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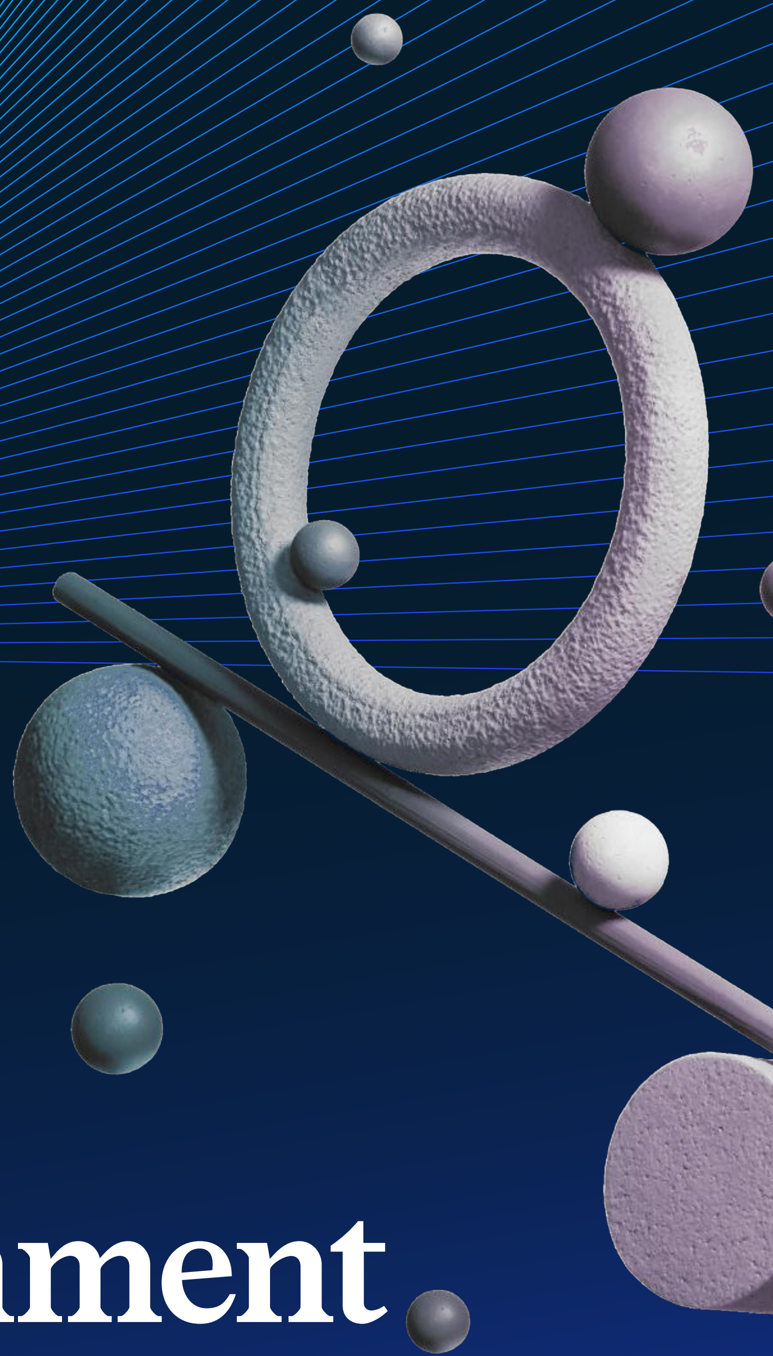

McKinsey on Government

Perspectives: Bridging the fiscal gap

Number 7, November 2019

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Contents

Introduction

We are delighted to present this latest compendium of articles from *McKinsey on Government,* the journal offering McKinsey's global perspective and strategic thinking on innovation in government productivity and performance. This compendium focuses on the significant fiscal challenges facing jurisdictions around the world. As a result of expenditures growing faster than revenues, political leaders are struggling to find the resources needed to invest for growth. It is our view that better, more proactive management of government finances can be transformational in every part of the world. Advances in analytical and management techniques have revealed previously difficult-to-achieve opportunities to reduce inefficient spending as well as revenue leakage due to noncompliance.

The seven articles in this compendium provide practical insights and solutions across the spectrum of public-finance activities. The first article offers a new way of thinking about resilience in government finances, along with a collection of ideas for better managing through the business cycle. The second focuses on the future of taxation, including grappling with trends that threaten the core stability of tax and revenue collections.

We then discuss solutions to vexing challenges in effectively managing government spending. The third article provides an architecture and best practices for managing spending reviews, a powerful but underutilized tool. The fourth moves toward the massive challenges that governments face in delivering $5 trillion in social spending and ways to overcome the increased pressures of matching their social-spending bills to the outcomes they wish to address.

Next, the compendium takes on two areas at the intersection of public finance and economic development. Special economic zones have exploded in popularity, but many have overlooked the critical role that customs agencies play in their success or failure. The fifth article thus brings out ways in which customs agencies can more resemble enablers and facilitators than rule enforcers for special economic zones, helping them flourish. Similarly, governments express a desire to mobilize private capital but often lack the tools and capabilities to systematically access it at scale. In the sixth article, we look at the financing gap in infrastructure and how three levers can help governments and development finance institutions increase private-sector financing. The compendium closes by zooming in on Africa—including the $100 billion opportunity in public finance and specific ideas and interventions around tax and revenue collections.

Wherever in the world this compendium finds you, we hope these articles are thought-provoking and inspire you to take action for the betterment of your citizens and society.

Sincerely,

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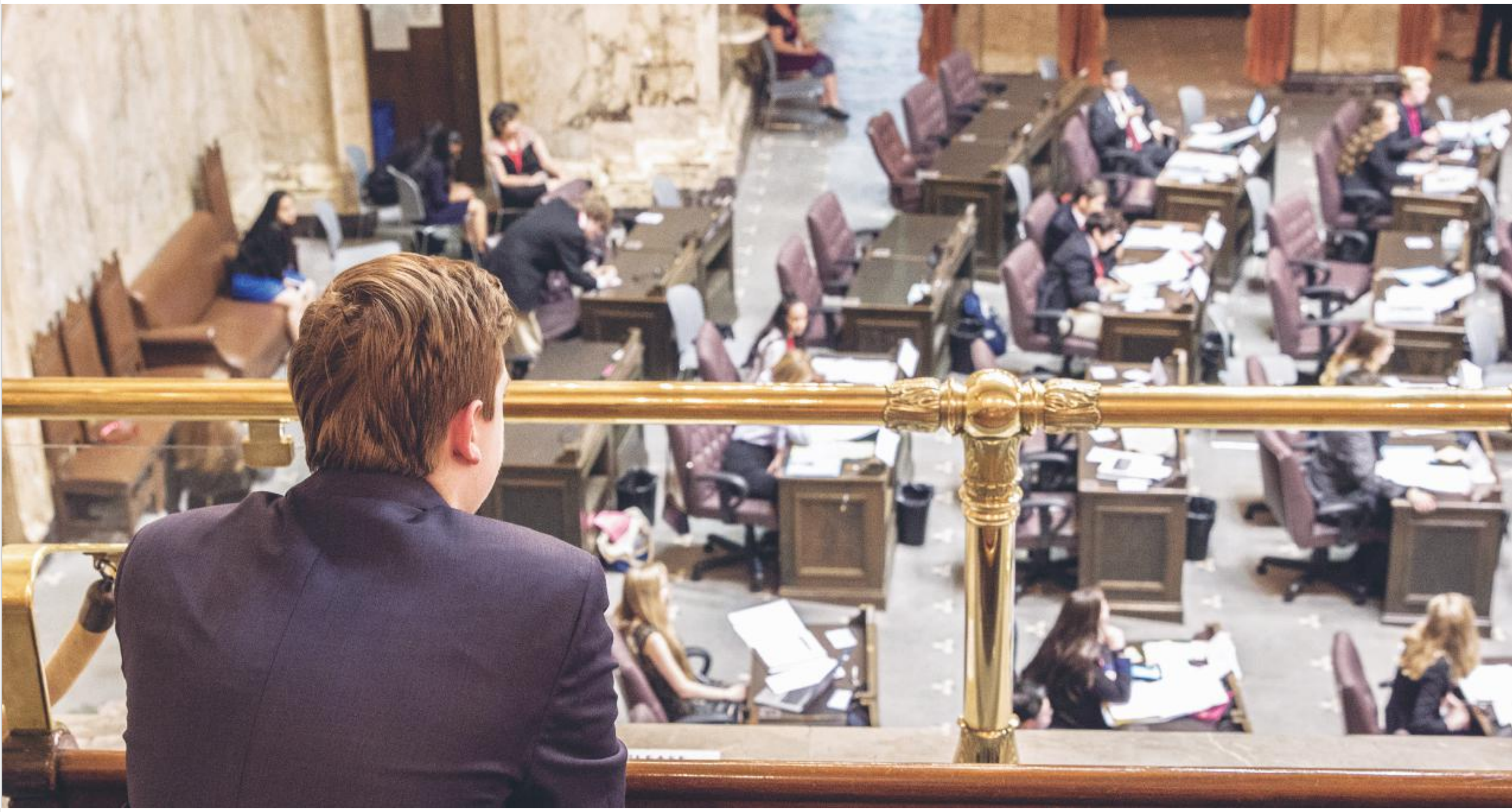
Fiscal resilience: Tools to manage state budgets in an age of uncertainty

When the next economic downturn comes, states will need to be more deliberate about how they manage expenditures and revenues than ever before.

by Jonathan Davis, Navjot Singh, and Todd Wintner



An emerging theme across US states—and many regional governments in developed economies—is persistent fiscal uncertainty. Demographic change, spiraling healthcare inflation, and underfunded liabilities have placed states under unyielding fiscal pressures. A more complex and dynamic economy only serves to exacerbate these challenges. Global trade patterns, increased labor and capital mobility, and new technologies are making it harder for states to plan for the long term. In the past ten years, there has been no shortage of budget office paralysis and legislative gridlock owing to these uncertainties.

Unfortunately, paralysis and gridlock are events that few states can afford, as business cycles are notoriously difficult to predict. Too often we see these kinds of challenges taking priority over "no regrets" moves that every state could take right now to boost their resilience. Despite the fact that higher-than-expected revenues led to a generally positive fiscal 2018—and at least 30 states put money away to cover future liabilities—most states are woefully unprepared for the next economic downturn.[1] Nearly half, for example, have less money saved in rainy day funds than they did prior to the Great Recession.[2]

It is therefore prudent to routinely and actively prepare for recession, whenever it may come. In making those preparations, the lessons of recent history are a useful reference point. At the peak of the most recent recession, US state tax revenues fell 17 percent below their level one year earlier, and personal income taxes were 27 percent lower. While increases in federal transfers helped soften the blow, states accumulated $500 billion in budget shortfalls from 2009 to 2012—more than double the amount in the previous recession.[3] In response, some 40 states enacted tax or fee hikes between 2008–09 and 2010–11.[4] Among the hardest hit expenditure areas were K–12 and higher education. The impact included cancelled school breakfast programs, cuts to universal pre-K, and reductions in adult-literacy programs.[5] Healthcare, employee benefits, and social programs also took a hit in most states.

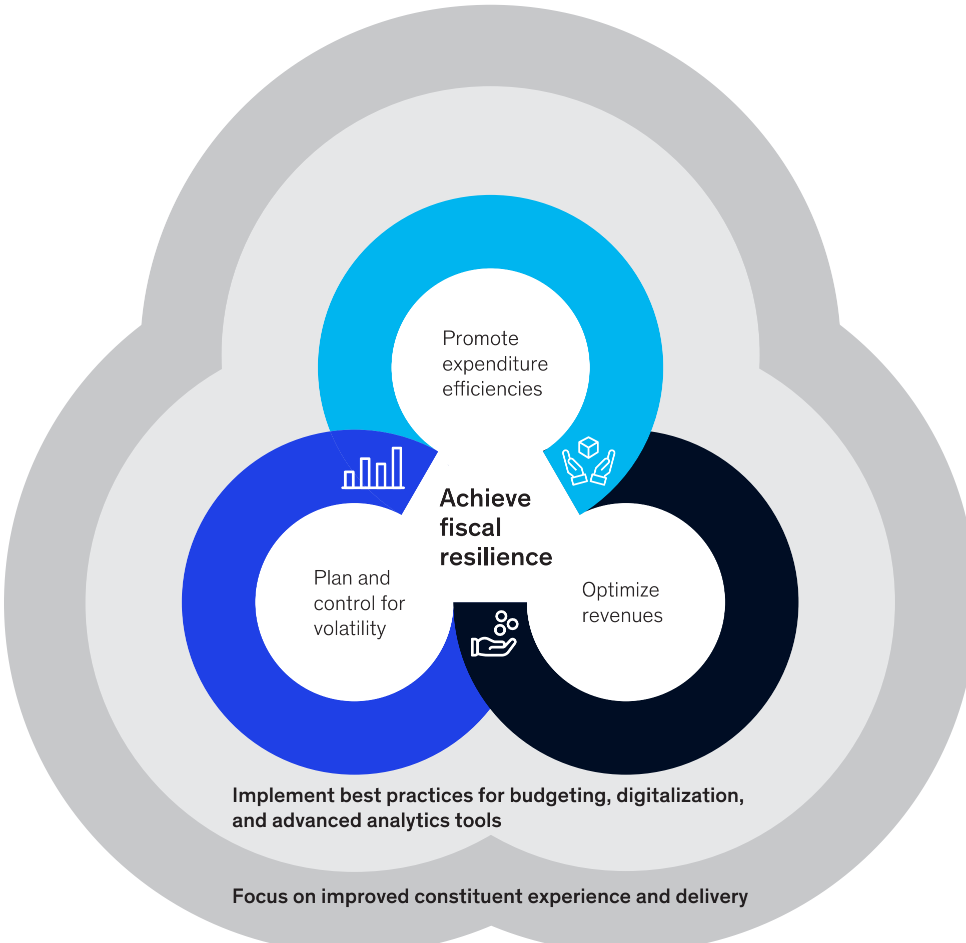
In this article, we explore a range of tools states can use to assess their readiness for—and then prepare for—fiscal uncertainty. These include opportunities to elicit more value from each dollar spent, optimize revenues, and control for volatility (Exhibit 1). Across these goals, we focus on three tools in particular: activity-based budgeting to increase transparency, digitalized services and processes, and advanced analytics to inform better decisions. Together, these tools offer the chance to significantly boost employee productivity, offsetting the impact of job cuts made over recent years. No doubt, implementation is a complex task given the number and diversity of stakeholders involved. However, the alternative risks more disruptive interventions when fiscal imbalances worsen.

At the peak of the most recent recession, US state tax revenues fell 17 percent below their level one year earlier, and personal income taxes were 27 percent lower.

[1] *The fiscal survey of states*, National Association of State Budget Officers, Fall 2018, nasbo.org.
[2] Barb Rosewicz, Jonathan Moody, Daniel Newman, "States make more progress rebuilding rainy day funds," Pew, August 29, 2018, pewtrusts.org.
[3] Tracy Gordon, "State and local budgets and the Great Recession," Brookings Institution, December 31, 2012, brookings.edu.
[4] Gordon, "State and local budgets and the Great Recession," December 31, 2012.
[5] Nicholas Johnson, Jeremy Koulish, and Phil Oliff, "Most states are cutting education," Center on Budget and Policy Priorities, February 10, 2009, cbpp.org.

Exhibit 1

States can use a multipronged approach to build fiscal resilience.



Building resilience through expenditure reductions

For the past several years, three categories of spend—primary and secondary education, Medicaid, and higher education—have contributed nearly two-thirds of state general fund expenditures.[6] The importance of these expenditures, in terms of impact on both budget and everyday life, means many service transformations have focused on these three areas. However, there are many "no regrets" efficiency initiatives where states have made significant progress (Exhibit 2). Many of these are enabled through recent innovations in technology and management techniques, allowing states to do provide better citizen outcomes at lower costs.

Optimizing revenue collection

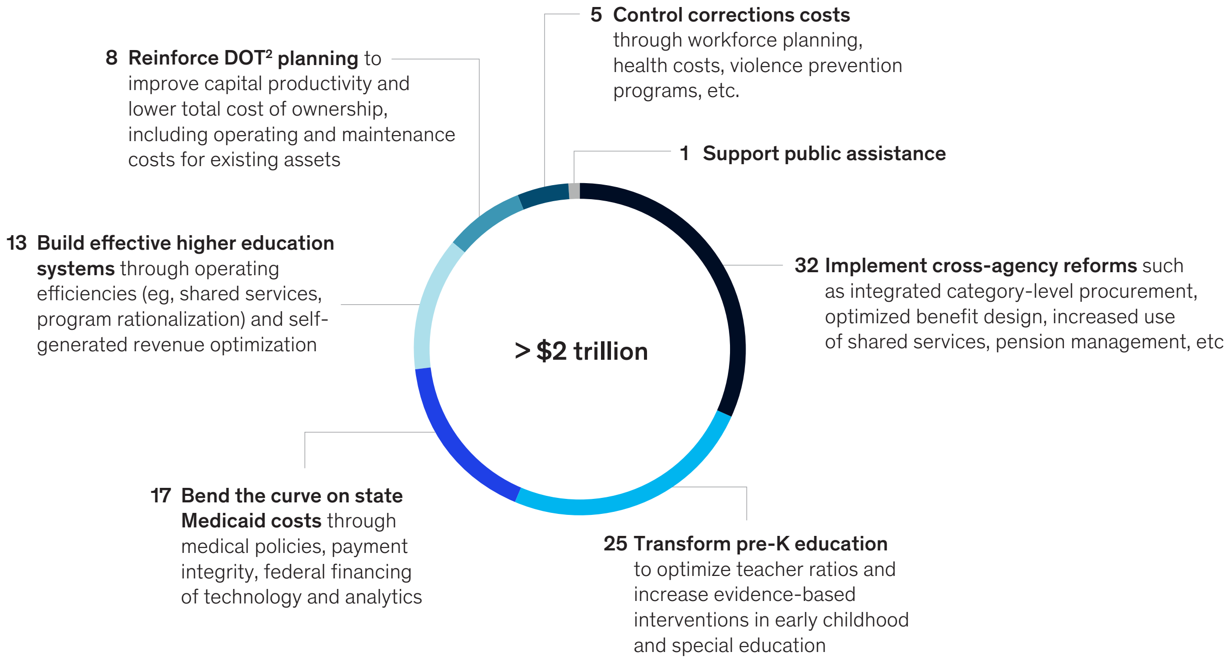
The formal state budgeting process tends to be dominated by debates over spending and tax policy priorities. As a result, many states overlook administrative actions that could optimize revenues (despite the fact that tax authorities often propose to close sources of revenue leakage). Admittedly, action is less urgent when economic factors lead to a strong revenue performance. In 2018, following

[6] *The fiscal survey of the states,* Spring 2017; Fall 2017; Spring 2018; Fall 2018; Spring 2019.

Exhibit 2

States can boost budget resilience through expenditure reductions.

2018 projected share of state expenditures, %[1]



[1] Figures may not sum to 100%, because of rounding.
[2] Department of Transportation.
Source: NASBO 2018 Projections

steep declines in oil and gas prices, revenue gains were driven by unusually high income-tax payments, a positive stock market performance, and a modest recovery in most energy-producing states. However, secular demographic trends (a shrinking working-age population) and escalating healthcare costs suggest that pressure to increase revenues will continue to rise.

As policy makers debate broader tax policy reforms, every state government can take four courses of action in the short term *without* major policy overhauls. These should focus on compliance; expenditures; auxiliary revenues; and licenses, fines, and fees (Exhibit 3).

Improving value for every dollar spent on citizen service delivery

While individual situations vary, the most resilient and efficient states employ three common performance enablers. The first is to bring transparency to the cost and value of funds spent on delivering citizen services. This can be achieved through activity-based budgeting, which can help tie the cost of service delivery to outcomes. Second, investing in digitalized service delivery can not only improve the citizen experience but also realize operational efficiencies. Finally, implementing advanced analytics helps to drive insight and sharpen decision making.

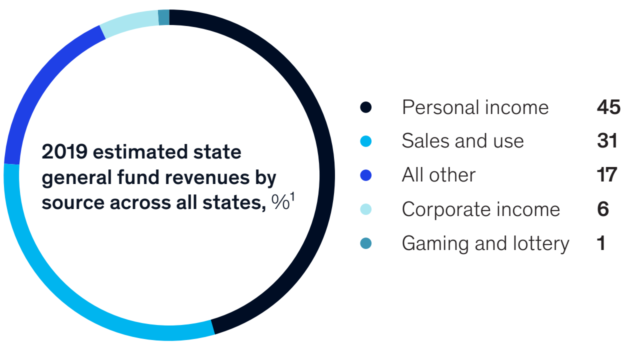
Bringing transparency to value for money

All states struggle to generate granular views of activity-level finances and to calculate the real cost of service delivery. Most agency accounting systems lack the capability to convert unit-, functional-, and fund-level financial statements to activity- and delivery-based views. Nonetheless, transparency in these areas is critical to identifying efficiency opportunities and tying the cost of delivery to performance outcomes.

Exhibit 3

States can employ four levers to optimize revenues without major tax policy overhauls.

State fiscal budgets rely on several sources of revenue . . .



. . . which can be enhanced by employing four key levers.

Tax compliance. Use advanced analytics to target high-ROI cases, expand correspondence audit capacity, and ramp-up past due collections efforts

Tax expenditures. Rationalize use of incentives to ensure ROI

Auxiliary revenues. Optimize revenue collected from assets, including real estate sale-leaseback arrangements, monetizing rights of way, maximizing concessions

Licenses, fines, and fees. Ensure state is achieving market rates for services ranging from background checks to inspection fees; ensure timely collection of past-due police fines and other charges

[1] Figures might not sum to 100%, because of rounding.
Source: NASBO 2018 projections

Leading states have shown how focusing on transparency can produce spectacular results. One state identified an opportunity to save $800 million in procurement and capital spending in transportation without affecting the quality of its service. It did so by bringing transparency to the total cost of ownership. It moved to centralized sourcing and ran a segmentation and diagnostic exercise to identify other potential savings. It was also able to reduce procurement turnaround time by around 60 percent, allowing for more flexible deployment of resources.

A vital tool for transparency is activity-based budgeting. This requires aligning roles and responsibilities over specific areas of the budget and ensuring clearer lines of communication between policy makers, budget leads, and agency representatives—all of whom should share accountability for execution. A relentless focus on outcomes can foster internal discipline in attributing costs to the appropriate missions. The process invariably reveals costs that do not support high-priority outcomes, sometimes because of mismanagement but more frequently because of programs that used to be priorities. Agencies in these cases often lack processes to redirect funds.

The requisite shift is of both mind-set and capability. Successful states often start small—focusing on a program or agency for which the cost is relatively high compared with the quality of service delivered. This approach has also been shown to work around the world.[7] An Australian state government, for instance, responded to rising crime rates through a metric-driven budgeting process that forced departments to prioritize spending on activities proven to reduce violent activity and adopt new practices for reducing burdens (for example, paperwork and court appearances) that took police off the streets. As a result, the state freed up nearly 10 percent of its annual budget and was able to reinvest in high-value preventative activities such as cybersecurity and predictive analytics.

Implementing digitalization and automation

Properly implemented digitalization can transform how services are delivered and support sharper, more efficient operational capabilities. Innovations such as unified authentication platforms, fully digital

[7] Rima Assi, Jonathan Dimson, Andrew Goodman, and Jens Riis Andersen, "Spending reviews: A more powerful approach to ensuring value in public finances," March 2019, McKinsey.com.

