Systematic Country Diagnostic

Turkey's Future Transitions

Towards Sustainable Poverty Reduction and Shared Prosperity

WORLD BANK GROUP

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October 12, 2016

ABBREVIATIONS AND ACRONYMS

AFAD	Prime Ministry Disaster and Emergency Management Presidency
BEEPS	Business Environment and Enterprise Performance Survey
CEPEJ	European Commission for the Efficiency of Justice
CPI	Consumer Price Index
ECA	Europe and Central Asia
ECE	Early Childhood Education
EE	Energy Efficiency
EIA	Environmental Impact Assessment
EMRA	Energy Market Regulatory Authority
EPIAS	Energy Exchange
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNI	Gross National Income
HBS	Household Budget Survey
IRA	Independent Regulatory Agency
LFP	Labor Force Participation
LFS	Labor Force Survey
LNG	Liquefied Natural Gas
LPI	Logistics Performance Index
NUTS2	Nomenclature of Territorial Units
OECD	Organisation for Economic Co-operation and Development
PFMC	Public Financial Management and Control
PISA	Program for International Student Assessment
PMR	Product Market Regulation
PPL	Public Procurement Law
PPP	Purchasing Power Parity
R&D	Research and Development
SCD	Systematic Country Diagnostic
SILC	Survey on Income and Living Conditions
SME	Small and Medium Enterprise
SuTPs	Syrians Under Temporary Protection
TDHS	Turkey Demographic and Health Survey
TEIAŞ	Electricity Transmission Company
TFP	Total Factor Productivity
TUIK	Turkiye Istatistik Kurumu (Turkish Statistical Institute)
TVET	Technical and Vocational Education and Training
WDI	World Development Indicators
WEF	World Economic Forum
UNHCR	United Nations High Commissioner for Refugees

CURRENCY EQUIVALENTS (Exchange Rate as of May 1, 2016)
Currency Unit US$1.00 Turkish Lira TL 2.86
Weights and Measures: Metric System

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ACKNOWLEDGEMENTS

This report was led by Ulrich Bartsch (Lead Economist, GMFDR) and Facundo Cuevas (Senior Economist, GPVDR), with the guidance of Johannes Zutt (Country Director, ECCU6), Ivailo Izvorski (Practice Manager, GMFDR), and Carolina Sanchez-Paramo (Practice Manager, GPVDR). The report was prepared in collaboration between IBRD and IFC, the latter under leadership of Tomasz Telma (Regional Director, CEUDR) and Aisha Williams (Turkey Country Manager, CTKFO). Marina Wes (Country Manager, ECPL), Hans Lofgren (Senior Economist, DECPG), Felipe Jaramillo (Senior Director, GMFDR), Raju Singh (Program Leader, LCC8C), and Ambar Narayan (Lead Economist, GPVDR) contributed useful guidance as peer reviewers. Martin Raiser (former Turkey Country Director), Will Wiseman, Jose-Guilherme Reis, and Steve Karam (former Turkey Program Leaders) contributed in the early stages. Ximena Del Carpio, Tamara Sulukhia, and Donato De Rosa (current Turkey Program Leaders) accompanied the completion of the report. Intellectual contributions were made by the rich Turkey Country Team, with members from all Global Practices (GPs) and Cross-Cutting Solutions Areas (CCSAs), and IFC in different locations across the world. Written contributions were made by (in alphabetical order) Alexios Pantelias, Alper Oguz, Ana Maria Munoz, Arzu Uraz, Ayberk Yilmaz, Aysenur Acar, Claudia Rokx, Daniel Valderrama Gonzalez, Elif Ayhan, George Konda, Holly Brenner, Israel Osorio-Rodarte, Joao Pedro Azevedo, Kaan Inan, Kamer Karakorum-Ozdemir, Kari Nyman, Levent Yener, Lourdes Rodriguez-Chamussy, Maurizio Guadagni, Mediha Agar, Merima Zupcevic, Monica Robayo, Nina Arnhold, Patrick Avato, Samar Essmat, Temel Taskin, Victoria Levin, Ximena Del Carpio, Yesim Akcollu, and Zeynep Darendeliler.

The SCD also benefited from multiple consultations to complement the analysis. The first round took place during March–April 2015 and consisted of (a) focus group discussions with clusters of GP staff mainly from the Ankara

office; (b) write-in contributions of issues and constraints for Turkey's path to poverty reduction and shared prosperity from the IBRD country team and IFC; (c) an online survey of the country team for scoring issues and constraints; (d) a full-day IBRD-IFC country team workshop to discuss scoring and prioritization of the identified issues and constraints; and (e) guided, open-ended discussions with Turkey experts, mainly but not exclusively in Istanbul. The first round helped in identifying the broad range of areas to be covered. The second round took place in August–September 2015 and consisted of focused discussions of the draft concept note with selected experts, the peer reviewers, and GP clusters mainly from the Ankara office. The concept note was revised following this second round of consultations. The final draft was discussed with groups of private sector stakeholders, including domestic real sector corporates, financial institutions, and foreign institutional investors in February 2016, and during presentations to government counterparts and World Bank staff in several locations in March-May 2016. The final draft also benefited from three rounds of detailed feedback and comments from line ministries and government agencies, coordinated by Treasury.

OVERVIEW

This Systematic Country Diagnostic (SCD) looks at Turkey from the perspective of the challenges and opportunities for eradicating poverty and boosting shared prosperity, the World Bank Group's twin goals. The objective of the diagnostic is to identify constraints and priorities for Turkey to continue making progress in reducing poverty and generating shared prosperity, the twin goals that define the mission of the World Bank Group. In practice, poverty is measured by the percentage of the population with consumption (or income) levels below the poverty line, and shared prosperity is captured by the growth in consumption (or income) of the poorest 40 percent of the population (the 'bottom 40') (Basu 2013). The SCD is forward-looking, assessing challenges and opportunities to consolidate recent gains and to make further progress in economic growth, inclusiveness and sustainability. More specifically, building on existing and newly generated analytical work, this SCD aims to answer three questions:

- Who will likely be the poor and the bottom 40?
- What will be the engine of growth?
- How can growth be sustainable?

This SCD aims at anticipating the next chapter in the story of Turkey's transitions. It builds on a range of recent analytical work, most importantly Turkey's Transitions: Integration, Inclusion, Institutions (World Bank 2014a), which give a detailed description of where Turkey stands today and how it got there, as well as discussing most of the challenges we are focusing on. We are interested in the medium-term future of the next 10 years, a time frame that is in line with the time it takes for interventions and investments under the next Country Partnership Framework (CPF) to

bear fruit. We analyze Turkey's future potential based on the stocktaking of Turkey's development. We build on this discussion with explicit modeling of Turkey's future where possible. Our framework builds on the 'asset approach' to development described in Shared Prosperity: Paving the Way in Europe and Central Asia (Bussolo and Lopez-Calva 2014). This approach describes the process of economic development in terms of the accumulation of physical and human assets, and institutions (the latter being defined as the 'rules of the game', and the state apparatus to enforce the rules). We complement this with a conceptual framework of the 'road to good jobs', putting the individual at the center of a universe of firms that employ his or her labor and skills, shops providing the goods he or she buys, schools helping him or her improve human capital, hospitals allowing him or her to remain active and healthy, and public assets and rules and institutions which enable markets to allocate factors and goods in a useful fashion. The individual is embedded in a household which engages in microeconomic activities and in turn is embedded in macroeconomic relations.

Turkey made significant progress in poverty reduction and shared prosperity in the 2000s, but poverty is still an important challenge, particularly in some regions. Poverty incidence was more than halved during 2002–14, from 44 percent to 18 percent of the population. Extreme poverty declined at an even higher proportional rate, decreasing from 13 percent to 3 percent.[1] Expenditure levels of the bottom 40 grew at an average rate of 4 percent. The decrease in poverty was shared across both urban and rural areas and was relatively robust to the sharp economic downturn in 2008–09, when poverty increased only marginally. However, despite the substantial reduction, poverty still affects millions of people: 13.8 million individuals lived in poverty and 2.3 million lived in extreme poverty in 2014, more than in any other country in ECA in absolute numbers. The recent influx of Syrian refugees (the Government had registered 2.7 million Syrian refugees by October 2016) exacerbated the burden of making progress toward the twin goals.

1 - For an explanation of why it differs from poverty numbers published by the Turkish Statistical Institute (Turkiye Istatistik Kurumu, TUIK), see Box 1.1. Poverty and extreme poverty are measured using the thresholds that the World Bank adopts for countries in the Europe and Central Asia (ECA) region. For poverty the line is set at US$5 per day, while for extreme poverty the line is US$2.5 per day, both in terms of 2005 purchasing power parity (2005 PPP). Data comes from the Household Budget Survey (HBS), collected by TUIK, and they are harmonized by the World Bank to produce poverty numbers that are comparable across countries and over time.

The major driver of poverty reduction and shared prosperity was economic growth, and the channels through which it contributed were employment and labor incomes. The drop in poverty was largely the result of overall economic growth lifting households' levels of income and consumption, rather than changes in inequality and income redistribution between households. Poverty has been reduced because 'the pie' got larger, not because of changes in how 'the pie' is shared. Moreover, around 60 percent of the decline in the poverty headcount ratio is attributable to labor income growth, explained by people having access both to more jobs and to better paid jobs. Non-labor income played a complementary role. Labor income growth also appears as the main driver of the improvement in shared prosperity.

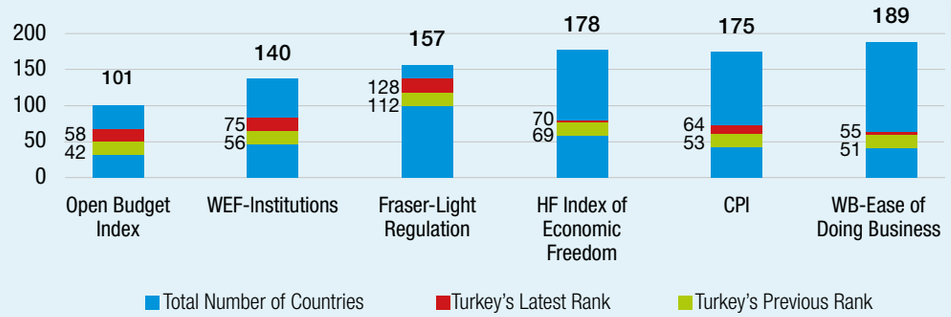
Looking forward, Turkey's challenge is to reap the benefits of the demographic dividend, and therefore it needs to create good jobs for the increasing number of people of working age. The 'demographic window' is now open. Turkey is still benefiting from a falling dependency ratio (non-working-age to working-age population) until about 2025, when rising old-age dependency will outweigh the decline in the number of minors. The time in which the dependency ratio is below one-third—the loose definition of 'demographic window'—is projected to last until 2050. The coming three decades are therefore the time during which Turkey could become rich before getting old. Alas, the 'demographic window' turns into a 'demographic dividend' only if people of working age are economically active on the labor market's supply side, the economy can create jobs for the new entrants into the labor force on the labor market's demand side, and the labor market itself works to bring the two sides together.

Turkey faces important challenges to maintain the foundations of growth and poverty reduction. Macroeconomic and political stability were at the heart of Turkey's impressive economic performance in the post-2001 period. After the crisis of 2001, sound macroeconomic management—supported by a flexible exchange rate regime, an independent central bank focused on inflation targeting, and fiscal consolidation—and much needed structural reforms paved the way for economic dynamism. However, Turkey's growth relied increasingly on the inflow of foreign savings. The dependence on mostly

short-term inflows to finance a high structural current account deficit is the economy's Achilles' heel, even after the reduction in the current account deficit following the decline in oil prices in late 2014, because of the need to roll over a large stock of short-term debt.

FIGURE O.1

Turkey's Rank in Indicators of Institutional Quality



Source: World Bank, World Economic Forum (WEF), Fraser Institute, Heritage Foundation, Transparency International, International Budget Project.

Note: Bars show ranks, that is, moving up on the bars corresponds to moving down in the international rankings.

Macroeconomic stability in the future will require significant growth in domestic saving. This is a major turnaround from the volatile period of the 1990s, when fragility of the banking system repeatedly resulted in financial crises. Nevertheless, the bank-dominated financial sector in Turkey lacks the depth to finance growth, and thereby contributes to Turkey's dependency on foreign savings.

Most importantly, the quality of Turkey's economic institutions falls short of countries that have successfully transitioned to high income, and the gap is widening. Turkey does not make it to the top 40 on any global ranking of the quality of economic institutions, and the distance to the top has been widening (Figure O.1). Moreover, shortcomings in the functioning of the judicial system and judicial independence have led to a deterioration in the perception of the rule of law.

A. Who Will Likely Be the Poor and the Bottom 40?

Although some subnational territories with high poverty incidence have successfully reduced poverty, the eastern regions are not experiencing the rates of growth in consumption or income that would allow convergence. Convergence would imply that regions with higher initial poverty rates experience higher rates of poverty reduction, but this has not been the case. Poverty reduction was relatively slower in the East and Southeast, with poverty even increasing in Central East Anatolia. This evolution leads to persistence of the traditional high regional disparities that have characterized Turkey. Labor markets are closely linked to the overall positive story of poverty reduction at the national level, as well as to the mixed news story at the subnational level. Although net job creation of formal jobs has taken place across regions, it has lagged behind in the eastern part of the country. Overall, labor markets in the East show systematically lower employment and participation rates, together with higher unemployment.

Female labor force participation (LFP) remains low, but if the trend toward rising female LFP is sustained and women from lower-income brackets join the labor force, this will, over time, make a significant contribution to economic growth and reduced poverty and inequality. Large gender inequalities persist particularly in access to economic opportunities. According to the 2015 Global Gender Gap rankings (WEF), Turkey ranked 130 among 145 countries included. As the recent

trends of Latin American countries suggest, women can play a key role in strengthening the linkages between access to jobs and poverty reduction and shared prosperity. Lessons from international experience suggest that although female LFP will continue to rise with Turkey's transition toward high-income status, the pace of increase is not likely to be sufficient for the country to close the existing gap with comparable countries, nor for the country to reap the benefits and returns of its human resources. Removing constraints to accelerate female LFP growth is a clear area of focus for greater progress on poverty reduction and faster transition to higher-income status.

A higher-skilled population will be needed to boost prosperity and accompany a sustainable transition to high-income status, but gaps in human capital between the bottom 40 and the rest are high and persistent. As emerging markets move forward, the share of employment in routine, non-cognitive tasks falls down. Technology increasingly replaces such tasks, while new jobs are being created with non-routine cognitive tasks. In Turkey, the share of employment in such tasks declined by an annual average of 1.1 percent during 1995–2012. Skills mismatches represent an important constraint for employers, especially in lagging areas of the East and Southeast of the country. Almost two-thirds of firms in this region identified inadequate education of the workforce as a major constraint. Only 3 percent of the bottom 40 adults has some post-secondary education, compared to 21 percent for the rest.

Turkey has accomplished fast improvements in learning outcomes and educational achievement, although it has recently lost some ground. Learning outcomes in general and skills in particular are important for reducing poverty and increasing shared prosperity as well as productivity and growth. Increasing public spending in the overall education system in Turkey is rapidly generating improvements not only in enrollment and coverage, but also on learning outcomes, as shown by students' scores in international test results. Turkey was the fastest-improving country in average PISA scores between 2003 and 2012, and attained faster-than-average improvements in TIMSS between 2011 and 2015. However, two important challenges arise. First, Turkey's learning outcomes still rank at the lower end among OECD countries (and spends less than half of the OECD average). Second, the positive

trend in learning outcomes has suffered recent reversals - 2015 PISA results have been worse than previous years.

B. What Will Be the Engine of Growth?

Turkey's per capita gross domestic product (GDP) is projected to grow by 30 percent over the next 10 years. Estimates based on a growth accounting framework suggest an economic growth potential of about 3.5 percent per year, although productivity-enhancing reforms and higher private investment could increase growth to about 5 percent per year (see Chapter 2). Combining the baseline projection of 3.5 percent growth with population projections indicates that gross national income (GNI) per capita would grow to about US$12,800 in 2025, from just over US$9,000 in 2015 (in constant U.S. dollars). Although significantly slower than envisaged in Turkey's National Development Plan (NDP) (2014–18), this growth would carry Turkey over the threshold to high-income status as currently defined by 2025.[2]

Over the past two decades, structural change constituted the main engine of growth, but new sources of productivity growth will have to come from technology absorption and innovation for production to 'move up the value chain'. While agriculture still employs one-fifth of the labor force—much more than in typical high-income countries—the potential for labor to move from agriculture to industry and services will eventually peter out. Within-industry structural change has to carry the torch for economic growth. Within-industry growth depends on improving resource allocation within industry, technology absorption and diffusion, as well as innovation. Turkey is doing well with medium-technology production, which increased significantly over the last decade. However, the share of its high-tech production and also exports has declined in recent years. These declining shares of high-tech goods are related to a low

2 - Current per capita GDP is above US$10,000 using the World Bank's Atlas method, which tries to smooth out exchange rate fluctuations. The 10-year projection crucially depends on the behavior of the exchange rate. The sharp depreciation over the last two years has depressed the real exchange rate well below its historical average; assuming it recovers to the historical average would allow a faster convergence to high-income status.

performance in innovation, where Turkey performs well below high-income countries. Low innovation performance can be linked to shortcomings in skills, corporate governance, and competition enforcement. Also, there is significant scope to achieve efficiency gains from pro-competitive sector policies and more effective economy-wide competition policy enforcement.

An analysis of the efficiency of resource allocation also highlights shortcomings in leveling the playing field. There is significant scope for increasing productivity by reallocating resources (capital and labor) within sectors by leveling the playing field and making sure markets function effectively. Comparing a measure for firm-specific distortions in Turkey in 2013 with similar measures for the United States for 1997 (latest available) shows that Turkey could have boosted total factor productivity (TFP) by 19.5 percent in 2013. However, given that the U.S. productivity dispersion has probably improved since 1997, the gap and potential for improvement for Turkey accordingly is larger.

C. How Can Growth Be Sustainable?

Turkey's economy is characterized by a relatively low, albeit rapidly increasing, environmental footprint. Economic growth has not yet decoupled from rising energy use, pollution, and greenhouse gas emissions, a process that has been under way in advanced Organisation for Economic Co-operation and Development (OECD) countries for the past decade or so. Turkey therefore has considerable potential for greater resource efficiency and pollution abatement. Of particular interest is the transport sector, where Turkey is at the crossroads: it could follow the North American example with heavy reliance on private vehicles and high-energy intensity, or follow the European and Japanese examples, which placed much more emphasis on developing public transport.

While successfully accommodating migrants over the last half century, Turkish cities face long-term sustainability challenges. These include the challenge to provide connectivity and the benefits of

agglomeration, which are threatened by environmental degradation and congestion. They need to improve urban transport planning and systems, effective means of social engagement to broaden the benefits of urbanization to all city residents, and the spatial planning measures that will safeguard against sprawl and inefficient, uncontrolled development. Taken together, these key challenges represent Turkey's second-generation agenda for sustainable urban development (World Bank 2015a).

While water availability is generally sufficient now, projections for growth in water use may surpass availability by 2030. According to a 2016 Climate Change assessment (Ministry of Forestry and Water Affairs 2016), in a worst-case scenario, increasing water demand may exceed Turkey's exploitable water level by 2030s (with agriculture, domestic water, and industry as the main users). Irrigated agriculture, which consumes 73 percent of the country's overall exploitable water, would be the hardest hit, starting with large semiarid and subarid regions. Irrigation is critical to Turkey's agriculture. It triples productivity compared with rain-fed areas. Turkey's concrete steps to promote performance improvement in water supply and to encourage treated wastewater reuse would only offset demand by 1 to 2 billion m3. Nevertheless, a profound change is needed to increase irrigation efficiency and agriculture productivity and to develop river basin management plans, allowing optimization of water resources management and promotion of integrated approaches for urban and industrial development.

D. Prioritization

In view of Turkey's fundamental challenge of reaping the demographic dividend through creating employment, we developed an analytical framework to help identify and prioritize constraints to poverty reduction and shared prosperity. The framework describes the road to good jobs. It combines economic actors, economic geography, and public interventions. It was developed on the basis of substantial consultations with Turkey experts and our reading of the large body of analytical work on Turkey.

- A solid foundation of economic and social stability, conducive institutions and good governance, and a functioning financial system is needed for economic development (Figure O.2).

- Jobs are created by dynamic firms, performed by productive individuals, and both need tangible public assets (blue circles). Firms grow and create more jobs by innovating and investing.

- Public assets provide connectivity, infrastructure, and resources. Individuals become productive by participating, by being healthy, and by accumulating skills.

- Policy interventions influence this universe through four channels: (a) economic and social policies contribute to stability; (b) institutions make innovation and investment profitable and regulate finance and connectivity (roads, energy networks), through for example a patent law for the protection of an innovation, or property rights to allow for the appropriation of returns on investment; (c) public investments improve connectivity, build infrastructure, and protect natural resources; and (d) public services improve health and education, which contribute to human capital, or child care to allow a broader participation of women in the labor force.

In the area of Solid Foundations:

- ***The main concern is the Low Quality of Regulatory and Accountability Institutions.*** This clearly stands out in all our consultations as the most binding for attracting capital (macro stability and finance), promoting innovation (growth), and safeguarding natural resources. They also received the top scores in our country team and expert consultations.

- ***Of similar, albeit slightly lesser priority, appear the geopolitical turmoil in the Middle East region and its implications for the East and Southeast of Turkey,*** which is a major factor in the lack of convergence in these regions with the rest of the country. Improvements in the broader regional security environment would contribute to the convergence between different regions of Turkey. A stable, safe environment will be crucial to expand services; attract investment and job creation on the labor demand side; and incentivize human capital accumulation, retention, and participation on the labor supply side.

- ***Underdeveloped Financial Markets*** contribute to gaps in formal saving and borrowing patterns, financial literacy, and women's access to financial services. Easier access to finance could greatly help small firms expand and help the economy grow with innovative firms.

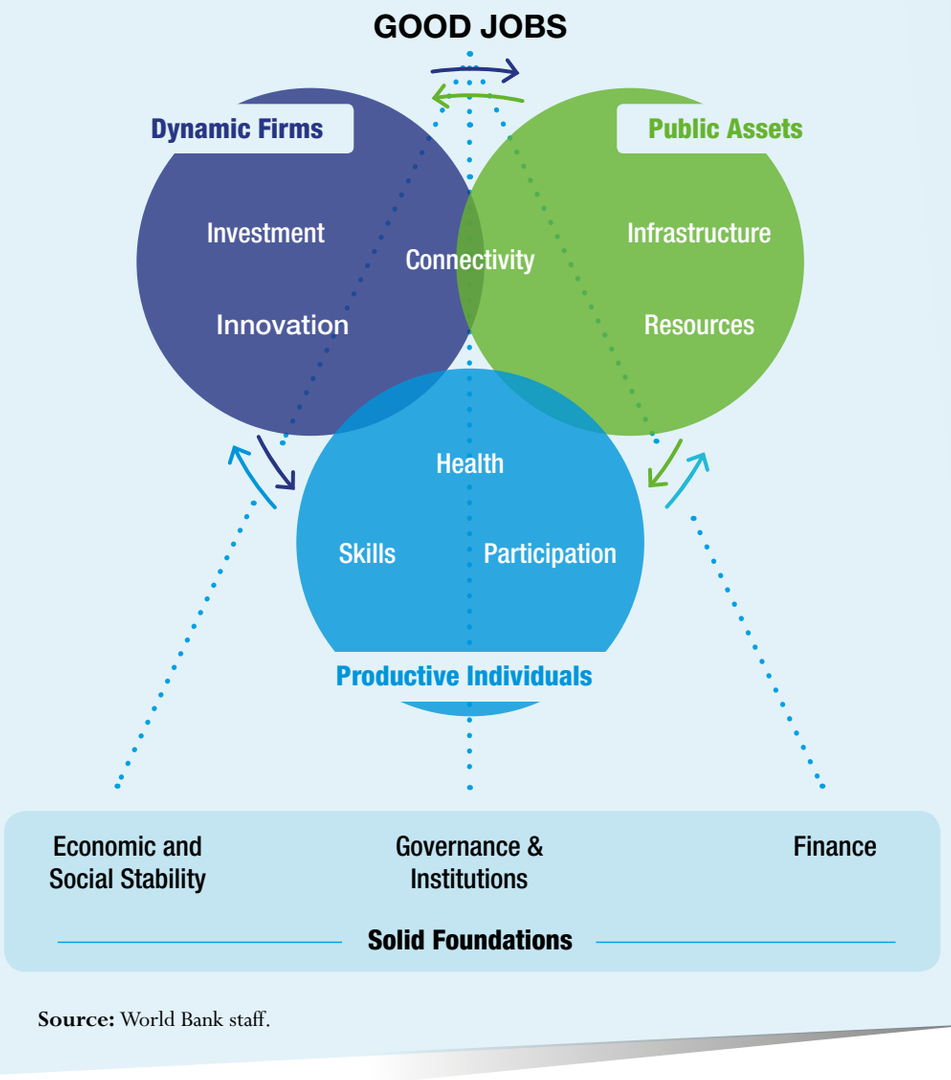
- ***Macro-fiscal Risks***, in particular the dependence on foreign savings, and rollover needs of a large stock of short-term debt add to its external vulnerabilities. The gross external financing requirement stands at US$195 billion. Increased risk aversion in international capital markets may expose Turkey to the risk of accelerating capital outflows. Foreign currency exposure in the economy remains notable with the non-financial corporate sector's outstanding open foreign exchange position equivalent to 26.6 percent of GDP.

In the area of Productive Individuals:

- ***Low Educational Achievements hamper the modernization of Turkey's industry and services.*** The challenges of 'moving up the value chain' are best met by tertiary education graduates, but more needs to be done to ensure quality of education. Moreover, tertiary education alone cannot build the cognitive and non-cognitive, behavioral skills increasingly required in the workplace. Their foundations are formed early and are the platform upon which later skills are built. Enhanced access to quality early childhood education (ECE) for all children offers some of the highest expected returns to education.

FIGURE 0.2

Conceptualization of the Road to Good Jobs



Source: World Bank staff.

- ***Low Female Labor Force Participation (LFP)*** constrains economic growth despite fast growth in recent years. Women still have lower levels of education and affordable child care and elderly care, and overall cultural norms are still a barrier for their inclusion. This is therefore closely linked to ***Low Educational Achievements*** above.

- Finally, ***Wide Regional Differences and Lack of Convergence*** slow down progress to the twin goals, and important parts of the population risk being left behind.

In the area of Dynamic Firms, the transition away from low-tech production is under way, high-tech products provide only a small share of overall value added, and the share has been declining in recent years.

- ***The Low Performance in technology absorption and innovation*** is especially visible in research and development (R&D) and innovation indicators collected by the OECD. This constraint is closely linked with ***Low Educational Achievement:*** poor human capital reduces the scope for innovation. It is also linked to the ***Low Quality of Regulatory and Accountability Institutions***, which do not provide the right incentives for private investment, innovation, and entrepreneurship.

- ***Weak corporate governance and weak competition policy and its enforcement*** are additional constraints that reduce the dynamism of Turkey's firms.

- ***Being Stuck in Small, Mixed Cropping Agriculture*** contributes to rural poverty and reduces the availability of productivity enhancing sectoral migration.

In the area of Public Assets and Resources, constraints relate to congestion, water, energy, and land.

- ***Congested cities*** endanger the benefits of agglomeration, which have contributed to growth and poverty reduction in the past. Financing and capital investment planning, consistent with territorial plans, is essential for sustaining urban growth. Connecting people and jobs efficiently at low environmental cost is essential for safeguarding competitiveness and sustainability.

- ***Declining Availability of Water*** could put a break on growth in agriculture and industry, while gravely affecting well-being. The adoption of greater irrigation efficiency is hampered by (a) land fragmentation; (b) distorted water pricing mechanisms based on land area rather than volume consumed; (c) inefficient planning of crop patterns and subsidy mechanisms with respect to water budget of basins; (d) managerial weaknesses of Water User Associations; and (e) inability to expand the pressurized irrigation systems.

- Improving the ***Efficiency of Energy Consumption*** is critical for Turkey's competitiveness and sustainable economic growth.

- ***Inefficient Land Management*** affects city planning and financing of municipal infrastructure, as well as rural poverty.

Alleviating the main constraints in the areas of Solid Foundations, Productive Individuals, Dynamic Firms, and Public Assets and Resources would provide the basis for faster progress in poverty reduction and shared prosperity.

E. Outline of the study

This SCD consists of two parts. The first three topical chapters provide the diagnostic of Turkey's development prospects under the headings of inclusion, growth, and sustainability; the next chapter organizes and prioritizes constraints to these three aspects of development using a conceptual model to take into account overlaps and complementarities. The chapters cover the following issues.

