiscal performance. Tunisia experienced high growth, strong macroeconomic and fiscal performance in most of the 1980s, 1990s, and early 2000s. Economic growth averaged between 4 and 5 percent per annum, export growth between 5 and 6 percent per annum and as much as 8 percent in the early 2000s following the implementation of trade liberalization, including with the EU, coupled with export promotion policies (Figure 1.1). The transition from a state-led development model to a more open economy in the 1990s was accompanied by an overall improvement in the fiscal situation. The fiscal deficit dropped from 4 to 3 percent of GDP from the

**FIGURE 1.1** GDP and export growth, 1980–2007

![GDP and export growth, 1980–2007](image)

Source: Authors using the WDI and WEO database.
FIGURE 1.2  Key macroeconomic indicators, 2000–07 vs. 2008–10

1990s to 2000–07, and public debt dropped from 67 to 52 percent of GDP during the same period (Figure 1.3). The tide started to turn in 2007 with the global financial crisis and commodity price increases. In fact, economic growth dropped to 3 percent on average in 2007–10, export growth plummeted to 1 percent per annum in 2007–10, and the current account deficit widened from 3 to 4 percent of GDP from 2000-07 to 2008-10 (Figure 1.2). The 2011 revolution was a major political, institutional, and social shock, which led the government to adopt an expansionary fiscal policy. This was achieved mainly through more hiring, wage increases, and expansion of subsidies on basic goods and services such as food, energy, and transport. Tax revenues which were skewed toward labor income taxation, held up relatively well during this period despite the growth slowdown.

Maintaining current trends of spending and economic performance would severely undermine Tunisia’s fiscal sustainability, further contract the fiscal space for spending in critical sectors, and jeopardize the quality of public services. The fiscal deficit averaged 5 percent of GDP over the past years, and public debt has increased by 30 percentage points of GDP in seven years and now stands at around 70 percent of GDP (2017). If the fiscal trends over the past years were to be maintained, then the fiscal deficit could reach over 10 percent of GDP (primary deficit of 6 percent of GDP) and public debt would rise to over 90 percent of GDP by 2022.

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Maintaining current trends of spending and economic performance would severely undermine Tunisia’s fiscal sustainability, further contract the fiscal space for spending in critical sectors, and jeopardize the quality of public services. The fiscal deficit averaged 5 percent of GDP over the past years, and public debt has increased by 30 percentage points of GDP in seven years and now stands at around 70 percent of GDP (2017). If the fiscal trends over the past years were to be maintained, then the fiscal deficit could reach over 10 percent of GDP (primary deficit of 6 percent of GDP) and public debt would rise to over 90 percent of GDP by 2022.

Source: Authors using the WDI and WEO database.
Bringing the debt-to-GDP ratio from 70 to 60 percent over a five-year period to create more fiscal space to finance Tunisia’s important development needs would require reducing the primary balance by 3.5 to 4 percent of GDP relative to the recent historical average (2012–16). We estimate that the primary balance would lower the debt-to-GDP ratio from 70 to 60 percent of GDP over a five-year period under two assumptions: an average growth of 3.5 percent per annum, or of 2 percent per annum. If growth averages 3.5 percent per annum, then the primary balance would have to be –0.1 percent of GDP, which is equivalent to a fiscal adjustment of 3.5 percent of GDP relative to recent historical performance (2012–16). However, if growth averages only 2 percent per annum, then the primary balance would have to be around +0.8 percent of GDP, which is equivalent to a fiscal adjustment of 4 percent of GDP relative to recent historical performance. Creating more fiscal space is critical for Tunisia to finance its important development needs combined with greater partnership with the private sector.

These objectives could be achieved through a mix of efficiency and equity-enhancing spending policy measures, including those identified in Chapters 2–9 of this report. Tax measures will also play a role as well as reforms to promote growth combined with greater partnership with the private sector to finance investments in key sectors. Critical spending measures detailed in the paragraphs below and in the different chapters include containing the growth and volatility of some expenditure items (e.g., wages, subsidies, and transfers to SOEs and parastatals). This can be achieved by prioritizing and orienting spending toward more effective and equity-enhancing programs, by raising the efficiency of spending in key sectors. Improving tax revenues can also play a role with the imperative of promoting growth and job creation by reducing tax avoidance. 

Source: Authors using the WDI and WEO database.
and evasion, making tax incentives more efficient, and improving tax administration (transparent and efficient tax services, incorporating the informal sector, etc.). Lastly, growth will be necessary to improve Tunisia’s fiscal stance and generate fiscal space for investment in key sectors, combined with measures to leverage private sector financing. However, the temptation of a purely revenue-based solution through higher taxation and growth that ignores structural spending weaknesses is unlikely to solve Tunisia’s fiscal challenges and could exacerbate its economic challenges, such as the weak private sector dynamism and job creation, and the significant level of informality.
Chapter 2

The Mother of All Reforms: Improving the Performance and Productivity of the Public Sector

*Tunisia’s civil service has increased rapidly over the past seven years.* The government wage bill in Tunisia is among the highest in the world, taking up more than 60 percent of government revenues and 50 percent of expenditures, thereby crowding out needed investment and social spending, and increasing the deficit (Figure 2.1). This wage bill covers salaries and wages for central government staff employed in central and regional administrations, but excludes staff working in local governments (around 30,000) and state-owned enterprises (around 190,000). The wage bill to GDP ratio has grown by 4 percentage points since 2010 and stood at 14.7 percent of GDP in 2017 due to increased hiring, promotions, and general wage increases in the aim to create jobs and maintain social peace following the revolution. The annual growth rate of the government wage bill has consistently surpassed the growth rate of GDP, inflation, and productivity since 2011, a clear departure from past trends.

**FIGURE 2.1** Wage bill spending: international comparison

Panel A. Wage bill, % of GDP

Panel B. Wage bill, % of government spending

*Source: Authors using Worldwide Development Indicators.*
Several other wage and benefits-related expenditure items are not accounted for in the Budget line for the “wage bill.” These are accounted for under the operating and capital expenditures as well as tax credits, totaling around 0.3–0.4 percent of GDP in 2016 and 2017. The total amount identified by the authors was equivalent to 0.36 percent of GDP in 2016. They include transportation allowances (daily, mileage, gas vouchers, etc.), medical expenses for staff and their children, as well as pension expenditures. In addition, in 2007, there were about 0.4 percent of GDP in tax credits given to public employees on account of agreed wage increases.

At the same time, the performance and productivity of the public sector has deteriorated. A recent public opinion survey indicates that 51 percent of citizens have a negative perception of the country’s public administration, perceptions of low productivity, clientelism, inequality of treatment, and corruption. According to the Worldwide Governance Indicators (WGI), the performance of the bureaucracy has decreased between 2010 and 2016 as its score for government effectiveness dropped from 70 to 45 (over a maximum of 100) (see Figure 2.2.) Several global business environment and competitiveness rankings such as the Doing Business also show that firms experience a more cumbersome, slower, and less effective administration.

**FIGURE 2.2** Government effectiveness and wage bill spending

![Graph showing government effectiveness and wage bill spending](image)

*Source: Authors using Worldwide Governance Indicators.*

The root causes of the public administration’s poor performance include its inability to attract and retain talent in key technical and managerial specialties, to provide adequate training, and to establish a credible performance incentives and evaluation system. The overall premium for public sector employees is estimated to be around 18.2 percent by the IMF, while it is estimated to be around 34 percent for employees of state-owned enterprises. A more

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4Opinion survey by Sigma Conseil.

A nuanced picture is shown when the premium for public sector employees is split across education levels. Wage premiums appear to be higher for employees with secondary and tertiary education diplomas (around 28 percent). However, a 2015 World Bank study found that public sector salaries for engineers were not competitive when compared to the private sector.\(^6\) For instance, the study estimated that private sector salaries were two to three times higher for junior level engineers and up to three to four times higher for an engineer with 25 years of experience. In addition, training offerings to civil servants remain highly centralized, and linkages between training and career advancement are not sufficiently strong, leading to overreliance on weak performance assessment methods and application of seniority-based promotions. Strengthening national training plans and institutions would help to respond to emerging new roles and responsibilities at all levels of government. This would be particularly relevant for managerial roles that require change and relationship management skills, and the management and evaluation of teams according to clearly defined performance criteria.

**There are important barriers to horizontal and geographic mobility in the civil service.** Such barriers limit potential wage bill control and efficiency measures that could have been achieved through the redeployment and optimal allocation of staff geographically, particularly in lagging regions. Allowances attributed to specific professional groups can sometimes match or exceed the base salary for certain employees (doctors, magistrates, engineers, certain ministries) and thus disincentive mobility (Figure 2.3 and Table 2.1). In addition, the civil service statutes prevent civil servants from being redeployed without their consent. Consequently, experienced staff with higher qualifications are disproportionately located in richer coastal regions. In the education sector for instance, the distribution of teachers is influenced by a legacy which assigns the youngest teachers in the interior regions and more experienced teachers in urban areas and large cities. Moreover,

**FIGURE 2.3** Composition of wage bill spending (% total)

<table>
<thead>
<tr>
<th>Year</th>
<th>Bonuses and allowances</th>
<th>Base salary</th>
<th>Social insurance contribution</th>
<th>Temporary and contractuals</th>
<th>Military and diplomats</th>
<th>Subsidies to public agencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>8.3</td>
<td>10.5</td>
<td>39.5</td>
<td>32.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>8.8</td>
<td>11.3</td>
<td>36.3</td>
<td>34.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>9.0</td>
<td>11.7</td>
<td>34.3</td>
<td>35.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>9.9</td>
<td>11.7</td>
<td>31.4</td>
<td>37.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>9.7</td>
<td>12.3</td>
<td>30.6</td>
<td>37.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>9.8</td>
<td>12.3</td>
<td>29.2</td>
<td>40.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>10.5</td>
<td>12.0</td>
<td>28.7</td>
<td>40.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>10.6</td>
<td>12.1</td>
<td>27.7</td>
<td>40.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>10.6</td>
<td>12.2</td>
<td>27.9</td>
<td>41.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>11.2</td>
<td>12.0</td>
<td>24.2</td>
<td>44.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: BOOST Dataset, Ministry of Finance.

there is a high concentration of trainee and substitute teachers in the predominantly rural central, northern, and southern delegations. The suboptimal regional distribution of staff, skills, and competencies hinders the delivery and quality of priority services and the effective management of public investments in poorer regions.