Case study

A Medicaid transformation led to significant savings

A state governor set out to expand value-based care to as many as nine in ten residents. The state's Medicaid agency was one of the largest in the US—the agency had an annual budget of more than $20 billion and costs were rising by a daunting 8.9 percent a year, so the task was significant. A key element of the process was to coalesce multiple stakeholders around three waves of episodes of care. The team designed a Patient-Centered Medical Home model (eventually launched by 111 practices) and analytics suite. It also launched a new behavioral healthcare model and health IT strategy. The transformation required more than 100 stakeholder meetings and involved 11 payers and providers. The eventual impact was significant. The state was able to lock in $250 million of annual savings, with 40 episodes launched across managed care plans and 800,000 people seeing improvements in their experience.

registration, and online transaction tracking make it easier for citizens to learn about and access services, leading to higher levels of satisfaction.

Governments that embrace reforms reduce the risk of poor delivery and improve employee engagement, particularly when employees are involved in redesigning how services are delivered. Digitalization has been shown to reduce stigma toward citizens receiving social benefits and helps ensure beneficiaries are best matched with programs that suit their needs.

When it comes to implementation, perhaps the most important pitfall to avoid is poor prioritization: failure to understand the citizen or civil-servant need, map the service delivery journey, or focus on the right pain points. Equally, states must put in place robust technology delivery and governance—establishing metrics and methodologies to continuously align activities with target outcomes.[8]

Applying advanced analytics

Data and analytics are powerful tools that can help governments make better decisions about how to serve their citizens. The large volumes of data sitting on state records mean that states are also well-equipped to highlight leakages; motivate compliance; increase participation in the formal sector; and flag waste, overcharging and fraud.

A useful tool is a nudge program, which can be aimed at individuals and businesses at risk of underreporting income. In addition, states may wish to consider building centers of excellence, which can act as focal points for developing new analytics use cases.

Analytics can also serve social purposes.[9] One Midwestern state faced a growing incarceration rate, persistent violence in corrections facilities, and high recidivism. It built an algorithm-based risk model that helped correction facilities better segment offender populations, predict violent behavior, and develop preemptive interventions. The results were drastically reduced rates of violent crime, increased facility capacity, and much improved employee satisfaction.

Getting started—a three-phase approach

The first step of any transformation carries the most jeopardy because it sets the direction of travel. It is therefore critical that relevant stakeholders (budget officers, agency leads, and cross-agency

[8] Jens Riis Andersen, Matthias Daub, Andrew Goodman, and David Taylor, "How governments can harness the power of automation at scale," February 2019, McKinsey.com.
[9] Anusha Dhasarathy, Sahil Jain, and Naufal Khan, "When governments turn to AI: Algorithms, trade-offs, and trust," February 2019, McKinsey.com.

administrators) are involved from the start. We find that full- or half-day offsite brainstorming sessions are an excellent way to define priorities and bring stakeholders together under a structured approach. These can be designed around three key phases: assessment, planning, and implementation.

Phase 1: Assess baseline risk and performance

Transformation must be predicated on a granular view of the current state of play. As with any fiduciary body, states should conduct regular stress tests to understand readiness for economic downturn or other potential shocks to revenues and expenditures. Benchmarking against peers is helpful to quantify risk, being conscious that few states are currently well-equipped for severe disruptions.

At the highest level, some of the metrics we rely on most to help states prioritize risks to fiscal stability include the following:

— *Overall economic health.* Trends in overall output, wage growth, and house prices can be helpful indicators in understanding a state's macroeconomic health. Equally important are regional and socio-economic distributions to understand how downturns could affect more vulnerable segments of the population disproportionately.

— *Revenue volatility.* History often repeats itself. Looking back at tax and fee receipt volatility since the Great Recession can provide insights into potential stress on future income. Changes in taxpayer concentration and tax policies should also be included in projecting future downturn revenue scenarios.

— *Credit and market access.* Volatility in a state's credit rating not only affects its cost of borrowing and ability to raise capital; it also suggests potential weaknesses in its underlying fiscal safety net (for example, debt ratios).

— *Liability management.* Many states have survived mounting budget shortfalls by underfunding liabilities, namely pensions and retiree healthcare. Changes in Governmental Accounting Standards Board accounting standards and more conservative projection models have made funding gaps more acute for many, further limiting the option to divert long-term expenditure toward operations in periods of fiscal stress.

— *Discretionary funding and budget flexibility.* Each year, states have seen higher proportions of annual expenditures tied up in fixed costs, such as debt service, and nondiscretionary obligations. Increased restrictions on general fund revenues mean states have less space to make strategic pivots in spending in response to revenue volatility.

— *Liquidity and forecasting capability.* Much has been written in recent years about the slow pace at which states have rebuilt their cash reserves, or rainy day funds, since the most recent recession. In 2008–10, the ability to use cash reserves was a major differentiator among

History often repeats itself. Looking back at tax and fee receipt volatility since the Great Recession can provide insights into potential stress on future income.

Case study

One state budget office identified $1.3 billion in savings in only ten weeks

A state facing financial pressure made a decision to transform its fiscal situation through bold cost and revenue initiatives. The state worked to identify, quantify, and implement opportunities to shave $1 billion off its budget over two years.

The ten-week project started with a series of interviews and workshops across agencies, which led to a number of proposals. They then analyzed potential cost and revenue benefits and worked with senior leaders to prioritize actions, taking into account the full range of relevant political and financial factors. Once a path forward was agreed upon, the state developed an implementation plan and communication strategy. At least 15 agencies participated.

states able to weather the storm versus those that required major tax increases or spending cuts. Another fiscal health factor worth focusing on is agency-level forecasting and project capabilities. Even in years of strong revenues, many states have required midyear budget adjustments because of cost overruns or failures to manage cash flows appropriately across fiscal year cycles.

— *Service delivery performance.* In addition to forecasting capabilities, benchmarking major categories of expenditure (for example, education, health, transport) vis-à-vis both peers and outcomes (for example, academic achievement, rates of reincarceration, and on-time completion of capital projects) can enable speedy assessment of opportunities to control spend across major categories. While top-down benchmarks rarely unlock policy directives, they can help define the "burning platform" for prioritizing efforts to achieve fiscal resiliency.

A clear sense of where vulnerabilities are most likely to emerge would allow policy makers to develop early hypotheses and prioritize initiatives across revenues, expenditure, and cross-cutting management practices. Leaders can also use this time to get clear on scope, targets and timing of change programs.

Quick wins can help build momentum for larger programs. One area worth looking at may be existing contracts and lease agreements. In any event, leaders should prioritize initiatives that may achieve demonstrable benefits in six to nine months. In all cases, individual agencies should be a key part of the process.

Phase 2: Refine, plan, and pilot

Armed with a clearer set of aspirations, budget leaders can refine the budget and move to small-scale pilots. The process at this stage becomes one of prioritization and targeting, based on initiative size, timing, and feasibility in terms of political will and capabilities. State agencies often begin with standardized driver trees that allow them to identify overlaps with common pockets of opportunity in peer states.

In one example, a major US city used a "spend cube" to group cross-agency procurements by expense category and vendor. The city could then identify significant growth in its fleet expenditure that could be curbed through enforcement of uniform employee use policies, consolidation of fuel purchasing, and vehicle renewal.

Another state benchmarked performance of its HR, IT, and internal finance functions against that of peers to build an investment case for a statewide business support center that would serve as a cornerstone initiative in the annual budget. The center integrated 4,100 employees across 65 agencies to promote $100 million in annual savings while reducing backlog service requests by nearly 60 percent.

Phase 3: Roll out, scale, and measure impact

The final step is to test and refine before implementing successful pilots at scale. Our research has found that successful transformation efforts are defined first by performance improvement, rather than savings or resilience.[10] Leaders should draft a road map for change with this lesson in mind, taking into account impacts across functions, IT frameworks, and geographies. A dedicated change-management office is a sensible investment and can save operational stress down the line. At this stage the challenge moves from strategic to operational. Again, however, it's important to work efficiently across, and with the cooperation of, relevant agencies.

Once initiatives have gone live, the work should not end. Agencies should monitor progress and feedback to budget holders with a view to developing strategies and improving outcomes.

Amid budget pressure, technological change, and rising uncertainty, governments need to find new ways to manage their budgets. Doing so will undoubtedly involve initiatives to boost revenues and cut costs. A vital first step, however, is to reassess budget-setting processes and, more fundamentally, embrace new ways of thinking about fiscal planning. Digital tools and automation are necessary ingredients that, in turn, require a strategic approach and new capabilities that many states have only just begun exploring. Once in place, however, they offer increased resilience across economic cycles and the potential for radical transformation of the citizen experience.

[10] Tera Allas, Roland Dillon, and Vasudha Gupta, "A smarter approach to cost reduction in the public sector," June 2018, McKinsey.com.

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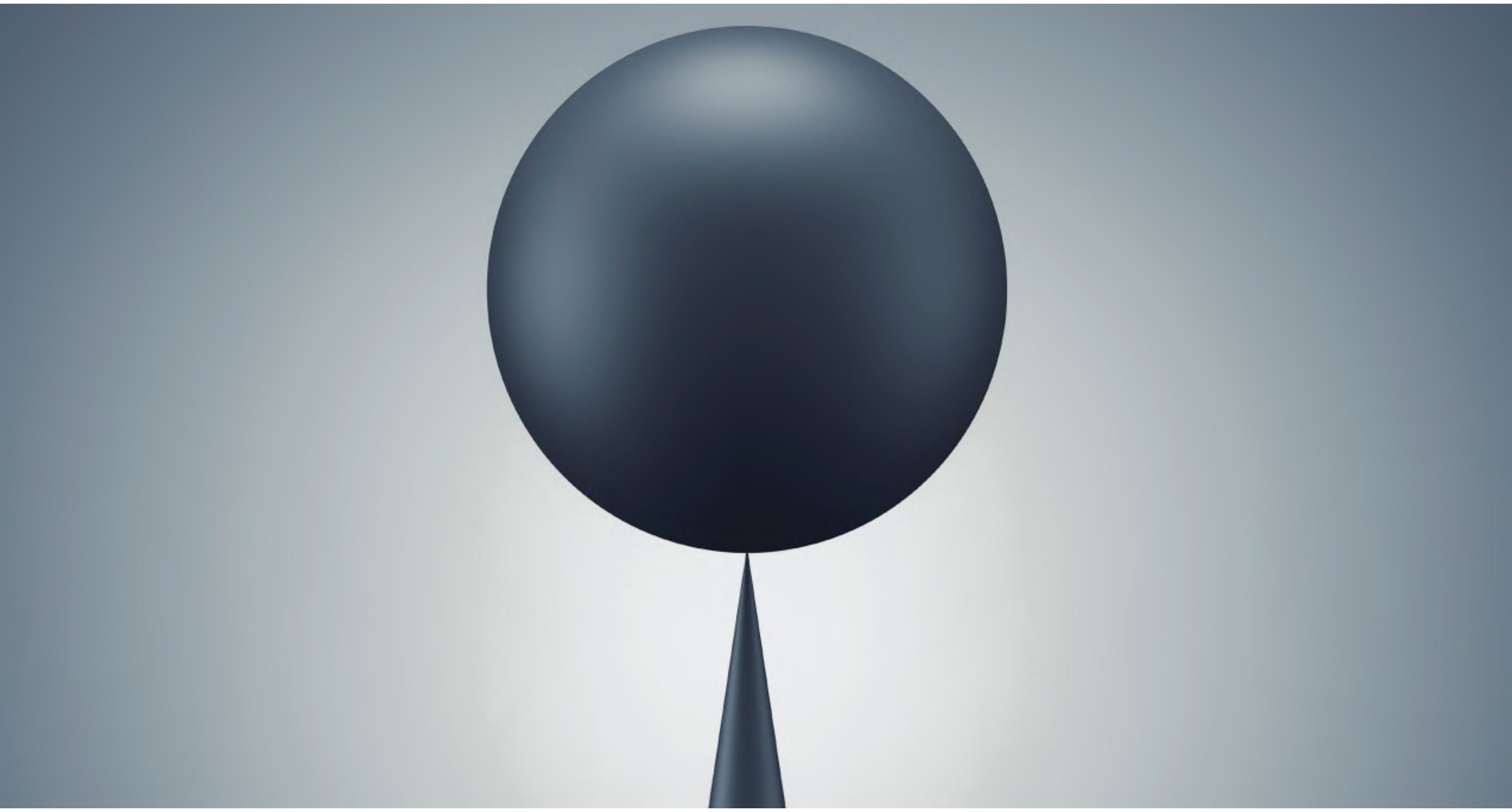
How smart choices on taxation can help close the growing fiscal gap

The growing fiscal gap has policy makers in a difficult position. Swift action in a few areas can help them improve the operational efficiency of fiscal systems.

by Aurélie Barnay, Jonathan Davis, Jonathan Dimson, and Marco Dondi



Governments around the world have implemented a range of fiscal and debt measures to fund policy initiatives over recent decades. As a result, tax revenues as a proportion of GDP have risen four percentage points across countries in the Organisation for Economic Co-operation and Development (OECD) since 1980. However, many governments remain inadequately funded. Despite higher tax revenues, spending is rising faster than income, leading to widening budget deficits and higher levels of debt.

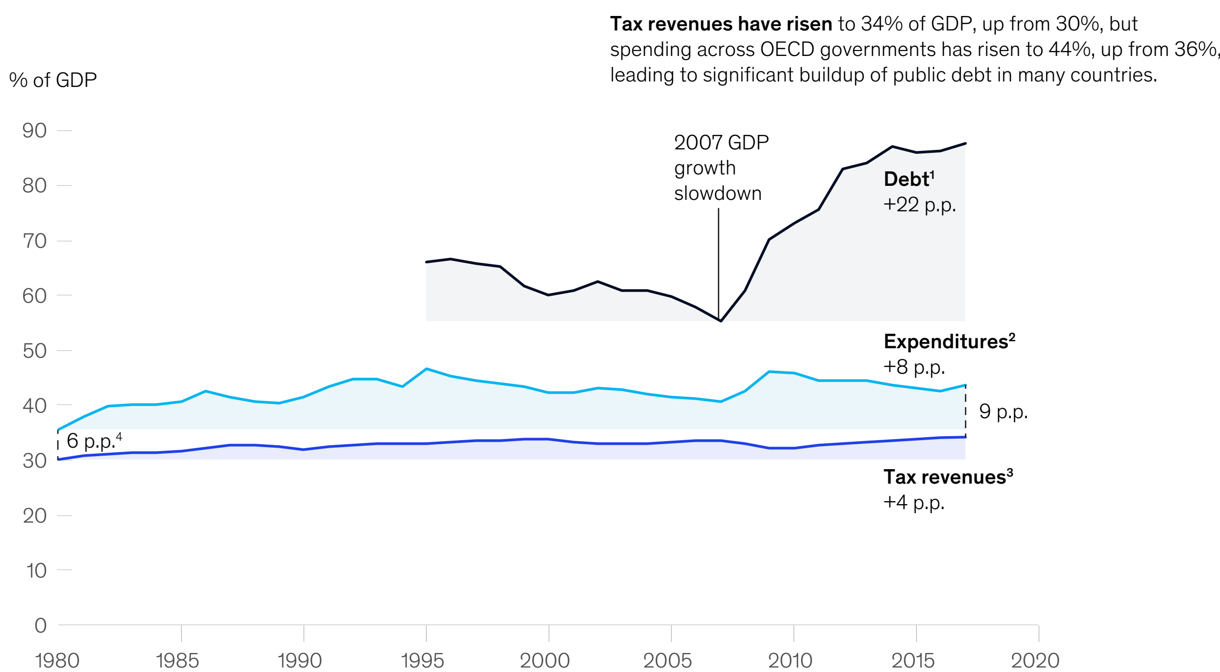
Four distinct trends are playing out: increasing automation in the workplace, leading to pressure on employment; evolving global trade through the proliferation of e-commerce and digital business, raising questions over cross-border taxation; rising self-employment; and aging populations. Each of these could further widen the fiscal deficit in the years ahead. Moreover, we see all four accelerating, placing policy makers in an ever-tightening fiscal bind.

Basic economics provides two options for balancing the books: increase revenues or decrease spending. This article focuses on options related to revenues and administration to improve the efficiency of collecting taxes.[1] With respect to policy, there are questions within the realm of taxation that will require consideration because the tax base upon which current policies were founded is changing. We explore the practical implications of several options and acknowledge the numerous consequential societal questions deeply entwined with tax policy, such as income inequality and the role of automation in future economic development. Understanding that the policy landscape is complex and challenging, we propose a set of actions that governments can

[1] For more on decreasing spending options, see Rima Assi, Jonathan Dimson, Andrew Goodman, and Jens Riis Andersen, "Spending reviews: A more powerful approach to ensuring value in public finances," March 2019, McKinsey.com.

Exhibit 1

Over the past 37 years, average tax revenues in OECD countries have risen less than expenditure.



[1] Gross debt of general government.
[2] Total expenditure of general government.
[3] Total tax revenues.
[4] Percentage point.

Source: Global Revenue Statistics database, OECD, September 4, 2019, stats.oecd.org; National Accounts at a Glance database, OECD, September 4, 2019, stats.oecd.org take to fundamentally improve the operational efficiency of fiscal systems and capture $1 trillion of the existing $5 trillion tax gap.[2]

The bottom line for governments is that there are no easy answers. Whether they seek to increase taxation or boost efficiency, they are likely to face headwinds. Still, decisive and rapid action is essential to optimize tax collections and keep pace with an inevitable rise in demand for services.

Revenues rise, but not as much as spending

Tax revenues in OECD countries have risen slightly over the past 35 years. However, spending has risen higher, leading to widening deficits that governments have bridged with debt (Exhibit 1). OECD tax revenues were 34 percent of GDP in 2017, a relatively modest increase from 30 percent in 1980 that's partly due to a decline in corporate tax rates in many countries. Spending, meanwhile, jumped to 44 percent of GDP in 2017, from 36 percent in 1980.[3] Because of tax deficits and the effects of the 2008 financial crisis, the average ratio of gross debt to GDP rose from 66 percent of GDP in 1995 to 88 percent in 2017.[4]

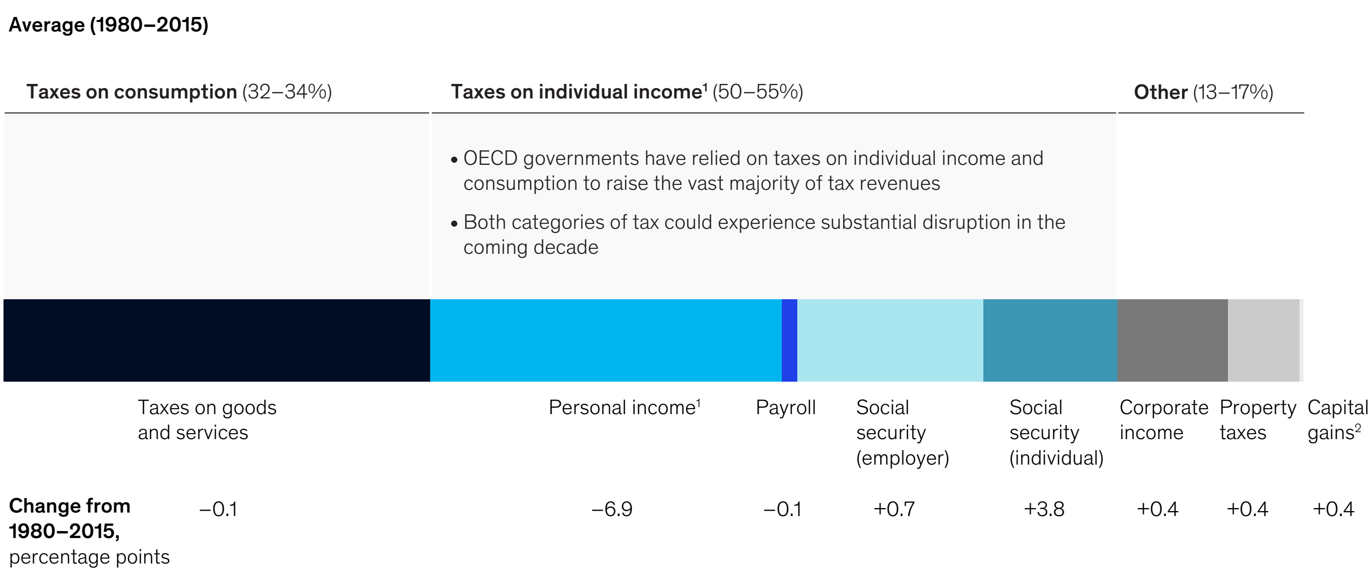
Sources of tax revenue have remained stable over time (Exhibit 2). Over three decades, personal

[2] The tax gap is the difference between the total amount of taxes owed to the government and the amount actually collected.
[3] Global Revenue Statistics data set, OECD, 2018, stats.oecd.org; and national accounts at a glance data set, OECD, 2018, stats.oecd.org.
[4] 1995 is the first year for which OECD-wide comparative data are available; debt includes gross debt of general government; national accounts at a glance data set, OECD, 2018.

Exhibit 2

While corporate and capital gains taxes can be under the media spotlight, 82 to 89 percent of taxes raised are on payroll or income and on consumption or excise duties.

Tax revenues by category, % of total tax revenue, OECD average



[1] Excludes individual capital gains.
[2] Individual and corporate.

Source: Global Revenue Statistics database, OECD, September 4, 2019, stats.oecd.org

We see several economic and social trends that are set to stem the flow of revenues over the coming years.

income and consumption together accounted for 82 to 89 percent of revenues.[5] The biggest single contributor was payroll and income tax, accounting for 50 to 55 percent of revenues (even though the contribution of personal income tax declined by nearly 7 percentage points). Consumption and excise duties remain little changed at 32 to 34 percent of revenues.[6]

Disruption on the horizon—four revenue headwinds

Despite some fluctuations, the fiscal picture has been notably stable for four decades. That said, there is no guarantee that the current situation will persist. In fact, we see several economic and social trends that are set to stem the flow of revenues over the coming years. These result from the impact of technology, the changing world of work, and shifting demographics in advanced economies. Four stand out as potentially significant:

— Increased automation in the workplace, leading to employment disruption

— Evolution of global trade

— Self-employment and the gig economy

— An aging population

Increased automation in the workplace

According to McKinsey Global Institute (MGI) research, the impact of automation and artificial intelligence may require 3 to 14 percent of workers (and around a third in advanced economies) globally to switch jobs by 2030.[7] Of course, the impact will vary from country to country depending on industry mix and pace of adoption. Industries such as accommodation and food services and manufacturing are particularly susceptible. In manufacturing, an estimated 60 percent of tasks and processes are likely to be undertaken by machines in the future. Jobs that require more pronounced human intervention, such as education, are less likely to be impacted. However, even relatively immune sectors will probably see more than a quarter of jobs disappear over the coming decade (Exhibit 3).