- ***Chapter 1:Who will likely be the poor and the bottom 40?*** It presents Turkey's recent experience with poverty reduction and shared prosperity, developing a profile of today's poor and people in the lower 40 percent of the income distribution (bottom 40) and showing the driving forces contributing to the recent achievements. It highlights the extensive role

TABLE O.1

List of Constraints and Scores

List of Constraints	Scores: Relevance to Growth	Relevance to Inclusion	Relevance to Sustainability	Sum of Scores
Solid Foundations				
Low quality of regulatory and accountability institutions	4	4	4	12
Geopolitical tensions affecting East and Southeast	4	4	3	11
Underdeveloped financial markets	4	4	2	10
Macro-fiscal risks	3	3	3	9
Productive Individuals				
Low educational achievements	4	4	2	10
Low female LFP	4	4	2	10
Wide regional differences and lack of convergence	3	4	3	10
Dynamic Firms				
Low performance in technology absorption and innovation	4	2	3	9
Weak corporate governance	4	2	3	9
Weak competition policy and its enforcement	4	2	3	9
Being stuck in small, mixed cropping agriculture	3	4	1	8
Public Assets and Resources				
Congested cities	4	3	3	10
Declining availability of water	3	3	4	10
Energy consumption closely linked with GDP growth	2	3	4	9
Inefficient land management	3	3	2	8

Source: World Bank staff and Turkey experts' survey.

Note: Scores are: 4 = critical, 3 = very important, 2 = important, 1 = relevant.

played by the labor market in this experience. Increasing employment and higher earnings were by far the biggest contributors in what is overall an impressive success story. The chapter also presents regional poverty maps, which show large regional disparities in both level of poverty and reduction of poverty over the last 10 years. In particular, they show that the pace of poverty reduction in the Southeast is slow and its people are falling further behind compared to other regions in the country. The chapter then discusses the challenges and opportunities presented by Turkey's demographic developments: a continuing decrease in the dependency ratio and a chance to reap an economic dividend if jobs can be found for the wave of young people and in particular women entering the labor force over the next 10 years with increasingly better education.

- ***Chapter 2: What will be the engine of growth?*** It first describes the macroeconomic developments that lay at the heart of the rapid job creation of the 2000s, which was the basis for reducing poverty and sharing prosperity in Turkey. It suggests that structural reform programs after the 2000–01 financial and economic crises laid the foundations for enhanced macroeconomic stability, public service delivery, infrastructure, and investment climate, which allowed the economy to thrive. The chapter then presents scenarios for future growth, which highlight the importance of capital accumulation and factor productivity growth. It then considers how dynamic firms innovate and accumulate wealth. It starts from the premise that structural change from agriculture to secondary and tertiary sector activities is running out of steam in Turkey, and growth will have to come from within-sector productivity improvements. This involves the application of new technology, better management, and a more efficient allocation of resources, which are best accomplished in competitive, predictable environments, and requires the availability of a well-functioning financial sector.

- ***Chapter 3: How can growth be sustainable?*** It highlights in particular the climate change impacts and looming constraint on water availability, which will force better efficiency in irrigation and 'climate smart' agricultural practices. We investigate energy balances in import-dependent Turkey and propose measures to improve energy efficiency (EE). Land use planning and management are underscored in a context of growing cities with increasing sprawl and congestion. The chapter also highlights the importance of investing in resilience in a country that is highly vulnerable to earthquakes and (climate change induced) adverse weather events.

- ***Chapter 4: Prioritization.*** It presents a conceptual model of the interdependence of the many factors that influence economic development, which was developed on the basis of broad consultations of Turkey experts both in the World Bank Group and in academia. The model allows for a systematic approach to highlighting priorities and complementarities on the road to addressing Turkey's fundamental challenge of creating good jobs, as identified in Chapter 1. Under the headings Solid Foundations, Productive Individuals, Dynamic Firms, and Public Assets and Resources, the binding constraints to poverty reduction and shared prosperity are presented and ranked. The chapter then supports this conceptual model-driven approach with a data-driven approach for ranking of constraints based on distance-to-frontier measures using a broad range of development indicators.

1

Who will likely be the poor and the bottom 40?

The 2000s was an impressive period for poverty reduction and increasing prosperity. A major economic transformation resulted in an increase of GDP per capita (purchasing power parity [PPP] adjusted) of more than 150 percent during the period 2000–2015. While this sustained growth was initially fueled by favorable global conditions, it slowed down during the global crisis in 2009, but has since recovered to rates higher than the OECD average. The positive economic dynamics were reflected in overall reductions in poverty and improvements in shared prosperity.

This chapter presents a detailed account of progress and challenges concerning poverty reduction and shared prosperity in Turkey. The chapter documents levels and trends of poverty and shared prosperity in the past decade and exposes the drivers behind those trends. It also presents a baseline scenario of progress toward the twin goals using a micro-simulation model and population and economic growth assumptions. Finally, it discusses bottlenecks to take into account going forward.

A. Progress in Reducing Poverty

3. Turkey made significant progress in poverty reduction in the 2000s. Poverty was more than halved during this period. The poverty headcount ratio declined by 25.4 percentage points during 2002–2014, falling from nearly 44 percent to 18 percent (Figure 1.1). Extreme poverty also

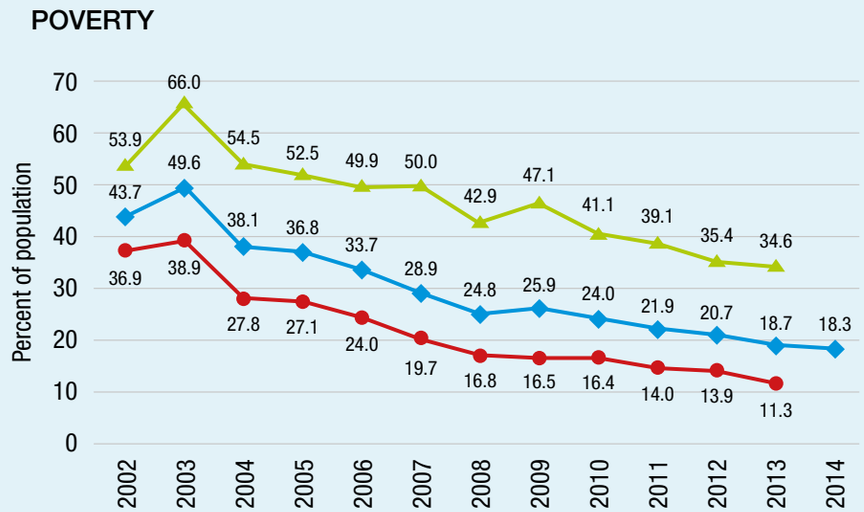
experienced a sizeable decline, at an even higher proportional rate, decreasing from 13 percent to just 3 percent.[3] In the context of ECA, this constitutes a median performance. Relative to baseline poverty levels, half the countries in the region have done a worse job than Turkey in reducing poverty—for example, Serbia, Latvia, Albania—and half have done better—for example, Belarus, Poland, and the Russian Federation.

The decrease in poverty was shared across both urban and rural areas. Despite macroeconomic volatility and productivity differences, both moderate and extreme poverty decreased across rural and urban settings. As a result, the population in extreme poverty has been brought down to close to under 2 percent in urban areas, and just over 7 percent in rural areas. Overall poverty, however, remains a concern. It still affects more than a third of the rural population and 11 percent of the urban residents. In terms of population numbers, nearly half of the total poor population lives in urban areas.[4]

In spite of a sharp economic downturn in 2008–09, poverty increased only marginally in 2009. Turkey's gains in poverty reduction showed relatively good resilience during the global crisis period. However, while economic growth recovered quickly post crisis, the pace of poverty reduction has slowed. In the post-crisis years, growth seems to be less pro-poor than growth before the crisis.

FIGURE 1.1

Headcount Poverty Rates, 2002-14



Source: HBS.

Note: Welfare aggregate is household per capita consumption including health, rent, and durables. Moderate poverty line = US$5 per day in 2005 PPP. Extreme poverty line = US$2.5 per day in 2005 PPP.

3 - For an explanation of why it differs from poverty numbers published by the Turkish Statistical Institute (Turkiye Istatistik Kurumu, TUIK), see Box 1.1. Poverty and extreme poverty are measured using the thresholds that the World Bank adopts for countries in the Europe and Central Asia (ECA) region. For poverty the line is set at 5 US$ per day, while for extreme poverty the line is 2.5 US$ per day, both in terms of 2005 PPP. Data are taken from the Household Survey (HBS), collected by TUIK, and they are harmonized by the World Bank to produce poverty numbers that are comparable across countries and over time.

4 - In 2014, 2015, and 2016, TUIK has not released any statistics at urban/rural disaggregation due to changes introduced in administrative divisions throughout the country. Therefore, the numbers belong to 2013.

BOX 1.1

How Does World Bank Calculate Poverty and Why Does It Differ from TUIK Numbers?

The World Bank monitors poverty in Turkey and globally using international poverty lines. In the case of Turkey and countries in the ECA region, these lines are defined at US$5 per day for overall poverty, and US$2.5 per day for extreme poverty, and are expressed in 2005 PPP dollars, for international comparability.

For any given year, for example, for 2014, overall poverty in Turkey is calculated as follows:

(a) Convert US$5 to Turkish lira using the 2005 PPP conversion factor, which is equal to 1.0014 in Turkey. The result will be lines expressed in local currency of 2005.

(b) Update those 2005 Turkish lira to 2014 using the consumer price index (CPI) to account for inflation. The result will be lines expressed in local currency of 2014.

(c) Construct consumption per capita from Turkey's Household Budget Survey (HBS) of the year of interest. In this example, the result will be consumption per capita of 2014.

(d) Compare the lines obtained in step (b) to consumption per capita obtained in step (c). Both are in TL of 2014. The poverty rate, the percentage of the population with daily consumption per capita below the poverty line, reached 18.3 percent in 2014.

This methodology ensures the international comparability of the estimates, since it uses dollars that account for differences in purchasing power. It also ensures the comparability of the numbers for Turkey over time, since the line

is kept constant in real terms. Similar steps are followed to calculate extreme poverty. The numbers are published on the Open Data portal and the PovcalNet[5] websites of the World Bank.

World Bank poverty numbers differ from TUIK numbers for a variety of reasons, but the main reason stems from how the poverty line is updated over time. TUIK uses a lower poverty line as reference, US$4.3 and US$2.15 per day for poverty and extreme poverty, respectively. To calculate poverty in a given year, these lines are converted to local currency using current PPP factors, which does not allow to properly take into account the effect of inflation. For instance, the current PPP of 2014 is TL 1.20 per US$. As such, the value of the poverty line was equal to TL 5.2 in 2014 (5.2 = 1.20*4.3), and the poverty rate was 1.6 percent. The results are published in TUIK's website every year, approximately 9-12 months after the HBS data collection is completed.[6]

The following exercise allows to reach greater clarity on the reasons behind differences between World Bank and TUIK numbers. First, abstract from differences in the base value of the poverty line and use US$4.3 per day. Second, update the US$4.3 line over time using the World Bank method and the TUIK method, as explained above. The results are plotted in Figure B1.1.1. As time goes by, the lines tend to diverge more and more. The World Bank line, by using the CPI to take into account the effect of inflation, is naturally ever higher than the TUIK line. In consequence, the poverty rates estimated by TUIK approach zero at a much faster pace than the World Bank estimates.

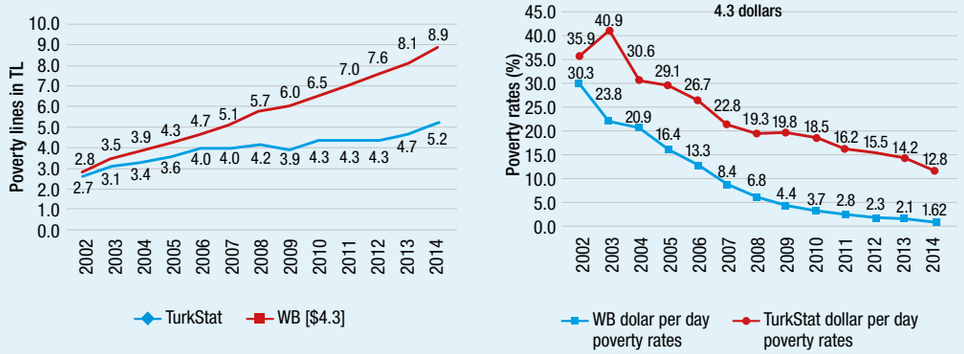
GDP will yield a much higher rate of change than with real GDP, measuring poverty reduction with a nominal line will give a much higher rate of change than with a line whose value is kept constant in real terms.

5 - PovcalNet (http://iresearch.worldbank.org/PovcalNet/) offers an interactive tool to replicate the calculations made by the World Bank's researchers in estimating the extent of absolute poverty across countries, regions, and the world. It is a flexible tool that allows to use either 2005 or 2011 PPP data and calculate poverty numbers under different assumptions.

6 - http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=18690.

FIGURE B1.1.1

Poverty Line and Rate at international US$4.3 per day, Updated using World Bank and TUIK Methods

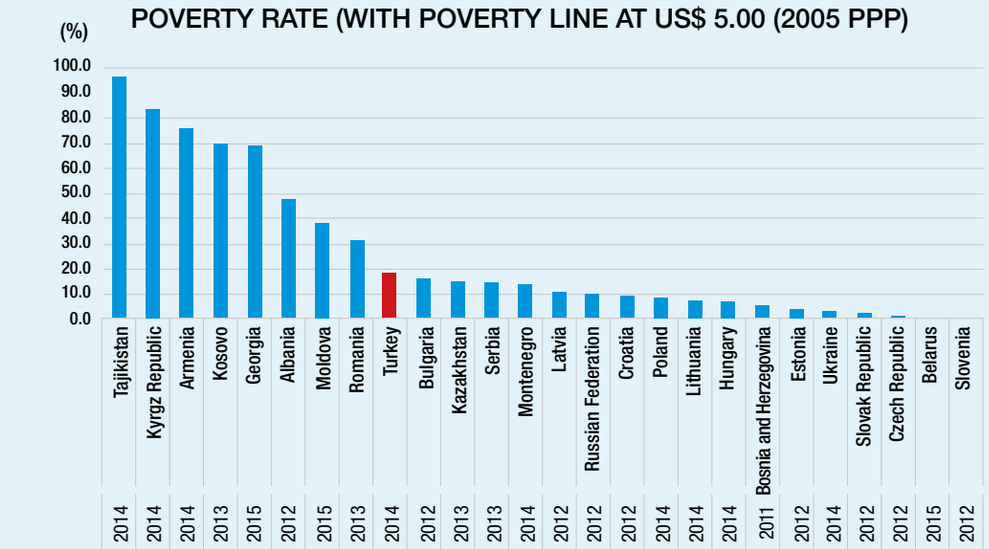


In sum, while quantitatively the results are vastly different, qualitatively the result is the same: poverty has been significantly decreasing in Turkey over the past decade. For more details, see Cuevas and Acar (2016).

Despite substantial reduction in poverty over the last decade, it still affects millions of people. More precisely, 13.8 million individuals still live in poverty (US$5 a day line); while 2.3 million live in extreme poverty (US$2.50 a day line). If one were to take a regional perspective of poverty in ECA, one would find that, in relative terms, Turkey contributes the highest number of poor and extreme poor. In other words, to advance toward poverty eradication in the ECA region as a whole, it is crucial to make progress in poverty reduction in Turkey.

FIGURE 1.2

Poor and Number of Poor in ECA Countries, around 2013

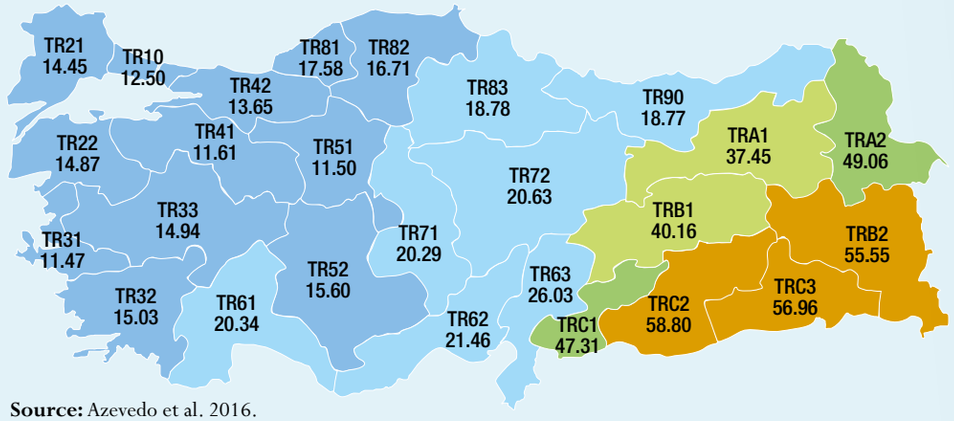


Source: EU-SILC (Bulgaria, Hungary, Croatia, Lithuania, Latvia, the Slovak Republic, the Czech Republic, Estonia, and Slovenia), and HBS (rest).

FIGURE 1.3

Incidence of Income Poverty in 26 Regions, 2013

(in percent)



Source: Azevedo et al. 2016.

Note: Survey-to-survey imputation from SILC to LFS at NUTS2 level. NUTS2 = Nomenclature of Territorial Units (n=26). Poverty line US$5 per day in 2005 PPP.

Across Turkey, poverty exhibits a distinct pattern of contrast between West, Center, and East. Poverty incidence is lowest in the Northwest, highest in the Southeast, and moderate in the Center of the country. There are shades of variation within each of these three regional blocks, but the gaps between them are stark. Poverty rates are in the 50s in eastern regions, and in the 10s in western regions (Figure 1.3).

Moreover, within the eastern parts of the country, there is visible heterogeneity across regions. Using survey-to-survey imputation techniques, recent analysis has made possible to understand differences and similarities in poverty incidence across regions at the NUTS2 level of disaggregation, that is, across 26 units of observation.[7] Without survey-to-

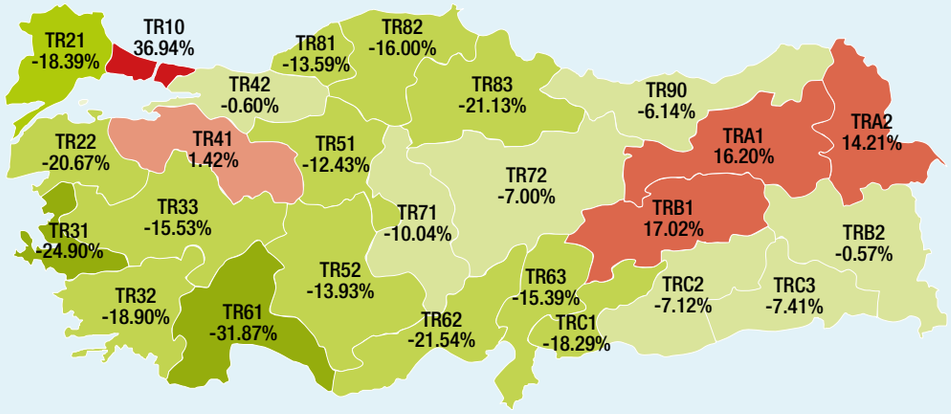
7 - Survey-to-survey imputation makes use of small area estimates techniques, and it has proven to be highly useful and utilized across countries for poverty mapping. The basic concept behind the method is that when one has two surveys, one with the welfare aggregate of interest (for example, income) but not representative for small areas, and another survey with higher level of representativeness (for example, NUTS2) but without the income variable, then one can build on both sources of information to produce statistics on poverty at a higher level of disaggregation. In the case of Turkey, the analysis builds on the income information of the SILC and the NUTS2 level of representativeness of the LFS. Estimates also take into account differences in prices between regions (spatial PPPs). For more details, see Azevedo et al. (2016).

survey imputation, the analysis would be limited to NUTS1 level, that is, it would only be possible to do comparisons across 12 aggregated regions. The NUTS2 level allows us to see that there is noticeable heterogeneity within Northeast Anatolia (TRA), Central East Anatolia (TRB), and Southeast Anatolia (TRC). By contrast, there is relative homogeneity across NUTS2 regions within the western and central territories (Figure 1.3).[8]

FIGURE 1.4

Changes in Poverty Incidence in 26 regions

(percentage change from 2006 to 2013)



Source: Azevedo et al. 2016.

Note: Survey-to-survey imputation from SILC to LFS at NUTS2 level. Baseline is 2006 because it is the first year that SILC was collected. NUTS2 = Nomenclature of Territorial Units (n=26). Poverty line US$5 per day in 2005 PPP.

Over time, poverty has decreased in the majority of the regions, but at a pace that is not allowing the poorest regions to converge to the rest. While poverty alleviation differs between Turkey's regions, it is important to highlight that most regions have seen a reduction in poverty incidence over time. However, the pace of progress is not leading to a convergence path between regions, that

8 - It is important to clarify that the imputation method was only used to produce the poverty maps. All other poverty analysis in the Systematic Country Diagnostic (SCD) did not use any survey to survey imputation but used information directly as collected by HBS, SILC, and LFS and shared by TUIK.

is, regions are becoming more heterogeneous over time. Poverty reduction was relatively slower in the East and Southeast (Figure 1.4), with poverty even increasing in Central East Anatolia (TRB). Poverty also increased in Istanbul, although from a relatively low baseline.

The poorest regions have been affected by the geopolitical tensions in the Middle East region and now host large numbers of refugees from the conflicts in the neighboring Syrian Arab Republic and Iraq. The geopolitical turmoil in the Middle East and its implications upon Turkey have created a challenging security atmosphere, which has effects on investment and capital accumulation. The refugee crisis is now perceived as an additional source of pressure on poverty trends, although up-to-date evidence is difficult to come by. There are no official statistics that would allow measuring poverty levels of refugees or their impacts on host communities. However, using imputation techniques on data up to 2013, a recent analysis indicates that the influx of Syrian refugees did not affect poverty trends (Azevedo, Yang and Inan 2016). Most of the refugee influx, however, took place after 2013. The World Bank is working with the Government of Turkey to bridge this knowledge gap. The Government's response to the refugee influx has been development-oriented, by largely allowing the integration of Syrian refugees into the economy and giving access to key public services (Box 1.2) (World Bank 2015e).

BOX 1.2

Spotlight on the Syrian Refugee Crisis and the Turkish Hosting Experience*

Turkey hosts the largest population of refugees registered by the United Nations High Commissioner for Refugees (UNHCR) in the world. The Government has registered more than 2.7 million Syrian refugees. Only 12 percent of them live in camps and temporary shelters, while the rest seek their own accommodation and work opportunities. The Government estimated that it had spent more than

US$10 billion of its own resources on its response to the Syrian refugee crisis by May 2016.

While these numbers are large, and the social and humanitarian problems they represent are pressing, they should be put into context. Turkey is a country with a population of more than 78 million, out of which almost 14 million are poor and more than 3 million people are unemployed. The refugees put additional pressure on these fronts, but relatively speaking represent a moderate challenge, as opposed to the Jordan and Lebanon cases, where refugees present a much higher proportion of the local population.

The Government's management of the refugee influx is guided by the 2013 'Law on Foreigners and International Protection'. Implemented in 2014, it provides Syrians the right to stay until safe return conditions are established in Syria (no such provisions exist for non-Syrian refugees). It sets out specific provisions for registration and documentation and grants access to benefits and services such as health, education, and entry to the labor market. This approach has allowed refugees to settle across the country rather than in camps supported by humanitarian agencies, as is most common.

The non-camp approach is beneficial: Integrating support for refugees into mainstream government service provision can be more cost effective and sustainable than setting up parallel humanitarian delivery channels. This is particularly true in the case of situations of protracted displacement. Evidence also shows that giving refugees the freedom to live outside of camps provides opportunities for social and economic self-reliance, and is more likely to result in economic benefits for host countries. Refugees are also more likely to be able to undertake a successful and sustainable return process to their home countries, when the situation allows.

Indeed, preliminary data show positive impacts of Syrians in Turkey. Syrians arriving with assets have invested; in 2014, 1,222 out of 4,249 new foreign-owned businesses in Turkey were established by Syrians. Syrians have also started (mainly unregistered) microenterprises, particularly cafes and

restaurants. Further gains come from the expansion of local markets in areas with high concentration of refugees, continued receipt of remittances from within Syria, and the benefits of government expenditures for local suppliers and labor contribution by Syrians.

Nevertheless, the socioeconomic strains of hosting refugees are felt strongly especially in cities in the Southeast of Turkey. Tensions relate to competition over jobs, rising rents, pressures on schools, municipal services and infrastructure, and cultural differences. Perception surveys show mixed attitudes—Turkish citizens recognize the humanitarian imperative to respond to the refugee influx and show generosity toward them; yet they are also deeply concerned about the social and economic consequences of the presence of Syrians in their communities.

Looking ahead, three key questions will need to guide Turkey's 'development-oriented' response to the Syrian refugees, particularly in light of recent legislation on work permits: (a) How to mitigate the potential negative socioeconomic impact of the refugee presence on host communities? (b) How to maximize the social and economic benefits of the refugee presence for host communities and the Turkish economy as a whole? and (c) How to support refugees to be self-reliant until they are able to return?

Note: * Based on "Turkey's Response to the Syrian Refugee Crisis and the Road Ahead", World Bank 2015e.

B. Progress in Sharing Prosperity

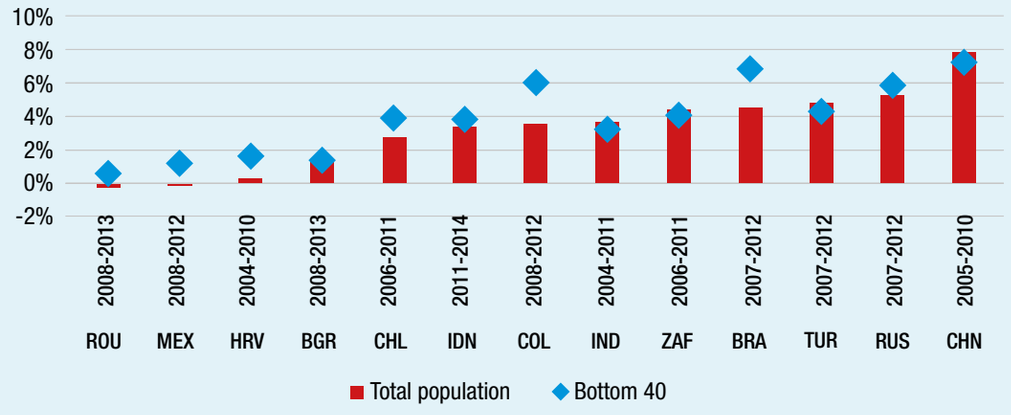
Turkey's prosperity has been shared, improving the well-being of those at the bottom of the distribution. Shared prosperity, measured by the growth of the average consumption per capita of the poorest 40 percent of the consumption distribution ('the bottom 40'), has been quite remarkable in Turkey (Figure 1.5). The annualized growth of consumption of the bottom

40 percent has attained 4.3 percent between 2007 and 2012, quite close to the consumption growth rate of the entire population, and a relatively good performance compared to peer countries.

Inequality fell significantly for most of the 2000s, but the trend was reversed after the financial crisis. While prosperity has been shared, consumption in the top part of the distribution has progressed slightly faster in recent years. Inequality in the distribution of per capita consumption, measured by the Gini coefficient, has increased from 0.38 to 0.41 over the past 5 years. The trend is stronger in urban areas, but levels are higher in rural settings (Figure 1.6). Similar trends are observed in the distribution of income.

FIGURE 1.5

Shared Prosperity in Turkey and Peers, 2005–13
(annualized percentage change)



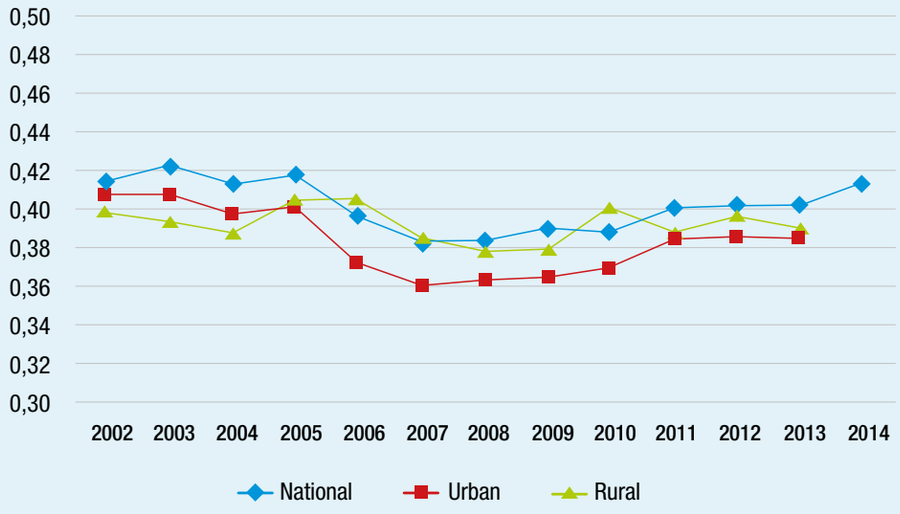
Source: Global Poverty Working Group Shared Prosperity database.

Note: Welfare aggregate is consumption plus durables and health (2011 PPP). Geometric mean is used to calculate average growth rate.