**Modernizing Tunisia’s public sector is central to the necessary transformation of the State.** This report identifies short- and medium-term recommendations to implement this reform that many observers have deemed “the mother of all reforms.”

- In the short term, the government could implement feasible and sustainable measures that contain the wage bill and set the civil service on a path to greater performance orientation. This should involve the following measures feasible to implement in the short term:
  - Implement a general freeze on recruitments for a maximum period of five years (longer would distort the age pyramid of the civil service and drain it of required skills and competencies). Compared with departure programs, a five-year freeze has greater cost-saving potential and poses less implementation challenges. To mitigate the negative effects of a recruitment freeze on the quality of administration and the provision of public services in remote or lagging areas, targeted recruitment could be allowed.
  - Establish clear and transparent criteria for promotion by professional groups, with the introduction of ceilings on the number of posts in specific grades per year, or over three years to follow the multiyear planning process.
  - Introduce improvements in the procedures for recruitment and selection of staff, including competitive-based recruitment (written and oral exams) and promotions applicable to all positions, irrespective of professional groups.

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7 Government efforts to contain the wage bill through early retirement and voluntary departure programs have not worked due to very low take-up.
– Conduct a diagnosis to build the foundation of the reform process. Diagnosis tools could include functional reviews, data collection/analysis, user satisfaction surveys, legal reviews, etc. Although some of these measures have been initiated in 2018, they need to be accelerated and finalized.

• In terms of medium-term structural reforms, Tunisia must look to put in place specific projects that target the drivers of public sector inefficiencies: (i) weak strategic planning including staffing allocations/mobility and performance management (promotions based on seniority, lack of in-service evaluation); (ii) complex compensation frameworks (multiple statutes); and (iii) poor career development and training. The reforms should

– Introduce a strategic workforce planning framework (Gestion prévisionnelle des effectifs, des emplois et des compétences, or GPEEC) for ministries and agencies to adequately assess and anticipate current and future staffing skills and competencies needed. While there is no single or common approach to workforce planning, experience from OECD countries suggest that workforce planning could focus on different aspects, including for instance efficiency savings, demographics, or service delivery issues. Overall, the GPEEC reform will be an essential measure to help ensure a sustainable management of the public sector wage bill and an efficient management of human resources over the long term.

– Accelerate the implementation of the program-based budgeting reform (Gestion Budgetaire par Objectifs, GBO in short), which could enhance monitoring mechanisms on the number of employees by introducing a budget management process based on clearly identified objectives and needs.

– Stimulate and facilitate redeployment and mobility as key measures of the allocation and management of human resources, notably in the context of fiscal constraints. The success of this reform depends on the level of understanding of staffing, skills, and competency gaps, and availability of precise job descriptions. It is also important to note that a successful redeployment reform will require agreement among stakeholders to: (i) implement revisions to the legal framework in order to set out the general rules and conditions for mobility and (ii) negotiate the likely impact on compensation framework; in the absence of a harmonized salary system, special financial and nonmonetary incentives such as allowances and promotions could be considered.

– Introduce better designed and targeted training programs that enable senior and mid-level technical and managerial staff to cope with new roles and responsibilities related to performance in the context of the program-based budgeting approach. New training programs and modules could be linked to a defined set of potential career pathways that allow civil servants to identify what they need to achieve in terms of acquiring specific skills, completing an assignment in a specific region, occupying a specific post, etc., in order to advance in their career.
Chapter 3

Time for Change: Building a More Sustainable and Equitable Pension System

Tunisia’s pension system8 is in a dire financial situation. The pension schemes are structurally in deficit, have exhausted their reserves, face liquidity shortfalls, and are increasingly draining government resources. The demographic profile and projections indicate further pressures on the financial equilibrium of the system. The deficit of the pension system quadrupled between 2009 and 2015, from under TND 250 million to nearly TND 1.2 billion (1.4 percent of GDP). The World Bank projects this explosive growth to continue in the absence of reform and reach TND 4.6 billion by 2020 (4.8 percent of GDP in 2017). The largest scheme for private sector workers had reserves worth TND 940 million in December 2014 (about 70% of annual benefit spending), which fell to TND 311 million by December 2015 and turned negative in 2016. The public sector scheme, which had reserves amounting to TND 206 million in 2010, had exhausted them by the end of 2013. Consequently, the schemes have increasingly used contributions for family benefits to pay for pensions, withheld contributions destined for the health insurance scheme, and owed debts to it amounting to more than TND 1.8 billion in 2017. The State has transferred on average 0.4 percent of GDP annually to the pension scheme between 2015 and 2017 to help cover its liquidity needs. Such transfers are regressive, especially as a large part of the population is not covered by the pension system. Tunisia’s pension spending appears high compared to the population aged 65 and above (a measure of the dependency ratio) as seen in Figure 3.1 while the support ratio (number of contributors per beneficiary) is rapidly dropping to levels found in European countries.

8There are two main pension funds (CNRPS—covering public sector employees, and CNSS—covering private sector employees). CNSS has seven different regimes covering different types of employees, RSNA being the biggest one. All schemes are of the defined-benefit type and are financed on a “pay-as-you-go” basis (current contributions pay for current benefits).
FIGURE 3.1 Determinants of pension cost: dependency and support ratios

Coverage of the mandatory pension systems in Tunisia is one of the highest in the MENA region; however it is still low when compared to developed countries. Moreover, contribution density in the private sector is low. Around 50 percent of the labor force contributes to the two main schemes. When small programs are also considered, the total coverage rate in the country is slightly higher than 70 percent of the labor force or 40 percent of the working-age population. However, contribution density in the private sector is low due to underreporting and transition in and out of informality.

Regarding adequacy, the pension system in Tunisia is generous by design given international standards but can often lead to small pensions. Public pension expenditures, nearly 7 percent of national income, are the highest in the Middle East and North Africa, even with Tunisia’s young population. Despite its generosity, the pension system does however generate small pensions because of the low contribution density, and early retirement provisions. All regimes provide a minimum benefit to help low-wage and short-career workers achieve an adequate income in retirement ranging between 30 and 66 percent of the minimum wage which raises issues of equity between members of different schemes.

The pension system creates inequities among those in the system, as well as between insiders and outsiders, and generates distorted incentives to work and contribute. The system has high contribution rates (20.7 percent for the public scheme, and 12.5 percent for the largest private scheme) which act as a tax on labor, discouraging employers from hiring workers. A high contribution rate also encourages workers and employers to evade social security contributions and operate in the informal sector. The system also implicitly encourages early retirement because there is no or a very limited penalty for early retirement, which is increasingly costly with increases in life expectancy given the longer duration over which pension benefits are paid (Table 3.1, column 1). The
### TABLE 3.1 Improving equity, efficiency, and sustainability of pensions in Tunisia: reform measures

<table>
<thead>
<tr>
<th>Feature of the pension system</th>
<th>Current policy</th>
<th>Destination policy</th>
<th>Slower reform</th>
<th>Faster reform</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accrual rate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>4%–2% and 3–2% CNSS; 2–3–2% CNRPS</td>
<td>Fundamental principles</td>
<td>Linear accrual: same rate for all years</td>
<td>2% at all ages for new entrants</td>
</tr>
<tr>
<td><strong>Earnings measure for pension calculation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>CNRPS: best of final salary and best 2 consecutive years; RSNA: 10 final years; RSAA, RSA: best of final 3 or 5 years; RNS, RTFR, RTTE, RACI: career average</td>
<td>International experience</td>
<td>Average earnings of entire career</td>
<td>14/28 countries before reform; 26/28 countries after reform (except France—best 25 years—and Czech Republic, 30)</td>
</tr>
<tr>
<td><strong>Valorization of earlier years’ earnings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>CNRPS, RSAA: none; RSNA: price valorization; RNS, RTFR, RSA, RTTE, RACI: minimum wage</td>
<td></td>
<td>Growth of average earnings</td>
<td>20/28 countries (except: price inflation—Belgium, France, Greece, Spain—and GDP growth: Italy and Turkey</td>
</tr>
<tr>
<td><strong>Minimum pension: length of service</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>CNRPS: 5 years of contributions (partial benefit), 15 years (full benefit); RSNA: 5 years of contributions (partial benefit), 10 years (full benefit); RNS, RTFR, RSA, etc.: 10 years</td>
<td></td>
<td>No guidance from basic principles</td>
<td>Average OECD countries: 21.5 years of contributions (partial) and 27 (full benefit); average in MENA: 15 years; 23/35 of OECD countries and 4/16 MENA have no minimum pension; basic or targeted schemes instead</td>
</tr>
</tbody>
</table>

(Continued on next page)
TABLE 3.1 Continued

<table>
<thead>
<tr>
<th>Feature of the pension system</th>
<th>Destination policy</th>
<th>Slower reform</th>
<th>Faster reform</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current policy</td>
<td>Fundamental principles</td>
<td>International experience</td>
<td>Age should increase in line with growth in life expectancy at age 60</td>
</tr>
<tr>
<td>Pension eligibility age</td>
<td>CNRPS, RSNA, RSAA, RSA: 60</td>
<td>RNS, RTFR, RTTE, RACI: 65</td>
<td>After 2040: increase with life expectancy with</td>
</tr>
<tr>
<td>Early retirement</td>
<td>CNRPS: no adjustment RSNA: 2% per year of voluntary early retirement; no adjustment in specific circumstances</td>
<td>Actuarially neutral adjustment: Equalizes present value of accrued benefit between normal and early retirement. With Tunisia’s mortality rate, 6% is actuarially neutral. Average of 24 countries: 5.6%</td>
<td>Phased increase 2–3–4–5–6% over a five-year period</td>
</tr>
<tr>
<td>Indexation</td>
<td>CNRPS: péréquation CNSS: minimum wage or discretionary</td>
<td>Price indexation</td>
<td>Price indexation for new retirees</td>
</tr>
</tbody>
</table>

Note: Péréquation is the system in which pension increases are linked to wage increases in the public sector.

system calculates the pension based on a few years’ salaries, which accentuates inequities between different career and wage profiles. Lastly, the multiplicity of schemes creates very different minimum pensions, accrual rates, contribution rates, and maximum replacement rates, which generates unequal pension contributions and payments.