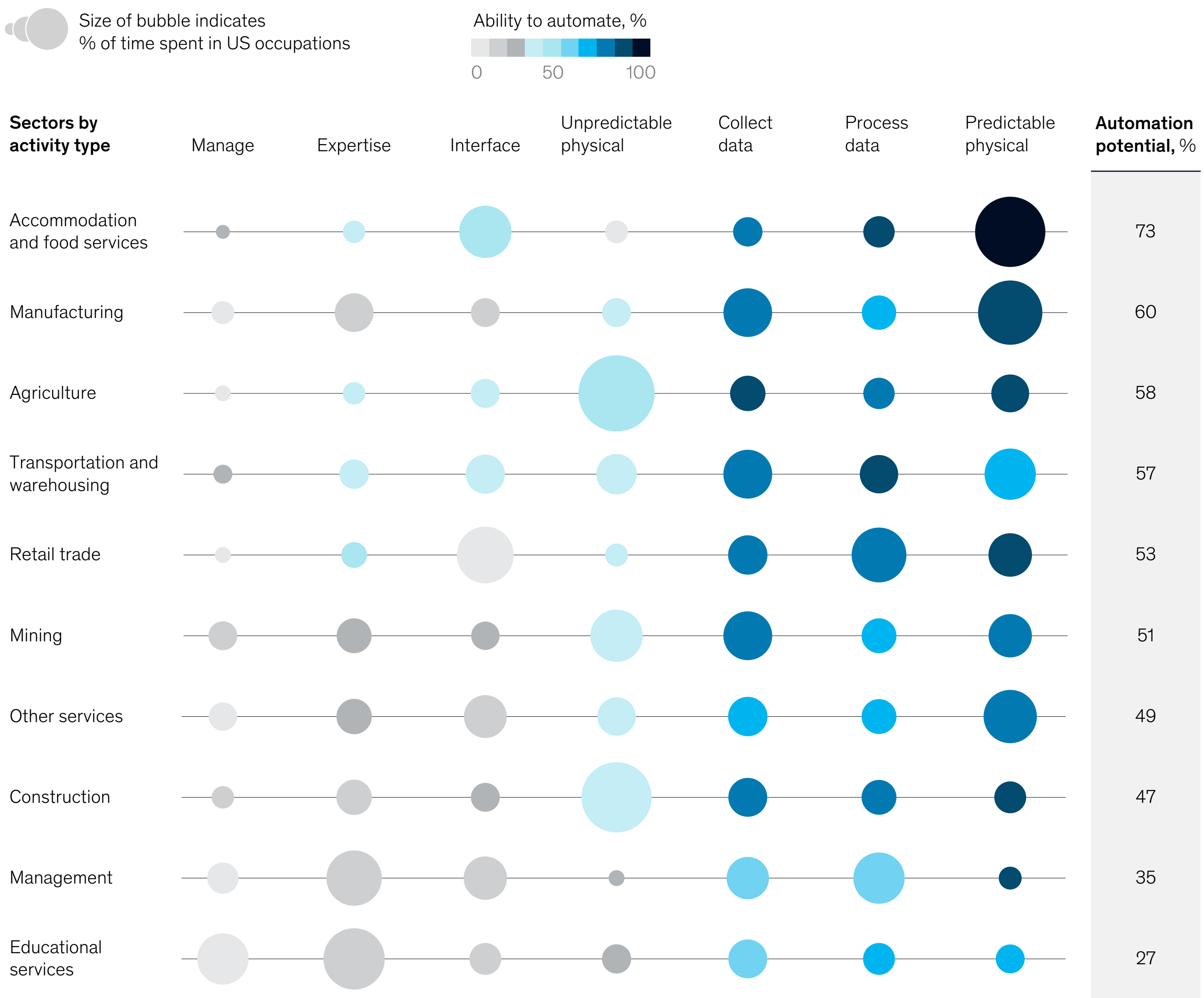
While automation reduces the need for employment, it also creates jobs. Many of the jobs seen today, from web designer to drone pilot, did not exist 25 years ago. From an income tax perspective, this would suggest automation is a benign phenomenon.

However, two significant unknowns are the pace of change and the impact on wages. As automation accelerates, jobs are being replaced more quickly. It is incumbent on employees to retrain, and there is a danger that this process may slow down the automation juggernaut. This necessary friction may present a temporary threat to net employment levels. In addition, there are likely to be sector-specific impacts, with automation leading to significant wage pressure in some

[5] Excluding individual and corporate capital gains but including taxes on income from labor and other sources, social security, and payroll taxes; Global Revenue Statistics data set, OECD, 2018.
[6] Global Revenue Statistics data set, OECD, 2018.
[7] For the full report, see "Jobs lost, jobs gained: Workforce transitions in a time of automation," McKinsey Global Institute, December 2017.

Exhibit 3

Automation will require about 15 percent of workers globally to switch occupations.



Note: Cost estimate includes adoption of artificial intelligence.

Source: US Bureau of Labor Statistics; McKinsey Global Institute analysis

sectors where middle-income is disappearing. If automation were to trigger a downward shift in wages in some sectors, it could mean lower income tax and consumption tax revenues in the longer term. On the other hand, if displaced workers are retrained and given new skills, automation could lead to an overall increase in the quality of jobs with potentially higher wages.

Evolution of global trade

The trade landscape is evolving. Trade in cross-border services, for example, is growing more than 60 percent faster than trade in goods, based on MGI estimates. We estimate that services (including gross services trade, services embedded in goods trade, intangibles provided to foreign companies, and free cross-border digital services) account for more than half of the value added in overall trade.[8]

Data are a valuable commodity. Global value chains are being reshaped by cross-border data flows and new technologies, including digital platforms, the Internet of Things, automation, and artificial intelligence. The use of cloud computing has accelerated, with more than 50 percent of businesses using cloud computing services in 2018 in Denmark, Finland, and other countries. In some scenarios, these technologies could dampen trade in goods and boost trade in services over the coming decade.

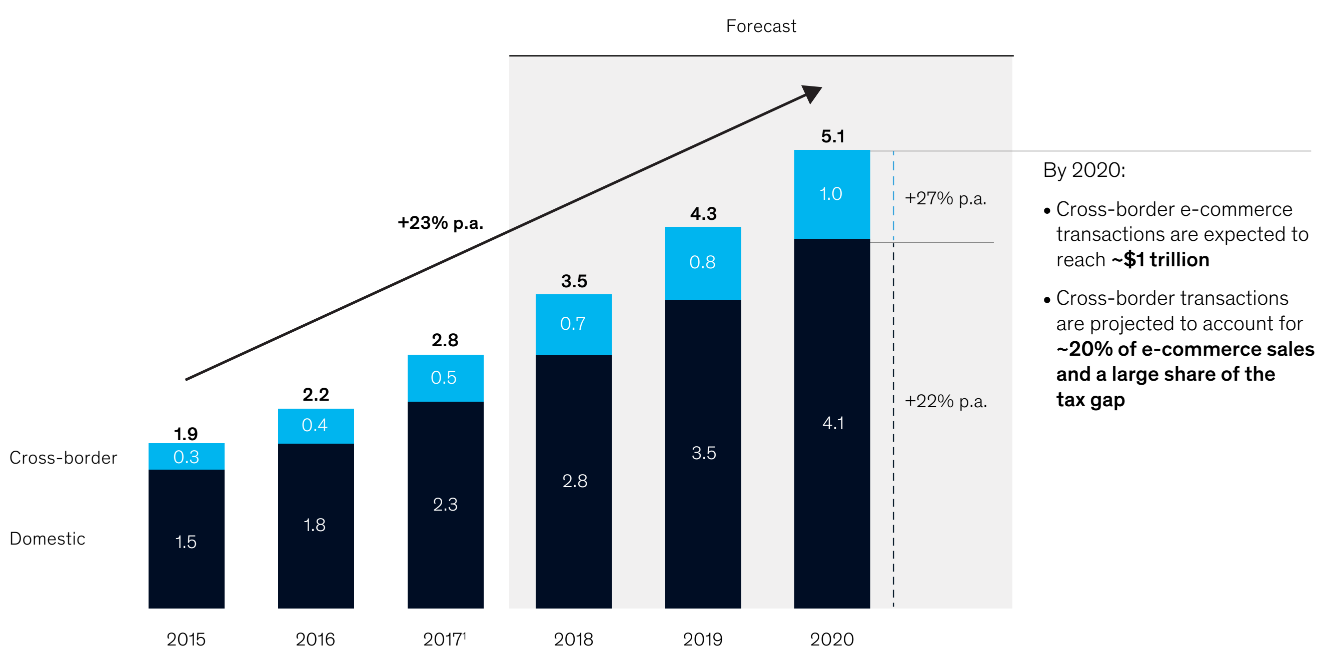
These shifts, which are often directly or indirectly related to the digital economy, have an impact on tax revenues. For example, a growing number of businesses have an economic presence in a jurisdiction but limited physical presence, making it difficult to apply existing tax regimes. The growth of digital platforms disrupts the way companies do business and the way consumers buy goods and services. Digital marketplaces are expected to account for $5.1 trillion of annual transactions by 2020, of which cross-border transactions will comprise around 20 percent (Exhibit 4).[9]

[8] For the full report, see "Globalization in transition: The future of trade and value chains," McKinsey Global Institute, January 2019.
[9] *Global cross-border B2C e-commerce market 2020: Report highlights & methodology sharing*, AliResearch, April 2016, unctad.org.

Exhibit 4

Cross-border, direct-to-consumer transactions comprise a rapidly growing share of e-commerce and are typically less effectively taxed than domestic consumption.

Global direct-to-consumer e-commerce transaction volume, $, trillions



Note: Figures may not sum to 100%, because of rounding.
[1] 2017 numbers not available and have been estimated based on five-year compound annual growth rate.
Source: AliResearch; UNCTAD; Universal Postal Union; World Trade Report 2018; McKinsey Global Institute analysis; for more, see "Globalization in transition: The future of trade and value chains," McKinsey Global Institute, January 2019

Taxation of e-commerce presents a significant challenge. EU member states are losing up to approximatively €3.8 billion annually in missing value-added tax (VAT) on B2C supplies of goods that cross borders (intra–European Union and imports). The incomplete levying of VAT on postal shipments into the European Union triggers up to an additional €1 billion in lost income per year for member states.[10]

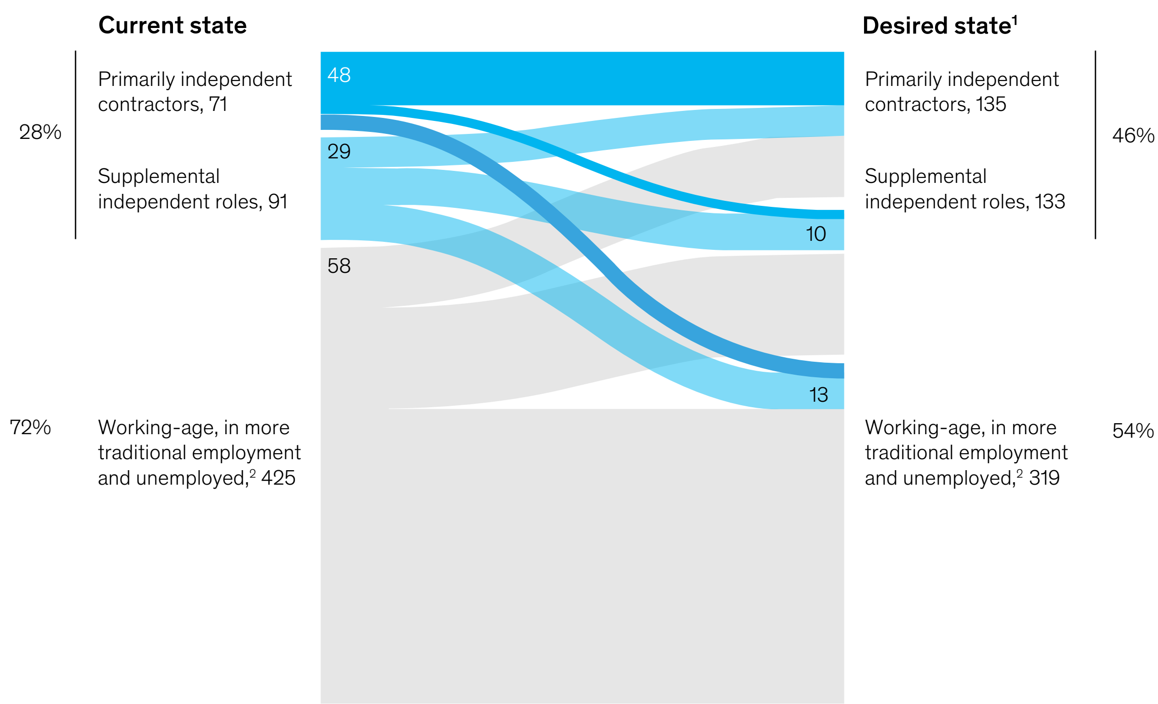
Self-employment and the gig economy
More people are working for themselves, either as a contractor to several companies or a single company. This emerging gig economy accounts for an estimated 28 percent of EU and US employment. The proportion would rise to 46 percent if everyone had their preferred working arrangement, according to MGI research (Exhibit 5).[11]

[10] *Impact assessment*, commission staff working document, December 12, 2018.
[11] For more, see "Independent work: Choice, necessity, and the gig economy," McKinsey Global Institute, October 2016.

Exhibit 5

The emerging gig economy is reshaping the nature of employment and challenging tax collection.

Potential transitions within the working-age population, million in US and EU



[1] Combined with at least "somewhat likely" to pursue.
[2] Includes people in traditional jobs, people not working, and those who stated they would like to be independent but also indicated they were not likely to pursue the option.

Source: For more, see "Independent work: Choice, necessity, and the gig economy," McKinsey Global Institute, October 2016; Internal Revenue Service, tax gap estimates for tax years 2008–10

However, the gig economy creates challenges for tax authorities. First, independent workers are generally less compliant than their employed peers, and in some countries are required to pay less taxes. Evidence from the US suggests that workers subject to limited information reporting, such as the self-employed, have an around 50 percentage point lower rate of tax compliance than traditional workers. There are also ongoing legal debates in some jurisdictions over whether gig economy workers are employees for the purposes of worker classification and social security contributions.

An aging population

The elderly population is defined as people aged 65 and over, while the elderly dependency ratio is the ratio between the elderly population and the working age (15–64 years) population (Exhibit 6). The elderly population has expanded steadily over the past 30 years because of factors including better diet, education, and healthcare. The number of working age people, on the other hand, has remained flat or has risen slightly, depending on the individual country. The result has been a rising dependency ratio.

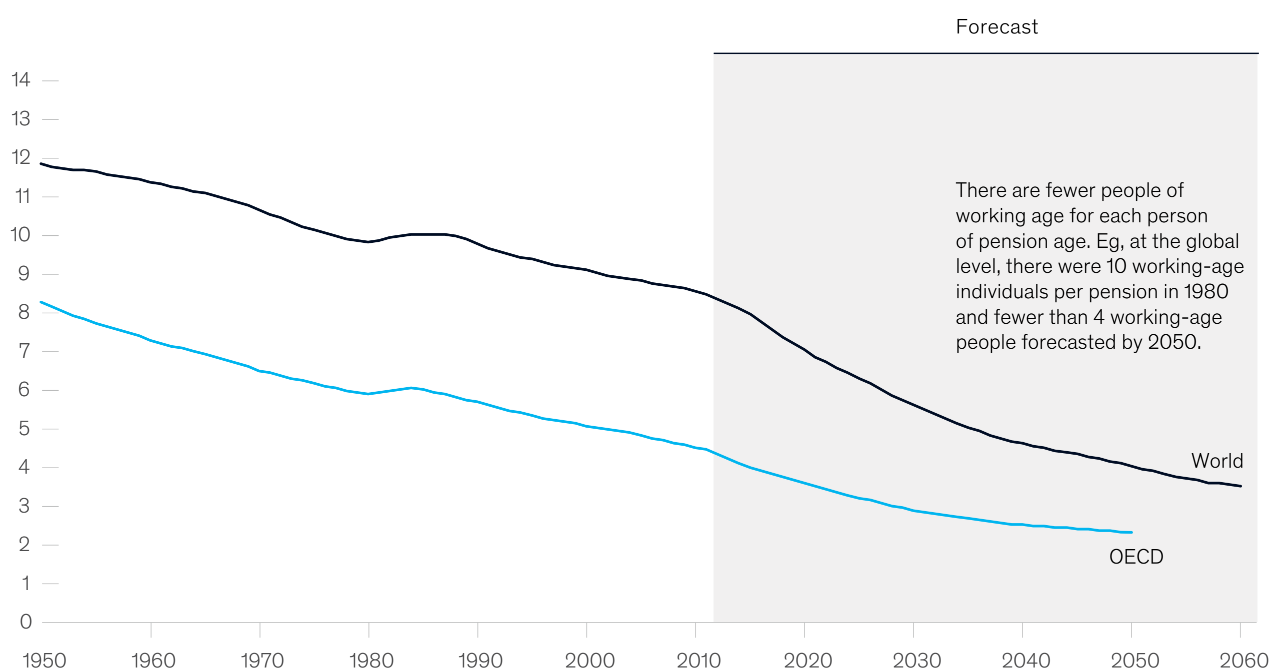
Put another way, there were ten working individuals per person over the age of 65 in 1980, and the number is expected to fall to six by 2030 and less than four by 2050.[12] Naturally, as the dependency ratio rises, demand for social services will put further pressure on revenues to support citizen service delivery.

[12] Historical population data and projections (1950-2050), OECD, August 23, 2019, stats.oecd.org.

Exhibit 6

The population is aging, and the dependency ratio is rising.

Dependency ratio, working age (15–64) to pension age (65+) population



Source: Historical population data and projections (1950–2050), OECD, September 4, 2019, stats.oecd.org

Options for moving forward

Governments can close the widening gap between revenues and expenditures in a variety of ways through tax revenues, nontax revenues, and spending optimization.[13] In addition, some governments are either implementing or considering approaches based on monetary finance.[14]

In respect to revenues, there are two key areas of potential focus. The first is policy change, which can realize significant inflows but is often tough to negotiate and time-consuming to implement. Another, more universal, solution is to collect taxes more efficiently. There are a range of tools that governments can use to optimize operations, many of which have substantial upsides.

Changes to the tax base and policy options

Academics, economists, and experts have proposed numerous options for aligning the tax code to current and future trends, and some governments are passing legislation to implement these ideas. As the trends outlined above play out, the taxable base of economic activity will change. Below are some initiatives that policy makers are considering adopting, which are presented without any recommendation or appraisal.

— *Addressing base erosion due to global tax competition.* The OECD and G20 inclusive framework on base erosion and profit shifting has been established to seek global consensus on how to allocate global profits (and the right to tax them) and provide mechanisms for transparency and cooperation among global tax authorities.

— *Taxing the digital economy.* With the growth of the digital economy, goods and services are routinely delivered across borders without any domestic intermediary. Global finance ministers are engaged in active dialogue around what ground rules should govern taxation of these activities.

Societal change and the role of tax policy

Taxation is much more than a fiscal discipline. Indeed, some of the most consequential questions that societies face revolve around national tax policies. Cited below are a few examples:

— *Income inequality.* MGI has identified a trend of stagnating median incomes among six OECD countries, and other research institutions have found similar trends.[15] Meanwhile, profit margins are rising, especially among superstar companies, and inequality has been increasing in advanced countries, with wealth being much more concentrated than income.[16] In this context, a number of academics and policy makers have suggested policies to shift taxes toward wealth instead of annual income, some with the intent to limit rents and idle wealth, while others with the objective of wealth redistribution.

— *Automation and economic development.* Some tax policy proposals target automation to capture its externalities, particularly regarding reskilling impacted workers. However, several OECD countries suffer from low productivity growth, and these automation taxes could reduce capital investment needed to boost innovation and productivity growth.

— *Climate change.* Taxation is often considered a powerful tool to curb carbon emissions. For example, Sweden has introduced carbon taxes, starting with a carbon tax on energy production of about €24 per ton of CO_2 equivalent in 1991, later upgraded to €114 per

[13] For more, see Rima Assi, Jonathan Dimson, Andrew Goodman, and Jens Riis Andersen, “Spending reviews: A more powerful approach to ensuring value in public finances,” March 2019, McKinsey.com.

[14] Monetary finance is the creation of currency by the central banks that was injected into the economy in exchange for some intangible government asset. Governments around the world have historically used this approach to finance war and react to economic crises, with the post–2008 quantitative easing as the most common example. But some governments have used similar approaches in a more conventional way, such as Japan, where the Bank of Japan has created more than 100 percent of Japan’s GDP worth of debt, and China, in which state-owned banks can refinance themselves at the People’s Bank of China by issuing perpetual bonds. An emerging school of economic thinking called modern monetary theory is proposing this route to enable higher government spending and faster growth.

[15] For the full report, see “Inequality: A persisting challenge and its implications,” McKinsey Global Institute, June 2019.

[16] For more, see “Superstars: The dynamics of firms, sectors, and cities leading the global economy,” McKinsey Global Institute, October 2018.

The gap between government revenues and spending has widened and will likely continue to do so. Several operational measures can help reclaim up to $1 trillion of a $5 trillion tax gap.

ton. In 1992, the country also introduced a tax on nitrogen oxide emitted from fuels, which has also increased over time. From 1991 to 2018, Sweden displayed a 26 percent reduction in carbon emissions.

— *Public health.* Taxing sugar, tobacco, alcohol, and any substance recognized as damaging to health may spur people to make better health choices and reduce the burden on public health systems. Obesity, smoking, and alcohol consumption together had an economic impact of almost 8 percent of global GDP in 2012.[17] A review of studies by the World Health Organization and the World Bank Group concluded that taxation has been the most effective intervention for reducing tobacco demand.[18]

The operational route: A trillion-dollar revenue prize

The gap between government revenues and spending has widened and will likely continue to do so. The onus, then, is on tax authorities to act now. Several operational measures can help them reclaim up to $1 trillion of an around $5 trillion tax gap without policy change (Exhibit 7).[19]

Digitizing the tax collection process is one of them. Countries are considering and enacting far-reaching reforms to the administrative tax collection framework. These reforms move from voluntary tax returns filed by individuals and companies to fully digital interactions where collections are automated and the tax authority has full insight into digital flows. As an example, new digital capabilities have enabled fully electronic invoicing, along with real-time cash register reporting, which allows tax authorities to accept payments in the moment and have full, up-to-date insights into VAT due, making examination easier.