As expected in a case of rapid economic expansion, the progress in poverty reduction has been uneven, resulting in large heterogeneities across regions and among socioeconomic groups. Gaps remain large between the prosperous West and more challenged Southeast Anatolia. Though growth incidence has been progressive, the average income of the richest decile is 14 times higher than the average income of the poorest decile of the income distribution; and this ratio is among the highest in the OECD (OECD 2016).

FIGURE 1.6

Gini Coefficient, 2002–14



Source: Azevedo et al. 2016.

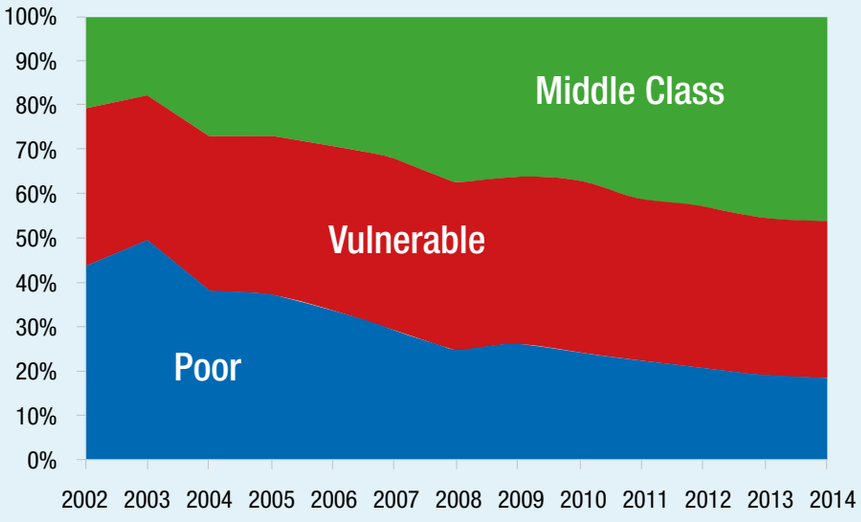
Note: Survey-to-survey imputation from SILC to LFS at NUTS2 level. NUTS2 = Nomenclature of Territorial Units (n=26). Poverty line US$5 per day in 2005 PPP.

The overall process has led to a significant expansion of the middle class. The size of the middle class (defined as population with consumption per capita higher than US$10 per day in 2005 PPP) in Turkey doubled from 21 to

46 percent during 2002–14 (Figure 1.7).[9] The size of the vulnerable group (the population with consumption per capita between US$5 and US$10 per day in 2005 PPP) remains large at more than one-third of the population. However, despite the rapid growth of the middle class, Turkey is still behind several countries with similar levels of economic development. For example, the size of the middle class reaches 47 percent in Malaysia and Chile, and 52 percent in Latvia (Figure 1.8).

FIGURE 1.7

Poor, Vulnerable, and Middle Class, 2002–14
(in percent)



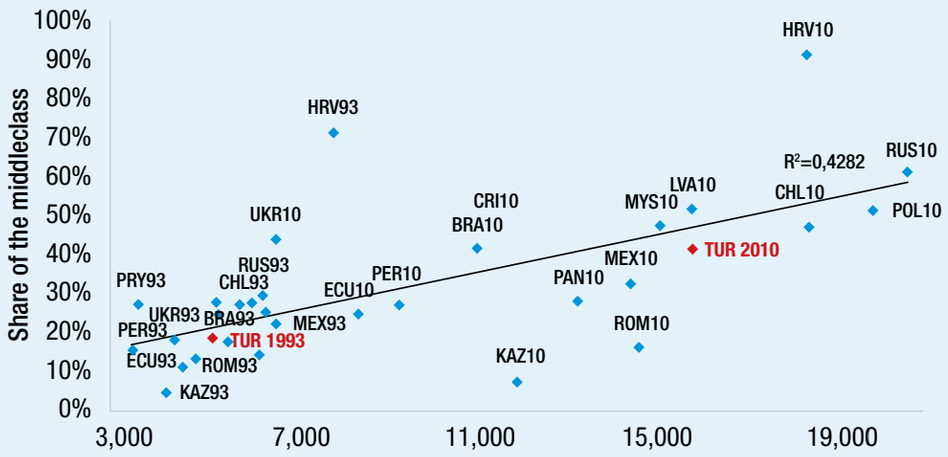
Source: HBS..

Note: Welfare aggregate is household per capita consumption including rent, health, and durables. Thresholds used are US$5 and US$10 per day in 2005 PPP.

9 - Middle class line follows the approach of Lopez-Calva and Ortiz-Juarez (2011) and Ferreira et al. (2013).

FIGURE 1.8

Middle Class in Selected Countries, Multiple Years
(in percent of total population)



Source: : Azevedo and Atamanov 2014.

Upward class transitions have prevailed, and transitions out of poverty have been relatively high. Estimates show that from 2002 to 2012, 39 percent of the poor moved upward to the vulnerable group, and 21 percent of the poor and 41 percent of the vulnerable population moved up to the middle class. Overall, it is estimated that approximately 60 percent of the poor population in 2002 had moved out of poverty by 2012. The size of downward movements into poverty is relatively smaller, affecting 17 percent of the vulnerable and 5 percent of the middle class.

C. Profiling the Poor and the Bottom 40

The poor are characterized by distinct household demographics. The poor population lives in households that on average are substantially larger and burdened with more dependents to support per working-age adult. A typical poor household has 6 members, with a mean dependency ratio of 0.71 children per adult, or about 2 children for every 3 working-age adults. A non-poor household has 3 members less, and half the dependency ratio of poor households. An extremely poor household has 7 members with an average dependency of almost one child per working-age adult (Table 1.1). A similar pattern is observed when comparing the populations in the bottom 40 to the top 60 percent of the welfare distribution.

The typical extremely poor person lives in rural settings, but for the poor it is as common to reside in urban as in rural areas. Due to the high rate of urbanization in Turkey, 46 percent of the poor live in urban areas, even though at 36 percent the rural headcount poverty rate is more than twice as high as the urban one (14 percent). Extreme poverty, however, is mostly a rural phenomenon—80 percent of the extreme poor population inhabits rural locations (Table 1.1).

The poor differ from the rest in circumstances at birth. Today's poor already differ from the rest when they are born. Parental background, for example, is significantly dissimilar. Among the poorest 10 percent of the population, more than 70 (40) percent are born to mothers (fathers) with less than primary education. By contrast, among the richest 10 percent, less than 20 (5) percent have mothers (fathers) with less than primary schooling (Figure 1.9). Place of birth is another circumstance that characterizes the profile of the poor. Overall, half the poor are born in the East, 30 percent in Central Anatolia, and 20 percent in the West. Among the well-off, 10 percent are born in the East, 40 percent in the Central part, and half in the West. Finally, early facility in language is positively correlated with income wealth.

TABLE 1.1

Demographic Profile of Poor, Non-poor, and Bottom 40 Populations, 2014

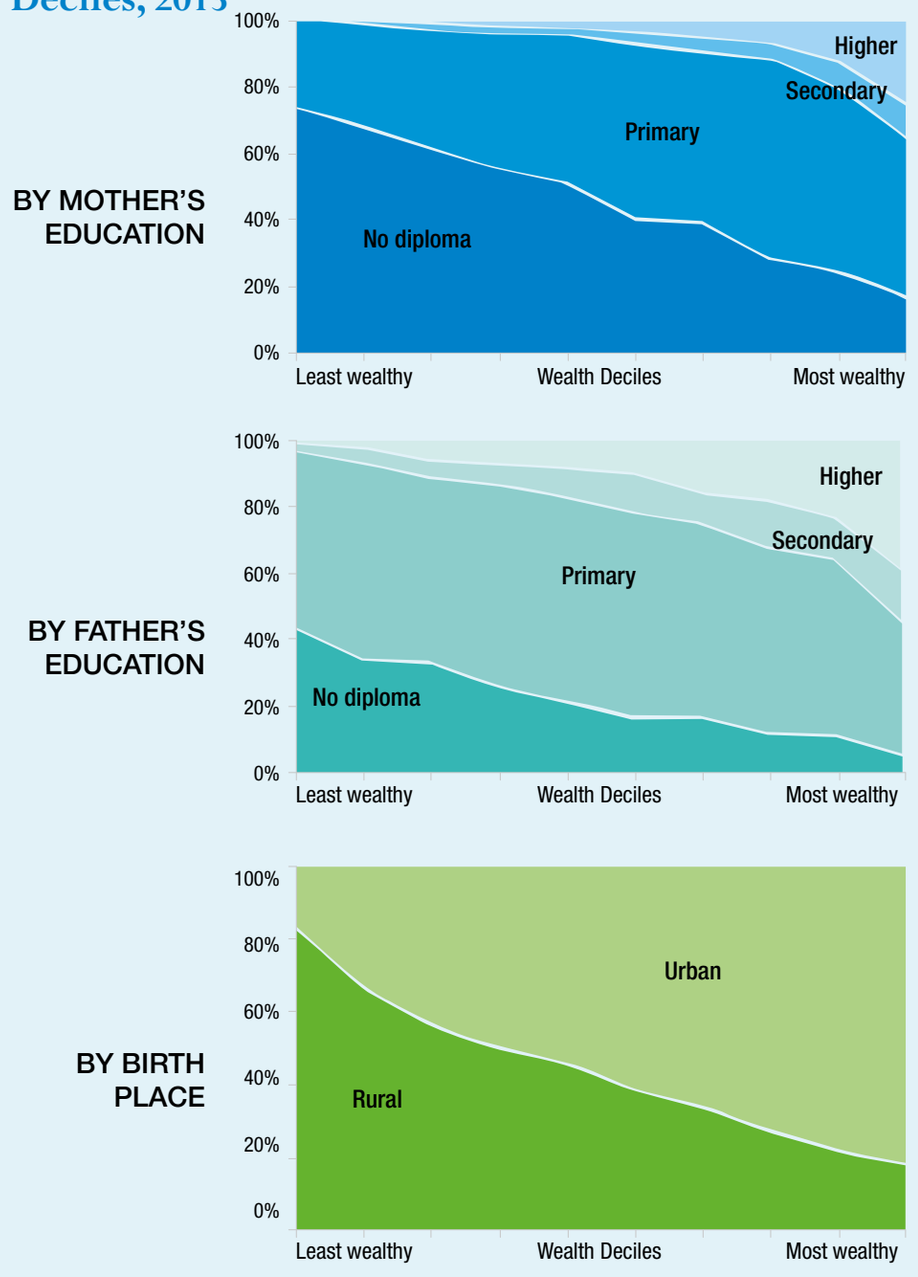
		Extreme Poverty (US$2.50 2005 PPP)		Moderate Poverty (US$5.00 2005 PPP)		Relative Group	
Demographics	**Total**	Poor	Non-Poor	Poor	Non-Poor	Bottom 40	Top 60
Share of total population (%)	100	3.1	96.9	18.3	81.7	40	60
% of group living in rural areas (*)	32	78	29	54	26	45	23
% of group living in urban areas (*)	68	22	71	46	74	55	77
% of households with 4+ members	46.6	88.4	46.0	82.5	42.0	75.7	34.9
Average household size	4	7	3	6	3	5	3
Dependency Ratio: Children age 0–14 per Adult (age 15–64)	0.37	0.96	0.35	0.71	0.31	0.57	0.25
Dependency Ratio: Elderly age 65+ per Adult (age 15–64)	0.12	0.13	0.12	0.13	0.12	0.12	0.12
% of households with female head	16	12	16	11	16	11	17

Source: HBS.

Note: (*) shows 2013 figures. TUIK does not publish urban-rural variable after 2013.

FIGURE 1.9

Poverty Profile by Circumstances at Birth, Wealth Deciles, 2013



Source: : TDHS 2013. Note: Wealth deciles constructed using asset ownership information of each household.

Microeconomic data can be used to analyze the capacity of households to participate in and contribute to overall economic growth. The household asset-based approach poses that the capacity to achieve better economic opportunities depends on (a) human capital, physical capital, and other assets that household's own or have access to (including also financial, social, and natural capital [such as land and forests]); (b) how intensively those assets are used (for example, labor force participation [LFP]); and (c) the prevailing returns to those assets (for example, labor market earnings) (Bussolo and Lopez-Calva 2014).

Gaps in access to household services and assets between poor and non-poor have been reduced. Access to key household services that play a role in accumulation of human capital and other assets is relatively high. For example, 90 percent or more of the poor have access to piped water, toilet, refrigerator, and cell phone (Table 1.2). In contrast, access to piped natural gas and central heating is not as widespread.

Gaps between poor and non-poor are especially large when considering access to services related to the location where people live. In Turkey, the poor have 20 to 30 percentage points less accessibility to postal services, banking, and public transportation given their location (Table 1.2). Banks are often located out of reach of the poor which is correlated with their low access to formal savings programs and limited choice for credit. Barriers to access financial services tend to contribute to reduced capacity to generate income and participate in growth. Likewise, reduced access to public services such as transportation limits the capacity of households to contribute to economic growth; on average 60 percent among the poor live in a location with access to public transportation, in contrast to 80 percent of the non-poor. Finally, although less large, there is still a gap in access to schools in Turkey: among the top 60 percent of the consumption distribution, 86 percent declare to have access to schools according to their location, compared to 77 percent among the bottom 40 percent.

TABLE 1.2

Profile of Populations in an Assets Framework, 2014

		Extreme Poverty (US$2.50 2005 PPP)		Moderate Poverty (US$5.00 2005 PPP)		Relative Group	
	Total	Poor	Non-Poor	Poor	Non-Poor	Bottom 40	Top 60
Access to Basic Services (% of HHs)							
Central heating	37	2	39	10	47	18	58
Access to piped gas	35	0	37	10	45	17	54
Access to piped water in house	100	98	100	99	100	99	100
Access to toilet in house	99	93	99	97	100	98	100
Refrigerator	99	97	100	98	100	99	100
Home phone	28	4	30	13	34	18	39
Cell phone	99	99	99	99	99	99	99
Less than 1.5 people per room	55	8	58	21	68	33	79
Accessibility to services (% of HHs)							
Accessibility to postal services	64	43	65	49	68	55	70
Accessibility to banking services	59	38	60	42	63	49	66
Accessibility to school	82	73	82	73	84	77	86
Accessibility to public transportation	76	58	77	61	80	68	82
Education							
Education							
Children aged 6–13	94	90	95	93	95	93	96
Children aged 14–18	76	56	77	66	80	70	83
Adult 25+ (% completed)							
None / <Primary	18	53	18	40	15	31	12
Primary-Secondary (~8 years)	51	44	51	52	51	57	48
High School (~4 years)	9	1	9	4	9	5	10
Vocational school	7	1	7	2	8	4	8
Tertiary level	15	1	15	2	17	3	21
Health							
% of people with limitation in daily activities due to a health problem	4	5	4	5	4	5	4

Source: HBS.

Note: (*) shows 2013 figures. TUIK does not publish urban-rural variable after 2013.

Gaps in human capital, a fundamental piece of income-generation capacity, and labor market outcomes are high and persistent. Using educational attainment of the adult population as a proxy for human capital endowments shows clear differences: the proportion of adults with tertiary education is just 2 percent among the poor and 17 percent among the non-poor. Or broadly, only 3 percent of the 'bottom 40' is endowed with tertiary education, while the level is almost 21 percent of the 'top 60'.

Such inequalities in human capital endowments will not be closed over the next generation. While almost all children, whether poor or non-poor, are attending basic education (8 years of schooling), only 2 out of 3 poor adolescents are enrolled in school, while almost 80 percent of non-poor teens are doing so (Table 1.2). Such gaps are also stark when 'bottom 40' and 'top 60' households are compared.

Gaps between poor and non-poor, and in general between the bottom 40 and the rest, also arise with regard to how assets are used. Intensity of use of human capital exhibits a mixed pattern among poor and non-poor groups of the population. Both groups have similar rates of LFP. Moreover, both share similarly low rates of labor force engagement for women. In contrast, people in the lower part of the distribution tend to be disproportionately affected by unemployment, with rates that are twice as high as the rates of the non-poor. In addition, the poor have a more precarious use of their time and endowments in the labor market. Self-employment is twice as high for the poor and bottom 40 percent than for their comparison groups, which correlates with lower quality of jobs and informality.

Endowed with fewer assets and having difficulty making use of those assets, the poor receive lower labor market returns and earnings than the non-poor. The average poor worker obtains significantly lower labor market income than the average non-poor worker. Mean labor income of workers below the poverty line is just TL 8,600 per year, while mean labor income of those above the poverty line reaches almost TL 20,000.

D. Main Contributors to Poverty Reduction

The major driver for poverty reduction was economic growth, or the 'expansion of the pie', as opposed to redistribution, or the 'sharing of the pie'. The 25.4 percentage point drop in poverty during 2002–14 was largely the result of growing levels of consumption (Table 1.3). The distribution of consumption became more equal over the same period, which helped reduce poverty even more rapidly. This development is consistent with most ECA countries, but different from Latin America, for example, where redistribution contributed to poverty reduction almost four times as much as in Turkey (Inchauste et al. 2014). Despite the lesser importance of redistribution, however, consumption and income distribution in Turkey is more equal than in most Latin American and Caribbean countries, although it is higher than in most European Union (EU) countries.

TABLE 1.3

Growth and Inequality Poverty Decomposition (percentage points)

	2002–2014
Total Change in Poverty Rate	–25.4
Growth component	–26.1
Redistribution component	–1.0
Interaction component	1.8

In the spatial dimension, Turkey has seen important reductions in poverty within urban and rural areas, with little contribution of inter-area shifts. Analysis of spatial decomposition reveals that reduction in aggregate poverty can be mainly attributed to progress within the rural and urban areas rather than to changes in the distribution of the population across areas (Table 1.4). Following Huppi and Ravallion (1991) to decompose changes in poverty into intra-region and inter-region population shifts between 2002

and 2013, we find that 92 percent of the aggregate poverty reduction is due to the contribution of poverty reduction within each area. In particular, the contribution of urban areas reached 61 percent, while the contribution of rural areas represented 31 percent. During this period, the share of population living in urban areas increased from 60 percent to 70 percent.

The rural-urban definition in Turkey has been a matter of discussion and change over the past year and new definitions have yet to be put into effect. TUIK has traditionally based the identification of urban and rural areas on two criteria. First, by administrative statute, considering urban the population in provinces and the district centers, and considering rural the population in the rest of the villages and towns. The second criterion has been population size, where administrative units with a population of 20,000 or less are considered rural. But in 2014, the number of metropolitan municipalities increased from 16 to 30. This means that more than a third of the total provinces in Turkey expanded their limits to include all rural settlements within province limits, resulting in a substantial reduction of rural population. Our analysis goes up to 2013, since TUIK is yet to make available the rural-urban variable for the 2014 survey round.

In terms of sources of income, changes in employment and labor income have been the major contributors to poverty reduction in recent years. Poverty reduction benefited from higher labor earnings first and foremost, aided also by higher employment and lower dependency. Around 60 percent of the decline in poverty headcount ratio is attributable to labor income growth (comprising growth of earnings and employment) among poor households (Figure 1.10).[10] Labor income growth appears also as the main driver of inequality reduction.

The pattern of income growth along the distribution is fairly different before and after the 2008 crisis, with labor income playing a prime role in the post-crisis recovery in every decile but especially in the bottom 10 percent. Labor income is the main contributor to growth in aggregate income in all deciles after the crisis (Figure 1.11). The contribution of public transfers and subsidies to income growth appeared important in the bottom deciles up to the crisis period; playing a

10 - Results based on the Shapley Value Decomposition Analysis.

protective role. Income from property (chiefly rents from assets and land) had a large negative impact in overall income change, especially for those at the top of the distribution. Changes in non-labor income after the crisis actually seem to offset the increase in labor income for the top 10 percent of the distribution.

TABLE 1.4

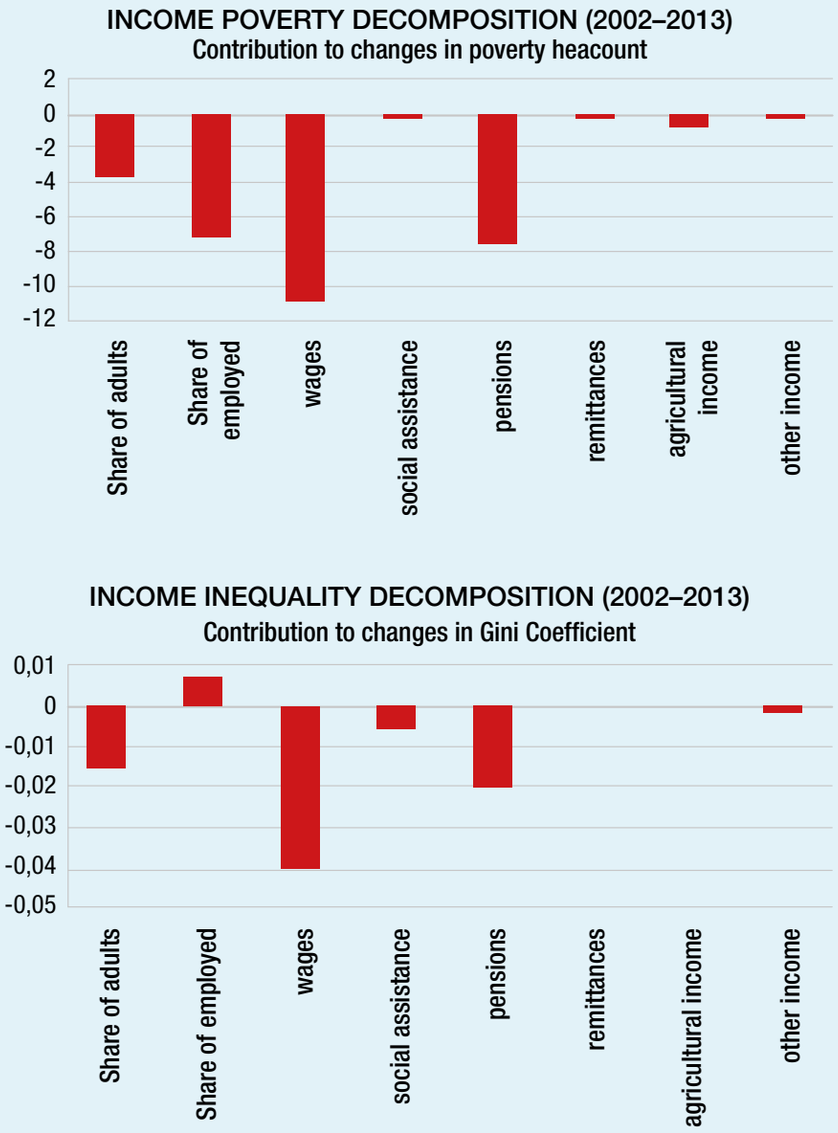
Intra and Inter Area Poverty Decomposition, 2002–13
(in percentage of overall poverty reduction)

			Change in Poverty Headcount
Area	Population Share in 2002	Absolute Change	Percentage Change
Urban	60.0	–15.4	61.5
Rural	40.0	–7.7	30.7
Total intra-area effect		–23.1	92.2
Population-shift effect		–1.4	5.6
Interaction effect		–0.5	2.1
Total change		**–25.0**	**100**

Pensions contributed to poverty and inequality reduction. Pensions accounted for 7.5 percentage points of poverty reduction. This is consistent with previous evidence suggesting that in developing countries, the positive effects of pensions go beyond the direct beneficiaries (the elderly) and may spill over on the other members of their households. Additionally, pensions play a fundamental role for the elderly living by themselves. In Turkey, more than 80 percent of the income of elderly living alone or with other elderly comes from pensions (Bussolo, Koettl, and Sinnott 2015).

FIGURE 1.10

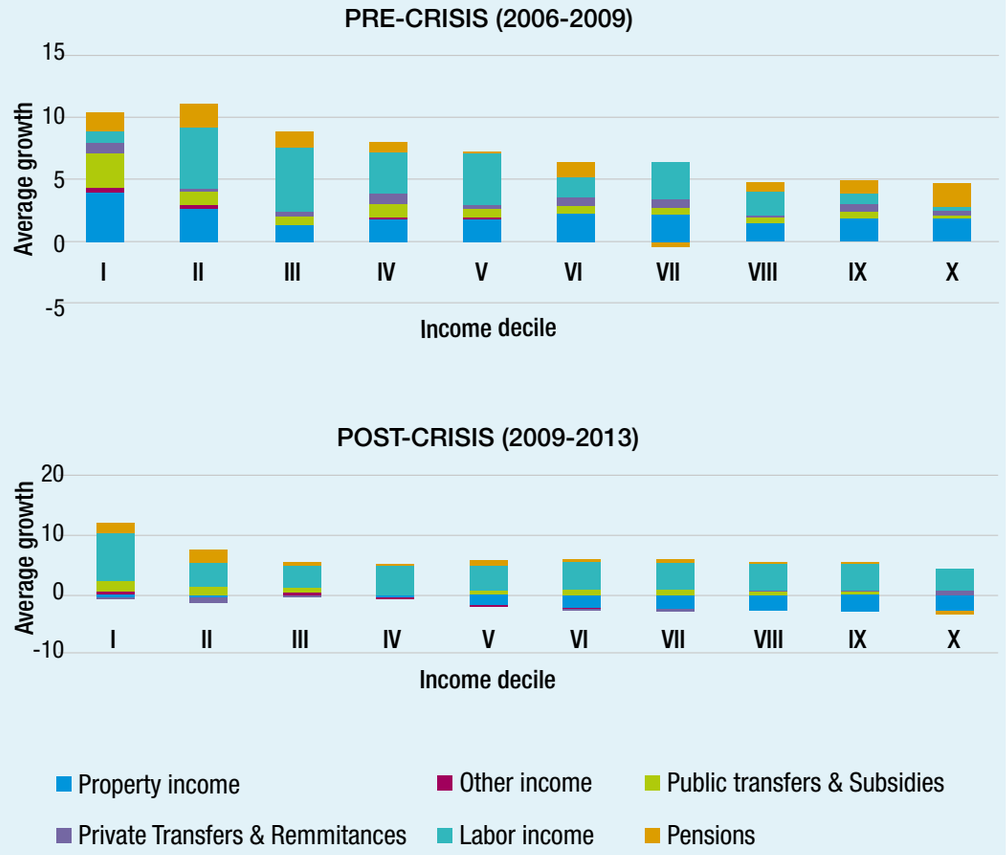
Change in Income Poverty and Inequality Resulting from Changes in Sources of Income



Source: : HBS. Note: Poverty line: US$5 per day in 2005 PPP.

FIGURE 1.11

Market and Non-market Income, 2006–13
(percentage change)



Source: : SILC.

Note: Deciles are calculated over total household per capita disposable income.

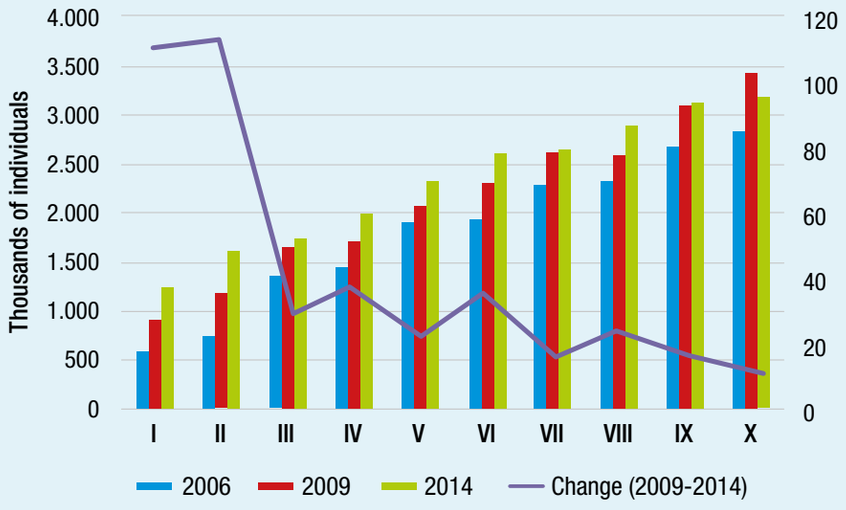
Among the poorest decile, the number of people receiving pensions almost doubled between 2006 and 2013. The changes introduced in pension schemes during this period contributed to improve the equity of the pension system. With the improvements in coverage of social security for the self-employed, artisans, and small tradesman (Bag-Kur), agricultural workers became eligible to receive pensions (Law No. 2926). As a result, during the period

2006–2013 the number of Bag-Kur agriculture retirees increased from 183,000 to 411,000. In addition, the number of small tradesmen retirees increased by about 250,000. Figure 1.12 summarizes the trends observed in pension recipients by income decile.