Aware of the current financial crisis in pension schemes and the need to respond, the government has introduced some revenue measures to finance pensions and is also seeking consensus around a set of limited parametric changes with its social partners in the so-called tripartite commission with UGTT and UTICA. A new tax, the contribution sociale de solidarité (CSS), levied at a rate of 1 percent on income was introduced in 2018 to finance the social security system, starting with pensions; the tax is close in spirit to France’s contribution social généralisée

9In the public sector the pension is calculated based on the maximum between the last salary and the highest salary received for two consecutive years, while in the private sector it is based on the salary over the last ten years in the private sector for the largest scheme.
(CSG). As a general principle, earnings-related pensions (such as Tunisia’s defined benefit schemes) should be financed by contribution revenues; this is fair between the covered and uncovered populations. The tripartite commission has also agreed on a limited package of reforms composed of raising the retirement age and raising contribution rates. The main concern with increasing contribution rates is that this damages economic competitiveness and reduces employment because of higher labor costs. Tunisia’s contribution rates are already among the highest in the Middle East and North Africa region. They are significantly above those in many middle-income countries in other regions, such as in Latin America and the Caribbean.

This report proposes a package of reforms respecting some of the principles agreed to by the stakeholders, including gradual changes and preserving accrued pension rights (les droits acquis). Windows of opportunity for change—when the demographic situation was more favorable and the system less mature—have been lost. The result of this delay is that the measures needed to put pension finances on a sustainable path are both much more urgent and more difficult. However, respecting accrued pension rights, as discussed between government and the main stakeholders, means that financial improvements on the benefit side of pension accounts will take some time to have an effect. For example, changing the accrual rate to 2 percent for all workers in the future will yield significant savings on pensions in only 20 years’ time and savings then would be only from new retirees; the full impact will be felt after 50 years. The report makes two main recommendations:

- **Adoption of a “modernizing package of parametric reforms”**: This reform package consists of bringing the pension schemes to international standards and reducing inequities and distortions in the system (see Table 3.1). This package includes gradually increasing the retirement age to 65, making the accrual rate uniform and lowering it to 2 percent, gradually introducing the lifetime average salary as the earnings measure, introducing a penalty for early retirement, moving to price indexation, etc. This reform package would eliminate the deficit of the public pension scheme by 2020, and there would be a period of surplus lasting nearly 15 years (Figure 3.2). In

**FIGURE 3.2** Pension deficit under the modernizing package

![Figure 3.2: Pension deficit under the modernizing package](image)

the long term, a shortfall averaging 0.8 percent of GDP between 2040 and 2060 is expected. This is less than half of the status quo. Accumulated surpluses, if kept in a ring-fenced pension fund, would cover about half of the deficits between 2040 and 2060. The main private sector pension scheme would be largely sustainable under this reform scenario.

- **Dealing with the short-term financial pressures**: ‘Sharing of sacrifices’ is one of the important principles agreed on by most stakeholders involved in pension reform in Tunisia. However, this should not mean that those not covered or the younger generations should bear the bulk of the adjustment cost to financial realities through general taxations and delays in reforms. Over the past decade, nearly half of the advanced economies of the OECD have taken measures to close the short-term pension deficits through freezes in the nominal value of pensions in payment (Belgium, the Czech Republic, Finland, Greece, Slovenia, Portugal), caps on the amount of pension increases such that larger pensions are uprated by less than smaller ones (Austria, Greece, Italy, the Slovak Republic), and special levies or taxes on larger pensions (Greece, Ireland, Portugal). Finally, two reforms of the personal-income tax system related to pensions could provide additional resources for the budget to cover the pension deficit. First, about 25 percent of pensioner incomes are not subject to tax, while for workers the tax abatement is just 10 percent, such that pensioners pay less tax than workers with the same income. In extreme cases, net incomes in retirement of public sector workers can exceed those when working. Second, while the deductibility of social security contributions against the personal income tax is reasonable in principle, it can often lead to regressive taxation (gross social security contributions are constant but net social contributions, once taxes are taken into account, fall as pay increases). Ending the deductibility of social security contributions would be a progressive measure, raising a modest amount of revenues from the higher paid.

**The roadmap for pension reform in Tunisia should also involve dealing with additional important issues.** These include improving the coverage of the pension system, incorporating the informal sector, addressing the disability and survivorship pension programs, and launching a well-designed and planned communications campaign. First, around 30 percent of pension beneficiaries are survivors, and this represents around 15 percent of all pension expenditures. Enhanced protection for dependent survivors, for example, will require additional cost-saving measures if the pension scheme is to preserve fiscal balance. Second, the informality phenomenon in Tunisia involves a high percentage of workers in the private sector. Additionally, some evidence suggests the need to rethink policy making, especially regarding labor markets and social security reform, because many of the intended beneficiaries operate beyond the reach of legislative reform. Also, the contribution density is low among those covered in the private sector due to underreporting and transitions in and out of informality. Lastly, as with any difficult reform, a strong and proactive reform champion is needed to lead the process and develop consensus, as well as an effective public information campaign, particularly targeted at the youth, workers, and employers.
Chapter 4
Renewing the Social Assistance Contract: From Subsidies to Targeted and Expanded Safety Nets

Tunisia has a comprehensive welfare system—comprising health insurance, employer-based social insurance, subsidies, and targeted cash transfers. It however remains dominated by volatile and non-targeted energy and food subsidies. This report identifies and simulates the welfare impact of reform options to reduce energy and food subsidies and strengthen the safety nets to protect the poor and vulnerable. Tunisia’s welfare programs have formed a crucial part of the country’s social compact for many decades, with price stability and access to basic goods like bread, fuel, and electricity being of paramount concern. However, while this form of safety net has helped reduce monetary poverty, it has not been as successful in addressing inequalities and social exclusion. Tunisia spent 3.2 percent of GDP on social assistance in 2016, the bulk of which was allocated to direct price subsidies for food and energy products. This number peaked at 8 percent of GDP in 2013 when fuel subsidies were particularly high (5 percent of GDP in 2013 versus 0.5 percent of GDP in 2016). Food subsidies have been less volatile, fluctuating between 1.7 and 1.8 percent of GDP during the same time frame. The country spends 0.8 percent of GDP on targeted social assistance programs, up from 0.4 percent of GDP in 2008; however, this is still largely below regional and global averages (Figure 4.3). While universal subsidies were an appealing policy option in an era when poverty was widespread and administrative systems weak, modern targeted and expanded safety nets can now assist vulnerable households more effectively. In addition, Tunisia’s goal to transition to more renewable energy with large private sector financing also requires reforming subsidies and improving the performance of energy subsidies, particularly for electricity and gas (see Chapter 7).

Energy prices have moved closer to cost recovery levels in recent years but remain subsidized for several products. Through a system of price controls and transfers to SOEs, the government subsidizes a range of fuel products including gasoline, diesel, LPG, natural gas, kerosene, and heavy fuel oil (which is used for heating). In recent years, several products have moved closer to cost recovery levels following the introduction of VAT and a more systematic application of a formula-based fuel price adjustment mechanism for gasoline and diesel products (Table 4.1). These two products are now respectively at 87 and 83 percent of cost-recovery (as of July 2018). However,
several products remain highly subsidized, including socially sensitive products such as LPG (at 30 percent of cost recovery) and lamp oil for lighting (53 percent), but also heavy fuel (51 percent). The net subsidy for electricity and gas, estimated using the price gap approach, decreased between 2014 and 2016, but reached 0.8 percent of GDP in 2017. Electricity and gas cost recovery stood at 73 and 60 percent respectively as of mid-2018.

At present, the bulk of subsidy expenditure is devoted to LPG and electricity, which are more neutrally targeted across per capita consumption quintiles (Figure 4.1). However, the overall targeting of energy subsidies remains regressive, largely due to residual subsidies on gasoline and diesel. In the case of electricity, the presence of a lifeline tariff contributes to the relatively neutral targeting. Recent increases in prices for consumption above 400 kWh/month have contributed to further reductions in the shares going to the upper quintiles. Subsidized energy products accounted for about 7 percent of household consumption in 2015–16, with richer households spending slightly more on electricity, while poorer households spent more on LPG. Except for LPG, the regional distribution of energy subsidies is inconsistent with the incidence of poverty. The differences are most pronounced for natural gas (for which the Centre Est region accounts for almost two-thirds of spending), and for diesel and gasoline (dominated by Grand Tunis and Centre Est).

Public spending on food subsidies has risen gradually in nominal terms since 2011, as the administered prices for most commodities have not kept pace with inflation (Table 4.2). The food subsidy program was reformed in the 1990s to contain costs by following a ‘self-targeting’ approach, retaining subsidies only for lower quality items primarily consumed by poorer households, resulting in a drop in total food subsidy spending from 4 percent of GDP in 1984 to 2 percent in 1993. Currently, the bulk of food subsidy expenditure is on cereals and cereal products, including semolina, flour, pasta, gros pain (bread), couscous, and vegetable cooking oils. Milk is also

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**TABLE 4.1** Composition of fuel subsidies by product

<table>
<thead>
<tr>
<th>Product</th>
<th>2014 (prices are in millimes of TND)</th>
<th>2018* (prices are in millimes of TND)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regulated price (millimes)</td>
<td>Actual cost (millimes)</td>
</tr>
<tr>
<td>Gasoline, unleaded</td>
<td>1,670</td>
<td>2,064</td>
</tr>
<tr>
<td>Diesel, unleaded</td>
<td>1,500</td>
<td>1,830</td>
</tr>
<tr>
<td>Diesel</td>
<td>1,250</td>
<td>1,749</td>
</tr>
<tr>
<td>Domestic LPG</td>
<td>569</td>
<td>1,900</td>
</tr>
<tr>
<td>Industrial LPG</td>
<td>1,317</td>
<td>2,036</td>
</tr>
<tr>
<td>Lamp oil</td>
<td>810</td>
<td>1,738</td>
</tr>
<tr>
<td>Heavy fuel</td>
<td>510</td>
<td>1,138</td>
</tr>
</tbody>
</table>

Source: Authors’ calculations. *Prices are as of July 2018 and costs are based on Brent price of 70 USD and exchange rate of 2.6 DT/USD.
FIGURE 4.1 Energy subsidies received by welfare quintile, 2015/16 (TND millions)

Source: Staff calculations based on household survey 2015/16.