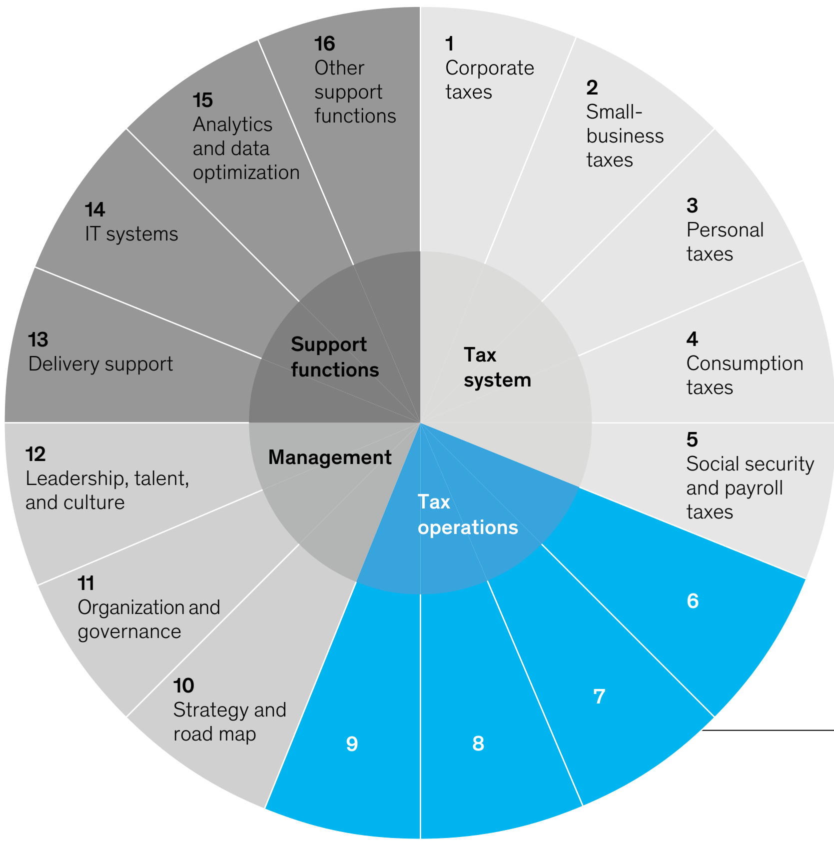
Optimize registration, submissions, and filings

A relatively simple mechanism is to encourage registration through marketing campaigns aimed at hot spots in the informal economy. Call centers and training sessions for intermediaries may also play a role in raising awareness around filing

[17] For more, see "How the world could better fight obesity," McKinsey Global Institute, November 2014.
[18] *World Bank Blogs,* "Taxation: Most effective but still the least-used tobacco control measure," blog entry by Patricio V. Marquez, July 19, 2017, blogs.worldbank.org; for a related discussion of policy options for closing the fiscal gap, see Sarah McAra, Vidhya Muthuram, and Karthik Ramanna, *The future of taxation: Opportunities for the 2020s*, University of Oxford, bsg.ox.ac.uk.
[19] Susan Cunningham, Jonathan Davis, and Thomas Dohrmann, "The trillion-dollar prize: Plugging government revenue leaks with advanced analytics," January 2018, McKinsey.com.

Exhibit 7

Tax authorities should consider several operational moves to reclaim around $1 trillion of the almost $5 trillion global tax gap.



Illustrative examples of initiatives

6 Registration, submissions filing
- Enlarge base through proactive registration
- Increase e-filing to 100% electronic
- Introduce account managers for large taxpayers

7 Compliance and audit
- Improve audit strategy and operating model
  - Increase compliance through communications
  - Segment taxpayers, eg, by types of tax
- Optimize audit processes, including analytics
  - Improve case selection with advanced analytics
  - Further integrate data with third parties
  - Optimize performance management

8 Collections and disputes
- Forecast losses and act predelinquency
- Improve debtor segmentation with analytics
- Improve contact and treatment strategies

9 Taxpayer service
- Develop a customer experience strategy
- Optimize call centers
- Improve digital offerings, eg, online payments

Disclaimer: McKinsey does not provide public policy recommendations or technical, legal, or regulatory advice.

Source: Tax accelerator, McKinsey Global Public Finance Practice

and compliance requirements. In one example, Singapore launched a highly influential SMS text service to send information and reminders to file and pay (see sidebar "Singapore authorities launch a highly influential SMS text service").

In addition, a highly digitalized and standardized submission process can be helpful. This process should use technologies including optical character recognition and digital voice recognition. E-filing, pre-filing, and e-invoicing can also help boost efficiency. McKinsey research shows that a tax administration accrues the full benefit of e-filing only when it reaches close to 100 percent e-filing.

These initiatives should be accompanied by strong data protection and cybersecurity.

Finally, cashless economies can boost revenues by undermining the shadow economy. In one example, Sweden saw VAT receipts rise steadily after introducing a range of measures to encourage cashless transactions, including new record-keeping requirements and noncompliance fines for cash transactions in some industries, cash banned on public transport, and encouraging the use of mobile payment platforms. In May 2017, the Swedish Tax Agency also introduced a mandatory transmission system for taximeters in the taxi

Singapore authorities launch a highly influential SMS text service

The Inland Revenue Authority of Singapore used SMS texts to send information and reminders. The content and timing of the messages were designed to nudge taxpayers to comply; late filers were reminded to file on time to avoid penalties, and individuals were provided with payment reference numbers so they could make payments without referring to their tax assessment. In 2015, the Revenue Authority sent around 6 million SMS messages. More than 95 percent of customers agreed that the service was timely and met their needs.

industry to transmit data to a certified accounting center for taxi businesses, supervised by the Swedish Transport Agency.

Upgrade compliance and audit
When it comes to auditing, authorities may wish to develop new target operating models for allocated cases based on handpicked parameters. They should begin by creating dedicated audit teams, staffed by legal and tax experts empowered to roll out streamlined tools and processes, and backed by best-in-class performance management techniques. Authorities should use end-to-end talent and communication strategies to support efforts that improve compliance.

Tax authorities can prioritize investment in data and analytics with the aim of spotting anomalies more effectively. They may wish to work with third parties and to access external data to improve insight. The tools are now available off the shelf to transition from simple risk analyses to sophisticated risk engines. These can be used to help identify potential candidates for audits and contribute to increasing audit revenues and reducing fraud (see sidebar “An OECD tax authority scaled up its audit process”).

Improve collections and resolve disputes
Advanced analytics are a key tool that can help authorities segment taxpayer subgroups and improve forecasting and predelinquency actions. Authorities can seek to standardize contact and treatment strategies, targeting tax offices with the largest outstanding debts (see sidebar “A European tax agency used advanced analytics to predict insolvencies”).

Streamline taxpayer services
The taxpayer experience can be optimized across channels, so the process is as easy and convenient as possible. Authorities should offer accessible digital solutions, both online and mobile, backed by information resources that help taxpayers understand their liabilities. Singapore chatbot Ask Jamie uses its natural language processing engine to understand the questions typed by the public and respond with an appropriate answer.

The digital economy, demographic change, and accelerating automation are piling pressure on

An OECD tax authority scaled up its audit process

In most countries, only a small proportion of tax payers is audited annually. An OECD tax authority used new data sources and advanced analytics to recalibrate its audit process and raise more than $400 million. The authority applied advanced analytics techniques to identify around 100 predictors of tax fraud and error. The changes were implemented in just six weeks. As a result, the authority was able to target its efforts more accurately. Alongside the new models, the authority worked to streamline processes and increase automation, leading to significant efficiency gains. The result was a two- to threefold rise in revenue per audit.

A European tax agency used advanced analytics to predict insolvencies

A European tax agency used advanced analytics to predict business insolvencies and time-to-pay adherence. The aim was to reduce a €4.5 billion annual tax gap caused by insolvency. The agency built two core logistic regression models to estimate the likelihood of promise adherence and delinquency among small and medium enterprises. This involved upskilling staff and analyzing value-added income and corporate taxes. Through its new approach, the agency was on track to achieve more than €500 million in impact.

governments that are already struggling to manage a widening gap between income and expenditure. There is no panacea to address these dynamics. However, tax authorities can take relatively simple actions. A first step is to upgrade operational capabilities, probably using many of the same technologies that are reshaping the commercial landscape. Of course, governments may wish to support these via legislation and many options are being considered. The bottom line in both cases is the same: fiscal frameworks require urgent modernization to remain fit for purpose.

For a related discussion of policy options for closing the fiscal gap, see Sarah McAra, Vidhya Muthuram, and Karthik Ramanna, *The future of taxation: Opportunities for the 2020s* by the University of Oxford.

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Spending reviews: A more powerful approach to ensuring value in public finances

Spending reviews have the potential to provide significant insight into budget allocations, enabling higher productivity and greater operational efficiency.

by Rima Assi, Jonathan Dimson, Andrew Goodman, and Jens Riis Andersen

Governments around the world face an imperative to manage their resources efficiently and provide services at the lowest possible cost. For some governments, this has involved going beyond traditional budgeting and taking a more innovative approach to managing public finances: spending reviews.

Spending reviews have the potential to provide significant insight into budget allocations, leading to recommendations to enable higher productivity and greater operational efficiency. They also boost transparency, offering citizens more insight into why and how money is spent.

There is no single formula for spending reviews, and governments can tailor their frameworks based on their own priorities. However, certain approaches can help support sustainability and increase the chance of ongoing benefits. These approaches include establishing granular financial and operational baselines, understanding the underlying drivers of costs, benchmarking the efficiency of spending to identify opportunities for improvement, and making recommendations to improve efficiency or reallocate resources.

Governments that put in place these strategic foundations are likely to succeed in creating a new generation of structured spending reviews that are reliable, effective, and rewarding.

Spending reviews: A powerful tool to manage the budgetary process

Spending reviews can help governments better understand their spending habits and identify opportunities for efficiencies. And these reviews are distinct from traditional top-down budgetary targets and the political negotiations that are still common in the countries in the Organisation for Economic Co-operation and Development (OECD). Instead, reviews are detailed assessments of specific areas of spending, aimed at increasing transparency, improving efficiency, and, where necessary, reallocating resources. Several governments have used spending reviews to enhance expenditure performance.

The UK government has carried out spending reviews every two to five years as part of its budget-setting process. In 2015, Her Majesty's (HM) Treasury partnered with other government departments to create a new costing unit to conduct rapid six- to eight-week reviews of areas of public spending. The unit has since completed numerous reviews focused on operating expenditure in areas ranging from vocational education to criminal justice.

Denmark has conducted more than 50 spending reviews in services across the government, from policing to back-office functions. Reviews have also been integrated into the annual budget process. The Ministry of Finance typically sets up several annual spending reviews a year, which become the bases for resource reallocation and spending programs and inform budget negotiations.

Sweden's spending reviews have primarily focused on capital efficiency (for example, in highways and rail) and delivery of services (for example, through the migration agency).

These spending reviews have had significant impact. In the United Kingdom, they have provided transparency into more than £20 billion of annual spending and a new approach to visualizing public spending across 25 departments. In Denmark, reviews have helped deliver combined annual savings of €1 billion from several cross-government and ministry programs over five years.

Designing a spending review process: Key decisions

Although there is no blueprint for designing spending reviews, governments should make design decisions in three broad areas:

Institutional setup. Governments must decide which ministries or teams are responsible for spending reviews. The entity responsible for the review should be within an institution with sufficient formal and informal power to coordinate the process. Countries that have conducted reviews have taken a variety of approaches. In the United Kingdom and Denmark, spending reviews have been led by HM Treasury and the Ministry of Finance respectively, working in partnership with other departments. By contrast, Spain and Italy have assigned responsibility to an independent fiscal authority and a politically appointed commissioner, respectively. Teams tasked with conducting reviews are typically small and comprise a combination of ministry and departmental personnel. For instance, the HM Treasury's team, consisting of about ten people, often conducts two or three reviews in parallel. It is also helpful to define up front whether review recommendations will be suggested or mandatory.

Selection criteria for individual review. Governments must decide on the range of the review body and the subject of the review. Scope is important because it affects the nature of the analysis and recommendations. Reviews of operating costs typically focus on labor costs, external spend, and back-office processes; reviews of capital projects cover the volume, specifications, timing, and delivery efficiency of projects. Meanwhile, reviews of transfer payments often look at issues such as eligibility, fraud, and error. Depending on the scope, a different set of skills and capabilities are required: a review of external spend and procurement is clearly different than a review of transfer-payment fraud and error. In the United Kingdom, reviews have mainly dealt with operating expenditure; the government has sought to make 30 to 40 percent reductions in operating costs in some ministries since 2010. And in Sweden, reviews were initially focused on capital projects but recently have had a broader scope.

Individual-review-selection criteria. Governments typically conduct up to ten individual spending reviews a year but may use different criteria to select reviews. One important decision is whether to focus on a single ministry or agency or on cross-cutting issues that span multiple areas of government (for instance, criminal justice and social care). Cross-cutting reviews can address more complex issues, including frictional costs resulting from coordination among ministries, but are more challenging to implement. Governments also need to decide the size of spend being reviewed—too small, and the review is unlikely to be material; too large, and it may be impossible to generate real insight in the time available. Most UK reviews have focused on areas of at least £1 billion in annual expenditure.

There is no right answer to these design choices, and they should reflect national priorities, governmental structures, and political realities. However, it is important to ensure that the design choices are aligned with each other so that the team conducting the reviews generates useful insight and recommends meaningful changes.

Conducting a spending review

Despite different choices about the institutional setup, scope of, and selection criteria for reviews, governments have converged on a common approach for conducting a spending review. There are typically four key stages: establish granular financial and operational baselines, understand the underlying cost drivers, benchmark the efficiency of spending to identify opportunities for improvement, and make recommendations to improve efficiency or reallocate resources.

Reviews are typically conducted by agile teams of five to ten people drawn from both the finance department and the departments delivering services in the area being reviewed. Timelines between six weeks and six months are reasonable, depending on the size and complexity of the review.

1. Establish granular financial and operational baselines

A spending review is often the first time that comprehensive financial and operational baselines are produced for an area of public spending. In simple terms, the financial baseline shows how much is spent, by whom, and on what, while the operational baseline casts light on activities funded by public spending and their outputs.

The first task is to agree on a standard taxonomy of inputs, outputs, and outcomes and how the government measures these. Standardization can alllow for like-with-like comparisons and potentially reveal conflicting targets across ministries or a lack of defined outcomes. Understanding the difference between funding, budgets, and costs, for example, can reveal deficits or surpluses. The inputs are the funding or budget provided and costs incurred at the levels of cost category (for example, labor, property, and external spend) and cost center (such as an operating unit like a school, hospital, or immigration center), while the outputs are the direct impacts of the spending. Outcomes focus on indirect or more long-term effects.

When HM Treasury reviewed the further-education system in England in 2015, it established a common set of cost categories that could be compared across institutions and analyzed at the level of the individual educational institution (that is, the cost center). The treasury then defined the immediate outputs (such as delivery of a lesson) and the outcomes (for instance, student attainment of qualifications and increase in lifetime income), creating a comprehensive view of the relationship among inputs, outputs, and outcomes.

The next step is to develop a comprehensive and granular financial baseline. This should include all the costs incurred in a particular area of public spending, often across multiple ministries, and should be at the most granular level possible. The financial baseline may reveal that the government is spending significantly more than thought in a particular area. In addition, a comparison of costs and budgets over time can identify structural deficits or surpluses. The review can also be designed to generate a forecast of future costs based on predictions for underlying drivers (for example, migration figures, criminal levels, and infrastructure-construction projects).

Developing a baseline poses significant challenges. In federal systems, a common complexity is understanding the costs incurred by national and local government entities in a particular area. Outsourced services and public–private partnerships (PPPs) are even more difficult, requiring a level of detail about actual costs incurred rather than just the headline unitary charge paid by the government. Analysis of the accounts of outsourced and PPP arrangements can help provide some of the detail required.

In the United Kingdom, all departments have been asked since 2015 to produce a "value map" that breaks down annual spending into cost categories and cost centers, providing a basis for a granular financial baseline. Meanwhile, the Danish public sector has developed a new approach to understanding the total cost of ownership in the transport sector, taking into account the maintenance costs of any given strategy.

A parallel step is to develop a clear operational baseline. This baseline is a map of the activities conducted and outputs generated by public spending. Operational baselines help identify areas of greatest volume and complexity, as well as handoffs and potential points of friction in complex cross-government spending. When HM Treasury reviewed the spending of the criminal-justice system in London, it produced an end-to-end map of key performance indicators that included policing, prosecution, the courts service, custody, and resettlement.

Spending reviews can provide ministries with a deep understanding of the drivers of costs and how to manage them.

2. Identify underlying cost drivers

One of the key benefits of spending reviews is that they can provide ministries with a deep understanding of the drivers of costs and how to manage them.

The first step is to build cost-driver trees for the main cost categories. For example, the cost of supporting a fleet of military vehicles will include manpower to drive and maintain, fuel, spare parts, basing, and storage. The cost of spare parts will be determined by the volume of parts consumed and the price of each part. The volume of spares will be determined by the number of vehicles, the distance they travel, maintenance policy, and the mean time between failures. It is possible to model each of these factors to provide a detailed understanding of what drives the costs of supporting the fleet and, in particular, where small changes in a cost driver may have a large impact on overall costs.

Part of the process of understanding cost drivers is to disaggregate fixed and variable costs. For military vehicles, the costs of basing and manpower may be fixed, while the cost of fuel is variable. One common challenge is distinguishing between contractually fixed costs (for example, a one-year fuel-purchasing contract) and physically fixed costs. In some services, there may also be fixed cost steps—for example, the number of bases required to support vehicles may only change when the number of vehicles rises or falls beyond a certain threshold. An understanding of fixed and variable costs is particularly important in outsourced and public–private support arrangements, where departments need to know how costs vary with usage to determine how much they should pay.

Governments with a detailed understanding of cost drivers are able to develop unit costs for the provision of services. Unit costing allows ministries to compare effectively the cost of providing a service either through government or externally. This level of visibility is similar to that expected of the product-level profitability from a private company. When the HM Treasury reviewed the cost structure of further education, it worked with vocational institutions to understand their cost per qualification hour—the "fully loaded" cost of delivering one hour of a specific qualification—which could then be compared across institutions.

Cost-driver analysis is critical to both assessing the efficiency of public spending and making policy and operational choices. It also allows departments to put a cost on the impact of policy changes—for example, a requirement to teach a specific qualification—or operational changes, such as a decision to conduct additional military exercises.

3. Benchmark spending efficiency to identify opportunities for improvement

Spending reviews can help ministries make more informed decisions about efficiency and productivity improvements.

Review teams can benchmark efficiency internally and externally to identify improvement opportunities, armed with a granular picture of costs and cost drivers. Where the same or similar services are provided by a number of different institutions, there is significant potential to benchmark internally. The prior cost analysis allows spending-review teams to standardize costs (for example, on a unit-cost basis) and compare performance across schools, hospitals, universities, and other institutions. In the United States, the requirement to publish the costs of certain medical procedures at individual hospitals could allow patients to make direct comparisons. Governments also often have the opportunity to benchmark costs and performance across regions or localities. In the United Kingdom, the government has defined local authorities that are "statistical neighbors"—those with similar demographic and socioeconomic characteristics—to allow regional comparisons, particularly in education and healthcare. Benchmarking internationally, and to the private sector, can also be helpful in identifying opportunities. The US government publishes faulty-payment rates at paymentaccuracy.gov, allowing other countries to compare fraud and error in payment streams. Similarly, the US Department of Defense publishes the prices it pays for a range of military parts, identified by NATO Stock Number, allowing other militaries to compare prices.

Spending-review teams can then identify methods for improvement, once benchmarking has identified the potential opportunity. This process is typically complex, requiring a combination of financial and operational analysis, detailed discussions with practitioners, and subject-matter expertise.

There are, however, productivity levers that are proven to be effective. Where the focus is on operating costs, the application of automation at scale—particularly in corporate functions such as finance and HR—is widely used to cut labor costs. For external spend, some ministries use a combination of demand management, contract renegotiation, and consolidation in procurement frameworks. In the United Kingdom, Crown Commercial Service is establishing frameworks for different spending categories.

Where the focus is on capital expenditure, ministries seeking to improve productivity can combine reviews of cross-government pipelines, improvements to specifications of individual projects, and value engineering of projects during their delivery. The UK Infrastructure and Projects Authority maintains a single view of the government's major capital programs. The Swedish government has achieved significant efficiencies in highway spending through a standard set of requirements for road projects.

Spending reviews examining transfer payments often focus on levers to reduce the levels of fraud and error in payments.

Using a combination of benchmarks and efficiency levers allows spending-review teams to help ministries locate potential productivity improvements, size the scale of the opportunity, and define actions to deliver efficiencies that can be tested and refined.

4. Agree on recommendations, prioritize actions, and ensure delivery

The ultimate aim of spending reviews is to make a set of recommendations that improve the efficiency and effectiveness of an area of public spending.

In order to have an impact, the spending-review team should agree on a set of recommendations with the ministries that are going to implement them. Recommendations often include changes to policies, funding arrangements, and operations, but without clear stakeholder agreement, they are unlikely to be implemented.

Once the spending-review team has made a set of recommendations, it can work with the relevant ministries to prioritize actions. This process can include defining a road map for the next three, six, and 12 months and beyond. Recommendations may also require additional funding—for example, capital investment in automation to deliver ongoing operational efficiencies. These funding arrangements may take the form of a performance contract between the finance ministry and the line ministries responsible for delivery.

Finally, spending reviews are most effective when the spending-review team follows up to ensure delivery, based on frameworks that define key performance indicators and include timetables for subsequent reviews and annual reviews of review-team impact across the portfolio of projects.

Spending reviews—as pioneered in Australia, Denmark, Italy, and the United Kingdom—offer a powerful new approach to ensuring value in public spending. Deploying a small, mixed team over a fixed period to review a defined area of public spending has consistently been able to provide deep insights into the cost base and identify efficiencies. For countries that have yet to seize this opportunity, reviews offer a realistic and attainable route to getting more value from public spending.

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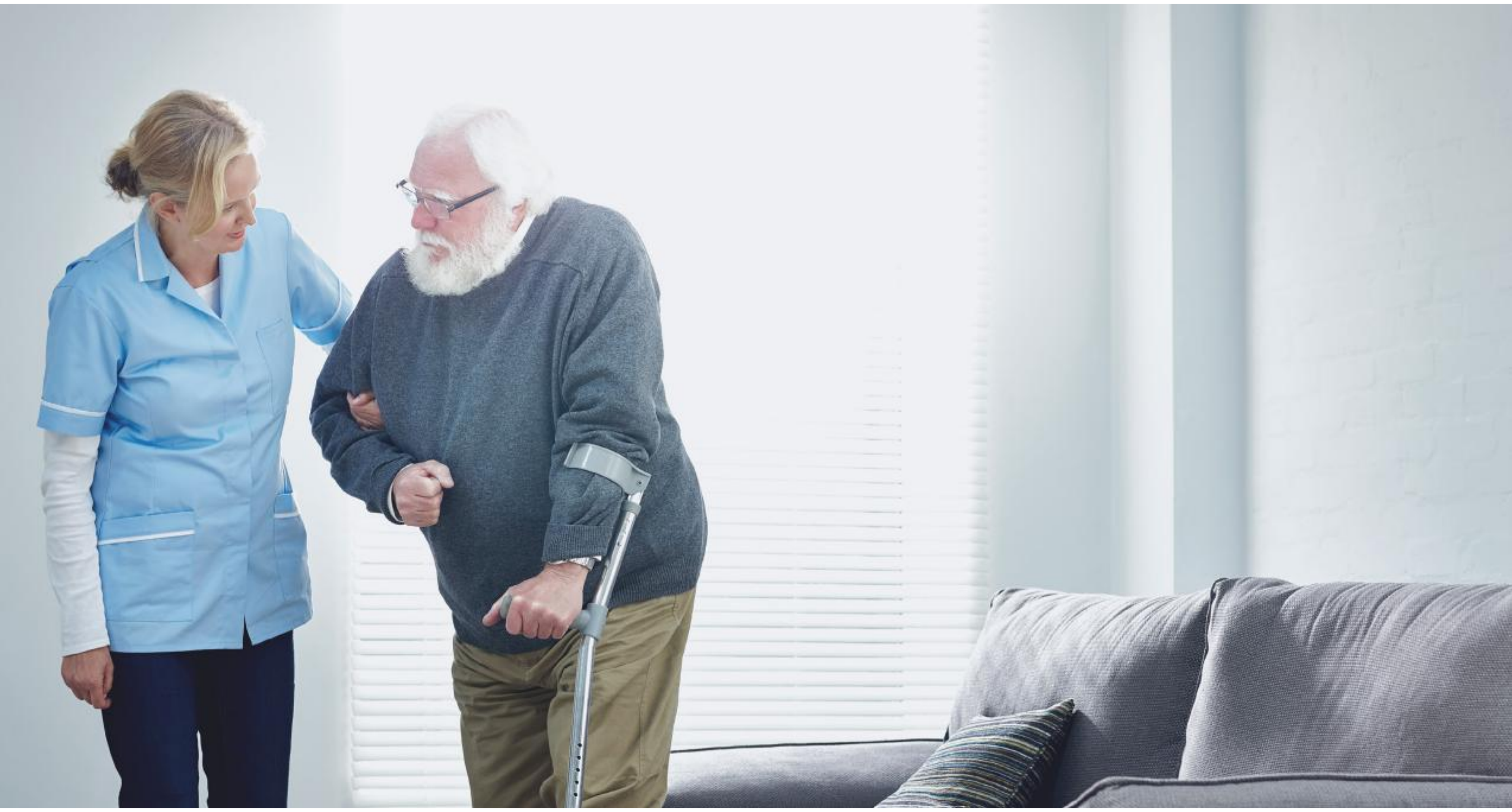
Social spending: Managing a $5 trillion challenge

Spending on social priorities, such as pensions, unemployment support, and disability, accounts for a large portion of government expenditure, yet many services fail to meet customer expectations.

by Melanie Brown, Damien Bruce, and Mike McCarthy



More than a third of government expenditure in Organisation for Economic Co-operation and Development (OECD) countries is assigned to social priorities, including pensions, income and unemployment support, family, and disability support. The 36 countries collectively spend approximately $10 trillion annually on these areas—more than double the amount allotted to defense and education combined. However, many services still fail to meet customer expectations, and governments need to deliver for less if they are to continue providing the services that people need.