FIGURE 1.12

Number of People Receiving Pensions, 2006–14

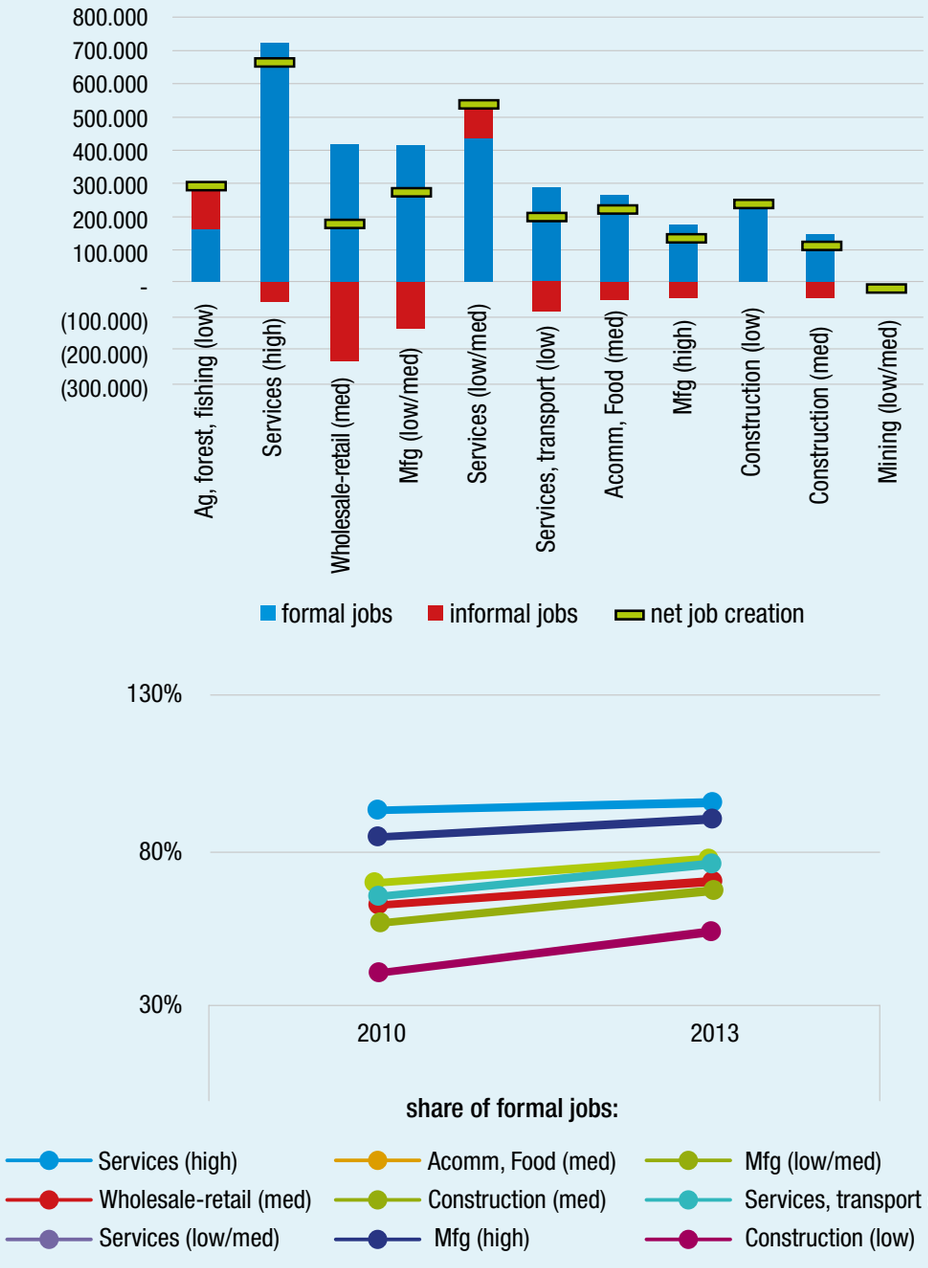
(thousands of individuals and percentage change)



Source: : SILC.

FIGURE 1.13

Net Job Creation and Formalization Took Place Across All Sectors



Source: : LFS 2010–2013.

Changes in demographics (share of adults per household) and non-labor income (remittances, agricultural and other income) seem to have played a marginal role in poverty reduction. Even though social transfers have been significantly expanded recently, they do not increase the incomes of the poor significantly. There may be scope for further increasing the effectiveness of social assistance to mitigate risks of vulnerability in the face of macroeconomic shocks.

Labor markets during this period have been characterized by exceptional employment growth, accompanied by improvements in job quality. There has been strong net job creation in the labor market, particularly stronger in the services sector but in general positive across all sectors. More than 90 percent of new jobs are formal, which has led to a notable positive formalization trend across all sectors. Other markers of job quality, such as adequate linkages between wages and the job, access to training, and safe conditions, have also improved (World Bank 2016) (Figure 1.13).

Employment has grown for both men and women, and for all levels of education. Employment growth has reached as much as 76 percent for women with secondary education and 41 percent for women with university education during 2010–13. Rates have been lower for men but still largely positive. Still however, women have less than a quarter of all existing jobs, due to their comparatively low LFP.

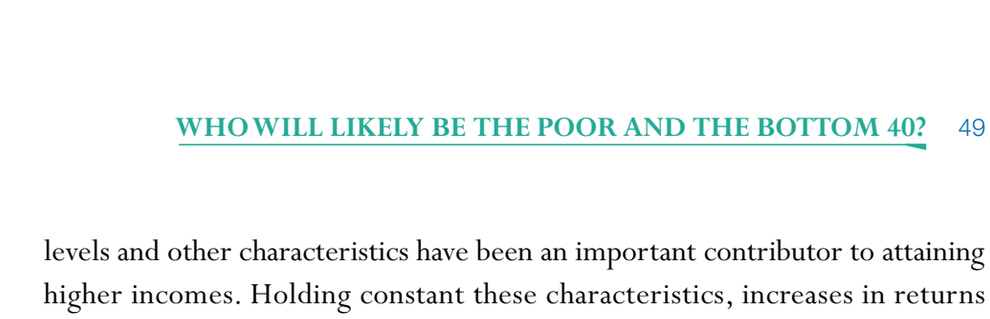
Challenges Across Regions

Higher labor incomes and poverty reduction have been driven by increasing returns to (human capital) assets and, to a lesser extent, by accumulation of such assets. Among the population in the bottom 40 percent of the income distribution, a quarter of the increase in labor income experienced over the last decade is explained by changes in characteristics, while almost 75 percent is explained by changes in returns to these characteristics. The application of a Oaxaca-Blinder decomposition shows that for the poorest 40 percent of the population, improvements in educational

levels and other characteristics have been an important contributor to attaining higher incomes. Holding constant these characteristics, increases in returns have played an even more important role during the period of analysis. Going forward, these results help frame a discussion of challenges in the coming paragraphs. For some groups or regions the bottlenecks take the form of lack of endowments (characteristics), while for some others the challenge hinges on the returns from the labor market (Figure 1.14).

FIGURE 1.14

Decomposition of Labor Income Growth between 2006 and 2013



Source: Cuevas and Rodriguez-Chamussy 2016, using SILC.

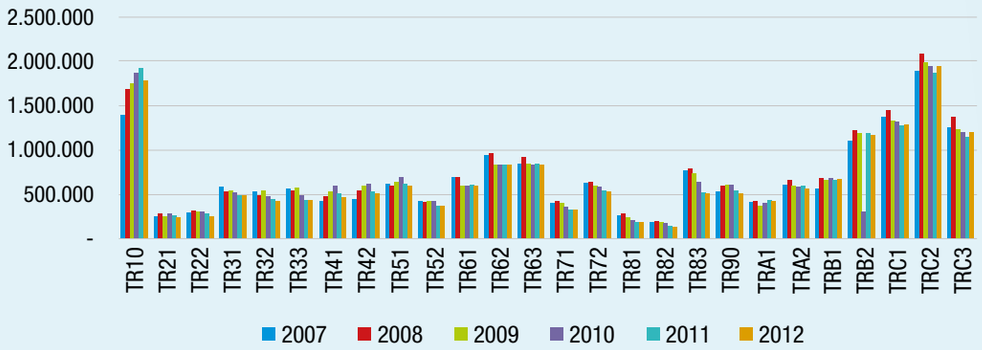
Note: Estimations based on Oaxaca-Blinder decomposition including Heckman correction for selection bias in the wage equation.

Although some subnational territories with high poverty incidence have successfully reduced poverty, the eastern regions are not experiencing the rates of growth in consumption or income that would allow convergence. Poverty convergence would imply that regions with higher initial poverty rates experience higher rates of growth in consumption or income and subsequently higher rates of poverty reduction. Hatay, Kahramanmaras, and Osmaniye in the South and Mardin, Batman, Sirnak, and Siirt

in the Southeast have experienced poverty reductions, although not at a sufficiently high pace. Meanwhile, poverty has increased in the Northeast regions since 2006. This evolution implies persistence of the traditional high regional disparities that have characterized Turkey.

FIGURE 1.15

Number of Poor across Turkey's 26 Regions, 2007–12
(number of people below poverty line)



Source: World Bank staff's calculations.

Note: Survey-to-survey imputation from SILC to LFS at NUTS2 level. Baseline is 2006 because it is the first year that SILC was collected. NUTS2 = Nomenclature of Territorial Units (n=26). Poverty Line US$5 per day in 2005 PPP.

Given their population size, the two regions with the lowest and the highest poverty incidence have both around 2 million poor people, but the challenges are extremely different. Istanbul (TR10), the region with the second-lowest poverty rate in 2012 (12.5 percent), as well as Sanliurfa and Diyarbakir (TRC2), the region with the highest poverty rate in Turkey (58.8 percent), concentrate the bulk of the number of poor in the country (Figure 1.15).

TABLE 1.5

A Typology of Regions by Their Level of Endowments, Use and Returns of Household Assets

Types of Poor by Region	Low Use, Low Return	Low Use, High Return	High Use, Low Return	High Use, High Return
Low endowment	TRC, TRB, TR7, TR6		TRA, TR9, TR8	
High endowment		TR5, TR1	TR3, TR2	TR4

Going forward, different regions face different constraints with regard to returns to or endowments with assets, while some face both. A typology of regions is developed according to whether they have a population with low-high endowments of assets (levels of education, access to services); low-high use of assets (LFP, unemployment, formal employment); and low-high returns (hourly labor income, hourly wages of salaried workers).[11] Table 1.5 summarizes the typology, where:

- Regions like the Southeast and East (TRB TRC) have relatively low endowments of assets (lower levels of education, access to services), and at the same time are constrained in their use and returns.

- Regions like the Northeast (TRA TR9) are constrained in endowments and returns, but less so in use of assets, with better LFP rates and unemployment than the national average.

- Regions like Istanbul or Bati Anadolu (TR1 TR5) are somewhat constrained in use of assets only, facing higher unemployment rates, lower LFP than the national level.

11 - The typology was developed using positive/negative deviants from national levels. For example, if a region has lower hourly wages than the national average, it is considered relatively constrained in returns.

Labor market trends vary widely across regions of the country, with the East lagging behind in quality job creation. Labor markets are closely linked to the overall positive story of poverty reduction at the national level, as well as to the mixed news story at the subnational level. Although net job creation of formal jobs has taken place across regions, it has lagged behind in the eastern part of the country. Job generation has not been strong enough to pull households out of poverty. Overall, labor markets in the East show systematically lower employment rates and LFP than other regions in the country, together with higher unemployment rates (Figure 1.16).

FIGURE 1.16

Unemployment Rates Across Turkey's Regions

Source: LFS 2014.

A rising minimum wage has been at the backdrop of improvements in earnings of low-skill workers and poverty reduction, while also explaining slower formal job creation in the Southeast. The growth in the minimum wage during 2002–12 reached 4.4 percent per year (measured in U.S. dollars), one of fastest growth rates in Europe (Figure 1.17). The ratio of minimum wage to average wages is now relatively high when compared with

other OECD countries. There is evidence that the minimum wage in Turkey is binding at least in the formal sector (World Bank 2013b). Hence, increases in the minimum wage affect average earnings, both directly (increased earnings for minimum wage earners) and indirectly (by anchoring all wages at a new, higher level). A minimum wage set above the equilibrium wage may lead to detrimental effects in the labor market (that is, higher informality or lower job creation for unskilled workers) with a potential negative impact on poverty. To lower labor costs, the Government has recently introduced a direct subsidy of TL 110 per month per worker for formal employers. There is also the possibility that a higher minimum wage acts as a 'big push' for the economy. Indeed, evidence from Indonesia and Thailand show that if firm profits are tied to local consumption, the high wages act as an externality and the size of the market increases with workers' wages and consumption (Del Carpio et al. 2014; Hohberg and Lay 2015; Magruder 2013).

The Syrian refugee influx is affecting labor markets in the Southeast, but their overall impact on well-being is not necessarily negative. New research shows that the influx of Syrian refugees has caused displacement of Turkish workers in informal jobs, particularly among women, people who have low education levels, and workers in agriculture. The estimates are consistent with one-to-one net displacement of Turkish workers, with even larger effects for informal and unpaid jobs. But not all displacement is into full inactivity, instead there are indications that the displacement from the labor market is associated with an increase in school attendance for young women. The analysis captures impacts up to 2014. Impacts may be different in later years (Del Carpio and Wagner 2015).

E. Projections for Poverty and Shared Prosperity in 2025

Turkey's per capita GDP is projected to grow by 30 percent over the next 10 years. Estimates based on a growth accounting framework suggest an economic growth potential of about 3.5 percent per year in the baseline;

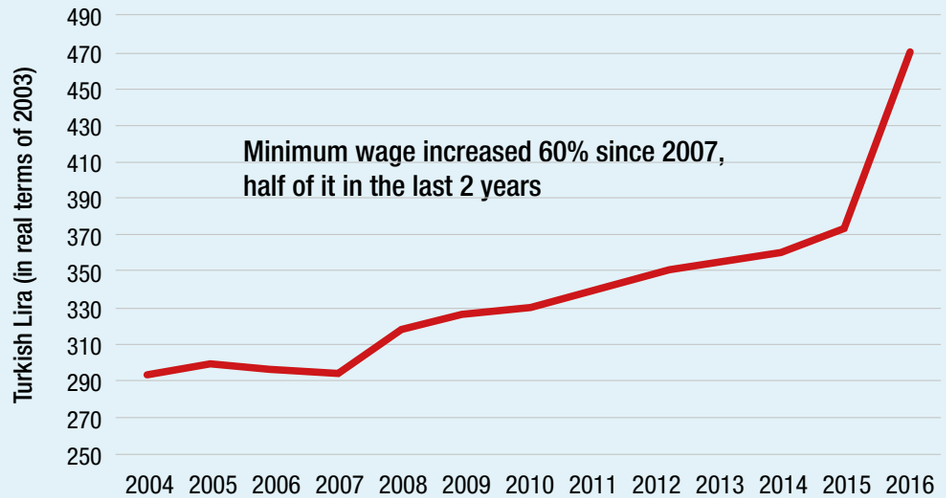
decisive action to alleviate the constraints identified in this report could raise the GDP growth rate above 5 percent (see Chapter 2.A). Combining the baseline projection with population projections indicates that gross national income (GNI) per capita would grow to about US$12,800 in 2025, from just over US$9,000 in 2015 (in constant U.S. dollars). Although significantly slower than envisaged in Turkey's National Development Plan (NDP) (2014–18), this growth would carry Turkey over the threshold to high-income status as currently defined by 2025.[12] The structure of the growing economy will continue to change, with agriculture losing importance, while industry and even more so services will provide increasing shares of production.

Turkey's 'demographic window' is now open. The dependency ratio—the share of children and the elderly in the overall population—has been declining since the 1960s, with the share of the working-age population thus increasing (Figure 1.18). Projections show that the dependency ratio will decline until about 2025. Birth rates have decreased rather quickly and dependency rates are falling because of it. From 2025, births are expected to stabilize, while the number of elderly in the population will increase rapidly. The time in which the dependency ratio is below one-third—the loose definition of 'demographic window'—is projected to last until 2050 (Hoşgör and Tansel 2011). However, the upside of the low female LFP is the potential for increasing employment and adding to the demographic effects, thereby extending the potential of the demographic dividend. The coming three decades are therefore the time during which Turkey could become rich before getting old. Alas, the 'demographic window' turns into a 'demographic dividend' only if people of working age are economically active on the labor market's supply side, and the economy can create good jobs for the new entrants into the labor force on the demand side.

12 - Current per capita GDP is above US$10,000 using the World Bank's Atlas method, which tries to smooth out exchange rate fluctuations. The 10-year projection crucially depends on the behavior of the exchange rate. The sharp depreciation over the last two years has depressed the real exchange rate well below its historical average; assuming it recovers to the historical average would allow a faster convergence to high-income status.

FIGURE 1.17

Minimum Wages in Turkey, 2004–16 (real terms)



Source: OECD Stats, consulted December 2015.

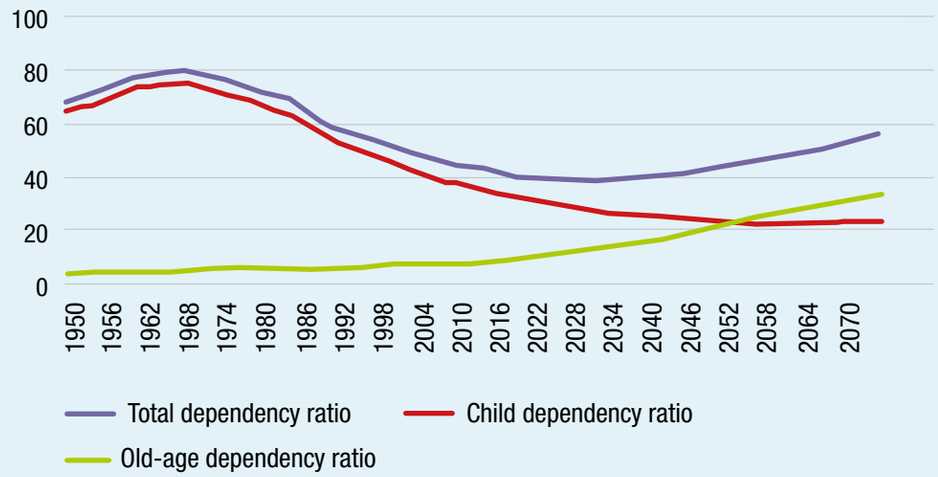
In addition to the demographic changes, the next 10 years will see a significant increase in educational attainments of the workforce. Turkey's population is projected to rise to 85.2 million in 2025, from 77.7 million in 2015.[13] The number of working-age people with tertiary education or more will rise to 11.4 million in 2025, from 7.1 million in 2015 (Figure 1.19), or from 15 percent to 22 percent in relative terms. Younger cohorts will increasingly have higher levels of education. The share of people with only primary education in population age 20–24 will drop to 21 percent, from 29 percent in 2015.[14]

13 - Population data received from TUIK.

14 - Education projections data from Wittgenstein Centre for Demography and Global Human Capital and International Institute for Applied Systems Analysis, see KC and Lutz (2014). The paper presents 4 alternative Shared Socioeconomic Pathways (SSP) for 140 countries up to 2100, which are distinguished by demographic and human capital assumptions. The scenarios differ very little in the period to 2025, which is our frame of analysis. We chose SSP1, the scenario with relatively low fertility and high human capital accumulation.

FIGURE 1.18

Demographic Changes, 1950–2075 (in percent)



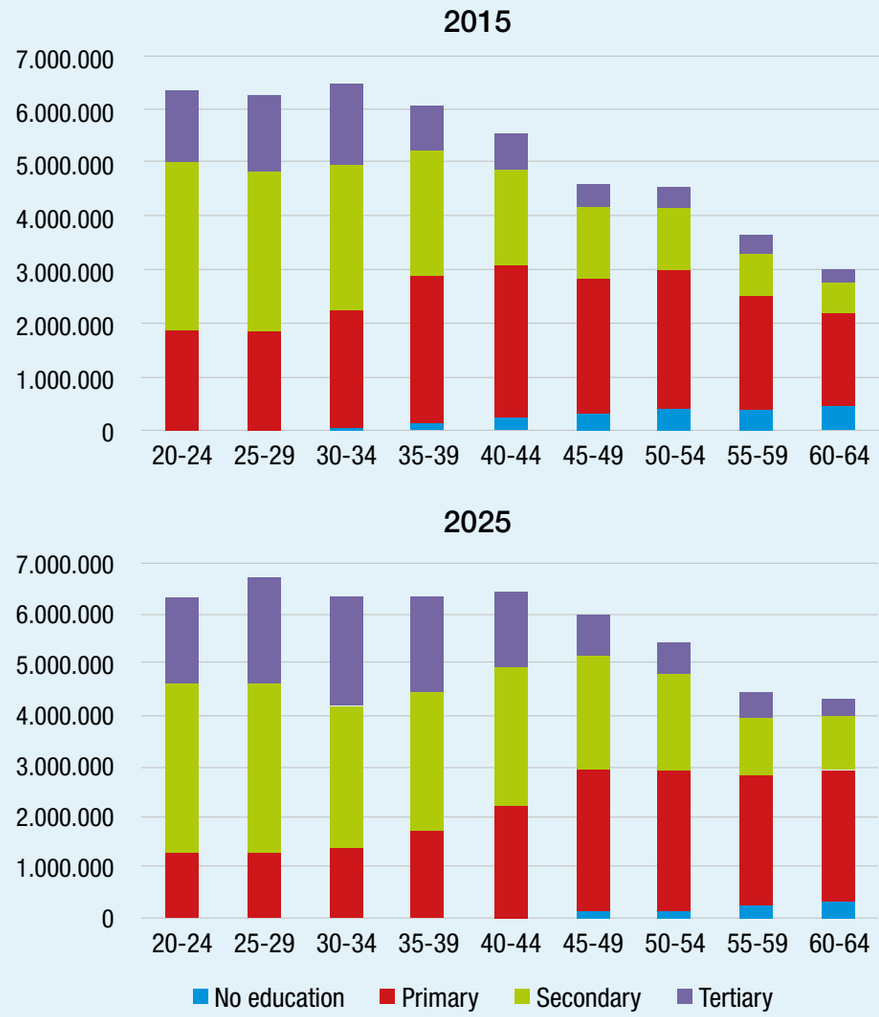
Source: TUIK population projections.

Participation of Women in the Workforce

Low female LFP constrains economic growth and, as importantly, women's broader social and economic empowerment. Large gender inequalities persist particularly in access to economic opportunities. According to the 2015 Global Gender Gap rankings of the World Economic Forum (WEF), Turkey ranked 130 among 145 countries included in the rankings, and was the lowest in ECA. Estimates suggest the loss associated with the gender gap in labor participation reaches 22 percent of income per capita (Cuberes and Teignier 2015).

FIGURE 1.19

Population and Education Projection, 2015–2025



Source: Authors' calculations using TUIK and Samir and Lutz (2014) data.

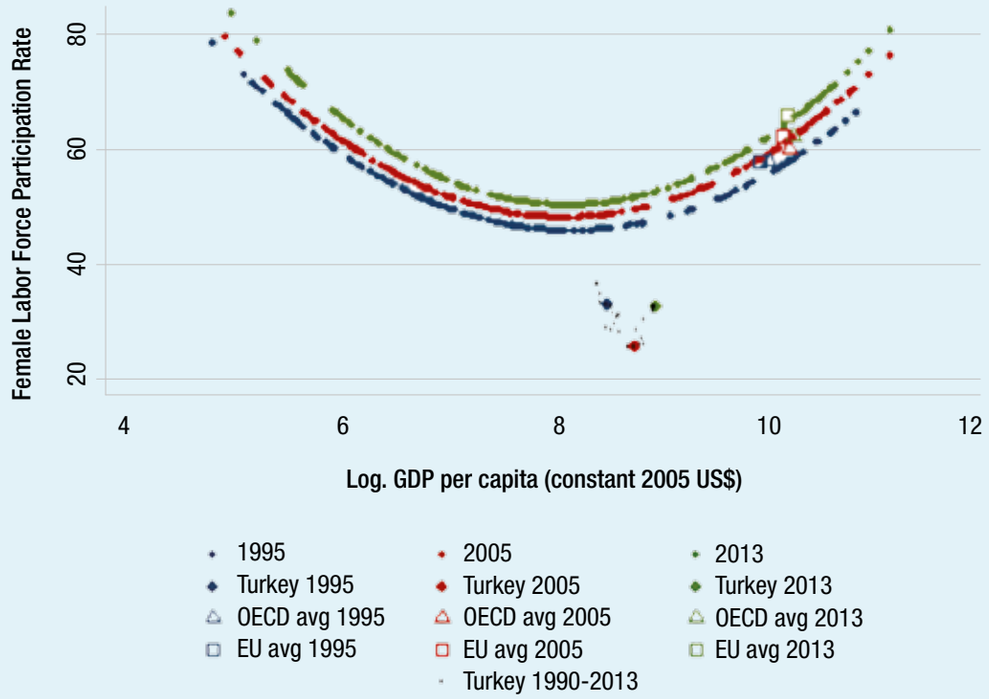
The relationship between female LFP and economic development in Turkey has followed a U-shaped pattern familiar to other emerging market countries. Agricultural shedding and urbanization were the main drivers of decreasing female LFP rates through the middle of the 2000s. Female rural migrants, who were mostly unpaid family workers in agriculture, were constrained to participate in the urban labor force after migration to cities, primarily due to low levels of education (World Bank 2009). In addition, the lack of child care in cities as opposed to the availability of family members in rural areas was another constraint that rural migrants faced. Since then, the pace of job access among better-educated females has accelerated and female LFP has trended upward. However, Turkey is still at a relatively shallow end of the ascendant part of the 'U' (Figure 1.20). Female LFP rate reaches only 33.1 percent of adult women, it still has ample room to grow, and with that, the contribution of women's earnings to the reduction of poverty and shared prosperity in Turkey.[15]

Demographic shifts will increase female LFP. Women from younger birth cohorts participate more often in the labor market than their counterparts from older birth cohorts (Figure 1.21). The LFP rate of women born during 1963–67 equaled 20 percent when they reached age 30–34, and this rate almost doubles to about 38 percent for the same age group in the younger generation born between 1978 and 1982. The four youngest birth cohorts (females born between 1968 and 1987) experienced a tremendous increase in LFP in the past five years. From 2007 to 2012, female LFP for these four birth cohorts increased by about 10 percentage points. The changing demographic profile of working women may herald a change in trend toward sustained increases in female LFP.

15 - LFP statistics from Labor Force Survey (LFS), TUIK, August 2016, http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=21579

FIGURE 1.20

Female LFP in OECD Countries, EU and Turkey, 1995–2013



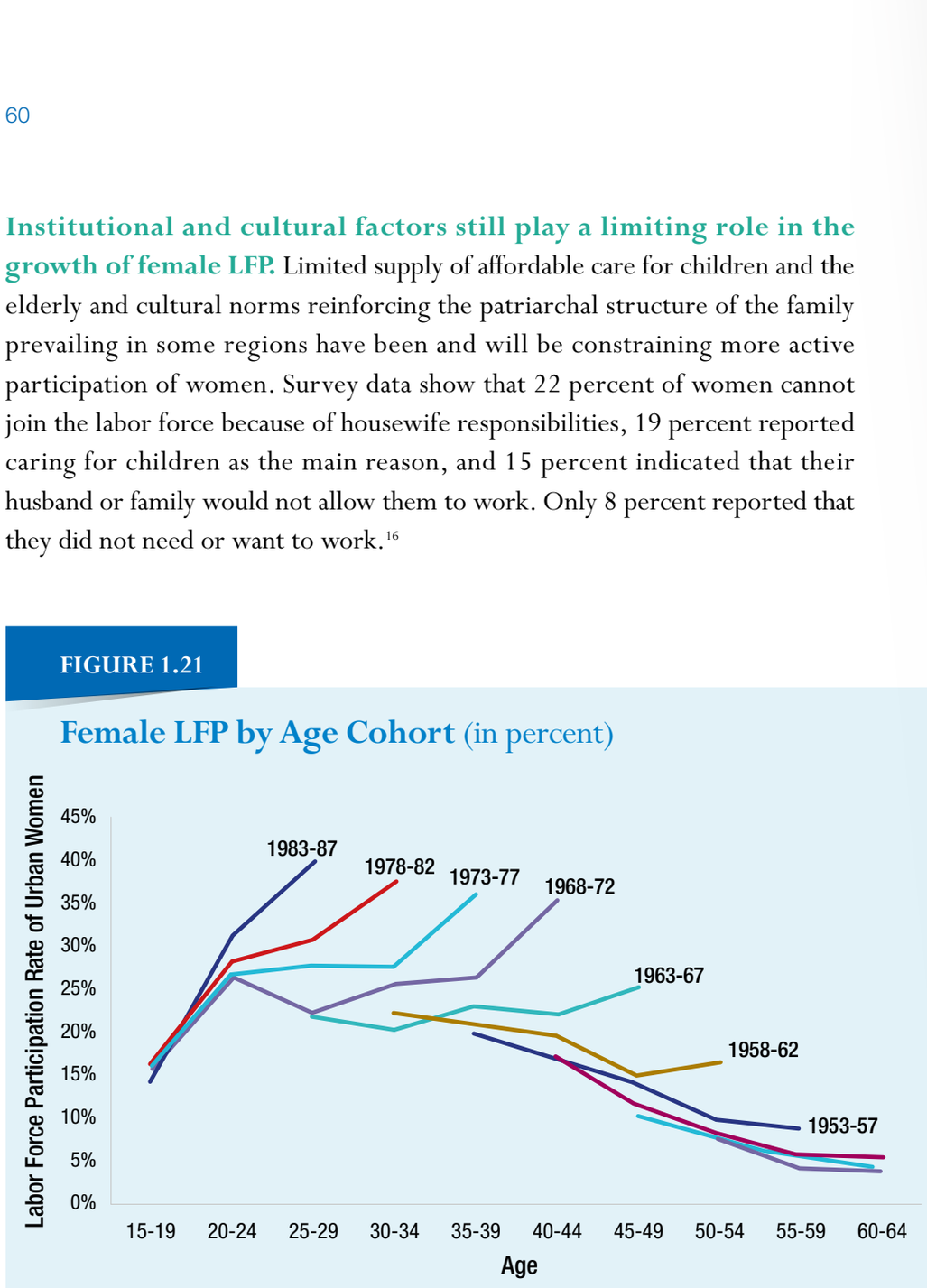
Source: World Development Indicators (WDI) 2015.