TABLE 4.2 Regulated and cost prices for subsidized food items, 2016

<table>
<thead>
<tr>
<th>Product (unit)</th>
<th>Regulated price (millimes TND)</th>
<th>Subsidy (millimes TND)</th>
<th>Cost price (millimes TND)</th>
<th>Cost recovery (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar (kg)</td>
<td>970</td>
<td>544</td>
<td>1,514</td>
<td>64.1</td>
</tr>
<tr>
<td>Gros Pain (loaf)</td>
<td>230</td>
<td>235</td>
<td>465</td>
<td>49.5</td>
</tr>
<tr>
<td>Baguette (loaf)</td>
<td>190</td>
<td>84</td>
<td>274</td>
<td>69.3</td>
</tr>
<tr>
<td>Milk (L)</td>
<td>1,120</td>
<td>50</td>
<td>1,170</td>
<td>95.7</td>
</tr>
<tr>
<td>Grain oil (L)</td>
<td>900</td>
<td>1,051</td>
<td>1,951</td>
<td>46.1</td>
</tr>
<tr>
<td>Semolina (kg)</td>
<td>398</td>
<td>660</td>
<td>1,058</td>
<td>37.6</td>
</tr>
<tr>
<td>Couscous (kg)</td>
<td>795</td>
<td>710</td>
<td>1,505</td>
<td>52.8</td>
</tr>
<tr>
<td>Pasta (kg)</td>
<td>805</td>
<td>700</td>
<td>1,505</td>
<td>53.5</td>
</tr>
<tr>
<td>Bread flour (kg)</td>
<td>700</td>
<td>560</td>
<td>1,260</td>
<td>55.6</td>
</tr>
</tbody>
</table>

Source: Tunisian government.
subsidized but at a much lower rate. The most heavily subsidized food items are semolina, vegetable oil, and bread with cost recovery levels at respectively 38, 46, and 50 percent. However, as will be shown below, the high rate of leakage of some of these subsidies is such that they could be replaced by more efficient forms of social assistance. This could be coupled with more targeted efforts to promote the agribusiness sector.

The largest food subsidy expenses—for bread, semolina, and grain oils—are either neutrally or slightly progressively targeted (Figure 4.2). However, substantial subsidies remain for items such as baguettes, sugar, couscous, flour, and milk, which are consumed in greater quantities by the more well off. Subsidized food products account for 4.4 percent of household consumption expenditure, and 8.3 percent of expenditure for the poorest quintile. The regional distribution of food subsidies also deviates from the distribution of poverty. Only subsidies for gros pain are close to mirroring the distribution of poverty. Subsidies for flour, pasta, couscous, cooking oil, and sugar disproportionately benefit the richer eastern regions (especially Grand Tunis and Centre Est), but are otherwise quite evenly distributed. However, the subsidies for baguettes and milk benefit Grand Tunis proportionately more than they benefit the southern and western regions. This could reflect the presence of pockets of urban poverty in coastal areas.

**FIGURE 4.2** Food subsidies received by each welfare quintile, 2015/16 (TND millions)

![Image of Figure 4.2](image-url)

*Source: Staff calculations based on household survey 2015/16.*
The main social assistance programs, the cash transfer program PNAFN (*Programme d’Aide aux Familles Nécessiteux*), suffers from low coverage and lacks a transparent beneficiary selection and graduation process. Tunisia’s social protection system is based around formal contributory insurance schemes comprising old-age income support, medical insurance, disability, and maternity. Most of the social assistance spending is provided through the cash transfer program PNAFN, which accounted for 0.5 percent of GDP in 2016. Beneficiary households are selected for the program based on categorical criteria. Beneficiaries receive TND 180 per month (or slightly below 50 percent of the minimum wage) plus TND 10 per month for up to three school-age children (6–25) and all children with disabilities. The program was scaled up significantly after 2011, and now covers close to 250,000 households and was expected to reach 285,000 households in 2018, or between 8 and 9% of households. However, it only reaches 16.9 percent of the poor (bottom quintile) leaving the bulk of poor and vulnerable households without social assistance (Figure 4.4). PNAFN, from a coverage perspective, is quite low compared to other countries in the region, while the benefits are adequate by international standards with one-third of benefit recipients moving into the second quintile of consumption and with greater effect in rural than urban areas. However, the program has design and management issues (coordination, monitoring) and lacks a clear beneficiary selection and graduation process. The overrepresentation of the elderly in PNAFN also points to the lack of an adequate social pension or old age support scheme for underserved formal and informal sector workers.

Other safety net programs include the Assistance Médicale Gratuite (AMG), which provides free subsidized care to poor families, as well as various small programs managed by different

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**FIGURE 4.3** Social assistance expenditure as a share of GDP

The AMG program has two subprograms, AMG-I and AMG-II. Free health cards provided under the AMG-I program cover around 260,000 families (around 90% of whom are also in the PNAFN program), while subsidized health cards provided under the AMG-II program cover an additional 622,900 families with selection based on income and family size or about 21.7 percent. However, this program only reaches about 38 percent of the bottom quintile. Government estimates indicate that the cost of the AMG program was TND 109 million in 2014, or 0.13 percent of GDP. Other ministries provide smaller, more categorical assistance: (i) the Ministry of Education provides scholarships and grants for school and university students totaling TND 146.5 million, or 0.16 percent of GDP in 2016; (ii) the Ministry of Social Affairs (MOSA) provides in-kind services such as childcare services, adult learning, and disability assistance; and (iii) the Ministries of Equipment and Social Affairs provide funds for social housing, which amounted to TND 34 million in 2016.

Our simulations show that the reform of energy and food subsidies should be considered on a product-by-product basis. This would create significant fiscal savings, but would require a targeted expansion of the coverage of cash transfers to fully compensate poor and vulnerable households in an effective manner. Removing food subsidies would save TND 1.2 billion (1.1 percent of GDP in 2018) but would have significant negative welfare impacts on the poor without compensation; the poverty headcount would increase by around 1.7 percentage points to 16.2 percent, mainly due to the subsidies on bread and semolina. Removing only the most regressive subsidies—

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10 These simulations incorporate the direct impact of price changes but do not take into account the indirect effects.
on sugar, milk, baguettes, couscous, and flour—would have much smaller impacts on the poverty rate and still save the government TND 273 million (0.3 percent of GDP). The poverty headcount would rise slightly by 0.4 percentage points. Compensation through cash transfers using the existing PNAFN program would be insufficient to protect the poorest households. However, extending compensation to all AMG beneficiaries would protect more poor households and at a lower cost but would still be inadequate to fully offset the impact of full subsidy removal. A better-targeted cash transfer has the potential to protect the poor much more efficiently. Our simulations also show that universal cash transfers would fully compensate households. However, it should be noted that the administrative costs of doing so (and issues in terms of continuing such a policy indefinitely) must also be considered carefully.

A full removal of energy subsidies would generate fiscal savings amounting to 1.1 percent of GDP but would increase the headcount poverty rate by 1 percentage point. LPG subsidies represent slightly more than half of the subsidies received by households. However, given the high reliance of the poor on LPG as a cooking and vehicle fuel, such a reform would need to be accompanied by compensation measures to ensure the welfare of the poor is not significantly impacted. Uncompensated, the removal of LPG subsidies would raise the poverty headcount by about a 0.7 percentage point. Removing electricity subsidies would save about 0.3 percent of GDP and increase the poverty headcount by a 0.4 percentage point. An expanded cash transfer program with improved targeting could compensate almost all poor households at minimal cost, making households 8 to 13 percent better off in terms of per capita consumption.

Attention also needs to be paid to the welfare outcomes of nonpoor households, particularly the middle class. This should be supported by a clear and proactive communications campaign. It may not be affordable to fully compensate all households for the subsidy reforms, but reforms can be done gradually to minimize the impact on consumers. Subsidy reform should thus be considered as part of a policy package, demonstrating clearly how the savings will be used to improve overall welfare of all citizens, for instance on public transport, health care, and social insurance. Tax reforms could also be considered to offset the increased cost of living and any employment-related impacts of removing price supports to subsidized industries. Subsidy reform should be accompanied by a clear and widely targeted communications campaign on the regressive nature of some subsidies, the waste and health impact stemming from poor pricing and overconsumption, as well as the tradeoffs between subsidies and more growth enhancing jobs and inclusive spending.
Tackling the Next Challenge on Education: Efficient Spending for Learning

Tunisia has historically been successful in providing access to basic education for all. But public spending in education is high, which combined with the projected increase in certain cohorts of school-aged children, calls for greater efficiency in the sector. There is almost universal access to basic education (primary cycle or basic education first cycle, grades 1 to 6 and basic education second cycle or college, grades 7 to 9) (see Figure 5.1). However, only 44 percent of children aged three to five go to school despite a one-year pre-schooling rate for five-year olds of 85 percent. In 2017, Tunisia spent 6.7 percent of GDP on education, which is equivalent to 22 percent of total government spending, and includes the funding allocated to the Ministries of Education, Employment and Professional Training and Higher Education, and Scientific Research (Figure 5.2). To this should be

FIGURE 5.1 Gross and net enrollment rates (GER and NER)

Source: Author using Ministry of Education data.
added the private financing of education through household expenditure, which amounts to nearly 1.1 percent of GDP. Furthermore, the projected 10 percent increase in the school-age population (3–23-year olds) between now and 2030, the bulk of which is in the 12–23 years old cohort, is a key demographic element that will impact the level and composition of education expenditures.