Social spending is already the fastest growing area of government expenditure, expanding, on average, from 18 percent of GDP in 2005 to 20 percent in 2017. Further, it is likely to accelerate in the coming years amid increasing requirements for social services.

Demand will be driven by factors like rising longevity and the disruptive impact of automation in the workplace. The proportion of people aged older than 65, for example, is expected to double by around 2050. Global dependency ratios are set to rise as fewer taxpayers support more beneficiaries.

Incomes, meanwhile, are falling. Two-thirds of households in advanced economies saw their incomes stall or fall between 2005 and 2014. One reason for this continuing trend is automation in the workplace, which is putting downward pressure on wages. We estimate around 15 percent of workers globally (and up to 50 percent in some advanced economies) will likely switch jobs by 2030. Jobs will also be created, but the cost of a more fluid workplace will be high: workers will need to retrain multiple times. As a result, there will more demand for unemployment benefits and transition assistance.

Governments must find ways to overcome the increased pressures of matching their social-spending bills to the outcomes they wish to address. We believe they can do so by first forcing greater clarity into the policy and demand-management outcomes they seek—and the trade-offs required to meet them. These outcomes must cascade into the strategy and the organization. Governments can then decide where to innovate across their operations and support functions—for example, through modernizing their use of data and analytics.

A strategic approach to social spending

Governments around the world must think strategically about the challenges presented by a rising demand for social services. Individual countries face particular challenges based on their own tax, demographic, and economic situations. However, we see four common, cross-country dimensions that policy makers and social-spending-delivery organizations can use to make a difference. And in some cases, they are already doing so. These are policy and demand management, strategy and organization, operations, and support functions (Exhibit 1).

Clear policy and demand management

Government social spending typically covers four areas: income and unemployment support, family payments, disability-care benefits, and pensions. There is always tension between the outcomes and funding, and this challenge is exacerbated in a tough fiscal environment.

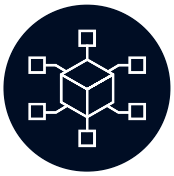
Governments that excel at managing social spending have a clear view of their outcomes. They are able to effectively align policy settings and outcomes. Finally, they accept that there are trade-offs between outcomes and funding, offering transparent guidance on how to approach those trade-offs.

One example of effectively prioritizing disability-care outcomes, and thus driving innovation, was the introduction in Australia of a National Disability Insurance Scheme (NDIS). The government set an objective to increase social and economic participation, choice, and control among people with disabilities through the introduction of an insurance scheme for people with disabilities. The scheme upended the status quo, reframing disability as an economic rather than a welfare

Exhibit 1

Social-spending management requires excellence across four dimensions.

The four dimensions of social-spending management

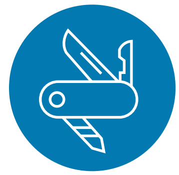


Policy and demand management

- Income support and unemployment payments and services
- Family payments and services
- Disability and caregiver payments and services
- Pensions

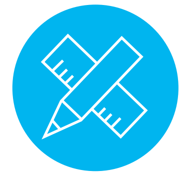
Strategy and organization

- Outcomes-focused strategy
- Organizational governance and health
- Workforce sustainability and talent management
- Change management



Operations

- Citizen registration and eligibility
- Customer service
- Compliance and payment integrity
- Asset and liability management
- Supplier and partner management



Support functions

- Delivery support
- IT systems
- Analytics and insight capability
- Behavioral economics
- Back-office functions

issue, and led to the abandonment of a one-size-fits-all approach.[1] This objective was prioritized over budgetary considerations: the NDIS almost tripled funding from around $8 billion to around $22 billion per year.[2] By investing up front, the government was able to win support from challenging stakeholders for transformational change, putting funding in the hands of people with disabilities, and creating a market for disability services. In addition to delivering the outcomes sought for people with disabilities, the program is expected to deliver significant long-term productivity growth and savings to other government services, more than justifying the up-front investment.[3]

Effective strategy and organization

Social-spending agencies refresh their strategies and organizations to deliver on the policy and demand-management outcomes set by governments. This works best where there is a quantitative flow from policy outcomes to the performance of individual services, a feedback loop into policy setting to show its feasibility or cost, and an organization that is set up to deliver.

A quantitative flow from policy outcomes to the performance of individual services can be a difficult ask for some policies. Complications include policy areas that are politically charged, such as in child

[1] In 2009, a report commissioned by the Australian Department of Social Services created a platform for reform with its findings that the block-funding model resulted in social exclusion, poor-quality disability services, and high unemployment. *Shut out: The experience of people with disabilities and their families in Australia*, National People with Disabilities and Carer Council, 2009, dss.gov.au.
[2] "NDIS market approach: Statement of opportunity and intent," Commonwealth of Australia National Disability Insurance Agency, November 2016, ndis.gov.au.
[3] Examples include health savings through reduced bed blocks in hospitals, savings in the justice system through better community support of people with psychiatric disabilities, and reduced use of income support by people with disabilities who enter employment; *Disability care and support*, Commonwealth of Australia Productivity Commission, August 2011, pc.gov.au.

poverty. In those areas, there may be nervousness around producing transparent metrics that political opponents could seize upon to attack progress. Further complications include difficulties in cascading a policy that may cut across services or a legacy organizational structure. Nevertheless, a clear quantitative flow allows the best targeting of policies and activities to achieve progress toward outcomes.

The delivery organization should feed back into policy setting. For example, a UK financial-delivery organization tasked with implementing an annual set of policy changes developed a model to show how policy and demand-management outcomes flowed through operational activity. It grouped policies into 30 different features, each with their own characteristics, showing ease of operational and technical implementation and the ongoing running cost. It showed instances in which outcomes could be achieved better through simplified policy. This model allowed better-informed decisions at the point of shaping policy.

Delivery requires an organization be structured and skilled to cope with changes to policy outcomes—often while implementing head-count reduction. Agile thinking is a proven way to organize people rapidly to deliver against outcomes amid instability. The playbook to become agile at scale is well established in the private sector—for example, at ING Bank and several other banks. Many public-sector organizations have experimented with agile or moved at scale toward agile. Organizations should become agile at their own pace. We typically recommend piloting one service to an excellent standard over six to nine months to create an organizational blueprint.

Automation can alleviate budget pressures. Our work with one social-spending agency suggests around 40 percent of activities can be automated. The potential upside is a significant productivity boost and improved scalability. This would allow agencies to cope better with spikes in demand for services arising from future economic shocks.

Still, several agencies have tried automation pilots and been dissatisfied with the results. Automation requires senior-leadership support to make decisions on difficult head-count reductions. It also requires implementation that can overcome the challenges of automation.

One national social-spending agency found that automating 15 tasks would capture 80 percent of the productivity opportunity. The tasks were primarily based on physical, manual, and basic cognitive skills but also included more complex tasks, such as project management, continuous learning, statistical analysis, and negotiation. Identifying this opportunity early allowed the agency to capture productivity gains and, at the same time, reskill employees—as well as reduce full-time equivalents through attrition and prioritize skills that cannot be automated when hiring new employees.

Social-spending agencies must consider the workforce skills and talent they will need in the coming years. This includes both reskilling, to avoid expensive redundancies, and tailoring hiring to predicted requirements. The United Kingdom's Department for Work and Pensions is an example in which digital-group leaders are active in social media and tech communities to raise awareness of the work they do and encourage applicants. They acknowledge that while many people will not want traditional full civil-service careers, they may be motivated by the opportunity to spend part of their careers focused on creating societal impacts that the private sector cannot rival.

Our experience suggests that it takes 12 to 18 months to see workforce change, from strategic planning to reskilling-program design and delivery.

Streamlined operations

High-performing social-spending agencies are constantly seeking new and better ways to deliver at an operational level, from managing the supply chain to providing high-quality customer service, maintaining compliance and payment integrity, performing asset-and-liability management, and managing citizen registration and eligibility. Here, we dive deep into two important areas: compliance and payment integrity as well as asset-and-liability management.

Compliance and payment integrity

Better compliance and payment-integrity functions can enable governments to reduce debt, increase payment accuracy, and boost customer and employee experiences. In most countries, 2 to 4 percent of social spending is lost on fraud, waste, and abuse. This represents a multibillion-dollar opportunity.

One social-spending agency defined its vision for 2025 as “the right payment delivered to the right person at the right time, without their active involvement.” It mapped out 45 capabilities required to deliver against the vision and scored itself against each capability. After identifying its strengths and weaknesses, it developed a seven-year road map for moving forward. Other social-spending agencies have captured more immediate opportunities through identifying two or three priority analytics-use cases to reduce fraud, waste, and abuse. Many have leveraged test-and-learn methodologies to drive solutions.

Asset-and-liability management

Governments can capture significant benefits through better management of their assets and liabilities. Pension is a critical area to get right. Governments increasingly face challenges in sustaining their pension schemes because of demographic shifts, strains on public finances, and a challenging investment environment. Two structural approaches—increasing contributions to pension funds and cutting benefits—are politically contentious, although many governments are making bold moves in these areas. A third option, improving investment performance, may be easier to accomplish and should be accompanied by structural reform.

Top performers in asset management achieve 60 percent higher risk-adjusted returns than bottom performers do, at up to a third of the cost. This implies government-run pension funds need to think about how they can achieve more for citizens and identify ways to drive better returns, which will ultimately reduce demand for government support. While clearly not every fund can be a top performer, governments can start by identifying areas of underperformance in pensions.

As governments look for ways to get individuals to save more for retirement, the ability to sustain useful returns will be increasingly important. In Australia, 9.5 percent employer contributions to superannuation schemes are compulsory. Fund assets total more than 2.8 trillion Australian dollars ($1.97 trillion). Australia is consistently ranked in the leading countries for best practices in retirement policy. Yet in January 2019, the country’s Productivity Commission identified several asset-management challenges, including widespread underperformance; a long tail of small, underperforming, high-fee funds; excessive insurance costs; and poor governance, including trustee misconduct. These all lead to balance erosion—lower savings, compounded, meaning more Australians will end up on state-funded pensions in retirement.

The key message from the Australian experience is that governments around the world must do more to analyze and diagnose challenges in their pension funds. Inaction could have serious implications for private-pension balances, and calls on public pensions, in the future.

Another approach being adopted by many countries is to shift pension structures away from defined-benefit models, which promise a specific income, to defined-contribution schemes, in which the pension depends on the amount paid in. In addition, it has been common to encourage investment in private-pension schemes (Exhibit 2).

Support functions

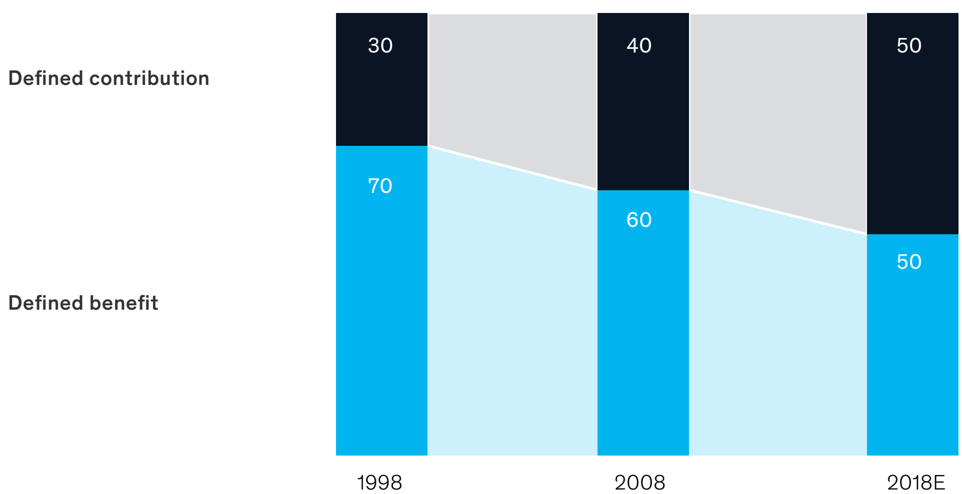
Effective delivery requires efficient support functions. Capabilities in IT, data and analytics, delivery support, behavioral economics, and back-office functions are equally as important as frontline knowledge and policy. Data and analytics as well as the use of nudges are two areas helping to evolve the management of social-spending organizations.

Data and analytics applied to delivery and policy
Among the most important recent developments using data and analytics to create insights that

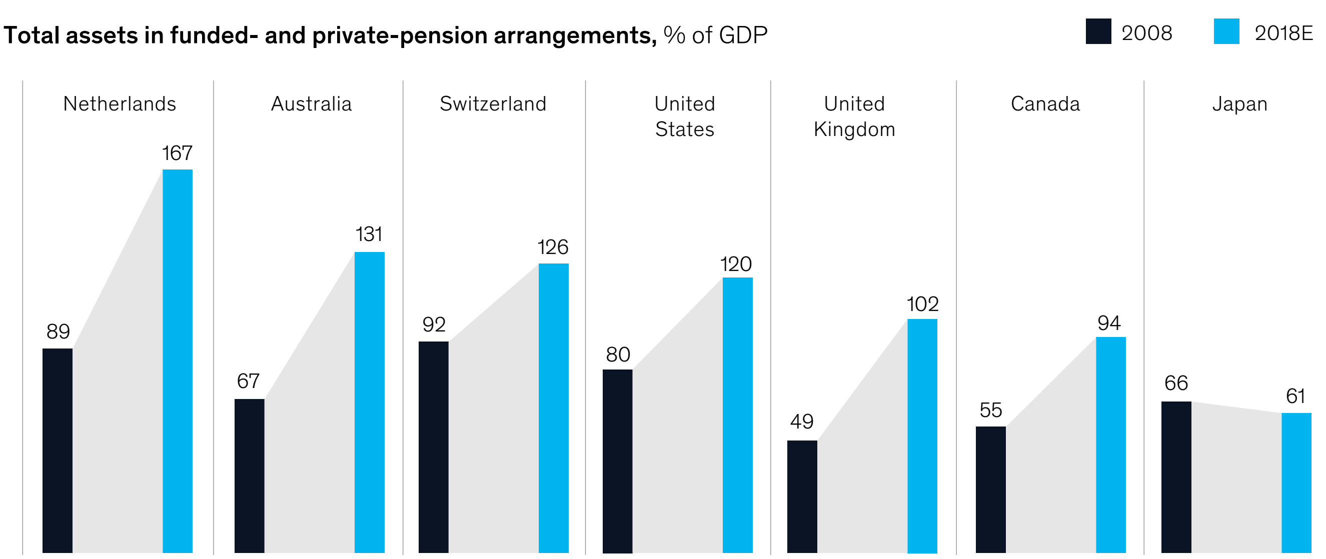
Exhibit 2

Governments are making structural shifts away from traditional defined-benefit, pay-as-you-go pensions to ensure sustainability.

Assets in top 7 pension markets in world, % of assets



Total assets in funded- and private-pension arrangements, % of GDP



Source: Willis Towers Watson

can pinpoint improvements to service delivery and shape future policy decisions.

Applied to service delivery, data and analytics can support a more personalized service. Segmenting citizens early in the process means that those who have a clear eligibility decision can undertake a shorter citizen journey. This allows the bulk of operational staff to focus their efforts where the eligibility decision is either marginal or complicated. Positive impacts include improved citizen satisfaction, lower fraud and error rates, and fewer "extreme bad outcomes," which are when the agency has clearly made the wrong decisions in complex cases (Exhibit 3).

Further, the next wave of social-spending-policy design will be underpinned by data and analytics that can better predict policy effectiveness and cost and then measure their real-world impact. This, in turn, will provide the raw material for future improvements. Analytics can be particularly effective when citizen data are shared across government departments. Citizens have multiple interactions with a government; thus joining these can create additional insights. In one European example of sharing data across departments, diverse agencies were able to offer joined services when an individual was released from prison, combining housing and welfare to encourage reintegration into society and reduce reoffense.

The techniques used to share data and apply analytics have matured substantially in the past two to three years, and there are detailed blueprints agencies can work from. We typically recommend launching a data-and-analytics transformation by proving its value in one service in parallel with building the operating model to scale and sustaining that value. Value can be proven in as little as four weeks by establishing a "data studio" in which operations, policy, and data specialists are brought together to uncover actionable insights for a particular outcome. Proving the value in this way

Exhibit 3

Data and analytics underpin approximately 50 percent of the total improvement potential for a typical citizen service.

Opportunities for realizing improvement potential

	Claim	Assess	Decide	Appeal
Direct cost of service, %	~10	40–50	25–30	10–15
Data-analytics improvement	**Identify complexity of claim** at outset and segment into clear yes-or-no case vs marginal decision	**Match claim to most appropriate assessment means,** based on claim complexity and demand	**Risk-flag decisions** to improve future segmentation and focus on fraud, waste, and abuse	**Provide consistent fact base and rationale** to citizen and to any appeals panel
Opportunity	**Segmentation of >60% claims** into clear yes-or-no decisions by using existing citizen data or taking citizens through a dynamic set of questions to pinpoint their circumstances quickly	**3–5× more effort focused on marginal cases** and getting them right, rather than overproving clear cases	**15–30% reduction in fraud, waste, and abuse** through improved tagging of marginal cases and ability to focus audits and checks	**50–80% fewer overturned decisions** because of more consistent use of facts and data in decision making

Source: Willis Towers Watson

provides the detailed blueprint for scaling to the wider organization and creates pull at the senior-leadership level for data and analytics services.

Nudges: Proven tools with many use cases
Some agencies are employing behavioral-economics techniques to influence citizen behavior—in particular, to reduce fraud and demand for services. Practices have matured in recent years, leading to a library of use cases and proven methods of setting up small and inexpensive "nudge units" to provide delivery inputs.

Nudges have been proven in fiscal settings, and social-spending agencies are picking up on that trend to discourage benefit fraud. Changing communications to emphasize social norms can encourage timely payments. In the United Kingdom, a government pilot to improve late tax payments showed that changing letters to explain that most people in their local area had already paid their taxes boosted repayment rates by around 15 percentage points, worth £160 million nationally.

Private-sector examples have shown that simple options, such as reversing the order of forms, can have an impact. For example, signing at the beginning, rather than the end, of a form can lead to a 42-percentage-point reduction in cheating.

Citizens increasingly demand that governments do more with less. In addition, the sheer size of social-spending budgets demands that governments prioritize effective and efficient policy and service delivery.

To prepare, a reasonable course of action is first to test that the agency has sufficient focus and clarity on its target outcomes and then test how its priorities fare across the 18 levers we have identified. Agencies can compare their aspirations with global best practices and identify the changes and capabilities that will have highest incremental impact for their outcomes.

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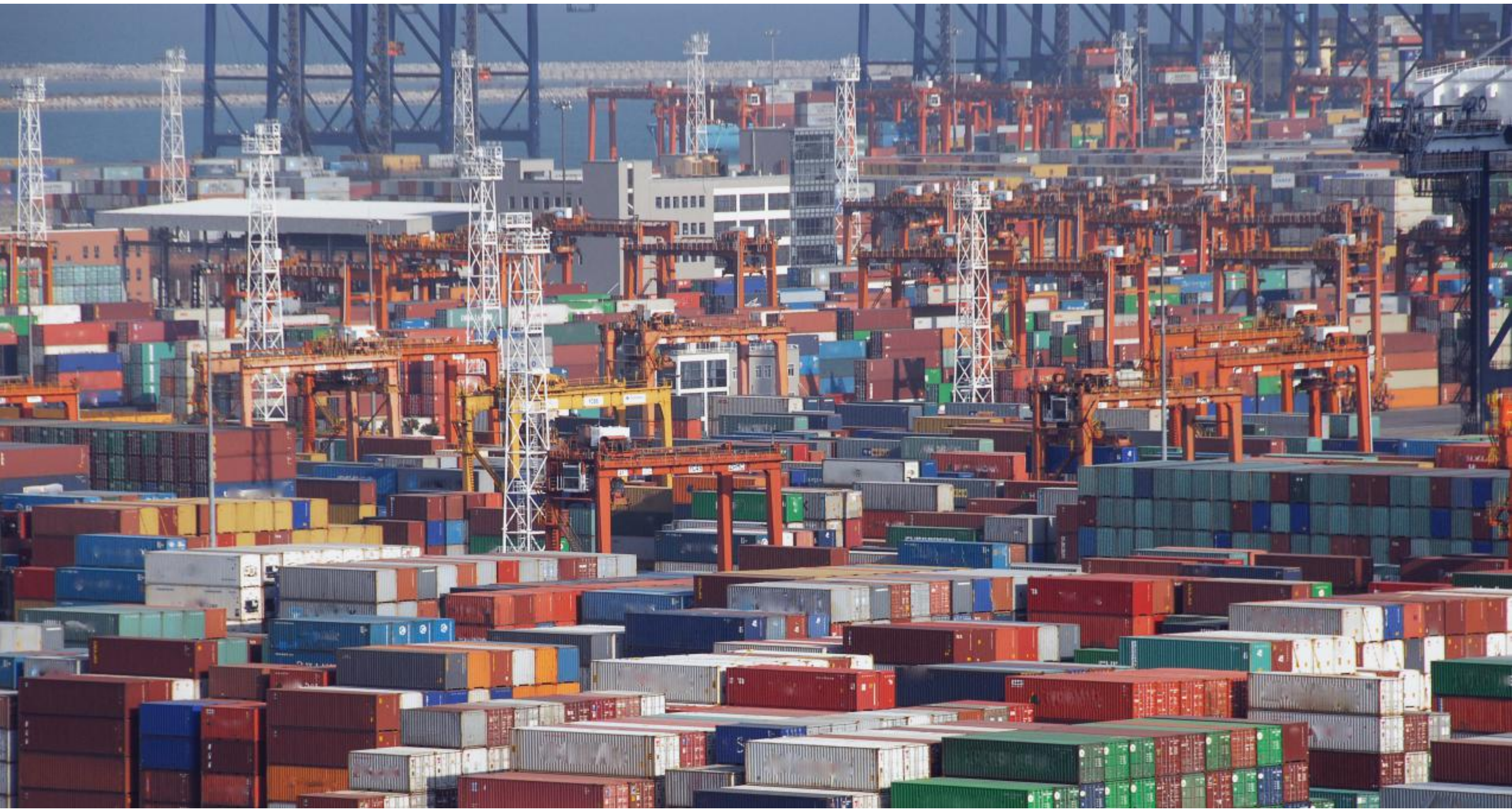
How customs agencies can help special economic zones succeed

When agencies have a seat at the table and participate in areas such as governance and stakeholder relations, these zones have the best chance of promoting economic growth.

by Jonathan Davis, Tom Isherwood, Rachid Maalouli, Jon Spaner, and Reinier van der Lely



Customs agencies play a key role in special economic zones (SEZs) by facilitating trade, safeguarding compliance, and (sometimes) collecting revenues. Yet they often struggle to make an impact, perhaps as a result of their relative lack of authority and idiosyncratic local rules and regulations. A common result is that SEZs fail to reach their potential.