Increasing levels of education have been and will be important enablers of further participation of women in the economy. Growth in female economic participation is closely linked to more women obtaining higher degrees, thereby increasing educated women's returns in the labor force and the opportunity cost of not working—especially in urban areas. Women with high school and tertiary education have 42 percent and 73 percent LFP levels, respectively (Figure 1.22).

Institutional and cultural factors still play a limiting role in the growth of female LFP. Limited supply of affordable care for children and the elderly and cultural norms reinforcing the patriarchal structure of the family prevailing in some regions have been and will be constraining more active participation of women. Survey data show that 22 percent of women cannot join the labor force because of housewife responsibilities, 19 percent reported caring for children as the main reason, and 15 percent indicated that their husband or family would not allow them to work. Only 8 percent reported that they did not need or want to work.[16]

FIGURE 1.21

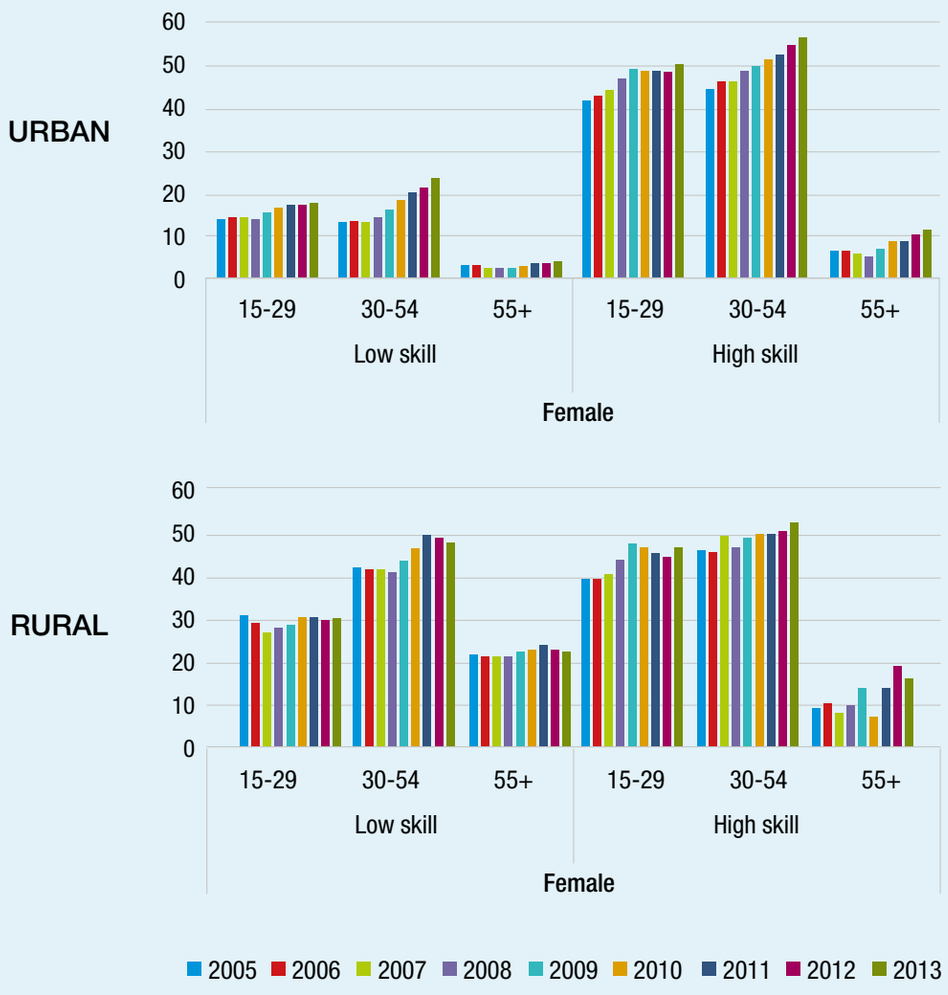
Female LFP by Age Cohort (in percent)



Source: LFS, several years.

FIGURE 1.22

Evolution of Female LFP by Skill Levels in Urban and Rural Areas



Source: HBS 2005–2013.

Note: A person is classified as low skilled if education level is less than high school and high skilled if education level is high school or more.

16 - Turkey Demographic and Health Survey (TDHS) 2013.

If the trend toward rising female LFP is sustained and women from lower-income brackets join the labor force, this will, over time, make a significant contribution to reduced poverty and inequality. As the trends of Latin American countries over the past decade suggest, women can play a key role in strengthening the linkages between access to jobs and poverty reduction and shared prosperity. Lessons from international experience suggest that although female LFP will continue to rise with Turkey's transition toward high-income status, the pace of increase is not likely to be sufficient for the country to close the existing gap with comparable countries, nor for the country to reap the benefits and returns of its human resources. Developing better evidence on the causes of low LFP and removing constraints to accelerate its growth is a clear area of focus for greater progress on poverty reduction and faster transition to higher-income status (growth scenarios in Chapter 2 further elaborate on this point).[17]

Investment in Human Capital: Education, Skills, and Health

A higher-skilled population will be needed to boost prosperity and accompany a sustainable transition to high-income status. As emerging markets move forward, the share of employment in routine, non-cognitive tasks falls down. Technology increasingly replaces such tasks, while new jobs are being created with non-routine cognitive tasks (Aedo et al. 2013; Sondergaard and Murthi 2012). In Turkey, the share of employment in such tasks declined by an annual average of 1.1 percent during 1995–2012. Workers with a mid-level of skills increasingly sit at the crossroads between having to accept low-skill, low-income jobs, or, if they can, upgrade their skills to a higher level to compete in non-routine, cognitive tasks.

Skills mismatches represent an important constraint for employers, especially in lagging areas of the East and Southeast of the country. According to the 2013 Business Environment and Enterprise Performance Survey (BEEPS), which interviewed 1,344 firms across Turkey, only 10 percent

17 - The Government has recently introduced regulation to protect part-time work, flexible work arrangements, and tax breaks to new child care centers. These are reforms in the right direction, and while it is too early to assess their impact, they shall be monitored closely going forward.

of firms identified 'inadequately educated workforce' as a major constraint to firm growth and performance, with the average employer being much more concerned about other constraints, such as tax rates, competition from the informal sector, and political instability, among others. However, this general satisfaction with workforce skills hides significant variation by firm's location, sector, and size. In particular, almost two-thirds (62.5 percent) of firms in East and Southeast Anatolia and more than one-third (36 percent) of firms in the Mediterranean region identified inadequate education of the workforce as a major constraint. Moreover, large firms and firms in the textile sector reported higher-than-average skills deficits.

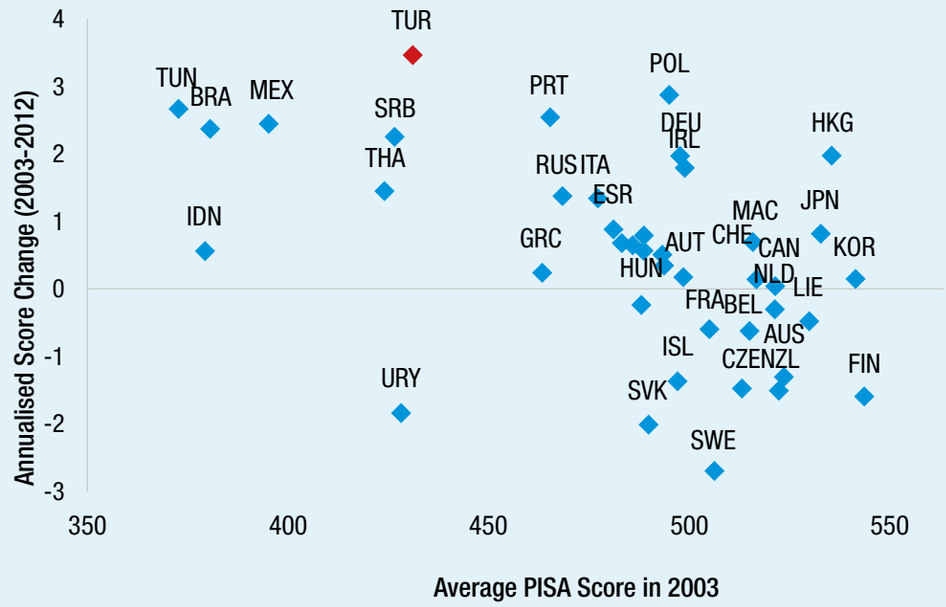
Public education spending has greatly increased in the last decade, but it is still below OECD levels. Per capita expenditure is important: there is a strong positive relationship between spending on education and economic growth. Between 2004 and 2012, public per capita expenditure on education increased by 7.4 percent annually. In 2012, the country spent almost 80 percent more on education per capita in real terms compared to 2004. The increase of financing in the education sector contributed to better teaching and also to increased and improved resources devoted to physical and IT infrastructure. Nonetheless, Turkey still spends less than the OECD average. On average, OECD countries spend over US$8,200 per student from primary through tertiary education annually while Turkey spends about US$3,200.

Expanding and sustaining investments in education since the end of the 1990s yielded fast increases in educational enrollment. Coverage in primary education is almost universal, and the gender gap disappeared in 2010–11. The net secondary enrollment rate jumped from 38 percent in 1997–98 to 80 percent in 2015–16, while the gender gap decreased significantly. When fully implemented, the 2012 reforms that made 12 years of education mandatory will increase the secondary gross schooling ratio even further.[18]

18 - Secondary enrollmet rates may then come closer to the Government's target of 85 percent.

FIGURE 1.23

Levels and Changes in PISA Scores Across Countries, 2003–2012 (average points, annualized point change)



Source: OECD's PISA.

Note: Average scores calculated as (Math + Reading + Science scores)/3. Annualized change calculated as (2012 Average − 2003 Average)/9.

In addition, Turkey has accomplished fast improvements in learning outcomes and educational achievement, although it has recently lost some ground. Learning outcomes in general and skills in particular are important for reducing poverty and increasing shared prosperity as well as productivity and growth. Individuals with modern and relevant skills can make capital and labor more productive, facilitate the adoption and invention of new technologies, and increase competitiveness of the labor force, all of which supports high economic growth. The overall education system in Turkey is rapidly generating improvements not only in enrollment and coverage, but also on learning outcomes,

as shown by students' scores in international test results.[19] Turkey was the fastest-improving country in average PISA scores between 2003 and 2012 (Figure 1.23), and attained faster-than-average improvements in TIMSS between 2011 and 2015. These changes will increase the supply of skills in the labor market, thereby boosting Turkey's productive potential. However, two important challenges arise. First, Turkey's learning outcomes still rank at the lower end among OECD countries. Second, the positive trend in learning outcomes has suffered recent reversals—2015 PISA results have been worse than previous years.[20]

Despite rapid growth, enrollment in preschool education is still very low by international standards. Enrollment rates increased rapidly from to 33 percent in pre-primary education in the cohort of 3 to 5 year-old children and 50 percent in the 4 and 5 year-olds in 2015, with plans to increase it further to 70 percent (MoNE 2016). Expanding preschool education has the highest rate of return among all levels of education (Heckman and Carnerio 2003). According to PISA data in 2012, attending preschool education increases PISA scores by 25 points after controlling for family socioeconomic status (OECD 2013). Currently, children from richer families benefit far more from early childhood education (ECE) than those from less-privileged households.

Tertiary education attainment is still relatively low. In 2014, about 25 percent of the adult population had a tertiary education degree (25–34 year-olds' attainment rate), as compared to 41 percent in the OECD. Many EU countries now have enrollment rates of 50 percent or more. Despite the rapid increase in tertiary education, the returns to higher education are still significant at 50 percent. At the same time, businesses continue to lament a shortage of skilled workers.[21] This highlights shortcomings with regard to work orientation of the teaching provided, which is partly a result of weak quality assurance and funding mechanisms, and a lack of overall orientation toward performance.

19 - As documented by the OECD's Program for International Student Assessment (PISA, http://www.oecd.org/pisa/aboutpisa/) and by the Trends in International Mathematics and Science Study (TIMSS) by the International Association for the Evaluation of Educational Achievement (IEA) (http://timssandpirls.bc.edu/).

20 - This may happen when the system is expanding. As increasing enrollment tends to add lower-than-average students in the system, average scores would tend to decrease.

21 - World Bank 2013b. In fact, employers regard a shortage of people with 'soft skills' as a greater constraint to filling vacancies than 'hard skills'.

There is scope to improve the availability and quality of professional education and increase opportunities for lifelong learning. Access to re-skilling and up-skilling opportunities and quality assurance of training provision are particularly important in the context of rapid technological change and demographic transformation. According to the 2013 BEEPS for Turkey, only 28 percent of Turkish firms offer formal training. Access to on-the-job training is particularly low in some regions (with 6 percent of firms in the Black Sea region and 17 percent of firms in the Aegean region offering training), in small firms, and in firms working in the retail sector. The Government has allocated efforts through its public employment services agency (ISKUR), particularly since 2010, to strengthen the link between employment and technical and vocational education and training (TVET), but there appears to be room to improve for professional (that is, non-tertiary) education to enable a pathway to more labor market opportunities for the bottom 40. According to the SABER on Workforce Development, as of 2012, few measures were in place to ensure quality of training delivered by a wide range of public and private providers. A rigorous impact evaluation of ISKUR-supported vocational training courses found limited impacts on employment outcomes (Hirshleifer et al. 2014).[22]

With regard to health, the other human capital pillar, reforms in public service delivery have contributed to an improved overall health care system. A decade of reform of the health system was launched in 2003, with the Health Transformation Program. Near-universal access was established through improvements to the quantity and quality of health infrastructure and human resources, while universal health insurance made health care affordable for all. This was supported by a focus on improving primary, preventive care and on incentives to ensure the quality of service throughout the system and across the country. Increasing public health expenditures allowed for a significant decline in out-of-pocket spending.

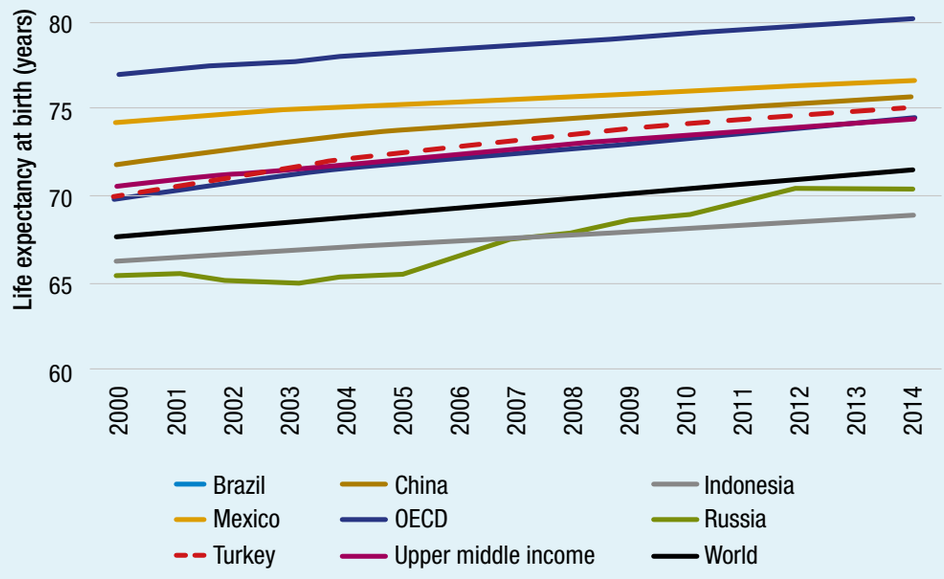
Universal health coverage contributed to improved health, enhanced fairness in financing, better financial protection, and increased user satisfaction. Life expectancy at birth approaches the OECD

22 - Following this assessment, ISKUR has made significant reforms in the provision of vocational training, the impacts of which would be important to analyze in the future.

average level (Figure 1.24). An average Turkish newborn had the chance of living an additional four years (from 71.1 to 75.2 years) if born in 2014 as compared to 2002 (World Bank 2013a). Under-five mortality and infant mortality fell sharply, and in particular were more than halved between 2003 and 2013. By 2013, under-five mortality rate (per 1,000 live births) was down to 15, from 37 in 2003, while infant mortality rate fell to 13, down from 29 in 2003 (Hacettepe University Institute of Population Studies 2014). The gap in under-five and infant mortality rates between rural and urban areas and between poorest and richest quintiles narrowed substantially, with convergence to similar rates especially after 2003 (Atun et al. 2013).

FIGURE 1.24

Life Expectancy at Birth 2000–2014



Source: WDI 2015.

Income Dynamics Simulation

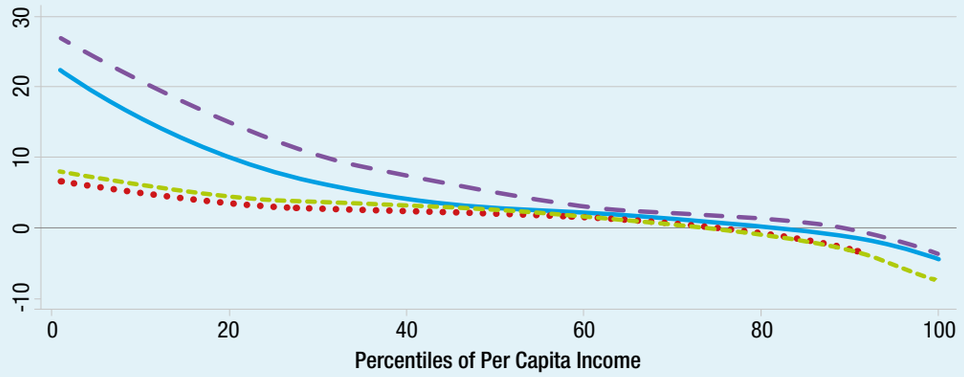
To gauge the effects of demographics, education, and economic growth on income distribution, we project changes in the labor market based on 'reasonable' assumptions. Assuming an increase in female employment 50 percent higher than that of men, as in recent years, means female LFP will rise by 3 percentage points by 2025. The 'education wave' will compress wage premiums for educated workers: wages for skilled workers (with at least upper secondary education / high school) will exceed those of unskilled workers (with at most lower secondary education) by about 50 percent in 2025, as compared to more than double that in 2015. Wages and increasing employment will drive progress toward poverty reduction and shared prosperity in the next 10 years, similar to the previous 15 years. However, continuing migration of labor out of agriculture will contribute to a sustained increase in food prices over non-food prices, with differential effects on households in line with their consumption shares.

Trends of poverty reduction and shared prosperity are projected for the next decade using a microsimulation model. The microsimulation framework allows stepwise and cumulative calculation of the impacts of these changes on income distribution (Figure 1.25).[23] The first step applies new weights to households in line with population projections ('reweighting'); as households become smaller more strongly at the lower end of the distribution, they benefit more strongly from reweighting. The second step adds the sectoral reallocation of workers from informal to formal sectors; again, households at the lower end of the distribution benefit more than those at the higher end because they are more often in informal employment. The third step adds the decline in wage premiums for more educated workers, who are predominantly in wealthier households; this has the strongest redistributive effect. In the fourth step, the relative increase in food prices affects the poorer segments more strongly, because they spend a higher share of their budgets on food. In the final step (not shown), distribution-neutral economic growth is added (3.5 percent per year from our scenario).

23 - The microsimulation is based on the Global Income Distribution Dynamics (GIDD) framework. It is a top-down macro-micro simulation framework that distributes macroeconomic shocks exploiting the observed heterogeneity available in household surveys. The GIDD was developed by the World Bank and was inspired by previous efforts involving simulation exercises (Bourguignon, Bussolo, and Da Silva 2008; Bourguignon, Ferreira, and Leite 2008; Davies 2009; earlier versions of the GIDD model can be found in Bourguignon and Bussolo 2013 and Bussolo, De Hoyos, and Medvedev 2010).

FIGURE 1.25

Growth Incidence Curves, 2025
(percentage change from 2010)



Source: World Bank staff calculation. Based on the GIDD framework, see Bourguignon and Bussolo 2013.

The simulation shows a significant decline in poverty and progress to shared prosperity over the next 10 years. Poverty would continue to fall to 13 percent by 2025, down from 21 percent in 2012. Extreme poverty would fall below 2 percent by 2025. Incomes of the bottom 40 percent of households in the income distribution would grow at about 3 percent in real terms per year, while the rest would see gains of 2.2 percent per year. Thus, the ratio of top 60 percent over bottom 40 percent would decrease to 3.7 from 4 in 2012, and the Gini coefficient would improve to 41.7 in 2025 from 43 in 2012.

2

What will be the engine of growth?

Over the past two decades, the shift of employment out of agriculture into industry and services constituted the main engine of growth. The structural change driven by international and domestic market integration has brought increases in productivity and rising incomes. Trade liberalization in the 1980s and the Customs Union (CU) agreement with the EU in 1995 provided the price signals and competitive incentives for the modernization of Turkey's industry. Structural reforms after the financial crisis in 2001 provided much needed stability and financing to the corporate sector, and together with more business-friendly regulations, facilitated the creation of jobs in manufacturing and services. Public and private investments in infrastructure, in particular transport, logistics, and energy, ensured that the benefits of international integration were spread inland (World Bank 2014a).

New sources of productivity growth will have to come from technology absorption, innovation, and 'moving up the value chain'. The agriculture sector still employs one-fifth of the labor force, and rural areas face much greater challenges in poverty reduction than urban areas. High-income countries typically have percentages of agricultural employment in the single digits, and between-sector structural change still has some way to go. Agricultural development therefore continues to be important for Turkey's future. However, as between-sector structural change inevitably slows, productivity improvements within manufacturing and service sectors have to become the drivers of growth (Acemoglu, Aghion, and Zilibotti 2006; Benhabib, Perla, and Tonetti 2013). With rising wages, low-value-added manufacturing is losing competitiveness, leaving only technology upgrading and innovation as avenues

for growth. Turkey's growth prospects therefore rely on the extent to which it can establish the conditions for such within-sector productivity growth. They include the macroeconomic and business climate, a competitive environment, and deeper financial markets.

This chapter looks at the prospects for growth over the next 10 years. It highlights the successes of the macroeconomic stabilization and structural reforms of the early 2000s in preparing fertile ground for rapid growth. It presents scenarios for future growth based on the well-known growth accounting framework highlighting the importance of capital accumulation and productivity improvements. Because of its continuing importance in supplying Lewis-type surplus labor, it then discusses the prospects of the agriculture sector, which is also an important source of income for the poor. The chapter then highlights the shift from between-industry to within-industry structural change witnessed in the 2000s, and the (slow) transition from low-tech to high-tech production and exports. The section focuses on the conditions likely to matter in promoting within-sector structural change: innovation, efficiency of resource allocation, competition, and corporate governance. We then move to enabling factors for growth: a well-functioning financial system to facilitate investment, without which technology diffusion is very slow, and an enabling environment with stable, predictable rules and their enforcement.

A. Turkey's Economic Growth through the Macro-Economist's Lens

Impressive achievements characterized Turkey's economic development through much of the past 15 years. From 2002 to 2007 and during 2010–12, Turkey had periods of high economic growth, which were on par with fast-growing emerging markets and contributed to the successes in poverty reduction and shared prosperity highlighted in Chapter 1. Turkey has seen a dramatic process of urbanization, opened up to foreign trade and finance, harmonized many of its laws and regulations with EU standards, and greatly expanded access to public services. In fact, Turkey's economic catch-up with

Europe mirrored the experience of other accession countries that benefited from Europe's 'Convergence Machine' (Gill and Raiser 2012).

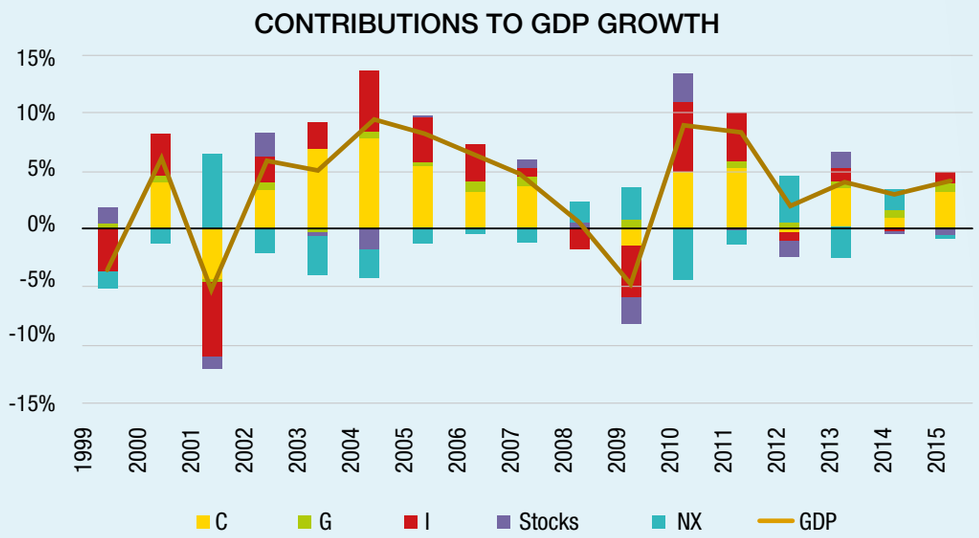
However, concerns regarding Turkey's capacity to sustain past performance have emerged with the stagnation of per capita income around the US$10,000 mark. Since 2012, economic growth has decelerated, unemployment has inched upwards, and the pace of reform has slowed. Regional differences remain large, and the geopolitical environment is presenting increasing difficulties. At about US$10,000, Turkey's per capita income is about 20 percent shy of the high-income threshold defined by the World Bank. Turkey's policy makers rightfully focus on the opportunities and challenges Turkey faces in joining the two handfuls of countries that have managed to cross this threshold over the last half a century.

Stability was at the heart of Turkey's impressive economic performance in the post-2001 period. After the crisis of 2001, sound macroeconomic management—supported by a flexible exchange rate regime, an independent central bank focused on inflation targeting, and fiscal consolidation—and much needed structural reforms paved the way for economic dynamism. Turkey's economy grew on average by 6.9 percent annually until the global economic crisis, with per capita income rising above US$10,000 (Figure 2.1). Fiscal consolidation resulted in increased social spending as the debt service burden declined, and political stability reassured investors.

The macroeconomic and structural adjustment programs achieved lasting fiscal stabilization. At the core of the programs was a commitment to persistent primary fiscal surpluses. The cumulative effect of an average primary surplus of 4.4 percent of GDP during 2001–07 was a reduction in debt of over 30 percent of GDP. High economic growth, a shift to consumption taxation, and reduced informality and therefore higher social security contributions helped in the adjustment.

FIGURE 2.1

GDP and Its Components (percent change)



Source: TUIK, October 2016.

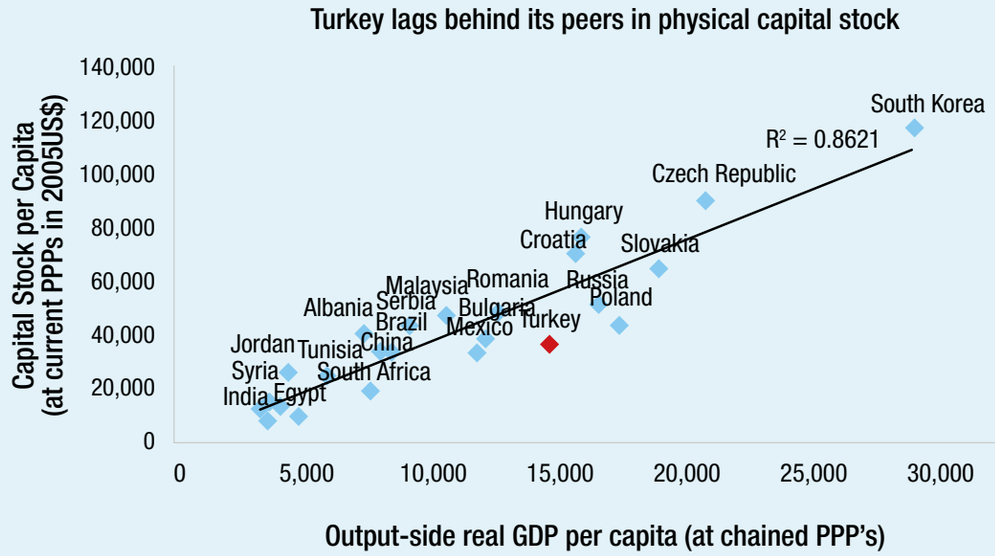
Government revenues increased significantly, thanks mainly to rising payroll taxes. Increasing social security contributions account for the bulk of the increase in government revenues during 1999–2013. Social Security contributions almost doubled over the period from 4 percent of GDP to 7.7 percent (8.2 percent if unemployment insurance contributions are included), while dividends and profits from state-owned enterprises saw an increase of almost 2 percentage points of GDP from 3.5 percent.