Wage bill spending in the education sector has increased significantly due to hiring, promotions, and wage increases. Wage bill spending has increased from 88 percent of total public education spending in 2012 to 93 percent in 2017 (Figure 5.3), while the share of spending allocated to investment has dropped to around 4 percent. This has been driven by both an increase in staffing and remunerations. The number of teachers (respectively nonteaching administrative staff) has increased by 1.1 percent per annum (respectively 3.2 percent) since 2005, while the number of pupils dropped by 0.5 percent per annum in primary education and by 1.7 percent in secondary education. Teachers’ salaries have increased by 7.9 percent per annum between 2011 and 2017 while consumer price inflation averaged 4.8 percent during the same period. The average annual salary of a teacher is equal to 2.2 times GDP per capita, which is equivalent to 5.3 times the minimum wage (against 4 times in 2005). Today, 99 percent of primary education teachers are in the penultimate highest or highest category of the salary scale, and 87.2 percent of secondary education teachers are in the highest category. Lastly, there are about 9,200 substitute teachers (2018) who are not properly accounted for in the wage bill of the Ministry of Education.
Consequently, the pupil-teacher ratio has dropped to levels found only in high-income countries, while teachers’ hourly workload is lower than in peer countries. Between 2005 and 2017, the pupil teacher ratio dropped from 20.1 to 17.2 in primary education and from 17.4 to 11.9 in secondary education (Figure 5.4). Consequently, today, there are 1.4 teachers per class in primary education and 2 teachers per class in secondary education. In addition, the number of pupils per nonteaching staff dropped from 54.3 to 32.7. International comparisons show that the student-teacher ratio in Tunisia is low compared with countries in the region or with countries with similar levels of development. A spatial analysis shows that the student-teacher ratio is lower in governorates with lower population density, mostly in rural and underprivileged areas. Furthermore, the youngest teachers with more diplomas are usually sent to these governorates where the performance in terms of internal efficacy and quality of education services are lower. The high number of substitute teachers also explains the increase in spending in the sector, although they are not accounted for under the wages budget line.
Despite increased education expenditures, low internal efficacy in primary and secondary education persists and has contributed to greater regional disparities. Repetition rates in primary and secondary education are 8 and 18.9 percent respectively but reach 20 percent in the most underprivileged governorates (Figure 5.5). The dropout rate is almost nonexistent in primary education and amounts to 10 percent in secondary education. There is a high dropout rate in the transitions between cycles (primary–secondary, secondary–high school, etc.) and higher repetition rates at the beginning and at the end of the cycles (Figure 5.6). This points to learning difficulties which tend to accumulate throughout the years of schooling. It is not possible to measure the learning quality in the different cycles because of the lack of a national evaluation. However, the last international evaluations in which Tunisia participated, namely TIMSS in 2011 and PISA in 2015, have shown that the learning results are still low and have dropped slightly in recent years.

Moving forward, the challenge for Tunisia is to provide quality education and learning for all, and prepare students for a globalized, knowledge/technology-intensive and fast-changing world. Key for Tunisia will be to improve the efficiency of spending given the demographic changes ahead and the deep inefficiencies in the education sector. This report identifies key reform areas to adapt the education sector to the new realities and the challenges ahead:

- To ensure greater coverage for the preparatory year (for five-year olds) in public primary schools and access to preschool education for three- and four-year olds, there is a need to rebalance the share of the financing allocated between primary and secondary education. Furthermore, the
FIGURE 5.5 Repetition rates by governorate (primary, secondary, and high school)

Source: Author using Ministry of Education data.
Significant reforms are needed to improve the quality of education and learning. The sector should aim to attract the best qualified and motivated young diploma holders, deploy well-trained teachers, and allow access to professional development. Structural reforms should be implemented to review the assignments of staff, the hourly workload and schools’ organization to obtain some financial leeway in order to redirect spending toward improving the learning processes and outcomes.

The learning outcomes must be evaluated at each stage of the education system, using a national system, to serve as a guide for decision making in education policies and spending.

Gains in terms of efficiency could be made through efforts at modernizing school administrations. This would entail seizing the opportunities offered by information and communication technologies and strengthening the autonomy and capacity of the Regional Education Commissions.
Tunisia has made tremendous progress to improve health outcomes and compares favorably with countries at similar levels of income. Child mortality rates have decreased by 56 percent since 2000, more than all income groups and almost all regional peer countries. In 2016, neonatal, infant, and child mortality rates were lower in Tunisia than the average for upper-middle-income countries and middle-income MENA countries. Tunisia’s maternal mortality ratio is also slightly lower than the average upper-middle-income countries. The average life expectancy has increased from 62.9 years in 1981 to 75.7 years in 2016, meanwhile, fertility rates have dropped from 5.1 children per woman to 2.2 children for the same period, along with an important decline in major communicable diseases (CD). As a result, noncommunicable diseases (NCDs), including diabetes, cardiovascular diseases, and cancer, have become the main health concerns for the Tunisian population. As of 2016, the prevalence of diabetes and hypertension among the population 15 years and above was 15.5 and 28.7 percent, respectively.

Tunisia compares favorably with income and regional peer countries in terms of health system quality, availability, and access to essential health services including immunization, antenatal coverage, skilled birth attendance, etc. With 2.1 beds per 1,000 people, Tunisia ranks higher than most middle-income countries in the region.11 With 3.2 nurses and midwives per 1,000 population nationwide in 2014, Tunisia places ahead of all countries in the region. However, the 1.6 physicians per 1,000 population (2014), is lower than some countries in the region such as Jordan (2.7) and similar to Turkey and Iran. The private provision of health care has expanded over the past decades, offering 20 percent of total bed capacity, employing 60 percent of physicians and 82 percent of dentists, and accounting for 74 percent of the advanced technologies available in the country.

However, Tunisia could achieve better results at current levels of spending pointing to significant scope for improving efficiency in the health system. Between 2012 and 2015, Tunisia spent on average 7 percent of GDP on health, which is equivalent to 13.6 percent of total central government spending, a level higher than most middle-income and regional peer countries (Figure 6.1).

11Total hospital bed capacity is projected to increase by 1,400 units at the end of the 2016–20 Five-Year Development Plan.
About 58 percent of this spending is covered by the public sector (central government, autonomous health facilities, and national health insurance system) and 39 percent through out-of-pocket spending. Public health spending grew by 40 percent between 2008 and 2012 to reach 4.3 percent of GDP. After 2012, health insurance expenditures remained stable while spending by the Ministry of Health increased 11 percent, almost entirely due to a one-year increase of 10 percent in 2015 related to the construction of new health facilities. Health expenditure per capita followed a similar trend reaching TND 308 (USD 157) in 2015. A relative efficiency analysis, which compares Tunisia’s health outcomes and expenditures with other countries, shows that Tunisia is among the group of countries with good health outcomes, but which spend more than expected for similar outcomes (Figure 6.2).

There are also significant inefficiencies in inputs (technical efficiency) and output choices (allocative efficiency) related to high labor cost and unbalanced funding of curative care relative to preventive care and deficiencies in the referral system. An analysis of factor shares in public health establishments (Figure 6.3 panel A) reveals a relatively balanced use of inputs, although the share of labor is on the high side, particularly for the first and second lines of care (primary health care centers, and local and regional hospitals). About 61 percent of expenditure by public health providers and the public administration goes to labor, 25 percent to medical goods and services, 9 percent to nonmedical goods and services, and 3–4 percent to investment. In primary health care, and in local and regional hospitals, labor accounts for about 80 percent of total spending, while pharmaceutical products account for 10–15 percent, which seems to be very low to respond to the population’s needs at the first and second lines of care. Overall, at least 77 percent of remunerations are directed at permanent staff, indicating high spending rigidity. Regarding allocative efficiency, about...
half of expenditures in the public health sector go to inpatient care and one-fourth to outpatient care (Figure 6.3 panel B), leaving little room for preventive public health activities. Around 40 percent of expenditure of the Ministry of Health and public health facilities goes to inpatient care, 27 percent to outpatient care, and only 7 percent to prevention and public health. Tertiary-level national institutions (troisième ligne) still absorb one-third of central government funding indicating that there is room for central government funding to refocus activities toward public goods and high-return low-cost preventive care activities. There is also room to transfer some of the outpatient activity from tertiary to lower-level hospitals and potentially reduce costs.

Lastly, despite some progress, the health system still faces important disparities across income groups and regions, and significant vulnerabilities related to out-of-pocket expenditures. Lagging regions have received more financing for health over time; nonetheless a number of governorates would benefit from higher funding for health from the central government budget given their poverty standing. The geographic distribution of physicians stands out as the most
unequal (Figure 6.4 panel A), with a significant concentration on the coast. Despite an increase in the density of doctors in both private and public sectors, regional disparities have widened, with most physicians and specialists located on the coast, leaving interior regions without much-needed specialists. We find a slightly negative correlation between government per capita health spending and regional poverty, and clear evidence that out-of-pocket (OOP) health spending is lower in areas with local health facilities. Overall, the distribution of OOP health expenditure is neutral to the distribution of income. However, the poor spend relatively more on pharmaceutical products than their level of welfare would have suggested (Figure 6.4 panel B): the bottom 50 percent of the population are responsible for 30 percent of pharmaceutical expenditure, 5 percentage points more than their share in total consumption. The impact of catastrophic spending\textsuperscript{12} and of impoverishment\textsuperscript{13} are highest in the poorest southern and western regions. This has effects on impoverishment, mainly for households in the bottom decile. Lastly, about 12 percent of the population reports not seeking health care for financial reasons, and as much as 19 percent in the southern regions compared to about 6 percent in the coastal regions.

\textsuperscript{12}Health expenditures are called “catastrophic” when, to pay for care, the sick or their household must pay a very high financial participation in relation to their financial capabilities and other needs. For example, WHO defines catastrophic expenditure exposure when a household spends more than 40 percent of its capacity to pay (i.e., its budget excluding living expenses) on direct health payments.