SEZs are complex. Many of them are exempt from taxation and have been set up to promote simpler trade, so customs agencies must tailor their approaches. What's more, their economic contribution is far from certain: while some generate wealth for the economy as a whole, others become hubs for smuggling, counterfeiting, and money laundering.

That doesn't have to happen. If customs agencies become more involved with SEZs, they are more likely to succeed. To help SEZs flourish, these agencies must be more like enablers and facilitators than rule enforcers. When they have a seat at the table and participate in areas such as governance and stakeholder relations, SEZs have the best chance of promoting economic growth.

Five foundations for success

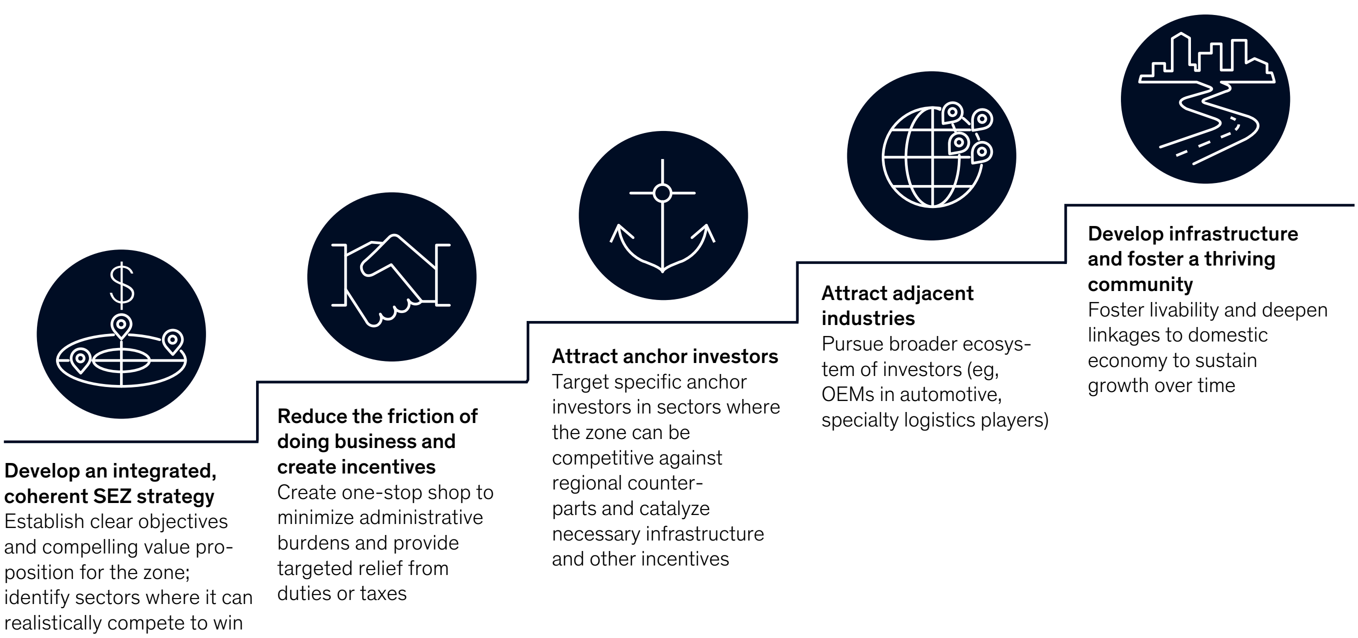
The number of SEZs around the world has increased from 800 in the mid-1990s to more than 4,000 today. They have created around 70 million jobs.[1] Their expansion means that they have become central to the economic-development agendas of many countries. Governments that make them work tend to excel in five key areas (exhibit):

— *Develop an integrated, coherent strategy.* Successful zones usually emerge from a detailed analysis of how they will create value for the broader economy. The analysis defines the value proposition of the zone to show how it can attract investment in a fiercely competitive global SEZ environment. Some zones are

[1] "Special economic zones: Performance, lessons learned, and implications for zone development," World Bank Group, 2008.

Exhibit

Five crucial steps can maximize the chances that special economic zones (SEZs) will succeed.



more productive by design. Those that serve as pure transhipment hubs create little value beyond jobs at the port itself, but if policy makers see transhipment as the foundation of a wider ecosystem, zones become a different proposition: they must highlight factors such as ease of access to the supply chain and the ability to attract and develop local talent.

— *Reduce friction and create incentives.* The scope and scale of incentives is in general directly tied to the value proposition's strength. Some zones have large natural advantages: maritime access, proximity to big regional economies, a pleasant living and working environment. They call for less investment than zones where investors need more convincing to make the leap.

— *Attract anchor investors.* Typical anchor investors are companies, relatively high in the supply chain, that pull in downstream suppliers and ancillary businesses. To win anchor investors, SEZs must make a convincing case about matters such as infrastructure, costs, and transport links.

— *Attract adjacent industries.* Successful zones identify adjacencies among suppliers, training providers, and related businesses. Once anchor investors are in place, these adjacent players create a powerful ecosystem of mutual interests.

— *Develop infrastructure and foster a thriving community.* Zones that successfully secure investors focus on creating an attractive place to live and work—one that includes everything from careful land planning through investment in schools and leisure opportunities.

Successful SEZs bring significant economic benefits. Shenzhen SEZ, for example, accounted for $338 billion of China's GDP in 2017—a sum larger than the GDP of Singapore. That's impressive, since Shenzhen was a small county in the 1980s.[2] Shenzhen raised its GDP per capita by about 25 percent a year from 1978 to 2014 and doubled its nominal output from 2011 to 2018. In Dubai, total trade volumes in the economic free zones grew by 22 percent year-over-year in the first nine months of 2018 alone.[3] In Bangladesh, the export-processing zones employed 481,000 direct workers in 2017 and contributed 19 percent of total exports.[4]

The flip side

Still, these success stories have a flip side: ill-conceived or badly implemented SEZs can have a significant negative effect. A relative lack of regulation and oversight, for example, creates opportunities for illicit activities, including trading of counterfeit goods, money laundering, and trafficking of human beings, drugs, and weapons. In a recent study, the Organisation for Economic Cooperation and Development found that the existence, number, and size of free trade zones (FTZ), a subset of SEZs, is correlated with the value of counterfeit and pirated products exported. The study found that, on average, each additional FTZ is associated with a 5.9 percent increase in the value of problematic exports.[5]

Despite the efforts of governments, a large number of SEZs fail to meet many of their objectives. In a McKinsey study of 30 such zones, half underperformed their national economies. Why do SEZs fail? Sometimes the value proposition isn't right or the zone isn't competitive against regional peers. In other cases, execution falters. Some policy makers believe if they provide tax and duty concessions, investors will come. But in reality, concessions are helpful though hardly adequate in themselves; SEZs must also have excellent infrastructure, streamlined port and customs operations, simplified clearance procedures, and a host of soft advantages that combine to create an attractive package.

[2] Frank Holmes, "China's new special economic zone evokes memories of Shenzhen," *Forbes*, April 21, 2017, forbes.com.
[3] Sarah Townsend, "Dubai free zones saw 22% trade growth this year, government says," *National*, December 22, 2018, thenational.ae.
[4] *Bangladesh policy notes: The rise of special economic zones in Bangladesh*, World Bank, January 2018, worldbank.org.
[5] *Trade in counterfeit goods and free trade zones: Evidence from recent trends*, Organisation for Economic Cooperation and Development, March 2018, oecd-library.org.

What can customs do?

When considering whether to invest in SEZs, companies require information about a range of factors, including governance and infrastructure, the availability of local talent, and access to schools and hospitals. These are the key questions companies will probably ask:

— Are we confident that the zone's governance is stable and that foundational policies won't change from one administration to the next? Does the country in question have the right trade agreements? Will authorities comply with promises made about tax deductions and the facilitation of trade?

— Is the port's infrastructure, together with nearby roads and rail facilities, adequate to support operations? Will access into and out of the zone be fast enough? Can our suppliers establish themselves in the zone?

— Will we be able to attract and develop local talent? Can we bring in experienced managers to support operations for a number of years?

— If we can bring in such managers, will they find reasonably attractive places to live with their families? Are there schools for international children?

Customs agencies can play an important role in helping to achieve these objectives. They can make a difference in five key areas.[6]

Deliver on promises. Customs must deliver on the promises made to investors about trade facilitation. Investors both want and need to see that customs is part of the process of setting up the SEZ and will ensure that trade-promotion and -facilitation incentives are in place. It's important to move beyond memoranda of understanding toward service-level agreements with port operators, facility managers, and (where SEZs are privately run) customs agencies, which can facilitate progress by locating local units close to SEZs.

Use information to inform strategy. Customs agencies are challenged by the limited insight from declarations of incoming and outgoing goods, especially in SEZs. In addition, other government agencies and the business community exert pressure to improve business facilitation by minimizing processing times. Meanwhile, the digitalization of the logistics supply chain is accelerating, with innovations such as automated pallet-handling systems cutting shipment-processing times by as much as 50 percent.[7] To be effective, customs agencies must maximize their information resources and keep up with these changes by building data sets and using cutting-edge analytics for activities such as facilitation, risk screening, and enforcement. These agencies can then focus their interventions on the minimum number of shipments while still achieving their revenue and security objectives.

Secure a seat at the table. Agencies need a seat at the table from the initial proposal to establish an SEZ through the daily operations management of an established SEZ, so they can engage regularly and effectively with the rest of the government and with industry. In our experience, when customs agencies embrace a problem-solving mind-set, their insights and expertise are usually welcomed.

Safeguard good governance. Customs must take the lead in designing and upholding proper governance frameworks to ensure that zones are managed according to local, regional, and global regulatory requirements.

Become global ambassadors. Leading customs agencies should reach out to peers around the world to discuss common challenges and develop best practices through bilateral discussions, partnerships, and regional bodies such as the World Customs Organization. The key is for customs

[6] A version of this perspective was shared at a WCO technical-committee meeting in February 2019. Member states provided many valuable comments, and we are grateful for this input.

[7] Ashutosh Dekhne, Greg Hastings, John Murnane, and Florian Neuhaus, "Automation in logistics: Big opportunity, bigger uncertainty," April 2019, McKinsey.com.

agencies not only to focus on the challenges but also to share success stories.

SEZs can be powerful drivers of economic growth, but if they are badly planned or executed, they can promote illicit activity. As governments consider their options, customs agencies have an important role to play. The five key elements of successful SEZs—strategy, incentives, anchor tenants, adjacent industries, and infrastructure—can all benefit from the close involvement of customs agencies, which can liaise between governments and investors, solve problems, and ensure adherence to essential rules and regulations.

Customs agencies must ensure that they can make a valuable contribution by securing a seat at the table and coming to it equipped with the knowledge and data that help streamline the process of establishing a successful SEZ. Agencies that can maximize their own potential will probably play a vital role in the success of SEZs that deliver long-term benefits.

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Unlocking private-sector financing in emerging-markets infrastructure

Three levers can help governments and development finance institutions increase private-sector financing for infrastructure, narrowing some of the sector's largest investment gaps.

by Ali Abid Hussain, Selim Jeddi, Kannan Lakmeeharan, and Hasan Muzaffar

Developing countries will need to invest more than $2 trillion a year in infrastructure just to keep pace with projected GDP growth over the next 15 years—yet many of them face challenges in mobilizing the resources to finance this investment. To close the gap, governments in these countries, together with their partners in development finance institutions (DFIs), will need to unlock private-sector infrastructure financing at scale. As we show in this article, solutions are in sight: there are innovative approaches available that could trigger an exponential increase in private financing.

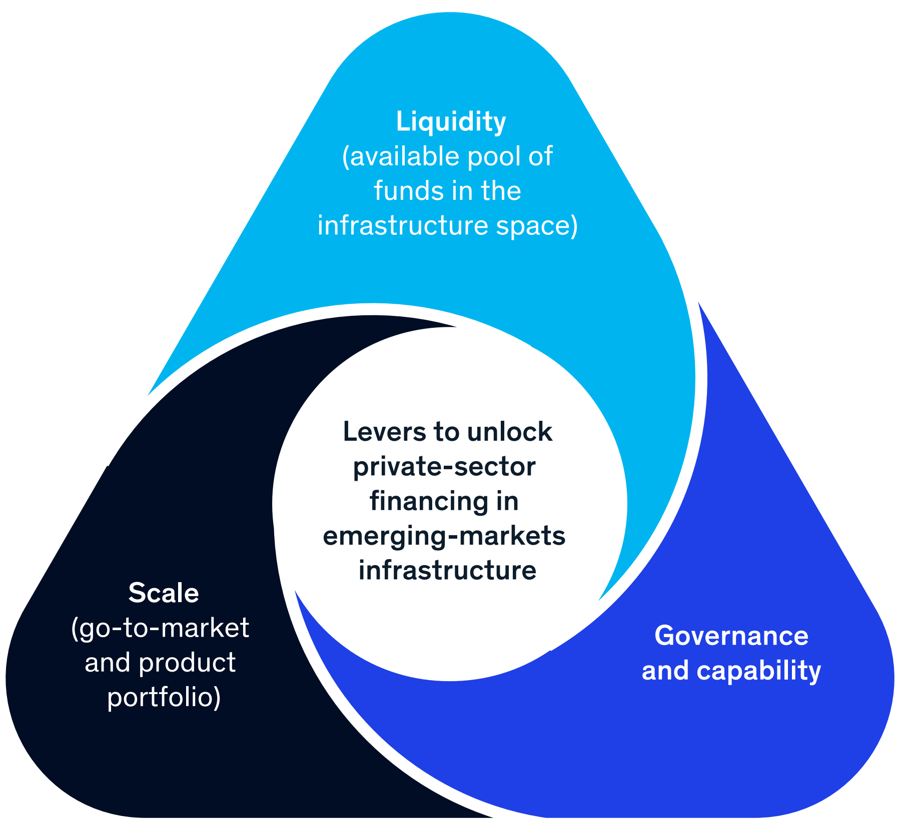
In this article we present three kinds of initiatives and innovations that governments and DFIs can consider to establish infrastructure as an investible asset class (Exhibit 1). First, they can increase availability of funds (liquidity) from both domestic and international providers of capital. Second, they can increase the scale of investment by bundling together individual projects and providing a portfolio of products in which such providers of capital can invest. Third, they can address the governance and capability gaps that often hinder private-sector investment.

These ideas and insights are based on interviews with leaders across commercial banks, private-sector investors, infrastructure developers and operators, and policy makers in emerging markets. This article also builds on previous McKinsey research on approaches to private-sector infrastructure financing, setting out several real-world case examples of how those approaches can be tailored and applied to deliver results in emerging markets.[1]

[1] Aaron Bielenberg, Mike Kerlin, Jeremy Oppenheim, and Melissa Roberts, *Financing change: How to mobilize private sector financing for sustainable infrastructure*, New Climate Economy, January 2016, newclimateeconomy.report.

Exhibit 1

Three levers establish infrastructure as an investible asset class.



The challenge and opportunity of infrastructure development in emerging economies

To put the challenge of infrastructure development in emerging economies into perspective, consider this statistic: in the African nation of Mali, a typical household uses less electricity in a year than a Londoner uses to boil a kettle each day. Across sub-Saharan Africa, nearly 600 million people lack access to electricity altogether—with the result that whole communities literally live half their lives in the dark.[2]

McKinsey estimates that, based on benchmark levels of spending, Africa's annual investment in power infrastructure will need to rise from $33 billion in 2015 to around $55 billion in 2025. Over the same period, annual investment in transport infrastructure will need to increase from $20 billion to around $45 billion. Major additional investment will also be needed in water and telecoms infrastructure.[3]

The requirement for additional, large-scale infrastructure investment is just as acute in other developing regions and will only increase over time. The McKinsey Global Institute (MGI) forecasts that the world will need to invest an average of $3.7 trillion in roads, railways, ports, airports, power, water, and telecoms every year through 2035 to keep pace with projected GDP growth. Emerging economies will account for nearly two-thirds of that investment need—and the financing they require could increase even further to meet the United Nations' sustainable development goals.[4]

Yet many developing countries have significant gaps between their current spending commitments and estimated need. New analysis by MGI shows that some of the biggest spending gaps are in Indonesia and Mexico, while Brazil, India, Saudi Arabia, and South Africa also face significant gaps (Exhibit 2). On the other hand, China has invested sufficiently to exceed its forecast infrastructure requirement and will arguably need to spend less as a share of GDP than it has in the past.

Although governments in many emerging economies have made considerable progress in recent decades to increase infrastructure investment, they increasingly face budgetary constraints in sustaining that investment from public sources. Overall levels of public-sector debt in emerging economies stand at record levels, and many countries have seen budget deficits increase in recent years.[5] That makes it imperative that governments unlock greater private-sector infrastructure investment and financing, both foreign and domestic. Looking ahead, that imperative will become all the more urgent as governments seek to meet the needs of a growing population in many developing countries and address critical infrastructure gaps to enable broader economic development.

Interventions to increase the available pool of funds in the infrastructure space

There are important opportunities to increase the available pool of funds (liquidity) in the infrastructure space by altering the risk–return characteristics of investments.

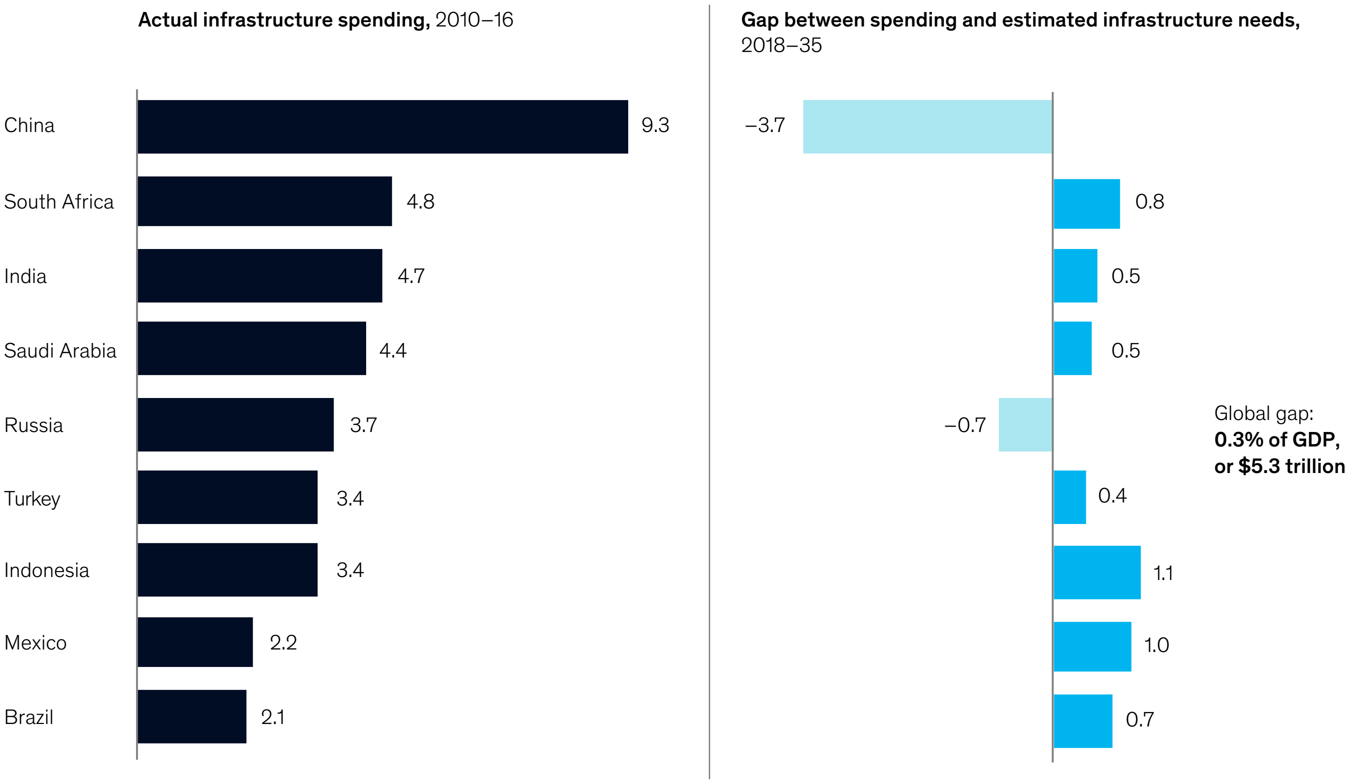
One such opportunity is for governments to partially mitigate private-sector risk by providing a liquidity backstop through guarantees. To achieve this in a sustainable manner, governments can develop long-term infrastructure plans in which delivered assets are used as collateral to guarantee the private financing of new infrastructure.[6] An example comes from Peru, where the Banco de la Nación de Peru created a trust division in 2000 to provide collateral and support to infrastructure investors and developers. To date, the Banco de la Nación has acted as

[2] Mutsa Chironga, Georges Desvaux, and Acha Leke, *Africa's business revolution: How to succeed in the world's next big growth market,* first edition, Boston, MA: Harvard Business Review Press, 2018.
[3] Chironga, Desvaux, and Leke, *Africa's business revolution.*
[4] *Bridging infrastructure gaps: Has the world made progress?* McKinsey Global Institute, October 2017, McKinsey.com.
[5] IMF DataMapper, International Monetary Fund, imf.org.
[6] Reliance on private financing should only be considered for projects where the private investor can demonstrate ability to deliver infrastructure at the same or lower cost than the public sector.

Exhibit 2

A sizeable infrastructure investment gap still exists.

Economic infrastructure, % of GDP



Source: GWI; IHS Global Insight; International Transport Forum, National Bureau of Statistics; McKinsey Global Institute analysis

a fiduciary to more than 60 infrastructure projects, including road infrastructure, irrigation, water, and sanitation. As a result, the number of people with access to treated sewage doubled between 2000 and 2015.[7]

Other countries have used the income and assets of state-owned enterprises (SOEs) as the basis of such guarantees or collateral. Governments can also allocate a proportion of the assets of sovereign-wealth funds and investment companies to support guarantees; often these are based on natural resource wealth.

Governments can also foster the development of secondary markets that enhance liquidity by allowing infrastructure investments to be recycled; the funds released can be redeployed to other infrastructure investments. Governments can issue long-term fixed bonds in the secondary market to boost activity and to set a long-term yield curve that allows infrastructure borrowers to price their bonds effectively.

Finally, there are several specific steps that governments and regulators could take to generate liquidity by directing domestic pools

[7] Banco de la Nación de Peru; World Health Organization/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene, washdata.org.

of capital into infrastructure. Those include the following:

— Instituting favorable regulatory investment limits pertaining to infrastructure-related sectors—which could help ensure that domestic pension funds and insurance companies participate in long-term infrastructure investments.