Increased public welfare spending helped make growth inclusive and muster support for continued fiscal consolidation. Part of the windfall from falling interest payments was allocated toward increased current spending. Social expenditures as share of GDP increased from 12.4 to 14.8 during 2001–07. Increasing spending on health and education greatly eased access for the broadest part of the population and led to improvements in social

indicators. Pensions were instrumental in reducing old-age poverty. Health expenditures increased from 3.6 percent to 4.1 percent of GDP.

FIGURE 2.2

Turkey's Capital Stock in Comparison (in US$, 2005 PPP)



Source: World Bank 2014a.

Turkey's capital stock is relatively low because of low investment rates. Investment dropped to 15 percent of GDP in the financial crisis in 2001, from about 25 percent of GDP in the 1990s. It recovered from the crisis, but reached at most 22.3 percent of GDP since. This level of investment is significantly lower than levels prevalent in Asian countries, but within the range of other large emerging markets such as Mexico, Poland, and South Africa. The capital stock is lower than expected given Turkey's per capita GDP (Figure 2.2).

An increase in public investment allowed for a rapid buildup of connectivity infrastructure. Investments in road, communications, and energy infrastructure had a significant impact on productivity and contributed to Turkey's export success. Further, investments led to considerable increases in employment and revenue shares of transport-intensive industries. As a result, Turkey compares well with its neighbors and competitors in the Logistics Performance Index (LPI), in which it is ranked 30 globally, just below China and above Poland. Turkey performs better than countries with similar per capita income (Figure 2.3).

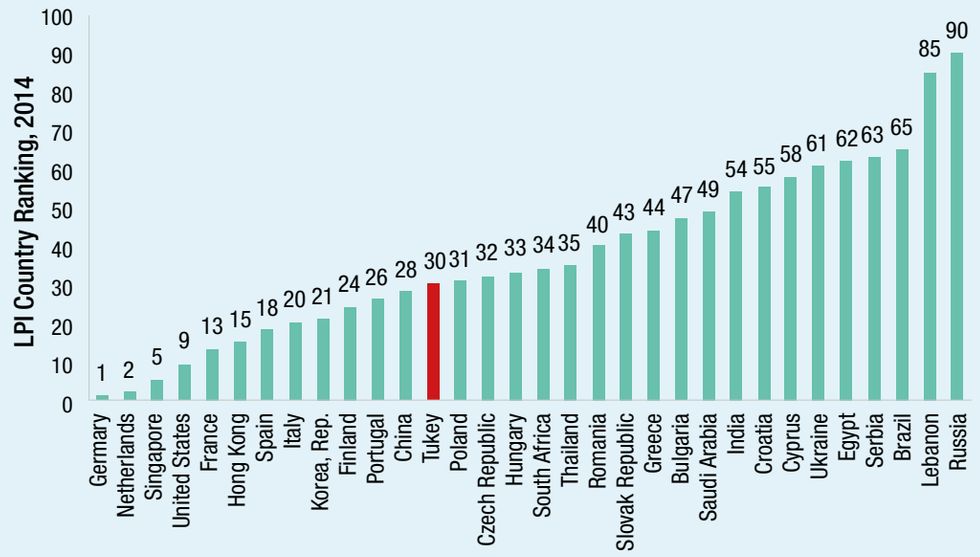
However, a result of greater stability, social protection, and availability of credit has been a significant decline in domestic saving. Private saving in Turkey declined to very low levels over the last decade and a half. They dropped off particularly steeply during the early 2000s, falling from around 25 percent of GDP in 2001 to 12.5 percent in 2006 (Figure 2.4). Since then, private saving rates have fluctuated around 12–15 percent of GDP. The decline of national saving since the late 1990s has been very close to that of private saving—about 10 percentage points of GDP. The decline in private saving provided room for more private consumption, which therefore became the driver of economic growth in the decade. Key explanatory factors for declining private saving include a decreasing precautionary motive caused by improved macroeconomic and political stability, greater access to credit, demographic trends, and the expansion of social insurance. On the other hand, improvements in financial literacy, financial deepening, female LFP, and higher real interest rates are associated with higher saving.

Attracting more foreign direct investment (FDI) would reduce macroeconomic vulnerability and support technology diffusion and upgrading. FDI in Turkey is associated with in-firm productivity improvements and between-firm technology spillovers (World Bank, forthcoming). Productivity improvements come four years after the investment and are associated with small reduction in employment. Knowledge spillovers are evident at the 2-digit level of disaggregation, although there is a small negative competition effect at the 4-digit level, that is, firms in the same narrowly defined sector suffer from the entry of a multinational, but companies

that are not direct competitors but could be suppliers or customers gain from the superior technology used by the multinational. Multinationals are good in selecting the most productive firms, and are attracted by endowments, institutional and regulatory strengths, and macroeconomic stability.

FIGURE 2.3

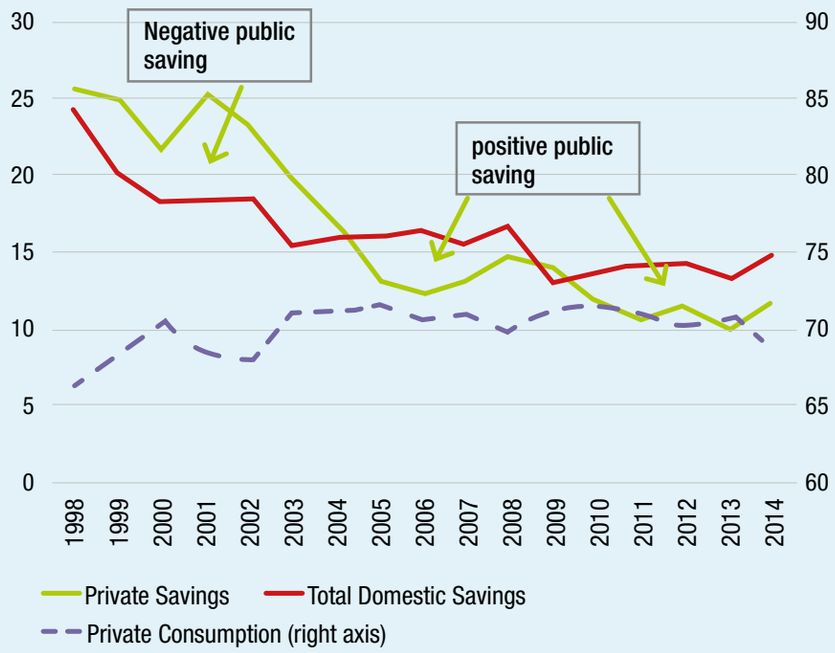
Turkey's Logistics Performance in Comparison, 2014
(index numbers)



Source: Logistics Performance Index (LPI) 2014.
Note: A smaller number indicates better performance.

FIGURE 2.4

Saving and Consumption (percent of GDP)



Source: Ministry of Development and International Monetary Fund (IMF) World Economic Outlook databases.

Growth Accounting[24]

Using the familiar growth accounting framework (Hall and Jones 1999), several episodes of economic development in postwar Turkey can be distinguished, marked by changing political circumstances. Turkey has had four above-average growth episodes (Figure 2.5); the highest

24 - This is an update of the growth projections in World Bank 2014a.

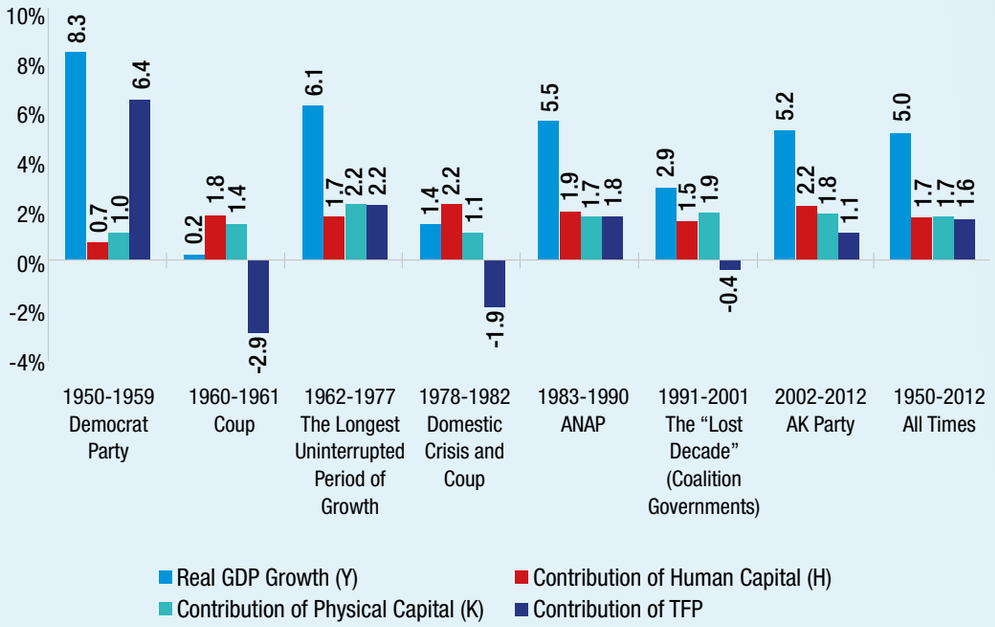
average growth rates were in the 1950s, with 6.4 percent TFP growth reflecting the postwar recovery in demand and efficiency gains from agricultural reform. The second-best performance occurred from 1961 to 1977, when average growth reached 6.1 percent. This period was characterized by central planning and import substitution, and high public investments. Following the military coup of 1980, the Turkish economy entered another vigorous growth episode under the Özal Government thanks to wide-reaching economic liberalization. The final above-average growth episode occurred during the early 2000s, during which the country was enjoying an average growth rate of 5.2 percent. However, from 2009, growth has been driven mostly by increases in LFP and employment. The chart shows clearly that political stability was closely related to positive TFP growth; negative growth periods coincide with coups and unstable coalition governments.

Growth prospects depend on largely exogenous factors, such as the rate of labor force growth, and largely endogenous factors, including the rate of human and physical factor accumulation, as well as factor productivity growth. The growth accounting framework can be used to estimate a baseline scenario for potential growth of the Turkish economy through the period of 2016–25:

- Average employment growth is 2.5 percent per year (the average for 2002–15 was 2.6 percent).
- Average growth in schooling of the working-age population is 1.6 percent (with mean years of schooling to increase to 8.5 percent by 2025 from 7.5 percent in 2014).
- Investment growth is 5 percent (average during 1980–2014 was 5.1 percent, while 2000–14 saw 6.8 percent).
- TFP growth is 0.8 percent (average during 1980–2010).

FIGURE 2.5

Drivers of Growth in Different Political Periods
(percentage change)



Source: World Bank 2014a.

Turkey's baseline potential growth rate is estimated to be about 3.5 percent up to 2025; decisive action to alleviate the constraints identified in this report could raise the GDP growth rate above 5 percent. Growth will be driven by human capital and will lose momentum over time. The reason behind the increase in the contribution of human capital is the extension of compulsory years of schooling and improvements in female LFP. With this average growth rate, Turkey continues its convergence to income standards of the EU, albeit slowly. A faster increase in schooling (similar to the Korean experience) could boost growth to 3.7

percent. Rapid increases in TFP in line with the 2002–09 average would raise the growth rate by 0.5 percentage points. High employment growth in line with the record job creation during 2010–15 could increase growth to about 4.1 percent per year (this would mean female LFP would converge with the OECD average by 2035). In a combined scenario, where there are improvements in investment, female LFP, and average years of schooling, the potential growth rate would surge to 5.1 percent, one-third faster than in the baseline scenario. Finally, if in addition TFP growth continued the rapid pace of the early 2000s, average GDP growth increases to 5.6 percent and Turkey reaches almost 80 percent of average EU incomes by 2025.

TABLE 2.1

Potential GDP Growth Scenarios (2016–30)
(percentage change)

	GDP Growth	Human Capital	Physical Capital	TFP
Baseline	3.5	1.1	1.6	0.8
1) Fast Increase in Schooling	3.7	1.3	1.6	0.8
2) High Employment Growth	4.1	1.7	1.6	0.8
3) High TFP	4.0	1.1	1.6	1.3
4) High Investment Growth	4.3	1.1	2.4	0.8
1+2	4.2	1.9	1.6	0.8
2+4	4.9	1.7	2.4	0.8
1+2+4	5.1	1.9	2.4	0.8
1+2+3+4	5.6	1.9	2.4	1.3

Source: World Bank staff.

Macro-fiscal Risks

In the past, economic growth has been highly volatile as various shocks hit the economy, most often associated with banking system weaknesses or political instability. The growth potential outlined above abstracts from the crises and shows averages. However, the road inevitably will be bumpy. The banking system is much more robust after the reforms of 2001, but there remains vulnerability to reversals in external portfolio flows.

The declining national saving over the 2000s resulted in widening current account deficits, which were mostly financed by short-term portfolio inflows. Low private saving and high dependence on energy imports contribute to a wide structural current account deficit. Before the global economic crisis, Turkey's current account deficit was financed mainly by FDI and other long-term capital inflows. In recent years, portfolio and short-term capital inflows have dominated long-term capital flows, although the ratio reversed again in 2015. Short-term inflows declined and were only partially replaced by a recovery in long-term inflows including FDI, with a resultant loss in central bank reserves. High dependence on short-term inflows creates risks of capital reversals and also worsens the composition of investments as short-term capital flows tend to finance investments that are not associated with technology transfers. Low domestic saving also threatens financial stability as banks and firms are exposed to maturity mismatches and foreign exchange risk.

Vulnerability to tightening global liquidity as well as concerns over the political and regulatory environment reduced private investment spending. Private investment growth, one of the main drivers of growth in the pre-2008 period, dropped sharply in 2012 and has stagnated since then. As a result, economic growth slowed since 2012. In addition, the anchor provided by the EU accession process since 2005 weakened and Turkey's attractiveness to FDI declined.

Despite its dependence on foreign saving, Turkey attracts relatively little FDI. Inflows received a boost from the official start of EU accession negotiations in 2005, but have since dwindled. They responded positively to

the institutional changes in the run-up to 2005, and the anticipation of more such changes during the accession process. However, the pre- and post-crisis averages are very similar: Turkey attracted on average US$12.8 billion in FDI during 2003–08 and US$12.7 billion during 2009–15.

The reliance in recent years on corporate borrowing in foreign exchange and household consumption borrowing to support growth is increasing risks. Corporate and household sector leverage is increasing, while banks reach lending limits with a loan-to-deposit ratio of about 120 percent. Foreign exchange exposure makes corporate balance sheets vulnerable to exchange rate fluctuations, a situation that could blow back on banks' balance sheets.

Government revenue is increasingly dependent on consumption and therefore highly vulnerable to domestic demand slowdowns. The change in the composition of tax revenues toward taxation of consumption has been dramatic, with indirect taxes now making up over 50 percent of total central government tax receipts and almost 14 percent of GDP. The increase in consumption taxes can be explained by both increases in the tax rates on consumption goods (for example, the special consumption tax) and the strength of domestic demand over the last decade. The correlation between real GDP growth and real central government revenue growth is strong. In addition, with tax rates on some of the items that make up the special consumption tax already high, the scope for additional consumption tax increases may be limited without risking base erosion.

While Turkey's population is relatively young now, the percentage of elderly in the population will triple over the coming 40 years. Improvements in health services with a focus on prevention and public health have helped improve life expectancy as well as the quality of life in old age. Pension reform through the '2008 Social Insurance and Universal Health Insurance Law' helped rebalance the pension system and improved both equity within the system and long-term sustainability. At the same time, although pension reform helped stabilize deficits in the pension system, these deficits will remain long into the future. There is also a need to address old age support for a large number of people currently not covered by the pension system, who are mostly those who work in Turkey's large informal sector.

At the subnational level, investment needs for municipal infrastructure, including public transport, are so large that the current financing mechanisms are inadequate. The strong reliance on Illerbank to finance municipalities creates significant bottlenecks. It sometimes displaces urgently needed commercial investment and sources of finance, for example, by providing subsidized financing for projects that could be financed by the private sector. Additional business models and financial products need to be unlocked in the subnational administrations which have sufficient capacity and resources to employ these models, for example, municipal public-private partnerships, municipal bonds, and so on.

Public financial management is weak with a lack of financial impact assessment of new laws and deferred audit requirements. The Public Financial Management and Control (PFMC) law of 2003 required financial impact assessments of new legal initiatives to be submitted with the new text. However, this requirement has been softened by eliminating the fiscal calculation by appropriation type with an amendment to the law. Additionally, no fiscal cost calculation of any draft laws has been made publicly available. The Turkish Court of Accounts (TCA) law, which was a follow-up to the PFMC law that was only promulgated seven years later, requires all public institutions to submit financial statements for audit. However, a three-year exemption was granted to the Ministry of Finance to provide financial statements, and therefore no financial audit has been possible for the general budget institutions. A financial statement for these institutions is therefore due in 2017.[25]

Public financial management is also in jeopardy from a proliferation of exemptions to the public procurement framework. Turkey's public procurement law (PPL) was first promulgated in 2002 and has been amended more than 30 times since then to bring it in line with EU directives. It covers about 7 percent of GDP worth of public contracts; however, estimates based on OECD methodology show contracts worth about 5.5 percent of GDP are made outside the remit of the PPL. These include concession contracts such as Build-Operate-Transfer (BOT), Build-Operate-Own (BOO), and Public-Private Partnership defense and security contracts, Mass Housing Administration's (TOKI) revenue-sharing contracts, unrecorded SOE contracts, and foreign-financed contracts. In addition, even in the

25 - The exemption was provided through a secondary legislation issued by the TCA in the Official Gazette dated December 8, 2013, and covers the transactions for the 2013–2015 period.

contracts covered by the PPL the contracting authorities have the power to restrict bidders to domestic companies and products, or impose a domestic preference in the bidding process. In 2014, an amendment was introduced in the PPL for mandatory domestic preference requirement to technology products to support domestic research and development (R&D).

B. Prospects for Agriculture

While the declining share of agriculture in overall employment contributed to economy-wide TFP growth over previous decades, the sector's development will continue to play a crucial role in supporting poverty reduction and shared prosperity. About 20 percent of the working population continues to be engaged in agriculture, a percentage far higher than that found in high-income countries, indicating that the process of labor-shedding and structural change has not yet run its course. Poverty incidence is much higher in rural areas as labor productivity is very low, which indicates that people are constrained from leaving the sector and finding higher paid work elsewhere. We therefore explore conditions in the agriculture sector to understand better what keeps productivity low, and what keeps workers in low-paid agricultural jobs. We cover the main characteristics of this very diverse sector, discuss irrigation and efficiency of input use, and present an assessment of growth strategies for different farming systems.

Turkish agriculture successfully provides food security and is globally important. It is the largest producer of hazelnut, cherry, figs, apricot, and quince in the world, producing 19–65 percent of total world output. Turkey is among the top 10 producers of a variety of fruits and nuts, and field crops such as barley, sugar beet, dry onion, cotton, rye, sunflower, and wheat (FAO 2015). The rankings may differ for different years and according to whether the value or the quantity is taken.

The sector is very diverse because of Turkey's varied geography. Looking at data at the regional level,[26] the average farm size varies between 2 ha and 12

26 - The Ministry of Food, Agriculture and Livestock (MFAL) distinguishes 30 regions according to their topographies, soils, and cropping patterns, although official statistics on households, poverty, employment, and so on follow administrative regions which are not matching these MFAL regions. Differences within the regions are also still important.

ha, the size of rural population in total population varies between 4 percent and 45 percent, and the share of agricultural employment in total employment varies between 10 percent and 55 percent (excluding Istanbul). Despite the overall declining trend, persistent increases in agricultural employment are observed in some regions such as Eastern Marmara, Mediterranean, and Aegean regions. The crop composition also shows quite a variation as expected from a large land with different topographic, climatic, and soil conditions.

Notwithstanding the diversity, we can identify some structural features of the sector, as follows:

- The long-term growth rate of agricultural value added is about one-third of that of the rest of the economy, which explains the declining share of agriculture in GDP over the past three decades.

- The share of agriculture in total employment has decreased from 35 percent in 2002 to 21 percent in 2014, a result of the decrease of agricultural employment by 27 percent, while overall employment increased by 21 percent. The sector provides employment to approximately 60 percent of the rural workforce.

- There are significant gender differences in the sector: most of the men employed in agriculture are self-employed (67 percent) and one-fifth are unpaid family workers; however, the vast majority of the women employed in agriculture are unpaid family workers (78 percent).

- Migration from rural to urban areas has led to an overall decline in human resources in agriculture, because migrants often are the young and more productive workers.

- About 8 million people live in villages associated with forestry; poverty incidence among them is higher than the rural average.

One of the most important structural problems is the small size of farms, which is exacerbated by land fragmentation into parcels sometimes distant from each other. Average farm size is 6.1 ha, more than 60 percent of the farms are below 5 ha and more than 30 percent are below 2 ha. The bottom 65 percent of the farmers cultivate about 20 percent of the land, while the top 5 percent cultivate over 30 percent of the land. Fragmentation is a major contributor to low yields, poverty, and exit from agriculture. Fragmentation is a result of inheritance, which splits farms between siblings in each generation, combined with underdeveloped land markets and renting arrangements.[27]

Irrigation infrastructure and inefficient water use are additional constraints. According to a 2006 survey, only a quarter of total agricultural land in Turkey is irrigated, which means there is significant room for expanding irrigation and thereby boosting output, which would compensate for small farm sizes and make diversification possible. However, systems for charging water use are inefficient or unavailable, and losses from old, open canals are high, leading to inefficient water use. We highlight in Chapter 3 that water availability would become a binding constraint for Turkey as a whole in the near future without significant improvements in efficiency. Important areas are already water stressed.

Raising the efficiency of input use is the most important contributor to higher agricultural incomes. Detailed data analyses shows that (a) big farms are more efficient than smaller ones; (b) an increase in the number of parcels per farm reduces efficiency (Kilic et al. 2009; Tipi and Rehber 2009); (c) fallow, share-cropping, land renting, cereal production, lower education levels, and smaller land sizes are also associated with lower efficiency (Dudu et al. 2015); (d) education, experience, use of credit, and women's participation in production contribute positively, but aging of farmers contributes negatively to technical efficiency (Bozoglu and Ceyhan 2007); and (e) the most technically efficient regions are West Marmara, the Aegean, and West Marmara, the least efficient are Northeast and Middle East Anatolia (Cakmak and Dudu 2012).

27 - A law passed in 2014 sets minimum thresholds for agricultural land, 2 ha for field crops, 0.5 ha for perennials, and 0.3 ha for green houses. Sales and inheritance below these limits are restricted. However, this leads to joint ownership of parcels which cannot be divided further.

TABLE 2.2

Farming Systems and Strategies for Growth

Types Specialized In	Growth Potential	Poverty Reduction. Potential	Intensification	Diversification	Market Orientation	Post-harvest Activity	Increase Farm Size	Off- Farm Income	Exit From Agriculture
Dry Field Crops	M	M	1	3	1	0	2	2	1
Irrigated Field Crops	H	M	3	1	2	0	4	0	0
Indoor Horticulture	VH	L	3	1	1	2	3	0	0
Outdoor Horticulture	H	H	1	2	1	2	1	2	1
Vineyards	H	L	1	2	2	3	0	1	1
Other Permanent Crops	VH	M	2	2	2	2	1	1	0
Livestock - Cattle	L	M	3	0	1	3	2	1	0
Livestock - Sheep-Goat	M	H	2	0	2	2	2	1	1
Poultry	H	L	4	2	2	0	2	0	0
Mixed Cropping	L	M	1	1	1	1	2	2	2
Mixed Livestock	L	L	3	1	2	2	1	1	0
Mixed Crop-Livestock	L	H	2	0	1	2	0	3	2
Average for Turkey			1.8	1.1	1.4	1.5	1.4	1.6	1.0

Source: Expert judgement, background paper on agriculture by Krasnaoglu and Cakmak (2016).
Note: VH = very high, H = high, M = medium, L = low.

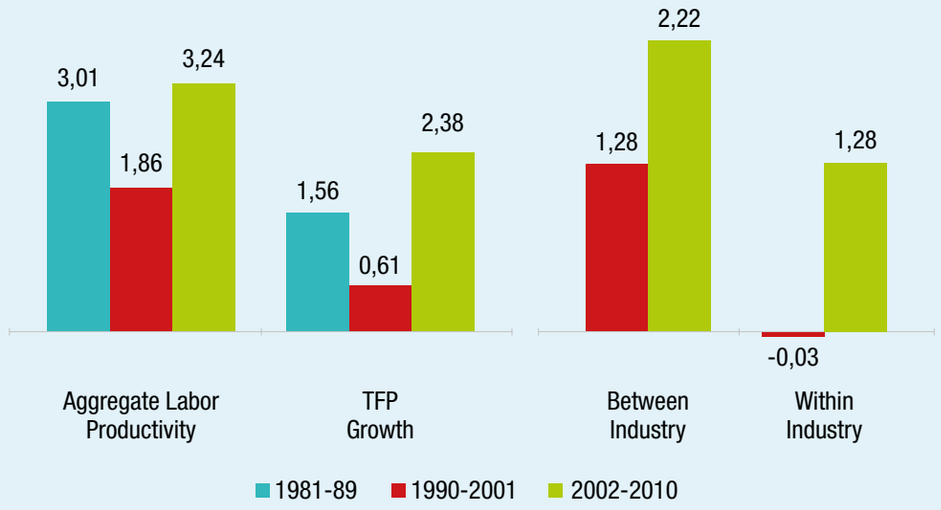
With all the caveats related to diversity between regions and farms, we identified and ranked farm systems and typical strategies for increasing agricultural production and incomes. On average, the most important strategies are intensification of cultivation, enhancing off-farm income and post-harvest activities such as processing (Table 2.2). The growth potential is highest for indoor horticulture, although its poverty reduction potential is low because of the high up-front investment required. Permanent crops such as fruit trees provide equally high growth potential. Livestock has low growth potential, and mixed crop and livestock operations feature poorly on growth, but provide a high potential for poverty reduction. Poultry offers the best potential for intensification. Some of the mixed cropping farms offer the best avenue for releasing workers to move to industry and services. The potential for increasing welfare through on-farm activities is just not there for those engaged in small-scale mixed cropping. Non-functioning land markets now make it hard for them to leave the land, as it means leaving their assets behind, which could otherwise provide start-up capital for a new existence in the cities.

C. Making Things Better and Better Things

As the share of labor in agriculture is diminishing, so is the potential for productivity growth from moving labor out of agriculture. In the last two decades, the leading factor in productivity growth was the shift of labor from agriculture to the manufacturing and service sectors, from low- to high-productivity jobs (Figure 2.6). Productivity growth in the 1990s was almost entirely due to shifts between industries, with agriculture shedding, industry and services gaining labor. In the 2000s, between-industry structural change remained the most important contributor to overall TFP growth, but within-industry TFP growth also became important. However, the share of labor in manufacturing did not increase over the 2004–14 period, while services and construction attracted a growing number of workers. Many of the service sector jobs are in low-productivity, low-skill personal services, and most jobs in construction are low skill as well. This pattern of structural change therefore does not add much to the productivity of workers moving out of agriculture.

FIGURE 2.6

Structural Change and Productivity Growth, 1981–2010
(percent)



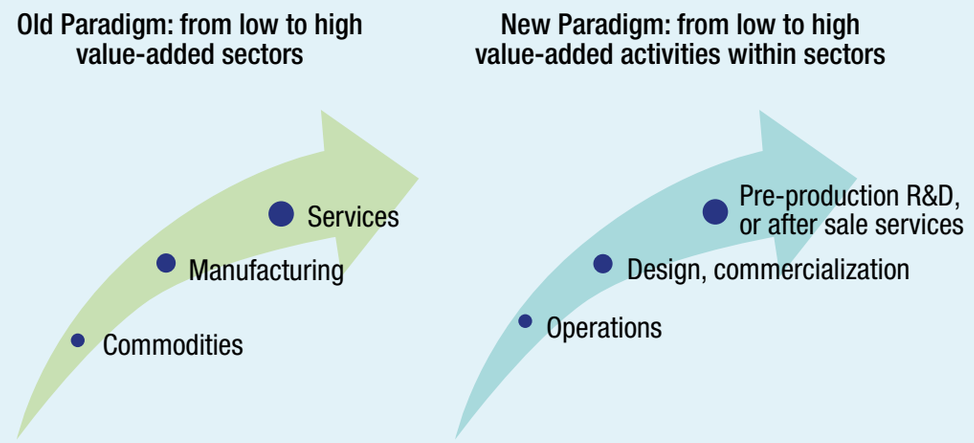
Source: World Bank staff using TUIK data.

Note: Labor productivity is arithmetic average of annual log differences of GDP in constant Turkish lira prices divided by employment.