\textsuperscript{13}Impoverishment is calculated as the difference between the number of households below the poverty line before and after direct health payments.
**FIGURE 6.4** Disparities in health services and spending

Panel A

Health specialists (per 100,000 inhabitants)

Source: Carte sanitaire 2015.

Panel B

Lorentz curve of Out of Pocket (OOP) spending

Source: Authors using household survey 2015 data.
Tunisia will need to improve the efficiency of health spending and reduce regional and income disparities in order to achieve its objective of providing quality health services to all its citizens. Article 38 of the 2014 constitution explicitly recognizes the right to health and commits the State to guarantee the right to social security and access to quality health care for all citizens. In 2014, the societal dialogue on national health policies and strategies concluded that reforming the health financing system is a key factor to achieve Universal Health Coverage, one of the sustainable development goals to which Tunisia has committed to. This report recommends key reforms to achieve these goals:

- Improve and reinforce budget allocation to outpatient activity, and preventive care at lower levels (primary and secondary), along with reforming the overall referral system and reinforcing the reform of family medicine started in 2017. Tertiary facilities should be more specialized in delivering tertiary care. Tunisia could also improve access to care at the primary and secondary care lines by strengthening provision of care and availability of medicines. Moreover, strengthening the roles of primary and secondary levels is critical in a context where the burden of diseases is dominated by noncommunicable diseases.

- Formulate a sound human resources policy to lower regional disparities in terms of health care access and human resources distribution and management, in order to improve the planning for the training and allocation of specialties programs in the regions. Additionally, decentralizing human resources management to improve primary health facilities control over their staff, budget, and productivity, particularly at the tertiary level will be crucial.

- Reform the subsidy system for pharmaceutical products and improve the safety nets, as well as the financing of the health system: the pharmaceutical sector (pharmacie centrale) has financial difficulties as a result of the devaluation of the currency, some leakages to neighboring countries, and debt with foreign providers. Balancing the financial sustainability of the pharmaceutical sector while diminishing the burden of OOP spending on the poorest and most vulnerable through adequate targeting and channeling of resources in social safety nets can protect the poor against impoverishing high health expenditures. These actions should be complemented with reforms to reduce overmedication, and reforms targeting the governance of the pharmaceutical system. Regarding the financing of the health system, the World Bank (2016)\(^\text{14}\) has proposed detailed recommendations to finance the system and improve its coverage.

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Tunisia has historically provided quality electricity supply to its citizens and firms with close to universal access to electricity (100 percent connection rate in urban areas and about 99.5 percent in rural areas). It is ranked 51 out of 190 countries in the 2019 “getting electricity” indicator of the Doing Business but with still a relatively high cost of connection. Tunisia performs well in the quality of service with very low incidence of power outages. The annual electricity consumption per person in Tunisia reached 1,444 kWh (2014) compared to 900 kWh in Morocco, 1,356 kWh per capita in Algeria and 1,658 kWh in Egypt.

Energy provision remains dominated by the public sector with very limited private sector participation. The main operator of the sector is the Tunisian Company of Electricity and Gas (STEG), the State company which is responsible for the production, transportation, distribution, import, and export of electricity and gas in Tunisia. The STEG oversees the planning and execution of investments in the electricity and gas sectors (but not for the upstream exploration and production of oil and gas). Despite some liberalization of the sector through the 1996 law that allowed for the entry of independent electricity producers and led to the granting of a first concession (a combined cycle plant in Rades), the private sector’s participation in electricity generation has remained timid. No independent private producer has been licensed since 2002. Moreover, electricity and gas prices are subsidized by government (direct subsidies), which legally must transfer to STEG every year the difference between the cost of the service and the administered price. Until 2015, gas purchases from Algeria by STEG were also subsidized (indirect subsidies) to keep costs for STEG and tariffs for consumers low. Consequently, total subsidies from government to STEG averaged 3.2 percent of GDP or 82 percent of STEG’s revenues between 2011 and 2014. STEG investments averaged TND 650 million per annum or 0.86 percent of GDP (compared to 15The Entreprise Tunisienne d’Activites Petrolieres (ETAP—Tunisian Enterprise for Petroleum Activities) is responsible for the upstream oil and gas sector. The Societe Tunisienne des Industries de Raffinage (STIR—Tunisian Enterprise for Refining Industries) is responsible for the production and importation of refined petroleum products. The Agence Nationale de la Maitrise de l’Energie (ANME—National Agency for Energy Efficiency), which is a nonadministrative governmental agency, is responsible for developing and executing the national energy efficiency policies and programs.
0.6 percent of GDP in Morocco and 2.4 percent of GDP in Algeria). Lastly, despite their overall good cost efficiency, the government only spends on average TND 30 million on energy efficiency programs through the Energy Efficiency Fund (cogeneration, solar water heaters, classification of household electrical appliances, energy audits, etc.).

The sector’s performance and financial viability have weakened over the past years, and the sector has increasingly been dependent on government support. Technical losses in the transport and distribution network have increased from 12 percent of injected power in 2010 to around 15 percent of injected power (Figure 7.1), a level now comparable to neighboring countries (15 percent in Algeria and 15 percent in Morocco) but much higher than European countries (6 percent in France and 10 percent in Spain). We estimate that reducing losses from 15 to 10 percent would be equivalent to saving TND 200 million (5.3 percent of STEG’s revenues). The volatility of international oil prices (and thus subsidies) and budget processes increase uncertainty for STEG and its ability to finance its investments and lower risks in public-private partnerships. In addition, unpaid bills have grown rapidly over the past years reaching TND 1.6 billion cumulatively in 2016 (43 percent of STEG’s revenues). Consequently, the STEG has systematically been among the top loss-making SOEs over the years. In 2016, it accounted for 26 percent of the 1.3 billion total losses (1.5 percent of GDP) made by the 20 largest SOEs. In addition, the STEG’s external debt guaranteed by the state reached TND 5.4 billion (130 percent of STEG’s revenues in 2016, 6 percent of GDP), representing about 50 percent of total guarantees on external debt of SOEs (Figure 7.2).

**FIGURE 7.1 STEG technical losses, % of injected power**

![Diagram showing STEG technical losses, % of injected power from 2006 to 2015.](image)

*Sources: Tunisian Company for Electricity and Gas (STEG) annual report.*
The sector is increasingly facing challenges to meet peak demand due to inadequate planning of investments, inefficient pricing of peak demand, and limited efforts to introduce appliances of higher energy efficiency. Electricity generation is currently dominated by natural gas fuel (at 97 percent), of which more than 58 percent is imported from Algeria (in 2016). Electricity generation, which reached approximately 18,000 GWh in 2015, has grown by 4.2 percent per year on average since 2006. The installed power capacity has increased over the same period by 5.6 percent per year (reaching about 1,700 kWh/year and per capita) to meet peak summer demand due to the development of air conditioning. The peak demand for electricity has been shifting for almost two decades during the heat waves of the summer season due to the rapid uptake of air conditioning. Peak demand for electricity has a negative impact on electricity production in two ways. First, there is a high reliance on open-cycle gas turbines (GT) despite their higher fuel consumption, lower efficiency (due to their adaptability to responding to peak demand: rapid mobilization of these production units within minutes during peak hours), their shorter time frames and lower investment costs (less than 50 percent of their closed-cycle equivalents) (Figure 7.3). Second, the electricity tariffs do not account for the higher production costs of this technology, and there are not yet enough efforts to introduce high-performance appliances such as air conditioners.

This report proposes several recommendations to materialize the government’s vision of reducing Tunisia’s reliance on imported fossil fuels. This can be achieved by making greater use of the country’s renewable energy potential and leveraging more private financing in energy production. The government’s strategic objectives are to improve energy security and inclusion by leveraging the country’s renewable resources, private financing, and technology in energy production, while transport and distribution would remain a monopoly of the STEG in the medium term. The government’s aim is to deeply transform the energy mix by increasing the share of renewable energy from the current 3 percent to 30 percent by 2030, which is equivalent to about 4,000 MW. This would require massive investments estimated by the government at more than USD 5 billion,
the realization of which would require large private sector participation. Following several years of
delay, the government has developed an action plan to accelerate this transition. This report identifies several areas of reform to set this transformation of the sector on the right course for success:

• **Strengthening of the legal, institutional, and economic framework for private investments:** Among the important institutional instruments that should be foreseen following the adoption of Law 2015-12 of May 11, 2015, on the production of electricity from renewable energies, the creation of an independent regulatory body for the electricity sector is a priority. The essential role of such an institution would be to ensure compliance with the rules and fair arbitration between all stakeholders. This body should also be able to determine the costs of service in order to inform the various actors (public authorities, network operator, independent producers, end consumers) about the real costs and the tariffs to be applied. In addition, Tunisia will need to improve its economic framework for renewable projects by establishing adequate financing and insurance schemes for projects in renewable energies and developing technical and financial capacity for the identification, preparation, negotiation, and monitoring of projects.

• **Engaging the necessary transformation of STEG:** STEG should be repositioned to focus on its core responsibilities in this new context of a significant entry of independent producers following almost 60 years during which it oversaw the planning, construction, and operation of almost all investments in the electricity sector. This transformation will require STEG to develop new capacity and skills (integration of large-scale renewable energies, demand management through smart grids, management of contractual relations with operators, etc.) and to allocate and focus more resources to optimize planning of its investments and operations.
• **Improving the performance and financial viability of the sector:** The operational and commercial performance of STEG will have to be improved for greater private participation in the sector to be feasible and viable. This will require eliminating energy subsidies by reforming tariffs and reducing technical and commercial losses. Chapter 4 provides policy recommendations to strengthen the safety nets that would allow reducing subsidies while protecting the poor and vulnerable. Those recommended actions should be combined with measures to help households and firms improve their energy efficiency and help the most vulnerable ones absorb the short-term adjustment costs related to these changes.
Chapter 8

Valuation and Conservation: Toward More Secure and Sustainable Water Services

Tunisia has made tremendous progress to provide universal access to water and sanitation services to its citizens, but some regional disparities persist, particularly on sanitation. Access to drinking water stands at 98 percent (as of 2016) and is slightly lower in rural areas (92 percent). Nationwide access to sanitation is 86 percent, but access is lower in southern and central regions and in rural areas. While 98 percent of wastewater that is collected is purified, only 55 percent of the population has its wastewater collected and purified. Water quality has deteriorated in the last five years with the rate of physiochemical nonconformity up by 10 percentage points to 29 percent. Government spending on WASH (water, sanitation, and hygiene) was about 1.5 percent of GDP in 2015 or 5 percent of total central government spending. Household expenditures on water represent on average 1.5 percent of household spending, well below the 3 percent threshold of affordability. While water quality in rural areas is lower, several rural zones pay higher water fees than in urban areas due to differences in pricing autonomy of the institutions providing water.