— Optimizing capital risk weights associated with infrastructure financing to incentivize domestic investors, as well as local banks, to finance infrastructure projects. (Capital risk weights prescribe the minimum amount of equity capital that lenders need to maintain for every dollar of lending provided.) Such optimization can be achieved by prescribing different risk weights for each infrastructure asset class, depending on its historical nonperforming loan ratio—rather than applying a single risk weight broadly to all project financing.

— Offering favorable tax treatment for infrastructure investments.

India's use of tax-free infrastructure bonds is one example of unlocking domestic investment in infrastructure. The National Highway Authority of India issues tax-exempt bonds to attract domestic investment, the proceeds of which are used to finance road projects across the country. The Highway Authority takes a similar approach to attracting foreign investment: it issues "Masala bonds," rupee-denominated bonds that enable capital raising in global markets.[8]

Ensuring scale through a compelling go-to-market and 'product portfolio' approach for investors

In addition to the interventions set out above, our analysis of case studies across the world finds that a portfolio approach to offering infrastructure-investment "products" that meet the risk–return targets of potential investors can be quite successful. Case studies show this works well when governments adopt an active go-to-market strategy to bring those products to the attention of investors. The portfolio approach to infrastructure financing can be adopted at different levels of devolution—whether at the federal, provincial, state, district, or municipal level.

The portfolio approach represents an important innovation over traditional investment-attraction approaches. The investible financial instruments it creates derive their cash flows from multiple infrastructure projects—potentially from several different asset classes—rather than a single infrastructure project. Governments taking a portfolio approach create a menu of tradeable instruments to attract different sets of investors. For example, they go beyond simply offering units in an infrastructure fund that may be attractive for financial investors. Instead, they offer variant products, such as a controlling equity stake in infrastructure platforms, which may be more attractive to strategic investors.

A portfolio approach offers several benefits to governments. For one thing, it enables investments from a broader group of investors, thereby opening up access to a larger pool of capital. Moreover, it allows financing of commercially unviable infrastructure projects by bundling them with commercially viable projects. (Very often these commercially unviable infrastructure projects belong to critical sectors that generate positive socioeconomic impact, such as wastewater-treatment plants.) This approach also facilitates financing of greenfield projects by bundling them with brownfield projects. It allows for centralization of infrastructure planning, which in turn leads to optimal prioritization of projects.

For a useful example of a portfolio approach, we return to India. The Securities and Exchange Board of India is promoting the use of

[8] Saikat Das, "NHAI to raise Rs 10K crore via bonds, may offer 8.5-9%," *Economic Times*, November 21, 2018, economictimes.indiatimes.com; "IFC issues historic 15-year Masala bond in London," International Finance Corporation, World Bank, ifc.org.

Infrastructure Investment Trusts (InvITs), publicly listed infrastructure-investment funds that invest in portfolios of infrastructure projects. There are two publicly listed InvITs—Sterlite Power's India Grid Trust and IRB Infrastructure Developers' IRB InvIT fund. The InvITs allow individuals and firms to invest relatively small amounts of capital into infrastructure projects in return for an income proportionate to their investment.[9]

Addressing governance and capability gaps that hinder private-sector investment

To improve international investors' confidence in emerging markets, governments might consider establishing autonomous institutions to act as an interface with the private sector. Such institutions can be designed and established in collaboration with DFIs and global partners—and can support governments in implementing global best practices in project structuring, financing, procurement, execution, and contract management.

These institutions can take several forms, including public–private partnership (PPP) units, infrastructure-delivery companies, infrastructure banks, and infrastructure funds. Through these institutions, governments can adopt a systematic approach to accelerate private-sector participation in infrastructure development. That approach can include five key steps:

1. Identifying the deals that could benefit from private-capital financing, as part of a national or sectoral portfolio of projects.

2. Building and publishing the deal pipeline to create transparency and certainty on upcoming transactions.

3. Building a robust, early perspective on the viability of all projects in the pipeline to focus resources on viable deals.

4. Providing project-development funding to selected projects, allowing expertise to be hired to structure projects in a commercially viable manner.

5. Designing and implementing a sequential stage-gated approach to manage implementation of each project—so allowing for course correction as well as relevant stakeholder alignment and action at each stage gate.

There are several compelling examples of these approaches in action. For instance, a PPP unit in the Middle East has conducted a significant portfolio-prioritization effort to identify, on a yearly basis, the five to six projects that could benefit from private financing. This approach provides investors with clear visibility on the transaction pipeline while enabling the unit to focus its resources on a limited number of high-impact transactions. Such PPP units can also be established successfully at the local-government level. For example, one such city-level PPP unit in China attracted a 31 billion renminbi (about $4 billion) investment from private investors in exchange for obtaining the right to build and operate a convention center for 20 years and to use the auxiliary commercial land. In the construction and operation stages, the private investor catalyzed the other professional developers and operators to maximize efficiency and market impact.

Finally, there is scope for governments and DFIs to collaborate to create effective investment-attraction institutions that span national borders. One such intervention, by the African Development Bank, is the creation of Africa50, an infrastructure-investment platform focusing on high-impact national and regional projects in the energy, transport, information technology, and water sectors. "Our goal is also to tap long-term savings from within and outside Africa by helping create

[9] "Infrastructure Investment Trusts can be a boon for India: Here is why," CNBC TV18, June 12, 2019, cnbctv18.com.

an asset class attractive to institutional investors," said CEO Alain Ebobissé. "We are doing this by increasing the number of viable, bankable private and PPP projects … as well as by investing in later-stage private and PPP projects." The purpose, he said, is to "contribute to the development of Africa's infrastructure as quickly and broadly as possible."[10]

Massive new investment is required in infrastructure across the developing world—to provide essential power and water, connect cities and markets, and strengthen digital connectivity. Governments will not be able to foot the full bill themselves. But with innovative thinking and bold action, they can unlock a new wave of financing and partnership from private investors and developers. DFIs, too, have a critical role to play in this revolution in private-sector infrastructure financing. Its impact, both on people's lives and on national economies, could be transformational.

[10] Africa50, africa50.com; "Raising Africa," Partnerships Bulletin, June 1, 2017, partnershipsbulletin.com.

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Unlocking Africa's $100 billion public-finance opportunity

African governments face stagnant tax revenues and rising public debt. Yet they have wide scope to reform tax systems and improve spending efficiencies. Across Africa, public-finance transformation could deliver $100 billion a year in new revenues and savings.

By Yaw Agyenim-Boateng, Acha Leke, Francisco Mendes, and Aurelien Vincent

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Although Africa remains the world's poorest continent, many of its governments have made impressive progress in fostering development and improving people's lives. For example, Africa's spending on infrastructure has doubled to around $80 billion a year in the past decade, while multiple reforms have improved African countries' ease-of-doing-business ratings. Thanks in part to these steps, the continent's combined GDP has tripled since the turn of the century. Investments in health systems have delivered significant gains—including a 50 percent reduction in infant mortality rates since 1990. And in education, the average time African children spend in school has nearly doubled since 1990, contributing to raising the continent's youth literacy rate to 70 percent.[1]

Will this progress be sustained or stalled in the decade ahead? In large part, the answer will boil down to finance. Africa today faces a perfect storm of a slowdown in growth, depressed commodity prices, stagnant tax revenues, and rising public debt. African governments' combined budget deficits exceeded $100 billion in 2018, equivalent to almost 5 percent of GDP—double the level in 2010. Closing the significant remaining infrastructure gap will cost another $100 billion per year.[2] Without appropriate action, many governments will face mounting fiscal pressure and find their ability to invest severely constrained.

Yet African governments have more scope than is often assumed to mobilize domestic resources for their own development and improve efficiencies in public spending. Several pioneering governments have already achieved big improvements in revenue collection through tax-system reforms, while others have delivered significant budgetary savings in areas such as public procurement and capital expenditure (capex). McKinsey's analysis shows that similar public-finance reforms, if scaled up across the continent, could close the entire fiscal deficit—or the $100 billion infrastructure-spending gap—within a few years.

In this paper, we highlight the public-finance challenges facing Africa today, and we assess the opportunities for African governments to improve both revenue collection and spending efficiency. We also point to the far-reaching transformation that many will need to undertake if they are to deliver on those opportunities. It is clear that Africa's fiscal challenges, while serious, can be resolved through levers that are available to most countries. Africa's governments have the power to navigate today's headwinds and steer the continent toward continued rapid growth and social development.

A perfect storm: Africa's public-finance challenges

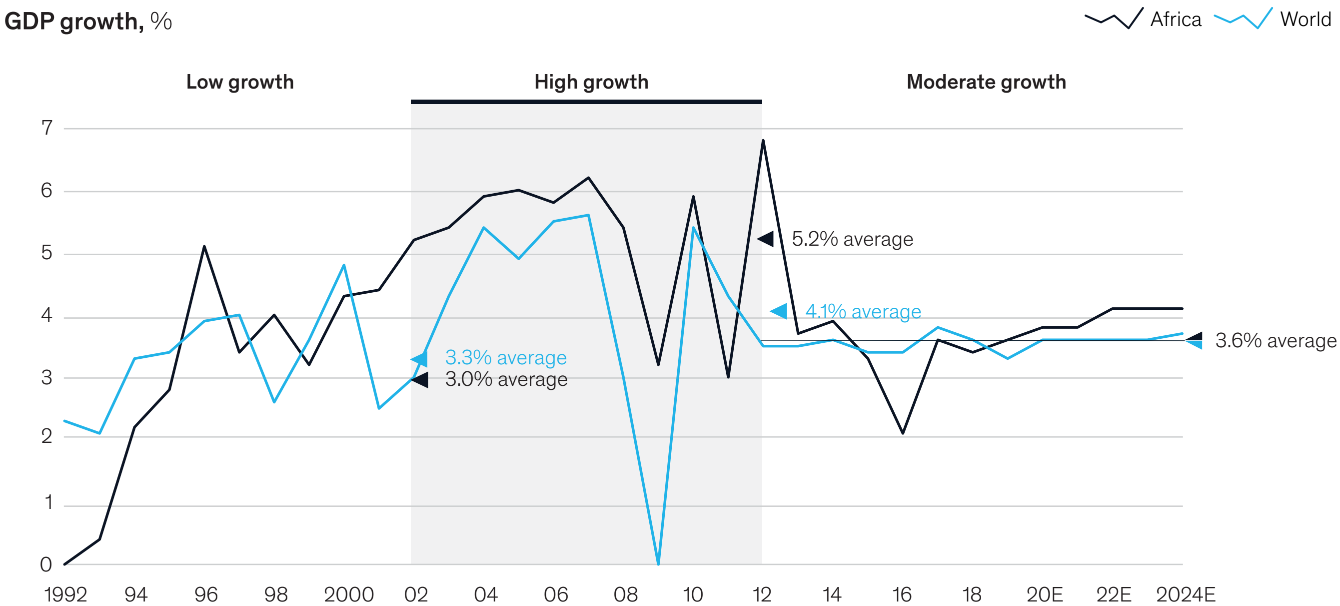
A long-term view reminds us that Africa's economic fortunes are on the rise. Real GDP growth, which barely topped 2.0 percent a year on average during the 1980s and 1990s, leaped ahead to 5.2 percent in the period from 2000 to 2010, making Africa the world's second-fastest-growing region after emerging Asia. In the late 1990s, private-capital flows to Africa (including foreign direct investment, equity, and debt) overtook aid inflows and remittances for the first time in decades. Rising productivity and investment reflected the increasing diversification of Africa's economies away from resources exports.[3]

After this heady decade, however, Africa's growth slowed sharply—to an annual rate of 3.3 percent in the period from 2010 to 2015. This was prompted by the twin shocks of the Arab Spring, which halted growth altogether in Egypt, Libya, and Tunisia, and the collapse of oil prices, which caused growth to fall sharply in oil-exporting countries including Algeria, Angola, and Nigeria. The recovery from that slowdown is still underway: Africa's GDP growth is forecast to reach 3.8 percent in 2022 and 4.1 percent in 2024.[4] Although key African economies such as Ethiopia and Ghana are now among the world's fastest growing, the continent overall will feel the effects of slower growth for some time to come (Exhibit 1).

[1] Mutsa Chironga, Georges Desvaux, and Acha Leke, *Africa's business revolution: How to succeed in the world's next big growth market,* first edition, Boston, MA: Harvard Business Review Press, 2018.
[2] For more information, see "Bridging infrastructure gaps: Has the world made progress?," McKinsey Global Institute, October 2017, on McKinsey.com.
[3] Chironga, Desvaux, and Leke, *Africa's business revolution.*
[4] Figures drawn from IMF data.

Exhibit 1

Africa's GDP growth is forecast to reach 4.1 percent in 2024.



Source: Source: IMF Data Mapper 2019

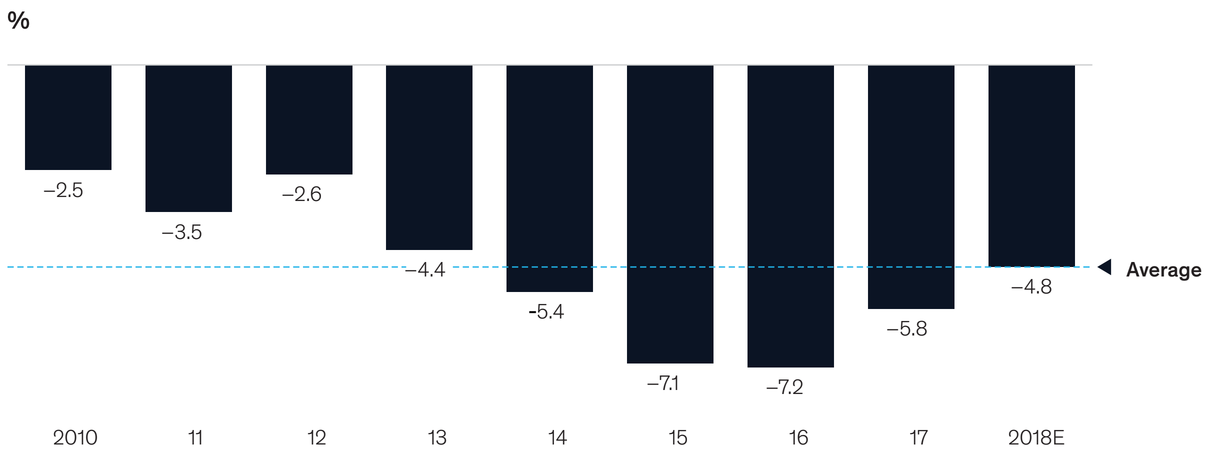
The economic slowdown has been matched by a sharp rise in fiscal deficits. The average fiscal deficit, which stood at 2.5 percent in 2010, ballooned to over 7 percent in 2015. Although the picture has since improved, deficits remained high at 4.8 percent in 2018 (Exhibit 2). That reflects the fact that growth in public expenditure has consistently outpaced revenues in recent years. In 2018, Africa's public spending amounted to $555 billion, but government revenues came in at only $443 billion—resulting in a fiscal deficit of $112 billion.[5]

African countries' $443 billion government-revenue take in 2018 represented only 19 percent of the continent's GDP, down from 23 percent in 2010.[6] That decline reflects the impact of declining revenues from natural resources—including oil, which saw a sharp fall in prices in 2013–2014 and is still far from earlier peaks. As we discuss below, some countries collect more than others; nonetheless, Africa's overall low ratio of public revenues to GDP makes it a global outlier. By contrast, the ratio of public revenues to GDP in most emerging countries outside Africa stands at between 25 percent and 35 percent—for example, it is 30 percent in Brazil. In the majority of advanced countries, the ratio stands at between 35 percent and 55 percent—for example, it is 37 percent in the UK and 53 percent in France. These comparisons make it clear that Africa as a whole is not "monetizing" its economy as much as it could (Exhibit 3).

[5] Figures based on McKinsey analysis and IMF data.
[6] These figures are projected from IMF data and national publications.

Exhibit 2

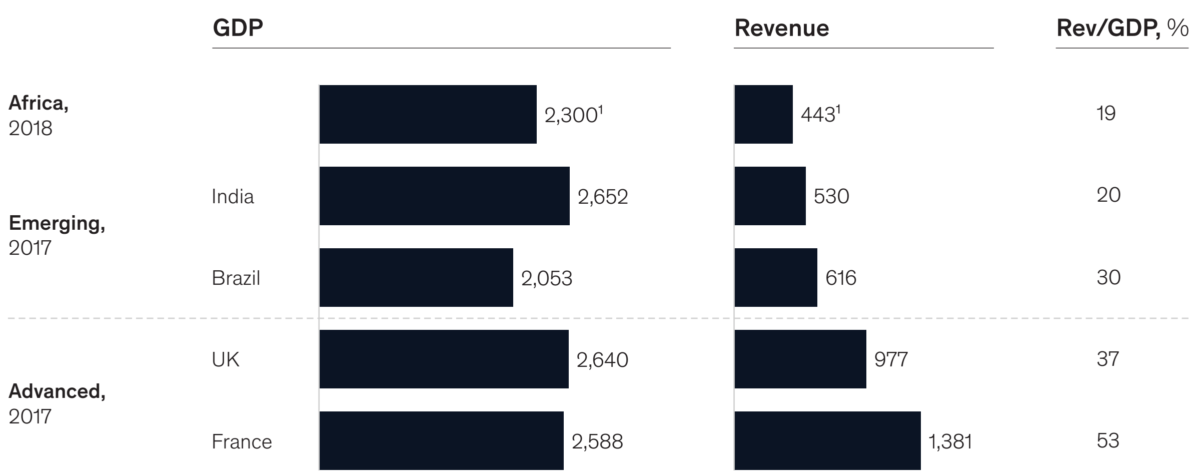
Average fiscal deficits in Africa ballooned in 2015 and 2016.



Source: Africa Development Bank

Exhibit 3

Africa has less 'monetized' economy than other key markets.



[1] 2018 figures.

Source: IMF, National publications, African Development Bank

Just as African governments have faced challenges in revenue collection, there has been upward pressure on public spending, which has outstripped revenue growth. Debt-servicing costs constitute 22 percent of that expenditure. Public-sector salaries and wages make up 21 percent of government spending, a higher proportion than in other emerging regions. Conversely, Africa's government budgets reflect a relatively low contribution to capex (32 percent) and pensions and subsidies (11 percent) compared with peer nations (Exhibit 4).

African countries' revenue and expenditure challenges, along with the accompanying fiscal deficits, have inevitably resulted in a growing public-debt burden. In 2018, Africa's cumulative public debt stood at a historical high of 58 percent of GDP—up from 40 percent five years previously. That continent-wide picture has been reflected in rising debt levels in nearly all of Africa's largest economies (Exhibit 5).

Nonetheless, Africa's debt-to-GDP ratio is still considerably lower than that of advanced economies such as Japan (where it stands at 235 percent), France (99 percent), and the United Kingdom (87 percent). It is also lower than that of many emerging countries. Yet Africa's debt servicing as a ratio of public expenditures is significantly higher than that of major emerging countries such as Brazil, India, Mexico, and Vietnam, owing to the high cost of African debt. That underlines the fact that Africa has more of a debt-servicing challenge than a debt problem (Exhibit 6).

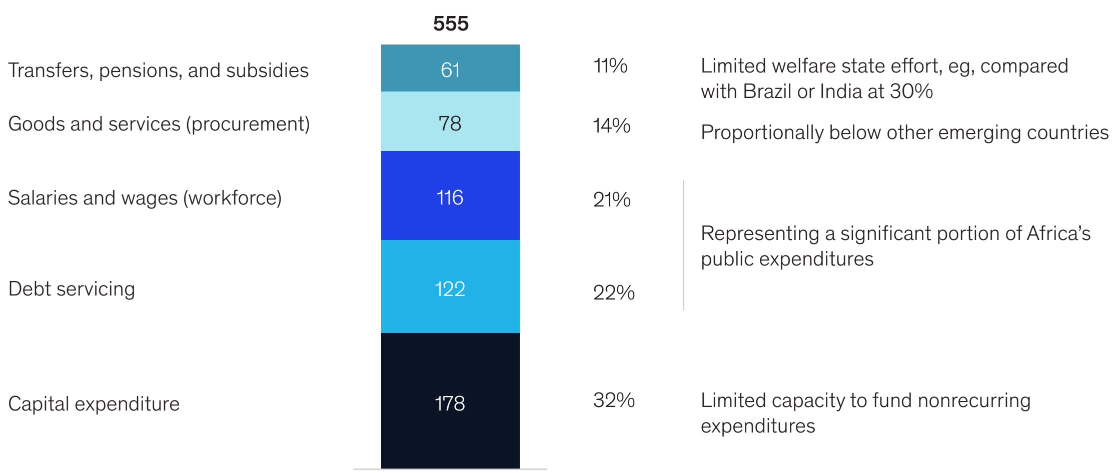
Africa's $100 billion public-finance improvement opportunity

Given the sobering numbers set out thus far, it is urgent for African governments to look at how they might strengthen their public finances. Most countries have considerable scope both to increase revenues through tax modernization and to improve efficiencies in public spending. Some African countries have already made real progress in

Exhibit 4

African governments' budgets reveal a relatively low contribution to capital expenditure and pensions and subsidies.

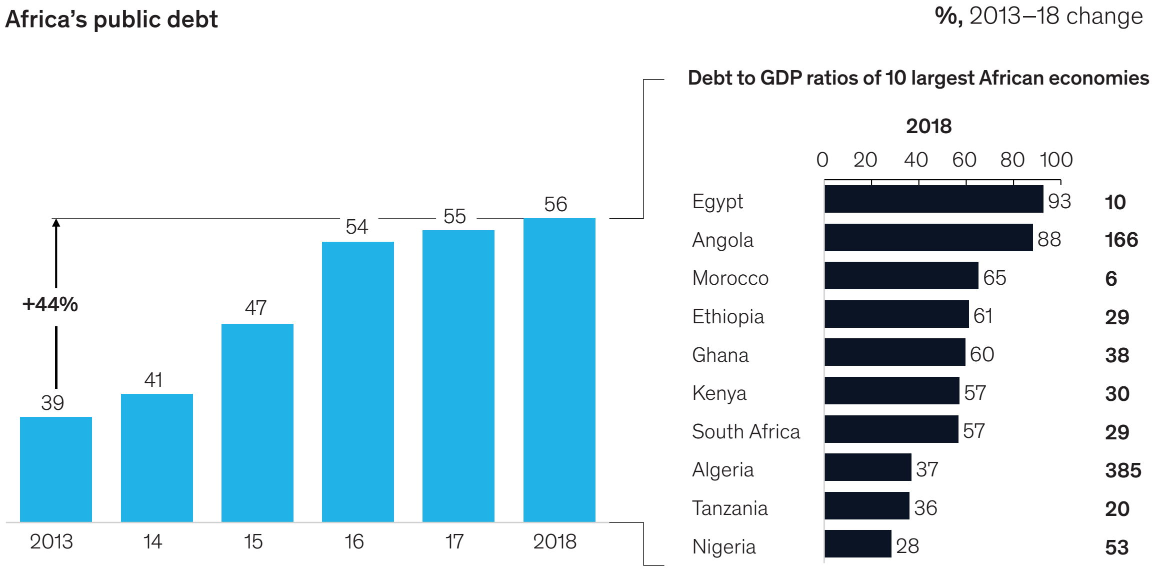
2018, $ billion



Source: McKinsey analysis, Africa Development Bank

Exhibit 5

Nearly all of Africa's largest economies are experiencing rising debt levels.