Turkey is 'moving up the value chain', but the transition seems to have halted at the high end. Within-industry structural change means upgrading production technologies and performing more sophisticated tasks in the global division of labor. In fact, the economics literature now uses a fundamentally different paradigm compared to earlier conceptual frameworks describing comparative advantage for producing different products (Figure 2.7). Mudabi (2008) describes a U-shaped curve of value creation in value chains, with higher-value activities in pre-production or in post-production, while at the center of the value chain—where manufacturing and standardized services take place—there is less value added. More value added therefore lies with the intangible activities or services than with manufacturing.

FIGURE 2.7

From Sectors to Tasks-based Development Strategies



Source: Cattaneo and Miroudot (2012).

In manufacturing, Turkey is doing well with products for which the production technology is characterized to be at a medium level of sophistication. In both domestic production as a whole and in exports, medium-technology production is providing an increasing share of value added, while low-technology production is losing in importance (Figure 2.8). Low-technology production accounted for 57 percent of total value added in 2005, but has since dropped by 13 percentage points. In the same time, medium- to high-technology production has gained 9 percentage points. However, the high-technology production share has fallen in recent years after increasing steadily to a maximum of 12 percent of the total value added in 2010.

FIGURE 2.8

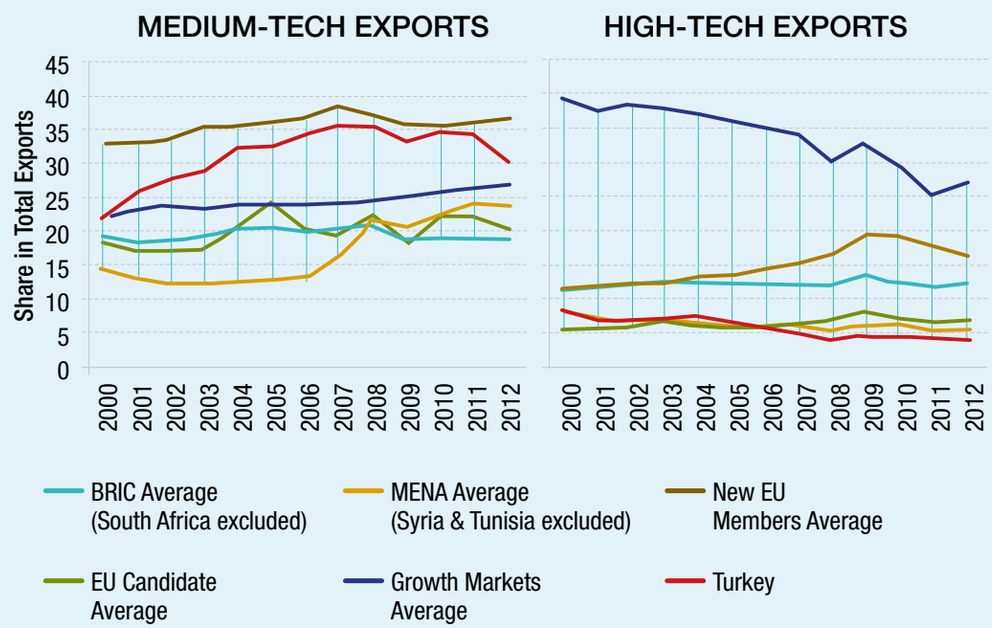
Sophistication of Production, 2003-2013
(percent share in total value added)

Source: TUIK Annual Industry and Services Statistics (firm-level data). Eurostat technology intensity classification (based on NACE2).

The pattern in the sophistication of exports is similar. The relative importance of medium-technology exports increased by more than half over the last decade. The share of medium-technology exports in total exports reached 32 percent in 2010 from 20percent in 2000, eating into the share of low-tech (Figure 2.9). Medium-technology exports (mainly automobiles and auto parts) played an increasingly important role and replaced less sophisticated products (garments and textiles) as the top export (World Bank 2014c). However, upon closer inspection, export sophistication improved until 2007, but then stagnated. Moreover, Turkey saw the share of high-technology exports decrease over time. Indeed, Turkey compares unfavorably in this respect with all of its competitors.

FIGURE 2.9

Medium- and High-tech Exports, 2000–12
(percent share)



Source: COMTRADE. Classification of products from Lall (2000).

The modest technology upgrading witnessed in these numbers gives rise to concerns that past growth is sustainable. With rising wages, Turkey is increasingly loosing competitiveness in low-tech production. In the following sections, we explore reasons for this slow transition: low performance in innovation, resource misallocation, weak competition, and corporate governance shortcomings.

Resource Allocation

An analysis of the efficiency of resource allocation highlights shortcomings in leveling the playing field. There is significant scope for increasing productivity by reallocating resources (capital and labor) within sectors. This is the result of an analysis of the dispersion of TFP across firms.[28] While the data inevitably contains some 'noise' and not the entire dispersion can be attributed to resource misallocation, our analysis indicates that highly productive and less-productive firms operate side by side. Reallocating resources from low-productivity to high-productivity firms therefore could boost overall factor productivity. This is the result of firms with high productivity not obtaining sufficient resources (in terms of capital and labor) to expand production, while firms with low productivity continue to employ resources instead of shrinking and exiting. The reasons could be, for example, that some firms have easier access to land and finance and therefore expand production, even when their productivity is lower than that of less well-connected firms. This phenomenon substantially affects Turkey's total output and productivity, because highly productive firms are smaller and less-productive firms larger than they should be.[29]

Resource allocation improved significantly during the early 2000s, but stagnated from 2007. Turkey successfully reduced distortions between 2004 and 2007. In fact, the standard deviation of revenue TFP dropped from 0.86 in 2004 to 0.75 in 2007 (see Figure 2.10). However, the standard deviation of the revenue TFP dispersion stagnated in the following years, although small improvements still can be seen in the tails of the distribution. This indicates that within-industry misallocation was reduced over time, more rapidly in the early 2000s and only slowly later.

28 - We used industries according to the 4-digit Statistical Classification of Economic Activities in the European Community, version 2, abbreviated as NACE2.

29 - This analysis was developed in Hsieh and Klenow (2009) to study the problem of resource misallocation. They assume monopolistic competition, that is, heterogeneous firms within a sector face a downward sloping demand curve; expanding production by employing additional resources leads to lower firm-specific prices. Another crucial assumption for this analysis is similar production technology, expressed as the same share of labor and capital in value added. The paper calculated the dispersion of revenue TFP (TFPR) as an indicator of resource misallocation. TFPR was calculated as physical productivity multiplied with the firm-specific price. Dispersion of TFPR is an indication of distortions; a firm with higher productivity than the sector average suffers more obstacles than other firms; otherwise it would hire additional resources and expand production until its TFPR converged to the average. Conversely, a firm with lower productivity would lose resources unless protected by distortions. The Turkey paper replicates the methodology for firms in the manufacturing sector using Turkey's firm censuses for 2004–13.

Leveling the playing field and making sure markets function effectively opens the door for more TFP growth from an improvement in allocative efficiency of resources. Comparing this measure for firm-specific distortions in Turkey in 2013 with similar measures for the United States for 1997 (latest available) shows that Turkey could have boosted TFP by 19.5 percent in 2013. However, we can safely assume that the U.S. productivity dispersion improved since 1997, and the gap and potential for improvement for Turkey accordingly is larger.

Innovation

Turkey has been increasing investments in R&D and innovation since the early 2000s mainly because of increased political commitment and funding. In 2015, there were about 58 support programs implemented by different public organizations through which 15,079 R&D and innovation projects were financed with a total budget of TL 1,390 million (US$479.5 million). The number of projects and the budget increased by 65 percent and 22 percent, respectively, over five years from 2011 to November 2015. Legislative improvements have also led to an increase in private financing for innovation, and venture capital and angel investment have started to grow recently. R&D expenditures increased from TL 14.3 billion in 2011 to TL 18.7 billion in 2014, resulting in an R&D intensity of 1 percent of GDP, according to TUIK. Business expenditure on R&D has also increased and its share in GDP was 0.5 percent in 2014. The target is to increase R&D intensity to 1.8 percent of GDP and the share of the business sector to 60 percent by 2018, according to the Government's 10th NDP (2014–2018).

Despite the recent improvements, Turkey compares poorly to other OECD countries in indicators of performance for its science and innovation system. These indicators include researchers' publications in top journals, patenting in firms, and the international dimension of innovation (Figure 2.11). Turkey's share among all patents registered in the European Patent Office was 0.26 percent (1,150 in total),

comparable to countries such as Luxemburg (0.28 percent) and Poland (0.23 percent), but well below the share found in countries like Denmark (1.22 percent) or Belgium (1.31 percent) (OECD 2015).

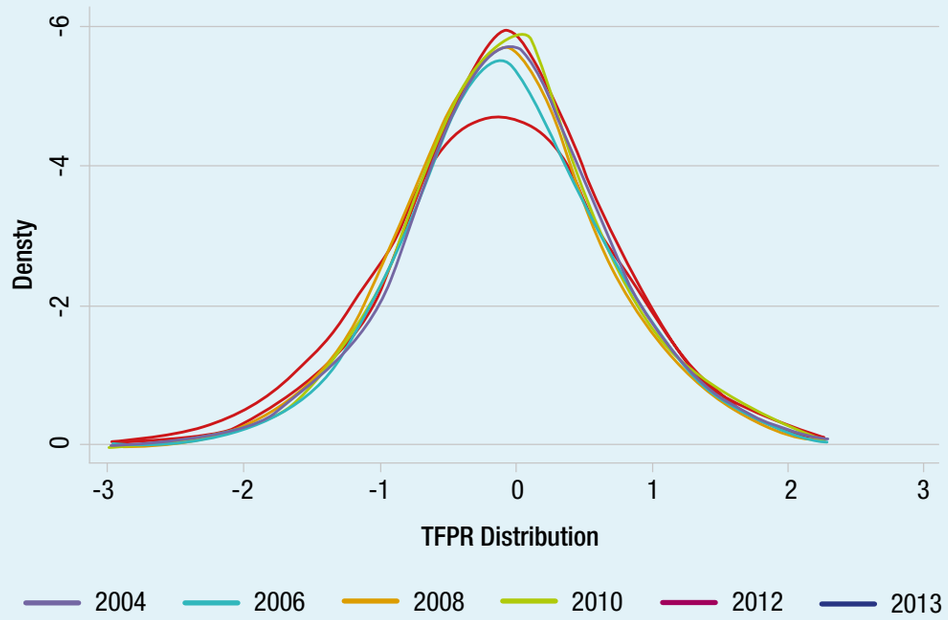
Entrepreneurship

Turkey's start-up rate is relatively high, but the average number of employees of a new enterprise is low, as are the survival and growth rates (Calvino, Criscuolo, and Menon 2015). Some of the barriers to growth for start-ups relate to constraints relevant to all 'Dynamic Firms', such as low technology absorption, weak corporate governance, and weak competition policy, while others stem from the lack of a coherent regulatory framework for entrepreneurship, rigidity in the labor market, and deficiencies in the education system.[30] However, the new industrial property law is a step in the right direction by the Government of Turkey to bring the Turkish legislation closer to the EU acquis communautaire. In addition, as specified in the recently adopted SME Strategy and Action Plan and the corresponding Entrepreneurship Strategy, Turkey would benefit from a stronger culture of entrepreneurship (with greater societal tolerance of risk, and more favorable perceptions of entrepreneurs) and from the inclusion of entrepreneurial learning in formal education curricula.

30 - See 2015–2018 SME Strategy and Action Plan issued by the Small and Medium Enterprise Development Organization in Turkey and the corresponding Entrepreneurship Strategy, www.mondaq.com/turkey/x/435888/Corporate+Commercial+Law/20152018+SME+Strategy+And+Action+Plan+Issued+By+Small+And+Medium+Enterprise+Development+Organization+In+Turkey and http://www.ey.com/Publication/vwLUAssets/EY-G20-country-report-2013-Turkey/$FILE/EY-G20-country-report-2013-Turkey.pdf.

FIGURE 2.10

Dispersion of Revenue TFPR, 2004–13
(density function)



Source: Nguyen, Yilmaz, and Taskin (2016).

Corporate Governance

A recent survey shows that management quality across a broad cross-section of countries is closely correlated with income. Management quality in Turkey is in line with its per capita income; however, it therefore also falls well short of that observed in high-income countries.[31] In many cases, Turkey's firms are relatively young and managed by the founder's family, who do not conduct succession planning and usually suffer from the 'key man' risk. This hinders their growth and innovation potential and is a disincentive to potential investors. Corporate governance, in particular weak

31 - World Bank (forthcoming), Creating Good Jobs Report.

oversight and accounting standards, and lack of strategy and risk management constitute an important obstacle to accessing financing.

D. Providing Finance

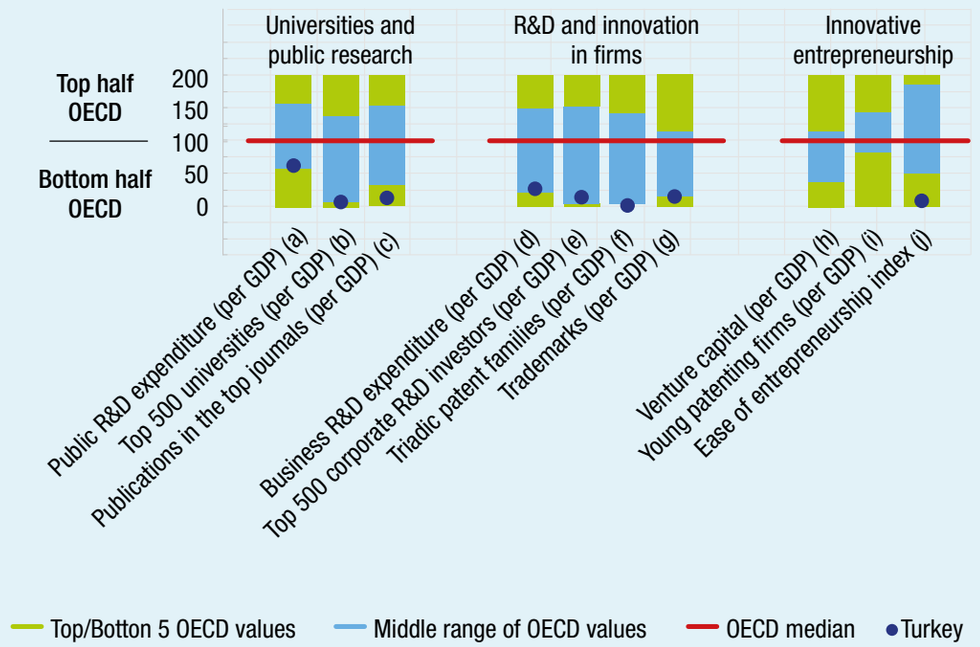
Technology upgrading and 'moving up the value chain' require investment, which in turn is enabled by a well-functioning financial system. The success of the broad economic reforms following the 2000–01 crisis owed much to banking system reforms. Most importantly, governance weaknesses were addressed by holding bank owners accountable and giving regulators full independence. Macroeconomic, financial, and fiscal policies were closely coordinated. This rectified some of the shortcomings of financial sector liberalization in the late 1980s. The crisis led to more cautious policy making concerning the financial sector, and Turkey's non-bank financial sector and its capital markets remain far less developed than those of many peers. However, the banking sector proved resilient to the effects of the global financial crisis, when Turkey was the only OECD country without public support to the banking sector.

Turkey's financial sector has great potential for further deepening given the size of the economy. Total financial system assets amount to 180 percent of GDP, with the emerging market economies averaging about 195 percent, and newly industrialized Asian economies 620 percent. Banks represent 90 percent of the financial sector and about 120 percent of GDP. The banking system remains well capitalized (Capital Asset Ratio of 16 percent) and profitable (Return on Assets and Return on Equity of 1.2 percent and 11.3 percent, respectively), with an improved asset quality (non-performing loan ratio of 3.2 percent, after reaching 5 percent in 2009). However, it should be noted that capital adequacy, liquidity, and profitability are all decreasing since the global crisis. Despite significant progress to deepen the capital market, the diversity of corporate debt instruments is limited, banks dominate issuances, and bonds are almost exclusively floating rate securities with an average maturity of 265 days and overall less than 3 years to maturity. With regard to market capitalization, Turkey's equity markets are smaller than its peers. Turkey's average capitalization of just 36 percent in 2009–12 lagged significantly

behind that of Brazil, Russia, India, China, and South Africa (BRICS) (at 65 percent) and other comparator countries (at 50 percent). Moreover, 39 percent of market capitalization comes from the financial sector. Factoring and leasing have grown significantly but can be further developed, while microfinance is almost nonexistent and lacks a dedicated legal framework.

FIGURE 2.11

Science and Innovation Indicators, 2014



Source: OECD (2015).

Note: Normalized index of performance relative to the median values in the OECD area (index median = 100).

The banking sector has limited access to long-term finance, a critical obstacle to private sector growth. About 87 percent of the sector's deposits had maturity below three months, while 77 percent of the lending was concentrated above three months. However, the banking system is funded mostly by stable customer deposits, backing 53 percent of total assets. Characteristically, only 4 percent of deposits had maturity of over one year, dropping to only 1.3 percent for Turkish lira deposits. The result is a negative liquidity gap (that is, more liquid liabilities than assets, also known as the liquidity mismatch risk) that peaks in the one- to five-year maturity. Nevertheless, the banking sector is aligned with Basel-III liquidity coverage ratio standards and banks have exceedingly met those standards. With the system's loan to deposit ratio increasing to 123 percent,[32] banks have drawn on balance sheet liquidity and wholesale funding from abroad (with foreign liabilities to total assets standing at 22 percent). However, maturity of the sector's foreign liabilities barely breaches four years. Longer-term sources of foreign debt, through for instance securitizations and subordinated debt, remain limited and constitute less than 15 percent of the total. In addition, following authorization in 2010, banks have begun to issue domestic bank bonds, with tenor ranging between 6 and 18 months. Nevertheless, only 1.2 percent of total assets are funded by Turkish lira bonds, while the weighted average of the maturity remains under one year. These imbalances are reflected on the bank loan portfolio and the enterprises' liability structure. About 50 percent of bank loans have less than one year remaining maturity, 36 percent between one and five years, and only 14 percent above five years. Consolidated sectoral balance sheet data for manufacturing enterprises offer a similar picture—the share of short-term external liabilities below one year makes up almost 70 percent of the total for small enterprises, dropping to just 63 percent for large enterprises. Overall, the banking sector is increasingly experiencing performance headwinds due to (a) structural mismatches, (b) decreasing capital and profitability ratios, (c) increasing reliance on foreign borrowing, and (d) growing uncertainty and tighter liquidity conditions in global markets.

32 - This falls to 113 percent when development and investment banks are excluded, which are not holding deposits. Further, taking into account banks' bonds reduces the effective ratio to 105 percent.

Development of capital markets in Turkey is a critical endeavor to ensure stable sources of long-term financing and secure sustainable growth. High dependency on external (and volatile) financing, a bank centric model, and strong demand for investments in areas such as infrastructure are just some of the reasons underpinning the rationale for deepening Turkey's capital markets. Access to credit for small and medium enterprises (SMEs) in particular is quickly curtailed in times of tightening liquidity with limited possibilities to diversify into other funding sources. Developing deeper and longer-term bond markets—notably local currency bonds—as well as equity markets would help diversify and provide more stable financing for productive real sector activity, and reduce any excessive dependency on banking intermediation and transformation risks. Significant challenges remain to develop the capital markets further in Turkey. Some of these challenges include low levels of savings, investors' preferences for short-term investments, the relatively small size of the institutional investors and their short-term maturity profile, limited diversity of corporate debt instruments, low cost-effectiveness of funding through domestic capital markets compared with financing through banks or the international capital markets, and low liquidity in the secondary markets of the corporate bonds.

SMEs and especially young, fast-growing firms and exporters would greatly benefit from expanding access to finance and financial services. SMEs receive only 27 percent of the total bank loans in spite of their much larger share in economic activity. Lack of cash-flow-based financing, credit history, and high collateral requirements acutely constrain their access to funding. Enterprise surveys show that access to finance is still one of the most important constraints for business growth, even though the Government of Turkey provides continuous financial support to the SMEs through KOSGEB's SME and entrepreneurship financial support programs. Improved access to finance for exporters would increase export performance of SMEs and upgrade already exporting firms along the global value chains which are critically important to address a large current account deficit.

Improving financial inclusion would help progress to the twin goals. Considerable evidence indicates that the poor benefit from basic payments, savings, and insurance services. Account penetration for individuals

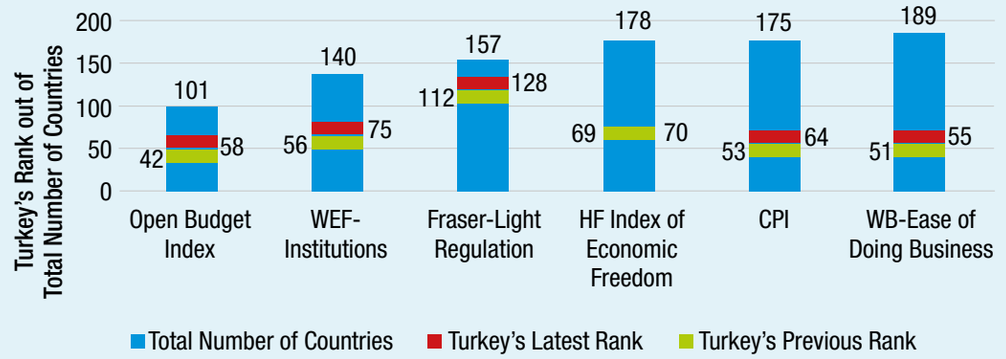
stands at 57 percent in Turkey, which is higher than the average for ECA countries (50 percent) but lower than the BRICS (68 percent). Account penetration stagnated during 2011–14 while it increased in peers. There are distinct gaps in financial inclusion with regard to (a) gender; (b) low saving behavior, especially through using the formal financial system; and (c) relatively low financial capability. Men are significantly more likely than women to report having a formal account: 69 percent of men are banked compared with 44 percent of women, which is one of the largest gaps globally. Overall, 9 percent of adults save formally, though the prevalence rate drops to 5 percent among women and among those in the bottom 40 percent of the income distribution. Levels of financial knowledge are also a challenge in other countries, but Turkey falls at the lower end of the distribution.

E. Setting Rules and Enforcing Them

Improvements in the policy and institutional environment supported productivity growth in the 2000s. The impact of the 2001 crisis catalyzed a decisive shift toward rule-based economic governance. The process of EU accession also played a significant role in the adoption of these mechanisms, particularly in the period between the establishment of the EU-Turkey CU in late 1995 and the opening of accession negotiations in 2005. However, reform momentum faltered when the enthusiasm about accession faded. After the global crisis, crisis management took center stage, and then complacency set in when the initial rebound from the crisis seemed robust. Although the negotiations with the EU have slowed down since the early 2010s, two new chapters were opened in 2015-2016, and preparatory works are underway to open five additional chapters.

FIGURE 2.12

Turkey's Rank in Indicators of Institutional Quality



Source: World Bank, WEF, Fraser Institute, Heritage Foundation, Transparency International, International Budget Project.

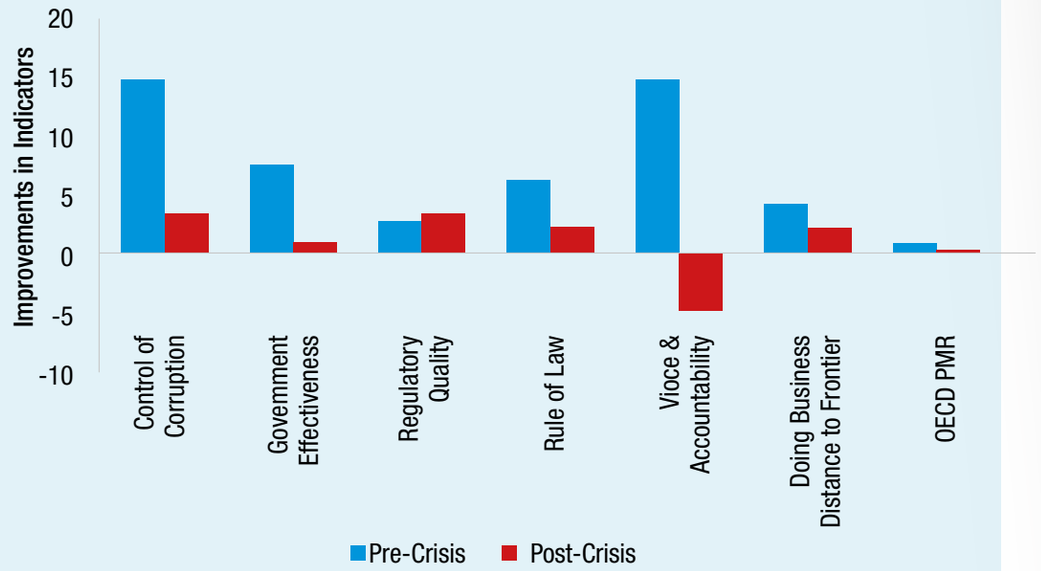
Note: Bars show ranks, that is, moving up on the bars corresponds to moving down in the international rankings.

Institutional Quality

The quality of Turkey's economic institutions falls short of countries that have successfully transitioned to high income, and the gap is widening. Turkey does not make it to the top 40 on any global ranking of the quality of economic institutions, and the distance to the top has been widening (Figure 2.12). Comparing data available at the end of 2013 and the beginning of 2016 shows that Turkey is falling further behind in major indicators of institutional quality. While these indicators all show Turkey's position compared with others, the negative development is also visible in the levels of business climate indicators (Figure 2.13). Indicators for voice and accountability actually started backsliding.

FIGURE 2.13

Improvements in Doing Business Indicators, 2001–07 and 2008–14



Source: World Bank 2014a, based on Worldwide Governance Indicators (WGI), Doing Business, OECD.

Note: Pre-crisis refers to pre-2008, post-crisis refers to 2008–12 for WGI and Doing Business, and 2008–13 for Product Market Regulation (PMR).

Some legislative initiatives have contributed to a worsening of institutional quality in recent years. The creation of independent regulatory agencies (IRAs) with considerable operational and financial independence supported growth in the period before the global financial crises (Zenginobuz 2008). However, in mid-2011 the Government made fundamental changes in their independence and operations. Decree no. 643 issued in June 2011 stated: "the IRAs may be directly attached to the respective ministries, based on the order of the Prime Minister and the President's approval."[33] Then, in August 2011 followed Decree no. 649, which stipulated that "the [respective] minister has the authority over all transactions and activities of the related,

33 - Translation from Ozel 2012.

attached and affiliated agencies." Further, by Decree no. 666, compensations of staff and board members at IRAs were fixed to the levels of government officers. This reduces the IRAs' attractiveness for the highest-quality staff and might lead to an erosion of their technical capacity over time. Finally, financial independence could be reduced by a change in public finance legislation in 2005, which requires IRAs to transfer surplus funds from their own revenue collection to the central government on a quarterly basis.

An example for the difficulties emerging is with regard to the electricity transmission company and the energy regulator. Turkey's Electricity Transmission Company (TEIAŞ) is facing challenges maintaining the stability of the transmission grid. Grid operation is becoming more complex with high energy demand growth that is increasingly met by intermittent renewable energy resources operated by the private sector (the Government aims at a rapid buildup in renewables). A robust load dispatch, system planning, and investments in infrastructure are critical to maintaining the integrity of the grid. There is room for improvement regarding TEIAS' capacity in areas such as access to finance, recruiting and retaining staff, procurement, and decision-making. Another example is the Energy Market Regulatory Authority (EMRA). It was established in 2001 as an independent, administratively and financially autonomous institution. However, its auditing responsibility of electricity distribution companies has been transferred to Ministry of Energy and Natural Resources (MENR) with the 2013 Electricity Market Law.

Competition

Although Turkey has made significant progress in enforcing competition law effectively, it faces challenges in achieving a comprehensive and coherent policy framework to promote product market competition. Regulatory restrictions to competition are more prevalent in Turkey than in other OECD and EU economies. PMR affecting competition is among the most restrictive in Turkey compared with OECD countries. In fact, Turkey's score on the PMR index developed by the OECD was 2.2 on a scale of 0 to 6, compared with 0.9 for the top

five performers and 1.3 on average in the EU. The main reason for Turkey's relatively poor standing in the PMR index is a high level of state control of economic activity. State involvement in business operations, as measured by the use of price controls and coercive regulations, and public ownership are higher in Turkey relative to EU counterparts. Price controls almost doubled between 2003 and 2008 (World Bank 2013c).

There is significant scope to achieve efficiency gains from pro-competitive sector policies and more effective economy-wide competition policy enforcement. Many professional services have high barriers to entry in the form of administrative procedures and exclusivity of rights that likely make their services costly and not as efficient as they could be. Accounting, legal, architecture, and engineering professionals are subject to government and self-regulations on fees. Turkey is the only country in the OECD that imposes minimum prices on all accounting and legal services. Turkey is one of three OECD countries to have binding minimum prices for some services provided by engineers and architects.