Tunisia is facing acute water scarcity, which is accentuated by the combination of the country’s historical approach of large water mobilization, high consumption, large network losses, and weak investment efficiency. The projected impact of climate change will accentuate Tunisia’s challenge to guarantee water security. Tunisia’s conventional water resources were estimated at 345 m$^3$ per inhabitant per year in 2016 (Figure 8.1), or about one-third of the international standard of aridity (1,000 m$^3$/inhabitant/year), in total 4.85 billion cubic meters (m$^3$) of which 4.2 billion m$^3$ were considered renewable. The largest water consumer is irrigated agriculture (82 percent of mobilized resources) followed by households and businesses (15 percent), the industrial sector (slightly above 3 percent), and tourism (slightly less than 1 percent). Water system losses (as a ratio of mobilized resources) increased from 24 to 36 percent between 2005 and 2016 (Figure 8.2). Losses in the irrigated perimeters vary between 30 and 50 percent of mobilized water. The

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16The desalination capacity installed at the end of 2015 is estimated at about 104,700 m$^3$/day (SONEDE the drinking water SOE and private entities). It is mainly done from the desalination of brackish water. Desalination of seawater is one of the components of water mobilization for the satisfaction of the drinking water supply. The first seawater desalination plant became operational on May 2, 2018, in the island Djerba for a capacity of 50,000 m$^3$/day and a total cost of TND 180 million.
obsolescence of the network and lack of appropriate maintenance and rehabilitation are the main causes of water losses, combined with an inefficient water tariff that accentuates Tunisia’s water valuation and conservation challenges. At the same time the storage capacity of large structures is decreasing due to lack of maintenance and protection of watersheds (siltation rate of 24 mm³/year). Additional mobilized water resources are lost due to poor planning of water transfer works, reduction in the utilization rate of irrigated perimeters (22 percent of nonfunctional public perimeters) and irrigation intensity, and low quality of wastewater treatment (50 percent of purified water does not meet standards) due to an aging infrastructure. Projections show that Tunisia’s water scarcity will become increasingly acute due to the impact of climate change, including increased temperature (an estimated 1–2°C by 2030), lower rainfall (an estimated 5–10 percent drop), and rising sea levels which will increase renewable water salinity.

**The water and sanitation sector institutional architecture and fragmentation complicate policy coordination and undermine efficiency.** Conventional water resources in Tunisia are largely managed by the Ministry of Agriculture, Hydraulic Resources, and Fisheries (MAHRP). The state-owned water utility SONEDE is responsible for the supply of drinking water under the supervision of the Ministry of Agriculture, an architecture which poses serious questions on institutional and policy incentives to conserve water and allocate it to the most economically productive use. At the level of non-communal areas, the user associations called Agricultural Development Groups (GDA) are responsible for the management of infrastructures and the sale of drinking water and irrigation. The SECADENORD, an SOE under the Ministry of Agriculture, has the mandate to manage the transfer and pumping installations and sells water to major users such as the SONEDE and the CRDAs (Regional Commissions for Agricultural Developments) located along the network’s route. Unconventional water resources and more specifically treated wastewater are managed by the National Sanitation Utility (ONAS), which is under the authority of the Ministry of Local Affairs and the Environment (MALE). The monitoring and control of quality of water used for drinking, bathing, and irrigation are assigned to the Ministry of Public Health.
The water tariff policy is highly sensitive to socioeconomic considerations and does not incentivize economically efficient use and conservation of Tunisia’s scarce water resources. At the same time, high losses and low SOE sector efficiency raises the cost of water production. Average prices for irrigation and drinking water are respectively TND 0.11 and TND 0.68 per cubic meter, indicating an overall average water price of TND 0.52 per cubic meter (Figure 8.3). We estimate that the cost of producing one cubic meter of water in Tunisia is about TND 1.1 which translates into a production cost recovery ratio of about 47 percent overall (10 percent for irrigation and 61 percent for drinking water). However, due to significant losses, the cost of a cubic meter of water increases by almost 50 percent between production and billing to users, indicating an overall cost recovery of about 31 percent (Figure 8.3). There is also a system of cross-subsidies within the system because mobilized water from dams is sold at lower prices to downstream SOEs and other institutions. In addition, Tunisia’s water productivity is low; the World Bank estimates that in 2014 one cubic meter of water produced USD 14.38 in the economy and only USD 1.75 in agriculture compared to USD 104.2 for the industrial sector. Sanitation services are also highly subsidized by the State, with total subsidies amounting to TND 76.5 million in 2015.

**FIGURE 8.3** Water cost and tariff, TND per cubic meter

![Water cost and tariff, TND per cubic meter](image)

Source: Authors using World Development Indicators database.


**Low SOE performance and inadequate tariffs have weakened the financial position and viability of the water and sanitation SOEs.** Nonetheless, the investments needed in the coming years are large, and fiscal space for public support is limited. The deficit of all SOEs in the water and sanitation sector (Figure 8.4), excluding subsidies, stood at TND 300 million in 2015 (representing 50 percent of SOE sector revenues or about 0.4 percent of GDP) of which the GDA accounted for TND 120 million (9.5 times their revenues), SONEDE TND 73 million (19 percent
FIGURE 8.4 Water SOEs financial balance

Source: Authors using World Development Indicators database.
Note: SONEDE (Water utility), ONAS (sanitation), SECADENORD (water mobilization SOE), GDA (Agricultural Associations for irrigation and drinking water).

of its revenues), ONAS 74 million (45 percent of its revenues) and SECADENORD TND 32 million (139 percent of its revenues). Commercial losses of water and sanitation SOEs are also important. Arrears to SONEDE amounted to TND 340 million in 2015 of which 24 percent were from public entities. Total investments in the water and sanitation sector grew by 6 percent per annum on average and reached TND 500 million per annum in 2009–16 or 0.7 percent of GDP, of which about half was carried out by the water and sanitation SOEs and half by the Ministry of Agriculture. Projected investment needs for water production, distribution, and loss reduction are substantial and, given the lack of fiscal space, would require strong measures to improve SOE performance and greater alternative private financing.

Although the water code has anticipated partnership with the private sector for unconventional water production and distribution, private sector participation is very low. The private sector involvement in the management of water resources, the supply of drinking water, or sanitation is limited to date despite signs of a political will to move toward the “construction-exploitation-transfer (BOT)” of seawater desalination plant. In the sanitation sector, numerous service contracts have been concluded in recent years (maintenance, repair, management of treatment plants, etc.). The private sector operated 17.8 percent of the sewerage network, 18.3 percent of the pumping stations, and 14.5 percent of the wastewater treatment plants in 2015.

Moving forward, Tunisia needs to reorient its water strategy and policies toward greater valuation and conservation of water. The new vision and strategy for the water and sanitation sector would need to recognize the rare and indispensable nature of water resources in Tunisia, which should therefore be well managed, conserved, and allocated to the most optimal use. This will
require three fundamental changes: (a) a move toward a demand-management driven model instead of a supply-management driven approach (cost recovery, transition to less water-intensive crops, use of water-saving technologies, etc.); (b) rigorous management and valuation of water resources (prioritization of rehabilitation and maintenance of existing infrastructure and equipment, reduction of losses, improvement in the quality and reuse of treated water, etc.); and (c) protecting and conserving the ecosystems, rigorously managing groundwater resources, and operationalizing a climate change adaptation strategy. This report identifies several policy and institutional reforms that are necessary for these changes to materialize:

- **Institutional reforms and capacity building**: these would aim to: (1) delegate the management of all water resources, excluding the share of the agricultural sector, to a single and relatively neutral institution; (2) rethink local water management given the limits of the GDA: the management of drinking water and sanitation in communal areas must be reassessed to be in harmony with the new decentralization policy; (3) strengthen the planning and management capacity of sectoral institutions: adapt profiles, develop capacity and skills in the public institutions in charge of the water sector (water/infrastructure economists; financial, management, and public policies specialists, etc.); and (4) rapidly upgrade the information and management systems across the sector (public and private infrastructure, equipment, monitoring of aggregate production, financial situation of the sector, pricing and debt collection, performance indicators of the sector, and public and private operators, etc.).

- **Investment and pricing policy reforms**: public investments should be allocated to activities that improve the use of existing resources. Consequently, reform priorities should be to: (1) develop and implement a simple approach for planning and selecting investments in the sector (clear and mandatory socioeconomic criteria for all public operators, need for economic feasibility studies for new investments, etc); (2) prioritize the rehabilitation and modernization of existing water mobilization and transfer infrastructure, drinking water distribution networks and treatment plants, increase transfer capacity (new pipelines) especially from water resources in northern regions and new dams to other basins (an emergency investment program could be implemented to make better use of the existing supply); (3) establish routine and periodic maintenance of works and equipment in the sector; (4) introduce a new pricing policy that aims to recover water and sanitation service costs from all users, implemented gradually and combined with direct transfers to users for social or economic reasons; (5) strengthen the policy to encourage private sector participation in all activities where the private sector can contribute to improving the efficiency and effectiveness of the sector, including maintenance, network management, investments in desalination and treatment plants, etc.; (6) develop and launch a program to intensify works for soil conservation and underground resource protection; (7) introduce incentives for the generalization of water-saving technologies in all sectors, especially in irrigation; and (8) develop and implement a policy to improve the quality of treated water and encourage its use.
Chapter 9

Paving the Way Forward: Improving Land Transport Services for Competitiveness and Jobs

Land transport plays a critical role for mobility and the economy in Tunisia. The State plays, de jure and de facto, a central role in the sector (Table 9.1). The sector represents 15 percent of public and private investment, accounts for 7 percent of GDP, employs 4.5 of the workforce and represents 97 percent of goods transport. The road network consists of 19,546 km (from 19,117 in 2001) of classified roads (routes classées) or 117 kilometers per 1,000 square kilometers compared to 90 for Morocco. The share of paved roads has increased from 66 percent in 2001 to 80 percent in 2016. The share of large roads (more than 7.5 meters wide) reached 67 percent, up from less than 45 percent in 2001. Land transport services are organized around several public companies across

<table>
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<th>TABLE 9.1 Distribution of roles between the state and other public actors in the transport sector</th>
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<td>Planning, contracting</td>
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<td>Roads infrastructure (support to land transport)</td>
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<td>Bus stations</td>
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<td>Rolling stock</td>
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<td>Railway infrastructures (Metro, RRN, Infra/inter urban)</td>
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Source: Authors based on a revue of regulations and practices.
the different regions. The SOE *Transtu* provides urban and suburban passenger transportation services in the Tunis area. Twelve other regional companies do the same for each of the governorates and the connections between neighboring territories. The Tunisia National Railway Company (SNCFT) manages a railway network of 2,153 kilometers for passenger and goods transport.