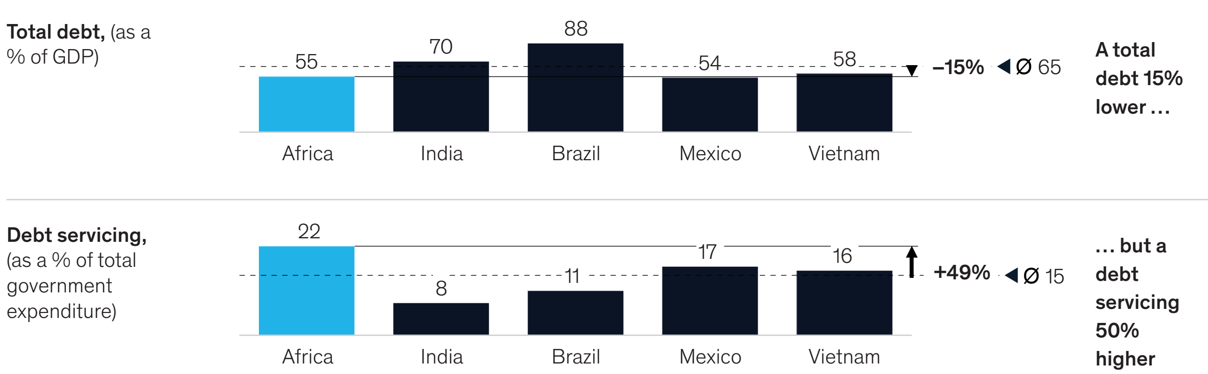


Source: IMF Data Mapper 2019

Exhibit 6

Africa's debt servicing as a ratio of public expenditures is higher than that of many major emerging countries.

2017, %



Source: International Monetary Fund (IMF), World Bank these public-finance reforms, delivering billions of dollars in additional revenues, along with significant savings. Several African countries that have pursued reforms have achieved annual revenue improvements of between $1 billion and $5 billion, or budgetary savings of at least 5 percent of total budget, or both.

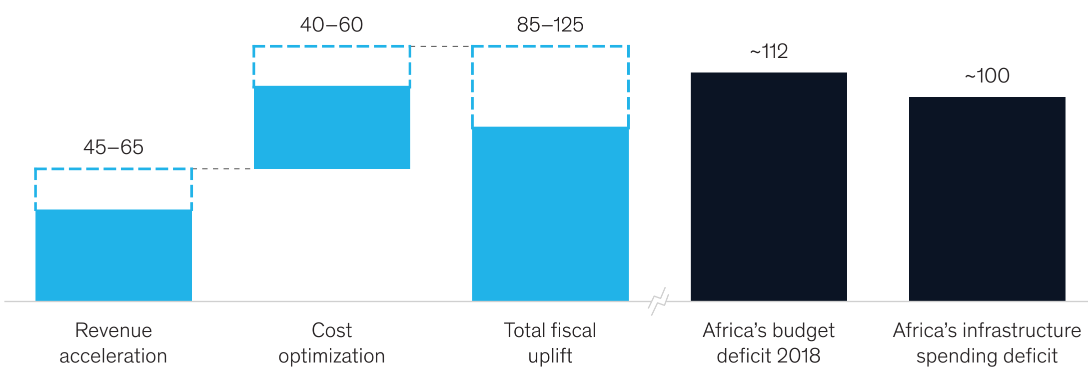
That points to the fact that the solutions to Africa's public-finance challenges do not need to be invented from scratch: many are already proven. If scaled up across the continent, such solutions could eliminate Africa's entire budget deficit. Alternatively, these reforms could unlock sufficient funding to close Africa's $100 billion infrastructure-spending gap. Moreover, such reforms could be enacted relatively quickly. They could generate substantial new revenues and savings within three years—without increasing tax rates or reducing the impact of government spending in critical areas such as education and health. But as we discuss in the next section, many African governments will need to face up to deep-seated barriers to implementation if they are to deliver this prize. That will require a true transformation in approaches to public finance. Our analysis shows that, launched at scale, efforts to improve tax-collection performance and public-spending efficiencies have the potential to deliver recurring annual impact of between $85 billion and $125 billion a year for Africa's governments (Exhibit 7).

Programs to enhance tax- and tariff-collection performance have the potential to deliver between $45 billion and $65 billion in additional annual tax and customs collection within three years. That translates into additional revenues of between 2 percent and 3 percent of GDP—without changes to tax rates or trade tariffs. In addition, programs to improve public-spending efficiency have the potential to deliver between $40 billion and $60 billion a year from expense efficiencies, such as implementing leaner capex practices, revamping procurement procedures, and eliminating "ghost workers"—nonexistent roles that are still on the payroll. Those savings represent between 8 percent and 12 percent of the aggregate budgets of African governments.

Exhibit 7

Africa's public fiscal-transformation opportunity is significant.

Annual public revenue increase and expense savings potential,[1] 2017, $ billion



[1] Before accounting for annual GDP growth; resource rents are excluded from tax analysis.

Source: IMF country desks (AFR Economic Outlook and Fiscal Monitor reports); Africa Growth Initiative at Brookings; ICTD / UNU-WIDER Government Revenue Dataset; World Bank WDI indicators; McKinsey Global Institute analysis; country budgets; McKinsey analysis

Mobilizing domestic resources for development: Africa's revenue opportunity

Today, tax collection levels are highly uneven across the African continent. For instance, South Africa's tax-to-GDP ratio stood at 25 percent in 2018 and Kenya's at 16 percent—but countries such as Ethiopia and Ghana gathered only about 11 percent of GDP in taxes. In oil-exporting nations such as Nigeria, tax collection excluding resource rents still makes up less than 10 percent of GDP, despite bold efforts to improve tax administration in recent years (Exhibit 8). That wide variance in tax-to-GDP ratios points to a significant opportunity to increase revenues in many African countries.

Research by the McKinsey Global Institute (MGI)—as well as by institutions such as the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD)—has highlighted several factors driving Africa's generally low tax rates. Government revenue authorities typically have limited data on the number of potential taxpayers, lack effective tracking tools, and have gaps in capabilities and resources. In addition, tax collection processes are often complex and burdensome. The time required by firms to pay their taxes is longer in Africa than in regions such as East Asia and OECD countries, although there are exceptions to this general rule including Kenya, Morocco, and South Africa.[7]

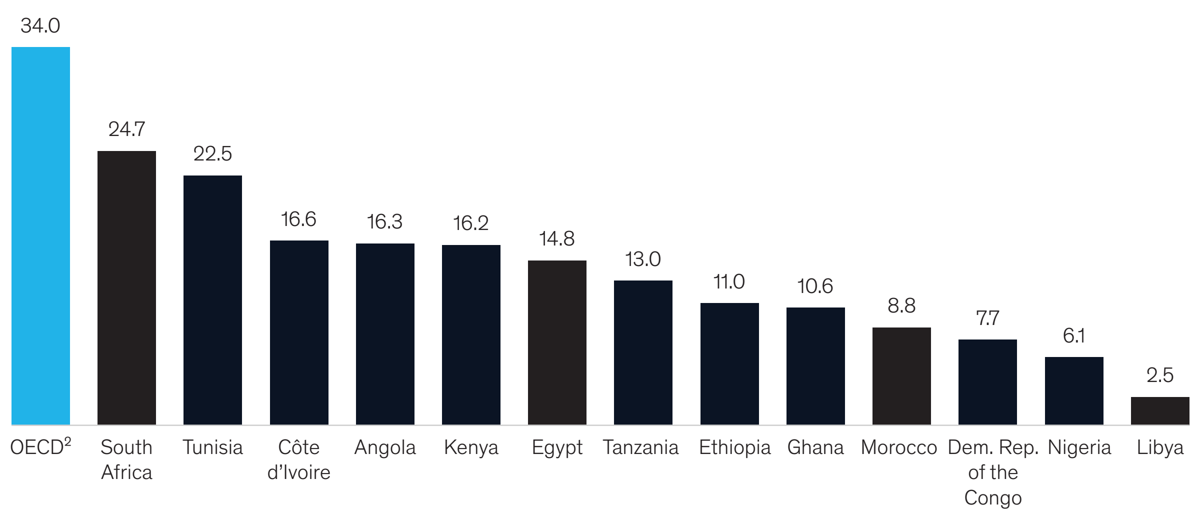
MGI estimated that African governments could boost tax revenue substantially if they were to eliminate noncompliance, including fraud, neglect,

[7] For more information, see "Lions on the move II: Realizing the potential of Africa's economies," McKinsey Global Institute, September 2016, on McKinsey.com.

Exhibit 8

Tax-to-GDP ratios vary widely across African countries.

Fiscal revenues to GDP ratio,[1] %, 2017



[1] Nonexhaustive list.
[2] Organisation for Economic Co-operation and Development.

Source: Economic Commission for Africa – African Statistical Yearbook error, and nonpayment. The opportunities include reducing informality to increase registration of taxpayers, strengthening the administration of tax systems by improving data collection, using data to drive risk-based compliance, and practicing better enforcement.

Such steps need to form part of an integrated, comprehensive transformation program that embraces the full tax-administration value chain, from registration through debt collection (Exhibit 9). In customs, likewise, an end-to-end transformation may be required (Exhibit 10). There are significant improvement opportunities at each stage of these value chains.

Delivering such a transformation also requires strong leadership and disciplined execution. The experience of successful tax modernization programs in Africa and elsewhere in the world points to three distinct components of such a transformation:

— *Improving the tax system to strengthen long-term sustainability.* One key step is to review and close the loopholes in corporate income tax—including taking steps to prevent tax-base erosion and profit shifting by companies from one jurisdiction to another. Another key step is the simplification and improvement of VAT regimes—including reducing exemptions and launching electronic invoice programs. Other levers include designing specific tax regimes for microactivity and informal businesses and redesigning exemption regimes to ensure that they actually drive investment and economic development.

— *Reforming tax and customs administration to improve enforcement and collections.* Key steps include ramping up inspections and audit processes and capabilities, including harnessing advanced-analytics techniques and third-party data—for example, from banks, utilities, and retailers. Governments and tax

Exhibit 9

Africa's tax revenue acceleration opportunity spans the value chain.

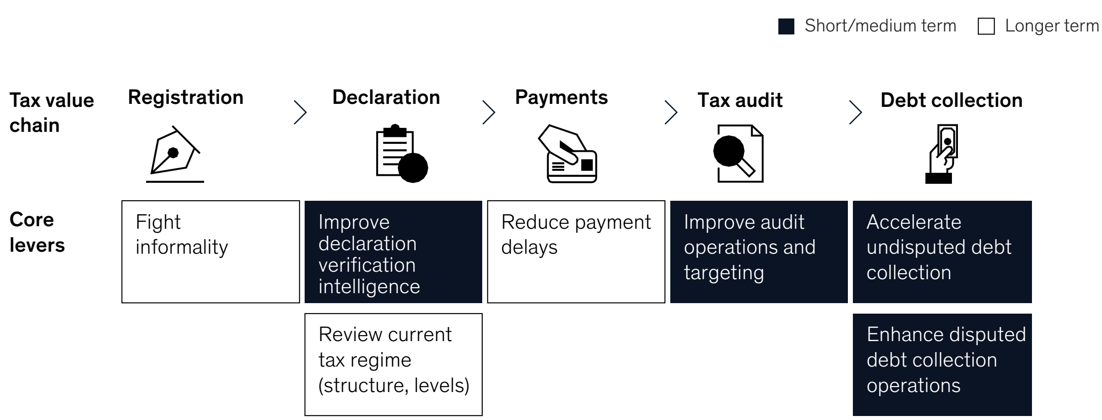
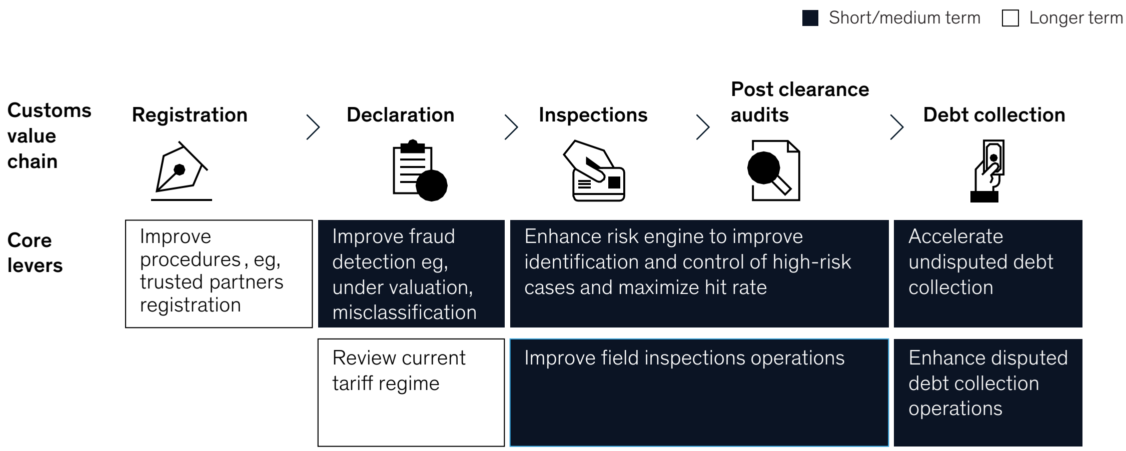


Exhibit 10

An end-to-end transformation may be required to capture Africa's customs revenue acceleration opportunity.



Source: McKinsey analysis

authorities also have the scope to make debt-collection processes more stringent.

— *Improving compliance.* Levers available include launching or strengthening initiatives to drive registration of businesses and individuals. Authorities can also reduce barriers to compliance, for example by enabling greater use of remote payments and pre-filing—and, where appropriate, by allowing defaulting taxpayers a "clean start." Longer-term levers include launching or strengthening taxpayer education programs delivered through mass media.

Several of these levers can have an impact in a space of months, not years—as the experience of a West African country shows. In just six months, it increased tax and customs revenues by 23 percent—and nearly doubled the tax compliance rate while improving debt recovery from defaulting taxpayers fivefold. The country achieved these results by redesigning customs processes with a focus on compliance and creating a centralized task force focused on debt collection.

A notable driver of this country's rapid improvements was its decision to set up an "audit factory." This new unit strengthened inspection capabilities and introduced an audit "risk engine" that helped prioritize high-value audits of both company and individual taxpayers. Before the country's tax transformation, only the 200 largest taxpayers had been regularly subjected to tax auditing, and there were widespread discrepancies in tax-auditing procedures. To address those gaps, the audit factory put in place a rigorous approach to standardize and extend auditing processes, with leadership and coaching to set weekly goals and help team leaders achieve them. The result was a 15-fold increase in the number of tax notices resulting from audits, from 165 in the year prior to the program launch, to nearly 2,500 in the third year of the program.

Many countries also have the opportunity to launch more broad-based revenue-improvement efforts—and again, there are powerful existing examples to learn from. For instance, Angola launched a five-year tax transformation program from 2011 to 2015 that resulted in an 80 percent increase in non-oil revenue. The country used a combination of both structural reforms, including a redesigned tax code, and a massive improvement in tax and customs collection and enforcement. To achieve the latter, the country revamped its tax administration, deployed advanced analytics tools to maximize information sharing, created digitalized tax processes, and implemented a comprehensive cultural transformation across the government.

Delivering more for less: Africa's public-spending efficiency opportunity

On the expenses side, African governments have opportunities to deliver substantial savings in most of the major categories of public expenditure (Exhibit 11). In our experience, this is generally an opportunity that is overlooked. Those opposed to notices include the following:

— *Transfers, subventions, and subsidies.* Potential steps include using digital technologies to create transparency on how subsidies are applied and thus eliminate leakage and reduce overheads. Many governments also have scope to reduce costs of transfers based on a reassessment of beneficiary agencies' true financial needs.

— *Procurement.* Governments can undertake targeted initiatives, including the centralization and harmonization of procurement processes for common categories of goods or services procured by government entities. Another opportunity is to define a price index allowing for the selection and enforcement of a reference price by type of goods.

— *Workforce.* Governments have several levers available to them to reduce workforce costs without resorting to reducing headcount. One is to eliminate ghost workers—a problem common to many African countries—by bringing transparency to the government payroll. Another lever is the implementation of revamped performance-management practices.

— *Capital expenditure.* Governments can improve capex planning, including through enhancing planning and prioritization processes. And they can strengthen delivery initiatives—for example, through monitoring and auditing of contractors and systematic implementation of legal contractual safeguards such as the enforcement of performance contracts.

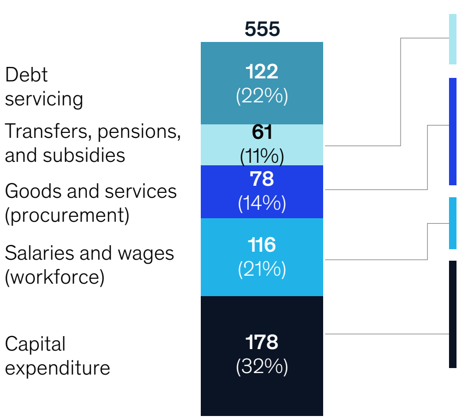
Several African countries have already delivered significant efficiencies by applying these levers. For example, a West African country achieved a public-expenditure efficiency program that led to a 5 percent reduction in absolute government expenditure in just 18 months. Key efforts to achieve that result included the following:

— *Capex planning and scrubbing initiatives.* These included technical counter-expertise interventions for major projects to reduce time and costs. Steps were also taken to reduce operations and maintenance costs, for example through the implementation of multiyear

Exhibit 11

African governments have opportunities to achieve substantial savings in most major public-expenditure categories.

Africa's aggregate public spends baseline, 2018, $ bn



Key cost-optimization levers	Savings potential	
Subsidy coverage prioritization Elimination of overhead and leakage	0%–10%	**$0–5 billion**
Price harmonization Volume discounts and consolidation Demand rationalization Standardization	15%–20%	**$10–15 billion**
Ghost-worker elimination Performance management	5%–10%	**$5–12 billion**
Integrated planning and capacity management Value engineering Contractor and delivery management Lean construction	15%–17%	**$25–30 billion**
Total opportunity	**8%–12%**	**~$40–60 billion in 3–4 years**

Source: IMF; Country budget documents; McKinsey analysis road-maintenance contracts. To ensure the improvements were sustained, the government implemented a new capex review procedure that allowed for systematic investment capex optimization.

— *Reduction in costs of goods and services.* The government introduced a centralized, standardized, and streamlined procurement function and associated processes, with a focus on real estate, vehicles, and travel expenses. In the vehicles category, for example, it centralized vehicle purchasing; negotiated longer-term, lower-cost contracts for fuel supply and repairs and maintenance; introduced vehicle sharing; and sold off underused vehicles.

— *Redesigned investment framework.* This removed unnecessary exemptions and implemented targeted controls to review the enforcement of tax exemptions. The new controls helped uncover numerous fraudulent situations, including companies benefiting from tax exemptions years after the exemption period had expired—and applying the exemptions to a wider scope of goods and services than was authorized by the law.

Other countries have delivered substantial impact in targeted categories of public spending by harnessing data and analytics. For example, Nigeria's federal government launched the Integrated Payroll and Personnel Information System (IPPIS) in 2016 to automate the payroll of civil servants and eliminate ghost workers. In one instance of the impact of this change, the government was able to eliminate more than 80,000 ghost officers from the Nigeria Police Force after integrating the force's payroll into IPPIS.[8]

This example is a reminder that corruption and fraud remain a serious drain on Africa's public finances—and that governments need to take bold steps, including through technology-enabled solutions, to tackle this problem. The African Union has estimated that as much as $150 billion is lost to corruption every year across the continent, in the form both of losses from the public purse and bribes paid by individuals and businesses.

From opportunity to action: Designing and delivering a major fiscal transformation program

The lessons learned from successful public-finance transformations in Africa show that solutions are widely known but that implementation can be difficult. These implementation hurdles include vested interests, silos in organizations, a lack of focus, and gaps in capabilities. We have seen governments deploy six components to overcome these barriers:

1. The right leaders in place for the transformation and across relevant institutions—not only must these leaders have the right technical capabilities but they also need to inspire others and serve as role models for the entire organization

2. Strong political will and discipline throughout the transformation—including active championing of the effort by political leaders, made visible across the government

3. Active engagement of key stakeholders, including the private sector and development partners

4. A compelling change story communicated throughout the public service to foster understanding of the purpose of the transformation and conviction that the change is beneficial and meaningful

5. Balanced focus on aggressive revenue growth and on cost control—with sustained pressure to maximize impact on both sides of the equation

6. Technology as a key enabler of the transformation: digitization allows governments to increase transparency radically, and it enables better decision making

[8] Victor Ekwealor, "Unified database uncovers over 80,000 ghost workers in the Nigeria Police Force," Techpoint.africa, March 27, 2018, techpoint.africa.

Meaningful public-finance transformations typically require action by multiple departments, agencies, ministries, and other stakeholders. These entities are often asked to move faster than they are accustomed to moving, collaborate in joint teams and initiatives, and experiment with bold new approaches.

To tackle these challenges and ensure effective coordination, several governments manage transformation via newly established "delivery units"—small, agile, cross-functional teams comprising exceptional personnel who have direct access to top government leadership and are fully dedicated to driving delivery. While some units are established for just a few years to manage the delivery of specific programs, others have more permanent roles spanning multiple administrations. Successful delivery units have been led by a senior official or business executive with a peer-like relationship with ministers. They have also been staffed by talented people—from either the public or the private sector—who are effective problem solvers, communicators, and influencers.

An example is the prime minister's delivery unit team in an East Africa country, which was set up to oversee the implementation of improvement initiatives in both tax policy and tax administration. It supports the prime minister with high-quality data and reporting transparency, enabling efficient steering of the public-finance transformation and rapid debottlenecking of barriers to implementation. The team has delivered rapid impact, including a $200 million increase in tax revenue in the first year of its existence.

A McKinsey survey of nearly 3,000 government officials involved in transformations found that efforts that were centrally coordinated by a dedicated team were twice as likely to be successful than those that were delivered through standard government organizations.[9] But the key challenge for leaders of public-finance transformations is not merely to set up a central coordinating unit—it is to make sure this unit is effective.

By way of an analogy, consider the difference between a music critic and an orchestra conductor. Many central program-management offices are more akin to the critic: they carefully observe and assess a performance, and after the fact they report its successes and flaws in a standardized template. Truly effective delivery units, however, are like conductors: they actively coach the players, providing real-time feedback that constantly improves the performance.[10] These units are designed and staffed to share responsibility for delivery and impact.

African governments face serious fiscal challenges, but they also have tremendous opportunities—realizable in the near term—to reform public finances. With sufficient commitment to transformation, governments can create new headroom to pursue spending priorities without threatening fiscal sustainability.

Given the major funding needs to meet the continent's development goals, the time to act is now. Finance ministers who take the lead can oversee a robust assessment of their countries' opportunities to increase tax and customs revenue and improve the efficiency of public spending. And they can then design an effective delivery machine to translate this potential into tangible, sustainable gains.

[9] *Delivering for citizens: How to triple the success rate of government transformations,* June 2018, McKinsey.com.
[10] For more on this topic, see Jörg Schubert, Martin Checinski, Tera Allas, and Vasudha Gupta, *Reframe to reform: Putting people at the center of government transformations,* a joint report from the World Government Summit 2019 and McKinsey & Company, January 2019, on worldgovernmentsummit.org.

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