**Significant investments have been made in recent years to improve accessibility, reduce congestion, and modernize the road network, but infrastructure building has suffered from delays.** The post-2011 period was characterized by strong demand and recognition of the need for greater connectivity, particularly of interior regions. This led to a significant increase in public investment in the road network. Annual investments in roads almost doubled during the 2011–16 period compared to the 2007–09 period, reaching TND 815 million per annum or 0.9 percent of GDP (Figure 9.1 panel A). These investments were allocated (Figure 9.1 panel B) to improve accessibility and to reduce urban congestion (28 percent of total road investment spending) in big

**FIGURE 9.1 Investments in the road network**

![Graph showing investments in the road network from 2008 to 2016. Panel A shows the level of investments with a line graph and a bar chart indicating the breakdown of investments. Panel B shows a pie chart with different categories of investments.]

*Source: Authors calculations, data from the BOOST database.*
cities and to a large extent in the Greater Tunis area. They also aimed at modernizing the network to improve its capacity and the service quality (28 percent), developing the highway network (26 percent of spending), developing and paving a series of rural tracks (16 percent), and undertaking new construction and heavy maintenance operations, including rehabilitation works and periodical maintenance (8 percent). Delays in project execution have been particularly significant between 2012 and 2014 due to poor planning, long land expropriation and compensation procedures, and a complex procurement system, which translates into higher costs.

Despite important progress in past years, proper road infrastructure maintenance remains a key issue. Since the early 2000s, significant efforts have been deployed for road maintenance, with the differentiation between routine maintenance (e.g., roads pavement, track trimming, cleaning, weeding of green spaces, sand removal) and periodical maintenance (e.g., heavy maintenance made necessary by exceptional circumstances such as repairing damages caused by flooding, maintenance of rural roads), with the latter outsourced to the private sector. Total maintenance spending has increased from TND 127 million in 2014 to TND 143 million in 2016, of which 59 percent was for routine maintenance. However, the Tunisian National Transport Master Plan estimated maintenance needs to be about TND 400 million in 2014 and TND 441 million in 2016, indicating that maintenance budgets covered only about a third of estimated needs.

The financial deficit of the highway network under concession to a SOE (Tunisie Autoroute) reached 42 percent of its revenues in 2016 (TND 38 million) and is expected to increase with ongoing extension of the network to lower traffic areas. The length of the highway network increased by 36 percent between 2001 and 2011, and by an additional 14 percent between 2011 and 2016 to reach 407 kilometers. Currently, there is an additional 331 kilometres under construction. Tunisie Autoroute (TA), an SOE created in 1992 with a state ownership of over 95 percent, manages the highway system under a concession scheme. Highway projects under construction are financed half by the State (in the form of capital increase to TA) and half by multilateral and bilateral institutions (loan guaranteed by the State). At the end of 2016, TA owed about TND 1.28 billion TD in the form of various credits from donors. One highway, the A1 Sud (Tunis-Sfax), accounts for about 65 percent of toll revenues (Figure 9.2), highlighting the low level of traffic in remaining highways and the overall low level of tolls (TND 2.6 cents per kilometer). Highways under construction are projected to have low traffic, which will further increase the structural deficit of the network and TA’s financial challenges. TA is characterized by high deficit and debt and slow revenue growth due to infrequent toll price adjustments.

The public transport companies (bus and metro) have experienced a structural decline in demand due to a rapid progression in private transport and their overall low performance. The three largest regional public transport SOEs experienced a large drop in passengers, from more than 490 million travelers in 2010 to about 335 million travelers in 2015 (a little over 40 percent of

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17It is estimated that the A1 Sud (Tunis-Sfax) highway has an average traffic of 46,000 private cars per day against about 6,000 and 7,000 cars per day on the two other highways (Tunis-Medjez and Tunis-Bizerte).
travelers are students). This represents a loss of more than 155 million travelers or 32 percent of travelers (Figure 9.3). The company for Tunis, Transtu, alone lost 134 million passengers during this period. In addition to these paying travelers, there are several socioeconomic groups that can travel free of charge, including staff from the Ministry of Interior, Defense, Finance, Justice, and Social Affairs, the wounded from the revolution, and the families of the martyrs, which are estimated at over 55 million per year for Transtu. In parallel, the number of private vehicles in service has increased considerably, from 0.95 million in 2010 to 1.18 million in 2016 (annual growth rate 3.7 percent). At the same time, the operational efficiency of transport SOEs dropped. For instance, at Transtu, operationally functional buses fell from 82 to 52 percent of the fleet between 2010 and 2015 (Figure 9.4) due to a combination of old fleet age and lack of adequate maintenance and repair investment and capacity. Four small private companies have engaged in urban passenger transport (in Tunis) and one company is ensuring intercity transport under a concession. However,

**FIGURE 9.2** Distribution of toll revenues across highways

![Distribution of toll revenues across highways](chart.png)

Source: Ministry of Transport.

**FIGURE 9.3** Number of passengers in the three largest regional transport companies

![Number of passengers in the three largest regional transport companies](chart2.png)

Source: Authors, based on companies' annual reports data.
the organized private sector companies have remained stagnant in their initial lines with no possibility of extension, while the various constraints continue to affect their development. For various reasons, the public authorities have favored other modes of transport (called unorganized transport: individual taxis, collective taxis). The rise in power of these modes of transports for more than a decade is in conflict with the market of organized private operators and even public operators. The phosphate transport by SNCFT has also fallen due to strikes and halts in phosphate production in the mining basin.

Transport SOEs appear to be structurally loss-making due to their low performance combined with low user fees. The State provided significant financial support to transport SOEs amounting to TND 564 million in 2016 (0.6 percent of GDP). The revenues of regional public passenger transport companies only covered 22 percent of their costs in 2015, down from 34 percent in 2010. The drop in costs was mainly due to operational inefficiencies and to the fact that tariffs have not increased in line with the real cost of services. Consequently, state support to the sector in the form of transfer for operational expenses has increased continuously, reaching TND 409 million in 2015 from TND 220 million in 2010 to compensate for the freeze in tariffs for almost all years since 2003. SNCFT’s revenues cover around 45 percent of its operating costs, while state transfers to support expenses reached TND 55 million in 2015 from TND 38 million in 2010. The State has also covered some of the transport SOEs social security contributions in past years (Transtu and SNCFT) in the face of their highly deteriorated financial situation and supported their investment efforts through on-lending of loans from donors. We identify all these transfers in the budget and estimate them at TND 564 million in 2016 or 0.6 percent of GDP.
To pave the way for better connectivity and mobility, Tunisia will need to restructure and improve the performance of its ailing transport SOEs; improve the investment prioritization, financial structuring, and selection of road infrastructure; and lay the ground for more private sector participation. The report makes the following recommendations:

- **Transport SOE restructuring and performance improvement and greater private sector participation:** Transport sector SOEs of all modes of transport are ailing and require deep and bold restructuring. Success in SOE restructuring and performance improvements will require developing and implementing clear objectives and mutual commitments between the SOE and the State, and to strengthen the capacity of line ministries and the government to supervise reform implementation. These mutual agreements would include giving SOEs more operational autonomy and ability to function on commercial rules. In this respect, pricing reform will be necessary for the sector to move to cost-recovery and competitive pricing combined with transparent and effective mechanisms that would allow the State to support access and mobility of targeted groups (e.g., students, low-income households, the elderly, etc.). Private capital and know-how can also help these changes materialize. In addition, Tunisia could encourage a more effective participation of the private sector in roads infrastructure, in particular for maintenance. It will also need to set up multiyear framework contracts and review the concession system for highways to enable greater private sector involvement. These changes will also require redefining and focusing the Ministry of Transport’s mission on the definition of policies for each category and mode of transportation, the development of the regulatory framework, and the monitoring and evaluation of policies as well as the strengthening of its capacity (strategic planning, economic analysis of projects, evaluation of transport policies, monitoring and evaluation, preparation of specifications and monitoring of concessions, etc.)

- **Strengthening investment prioritization, financial structuring, and selection:** This will require the adoption of a simple approach for planning, prioritizing, and selection of investments in the sector (clear and mandatory socioeconomic criteria for all public operators, need for economic feasibility studies for new investments, and cross-sector coherence railway-road). In addition, separating the feasibility studies from the technical studies would be highly desirable, as well as to start the latter only based on the most economically viable solution. Given the lack of fiscal space and high public debt, new investments should include a public-private partnership (PPP) analysis that brings out the elements of comparison between the two modes of financing (purely public or in PPP) in order to better inform decision makers about the alternatives offered and the possibilities of optimizing the allocation of public resources. This will also require developing tools and capacity within the administration to prepare, commission, and evaluate quality feasibility and technical studies in order to provide decision makers with a relevant quantitative and qualitative analysis to make the right investment decisions and the most appropriate method of implementation and exploitation.
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