While the application of antitrust policies improved in recent years, there remain gaps to EU standards in Turkey's competition policy framework and the Turkish Competition Authority. These advances were reported in the OECD Turkey 2010 Progress Report and the 2015 European Commission Report.[34] The Turkish Competition Authority (TCA) has also received positive feedback regarding its satisfactory level of administrative and operational independence, strong emphasis on staff training, and a clear track record in the implementation of competition rules. In line with the trend toward more in-depth economic analysis, the Authority has a stand-alone Economics Department. In addition, important competition regulations and guidelines on leniency applications and fines for collusive behavior have been passed. Secondary regulations regarding implementation of State Aid Law, however, needs to be put in effect to prevent and eliminate competition distortions and ensure alignment with the acquis.

34 - https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/pdf/key_documents/2015/20151110_report_turkey.pdf

While the Turkish Competition Authority (TCA) has concentrated its efforts on improving antitrust enforcement and merger reviews, it remains severely constrained when it comes to advocacy in relation to sector regulators and other government bodies. Competition advocacy—defined as 'the ability to promote a competitive environment by means of non-enforcement mechanisms, mainly through its relationships with other governmental entities and by increasing public awareness of the benefits of competition'—plays a central role for the effective enforcement of competition policy. However, opinions issued by the TCA on anticompetitive sector-level regulation and legislation are neither mandatory nor binding.[35] There is a clear need to enhance the capacity of the TCA to interact with sector regulators and other government bodies. Lack of advocacy powers constrains the effectiveness, and ultimately the impact, of policy advocacy to open markets to competition.

Corruption

Transparency International's Corruption Perceptions Index 2014 highlights an increase in perception of corruption, lowering its ranking from 53 in 2013 to 64 in 2014. Transparency International's Corruption Public Opinion Survey (2015) found that the decision of the Plenary of the Parliament not to prosecute corruption allegations led to the impression of impunity. Survey respondents suggested that filing complaints about corruption would have no effect (Transparency International 2015).

Judicial Services

The track record of service delivery by the Turkish courts in ordinary, non-politically connoted cases has improved over time, but remains mixed. The European Commission documents progress toward implementing European standards in the judiciary during 2007–13, but highlights that there has been no progress since 2014 (European Commission 2015, 14). While the Ministry of Justice has not remained inactive and has recently started a project to strengthen legal aid, challenges remain with respect

35 - They are binding in privatization cases.

to some aspects of efficiency of service delivery, quality of services delivered, as well as access to these services.

Efficiency of service delivery by courts has improved, but performance is uneven and significant pockets of inefficiency remain. Efficiency as measured in court clearance rates (ratio of resolved cases over incoming cases) has seen some positive developments, as highlighted by the European Commission for the Efficiency of Justice (CEPEJ), which considered clearance rates and disposition times for main non-criminal case categories (civil and commercial) as satisfactory based on 2012 data (CEPEJ 2014, 200). According to the 2013 Activity Report of the High Council of Judges and Prosecutors, the clearance rates are above 95 percent in general and in some courts reach over 110 percent.[36] The clearance rate in insolvency cases in first instance courts in Turkey is notably high, reaching 127 percent in 2012.[37] It is considerably lower in consumer protection and labor courts. However, the level of backlog remains high and delays remain challenging (European Commission 2015, 16). Average length of proceedings in enforcement and bankruptcy offices was 787 days in 2014 and 732 days in 2015.[38] People have to wait for more than two years for the enforcement of decisions.

The quality of services delivered by courts needs improvement. The efficiency of the legal framework in settling disputes and challenging regulations as assessed by the Global Competitiveness Report 2015–2016 is declining. While overall "the quality of judicial decisions has improved in recent years," weak reasoning at times limited to repeating the legal terms or the relevant articles of the laws remains a challenge (European Commission 2014, 46; European Commission 2015, 15). Consistency of adjudication remains weak and undermines legal certainty. Also, the courts reportedly fail to comply with procedural rules and stick to previous practices despite changes in legislation. The appeal process does not address these challenges effectively as it is affected

36 - Hâkimler ve Savcılar Yüksek Kurulu 2013 Faaliyet Raporu, Ankara: HSYK, pp. 70,72,74, 84-86. It should be underlined that, according to CEPEJ 2014 Report on European judicial systems, Turkey is amongst the states with higher clearance rates.

37 - CEPEJ 2014, 249. Comparable data for subsequent years are not available to confirm the continuation of this trend.

38 - Judicial Statistics, 2014, http://www.adlisicil.adalet.gov.tr/istatistik_2014/ist_tab.htm.

by the same phenomenon. The 2014 EU Progress Report finds that "public awareness of legal aid in rural areas and among disadvantaged groups remains limited. Low literacy rates aggravated the problem. This—combined with a low level of gender equality awareness among law enforcement officials, members of the judiciary, and public officials—increased the obstacles that women faced in accessing justice and legal services" (European Commission 2014, 47).

3

How can growth be sustainable?

Irrespective of the difficulties to describe an amorphous mass of cities, utilities, infrastructure, land, and natural riches, these assets are as important as labor and capital in the production process and in determining well-being. This chapter discusses the availability of and constraints imposed by resources and public assets. We start with a look at Turkey's urbanization experience and discuss infrastructure and connectivity issues. We then present opportunities for greening Turkey's growth, challenges in the sustainability of water use, and issues in energy supply.

A. Increasing Urbanization

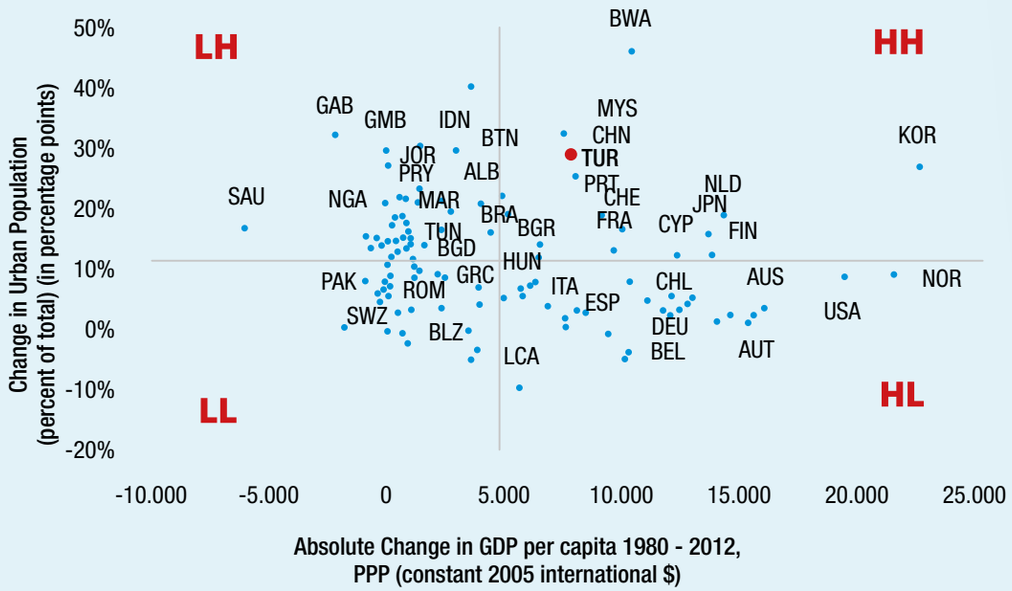
Fast urbanization has led to an impressive rise in Turkey's city population, without some of the pains observed in other countries. Informality in housing is well below what would be expected for a country that went through such a rapid urbanization and population growth. Today, new firms are increasingly moving toward dynamic secondary cities, capturing economic spillovers from Turkey's large primary cities, while taking advantage of lower land and labor costs. Turkey's leading cities, meanwhile, are diversifying and innovating to remain competitive.

Urbanization and economic growth should move in tandem, and Turkey is a good example. Urbanization and per capita incomes progressed above average (the HH quadrant in Figure 3.1). In contrast, some countries have

rapidly urbanized, but have not been able to leverage the full benefits of urbanization to achieve high per capita growth, including several African countries (the LH quadrant). Countries with high GDP and low urbanization are typically advanced countries in which urban growth took place largely before the 1980s. Quadrant LL reflects countries in the incipient stages of urbanization (or those that are de-urbanizing) that have yet to take full advantage of agglomeration economies as a contributor to national economic growth.

FIGURE 3.1

Turkey's Urbanization in Comparison, 1980–2012



Source: WDI, World Bank staff calculations.

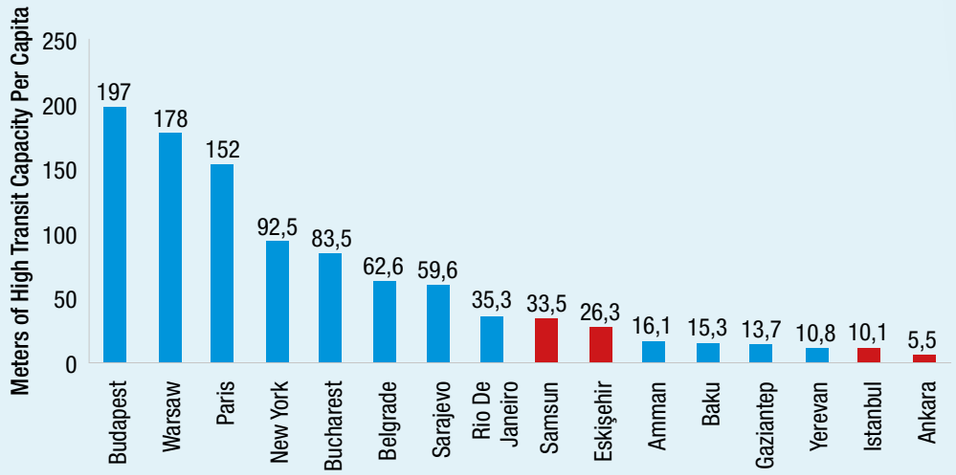
While successfully accommodating migrants over the last half century, Turkish cities face long-term sustainability challenges. These include the challenge to provide connectivity and the benefits of agglomeration, which are threatened by environmental degradation and congestion. They need to improve urban transport planning and systems, effective means of social engagement to broaden the benefits of urbanization to all city residents, and the spatial planning measures that will safeguard against sprawl and inefficient, uncontrolled development. Taken together, these key challenges represent Turkey's second-generation agenda for sustainable urban development (World Bank 2015a). This is all the more true for the 14 newly created metropolitan areas.

Connecting people with jobs and markets requires integrated transport planning. Cities need to move away from the reliance on private cars and small buses to more efficient public transit systems that reduce congestion and air pollution. During 2001–10, car ownership per capita grew much faster than per capita GDP in most metropolitan areas, although it has reached a saturation point in the largest metropolitan areas Istanbul and Ankara. Fast-growing cities will need to take steps to avoid congestion costs and other negative externalities. This reality is underscored by the relatively low capacity of Turkey's mass transit systems (Figure 3.2). Effective urban transport systems also need to factor in how low-income communities in remote parts of the city will get to work—and how women, who are more reliant on public transit, can have safe, clean, and affordable transit options.

In fact, Turkey's current transport system is unsustainable. Improvements in Turkey's logistics performance were largely based on trucking operations along the country's well-developed and mature highway system, which connects most regions with major industrial hubs. However, the transport system is constrained by a lack of intermodal services, particularly along the rail and maritime interfaces. In addition, congestion is growing in suburban roads and accesses to seaports have become major bottlenecks. The development of intermodal services and infrastructure in Turkey but also with neighboring countries could reduce transportation costs and thereby increase Turkey's competitiveness.

FIGURE 3.2

Turkey's Public Transport Capacity in Comparison, 2009



Source: Tool for Rapid Assessment of City Energy (TRACE), from World Bank 2015a.

B. Greening Turkey's Growth

Turkey's economy is characterized by a relatively low, albeit rapidly increasing, environmental footprint. Turkey's rapid economic growth has not come at the expense of a rapid depletion of its natural capital stock. While sector-specific challenges deserve to be highlighted, on the whole Turkey compares favorably with other industrialized and emerging market economies. At the same time, emissions increased much faster than in other OECD countries in recent decades. The challenge is to reduce the link between economic growth and impacts on the environment, including from pollution, CO2 emissions, water use, wastewater disposal, or degradation of fertile land. This section highlights the challenges.

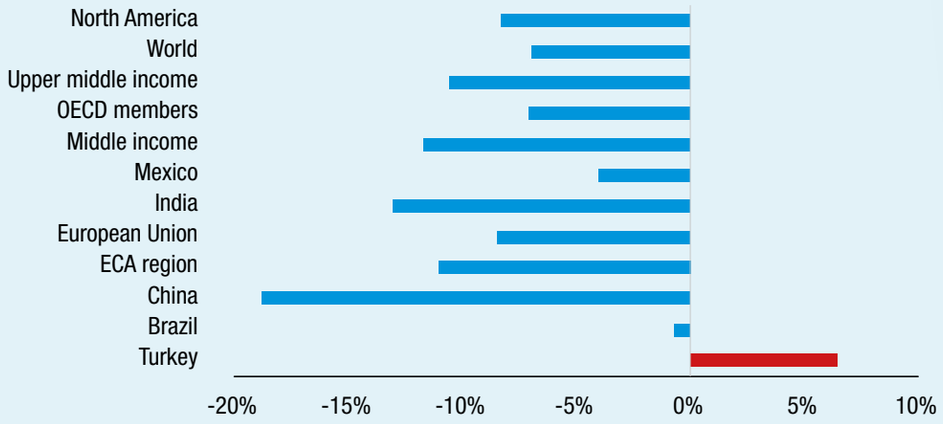
Environmental Footprint

Economic growth remains closely related to rising energy use, unlike in advanced OECD countries, but there is progress in some elements of green growth. In fact, Turkey's energy intensity has actually risen by 6.5 percent from 2005 to 2011, albeit from a relatively low level, while EU countries have managed to decrease it by 8.4 percent over the same period (Figure 3.3). Energy use in the public and commercial sectors increased fivefold during 2000–12. Over the next decade, energy use per capita could increase by 33 percent to reach current EU levels.

Climate change policies could force significant shifts in energy consumption. Turkey ratified the Kyoto Protocol in 2009, signed the Paris Agreement in 2015, developed a National Climate Change Strategy and national action plan, made considerable efforts in harmonizing its environmental laws with those of the EU and has begun implementing them in several areas, including waste and water management, and environmental impact assessments (EIAs). The Government plans to further exploit indigenous energy sources including renewable energy resources to improve security of supply, diversify resource mix, and reduce energy imports as well as greenhouse gas emissions. Turkey is only utilizing 17.5 percent of its identified wind potential, and government strategy ambitiously aims for utmost utilization with targets of 10,000 MW and 20,000 MW of installed wind capacity by 2019 and 2023, respectively. The Government also targets 3,000 MW of installed solar capacity in 2019, which is a big jump from its current level of 250 MW. Geothermal energy provides additional opportunities for greening the energy mix.

FIGURE 3.3

Change in Energy Intensity, 2005–11
(percent change)



Source: World Bank staff calculations.

In the transport sector, international experience shows important differences between regions, which points to the need to make far-reaching decisions in Turkey. North America relies heavily on private vehicles, while cities in northern Europe have successfully built public transport systems and discouraged car use and car ownership (Figure 3.4); following these trends, the country's motorization rate could reach between 350 and 700 vehicles per 1,000 persons by 2022, which translates into an annual growth rate of between 7 percent and 13 percent. Road sector energy consumption would reach between 460 kg and 915 kg petroleum equivalent per capita. In other words, alternative pathways mean energy consumption would increase between 2.5 and 5 times above the 2009 level. A city's built urban form can have important impacts on environmental sustainability with a critical lock-in effect. This underlines the importance of city planning to ensure environmental sustainability, and a good railway network to move goods around.

FIGURE 3.4

Relationship between GDP per Capita and Motorization Rate, 2003–09 (motor vehicles per 1,000 people)

Source: World Bank Data (data.worldbank.org).

Water

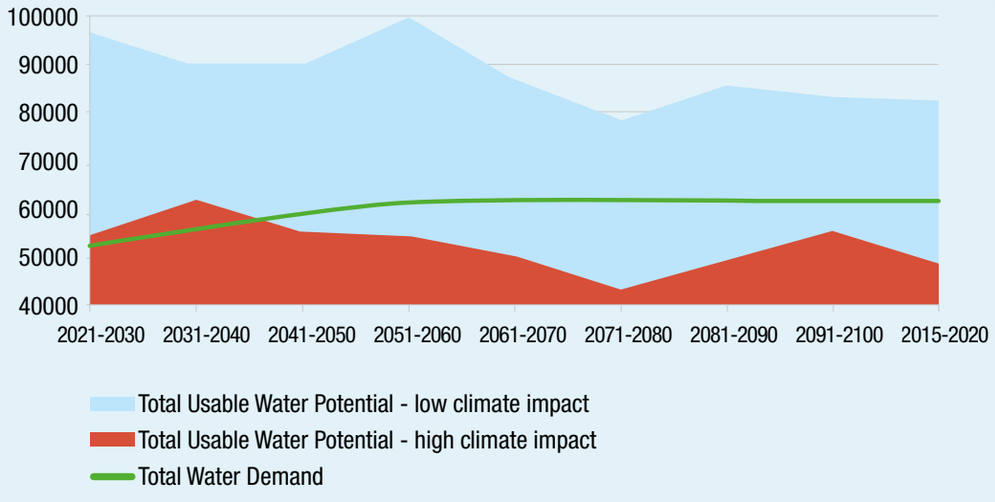
While water availability is generally sufficient now, projections for growth in water use may surpass forecasted availability as early as in the 2030s. The overall demand for water doubled since the 1980s to reach 52 billion m3 in 2015, driven by a sharp increase in irrigation and domestic demand. According to 2016 estimates by the Ministry of Forestry and Water Affairs,[39] water demand will exceed 60 billion m3 per year by the 2050s. In the meantime, climate change models forecast a sharp decrease in water availability. In the optimistic scenario, exploitable water resources would decrease from the estimated 112 billion m3 to about 86 billion m3 by the 2050s. However, in a worst-case scenario

39 - Assessment of Climate Change Impact on Water Resources, General Directorate of Water Management, Ministry of Forestry and Water Affairs, November 2016.

of climate change impacts, water demand may exceed Turkey's exploitable water level as early as the 2030s (Figure 3.5). Irrigated agriculture, which consumes 73 percent of the country's overall exploitable water, would be the hardest hit, which would in turn affect the country's economy. In fact, because of its large semiarid and subarid regions, irrigation triples agricultural productivity compared with rain-fed areas. Turkey's concrete steps to promote performance improvement in water supply and to encourage treated wastewater reuse in irrigation in or around urban centers is expected to offset demand by 1 billion m3 to 2 billion m3 yearly. Nevertheless, a profound change is needed to increase irrigation efficiency.

FIGURE 3.5

Water Availability and Demand Projections Using Two Climate Scenarios (in million cubic meters per year)



Source: Hydrological Modelling and Assessment, General Directorate of Water Management, Ministry of Forestry and Water Affairs.

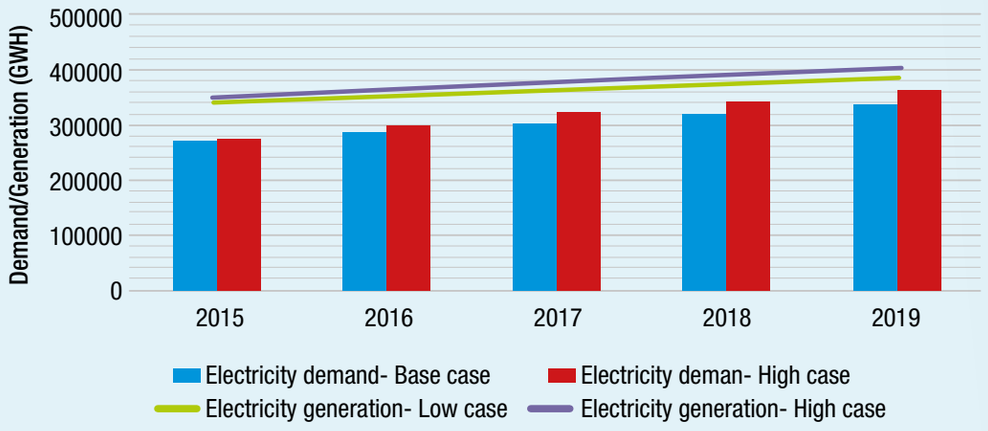
Energy

Timely reforms ensured adequacy of supply by helping attract private investment in new electricity generation capacity. Over the past 40 years, electricity demand has grown nearly twice as fast as the economy. From 2001, over 35,000 MW of market-based, private sector power generation capacity was commissioned; investors took over the entire power distribution system; and the regulatory framework for renewables and the development of the electricity market facilitated 16,000 MW capacity addition based on renewable energy sources. Success was based on ambitious electricity and gas market laws enacted in 2001 as part of the Government's comprehensive reforms after the 2000–01 financial crisis. However, while the initial response from prospective private investors was encouraging, it proved insufficient to ensure security of supply, because retail tariffs were kept below cost-recovery levels through 2007. The introduction of the Electricity Market Balancing and Settlement System in 2006, a new, cost-based energy pricing mechanism in 2008, and a series of tariff adjustments in 2008–09, as well as the start of the Energy Exchange (EPIAS) in 2015 brought the power sector to financial viability, supporting a large volume of market-based generation investment and enabling the Government to start the delayed distribution privatization program (World Bank 2015d).

While the electricity distribution companies were privatized to increase efficiency, some of them are now facing financial difficulties. These are due to high losses and non-payment of bills in their designated regions. The average loss-and-non-payment ratio is 14.6 percent; however, it is higher than 50 percent in some regions (for example, 73 percent in Dicle and 61 percent in Van Golu). The attempts by some of the privatized companies to enforce payment through disconnections places strains on the relations between the companies and their customers, and poses important social welfare questions.

FIGURE 3.6

Projected Electricity Demand and Generation, 2015–2019 (gigawatt hours)



Source: TEIAŞ, Generation Capacity Projections for 2015–2019, July 2015.

Implementation of a gas trading platform will increase commercial flexibility of the system, provided that necessary market transformation is achieved. Operationalization of gas market exchange under EPİAŞ, which is expected to run the spot markets (namely, day-ahead and intraday markets) is a critical component of the current market transformation. Natural gas consumption growth from 16 bcm (billion cubic meters) in 2001 to 48.7 bcm in 2014, indicating a compounded annual growth rate of almost 9 percent, makes Turkish natural gas market a very dynamic market. The national gas company (BOTAŞ) has recently contracted additional supply from Azerbaijan, to be delivered by 2018. Turkey also imports significant volumes of liquefied natural gas (LNG). Restructuring of BOTAŞ is among the critical components of the current market transformation. These measures are needed if Turkey is to achieve gas supply security, increase private sector participation in gas imports, and realize its ambition of becoming a regional energy hub (Dilli and Nyman 2015, p.14).

Elimination of the constraints to gas imports, and shortcomings in the infrastructure would have an impact on energy security. The market share of BOTAŞ is around 75 percent. While there is no legal restriction on the LNG imports, the 2001 Natural Gas Market Law limits private companies from importing gas from the countries with which BOTAŞ has import contracts, until these contracts expire.[40] However, new import contracts can be signed with these countries if there is a shortage of gas supply determined by EMRA, or for the purpose of exporting to a third country. Network and storage capacities are to be improved to facilitate the flow of gas and the trading of gas by its prospective competitors. The constraints in the gas market and infrastructure may prevent Turkey from achieving gas supply security at reasonable price. Although the current gas storage capacity of 2.8 bcm constitutes only 5 percent of annual gas consumption (20-30 percent for European countries), 2.7 bcm additional storage capacity will be in operation in the short term, and an additional 4 bcm is programmed already to add to the national capacity other than the private sector licences.[41] A number of significant new actions are planned, among which are FSRU investments, new UGS investments by public and private sector, expansion of existing LNG and UGS facilities, and acceleration of existing pipeline gas projects.

Land

Man-made capital can substitute only some of the natural capital with which Turkey is endowed. Production processes and quality of life depend on the availability of land, water, and clean air. Turkey's land mass provides room to Turkey's cities and enables highly productive agriculture, although regional differences are very large and productivity depends on irrigation in many areas. Rampant land use expansion by cities, however, needs to be put in check by using enhanced land management and planning practices. The forestry sector only contributes about 0.8 percent to overall GDP, but it ranks 17 among 64 sectors in terms of its overall contribution to employment.

40 - Once BOTAS' import contract with a given country expire, firms can sign new import contracts with the country.

41 - Phase I and Phase II of the Tuz Golu Underground Gas Storage Project will be completed by 2017 and 2020, each adding a 0.5 bcm of additional gas storage capacity, and a total withdrawal capacity of 40 million m3/day. There are also other projects that are underway to increase the gas storage capacity, such as expansion of Silivri gas storage facility.

C. Investing in Resilience

Turkey is highly exposed to disaster risk due to its tectonic, seismic, topographic, and climatic characteristics. Of these risks, seismic risk is by far the most critical and the country experiences on average one earthquake with a magnitude of 5–6 per year. The United Nations (UN) estimates that over 2 million people and 6 percent of Turkey's GDP are exposed to disasters in any given year. Turkey is ranked 9th globally with regard to human losses due to earthquakes. But other hazards such as flooding, avalanches, landslides, and fires also contribute to Turkey's overall risk profile.

The Government of Turkey has scaled up its institutional setup for better emergency response and strengthened disaster preparedness. The establishment of the Prime Ministry Disaster and Emergency Management Presidency (Afet ve Acil Durum Yönetimi Başkanlığı, AFAD) in 2009 aimed at resolving coordination challenges between agencies within the disaster mitigation and emergency response system. The agency successfully responded to the humanitarian crisis presented by the arrival of more than 2.7 million refugees from Syria over the last five years. Turkey has reportedly spent more than US$12 billion in providing food, shelter, and social services to the refugees. AFAD is operating camps for about 300,000 refugees in Turkey's Southeast. AFAD's Five Year (2013–2017) Strategic Plan published in 2012 signaled its intent to pursue a more integrated, institutionally coordinated, and far-reaching vision for tackling the complex challenges of disaster management and risk reduction aiming at a resilient Turkey. The strategy outlines a program addressing mitigation, preparedness, response, and recovery to and from multi-hazard risks. Turkey needs to develop administrative and budgetary mechanisms and procedures for implementing multiagency, multisector disaster risk management programs at the central and local levels taking NDPs and priorities into consideration. AFAD has the budgetary and administrative mechanisms in place to manage funds flow in dealing with crises. However, pre-disaster operations and investment programs are subject to the Government's regular screening and public investment approval procedures, which leaves almost no room for cross-sectoral programs.

The risk reduction program pioneered in the city of Istanbul is a flagship operation repeated by other regions in Turkey as well as internationally. The Istanbul Seismic Mitigation and Emergency Preparedness Project is an example of a successful and ongoing earthquake risk mitigation program in Turkey. The program started in 2006 and focuses on addressing the vulnerability of priority public buildings in Istanbul. The first steps of the project included developing standards for the selection of structures to be strengthened, definition of procedures for design, and third-party review of the structural designs and detailed procedures for quality assurance. This has been a collaborative effort led by the Istanbul Governorship with the support of AFAD under the Prime Ministry, the World Bank, and other international financial institutions.

Turkey has a world-class seismic risk insurance scheme for private properties established after the 1999 earthquakes, but there is still room for improvement. Turkish Catastrophe Insurance Pool has been recognized as a proactive and very successful example for other countries. However, the scheme does not extend beyond seismic risk to incorporate other types of disasters, such as floods and landslides. The insurance mechanism also does not provide incentives for disaster-resistant development and construction by differentiating tariffs. Moreover, a next phase could be to develop programs for insuring public assets to reduce the potential financial burden of disasters on the Government's budget. A comprehensive financial protection strategy still needs to be developed.

4

Prioritization

The previous chapters explained how progress toward the twin goals in Turkey over the next 10 years will depend first and foremost on creating good jobs. They developed projections for labor force growth, and human and physical capital accumulation, as well as outlining the requirements for TFP growth, and, finally, sustainability. A short summary follows here.

- Chapter 1 presented evidence of the importance of job creation and rising wages in Turkey's success in poverty reduction and shared prosperity over the 2000s. Population projections show that Turkey is still benefiting from a falling dependency ratio (non-working-age to working-age population) until about 2025, when rising old-age dependency will outweigh falling dependency of minors. The 'demographic window' is the time during which Turkey could become rich before getting old, but only if people of working age were economically active, and the economy created jobs for the new entrants into the labor force. Progress toward the twin goals will rest in a major way on creating good jobs in the next 10 years. On the labor market's supply side, human capital accumulation enhances productivity. The chapter provides a cautious, middle-of-the-road projection for GDP growth, wages, inflation, and so on based on assumptions of population and human capital growth, and extrapolation of recent trends on capital accumulation and TFP. This baseline shows a decline in poverty to 13 percent and 2 percent in 2025, from 21 percent and 4.5 percent in 2012, at US$5 and US$2.50 poverty lines, respectively. Removing the constraints identified in this SCD could speed up growth and progress to the twin goals significantly.

- On the labor market's demand side, Chapter 2 presented evidence of production shifts to more sophisticated technology, but also showed weaknesses in the high end of the market. 'Moving up the value chain' will require more innovation and technology diffusion, which in turn are hampered by weaknesses in the quality of institutions, and the financial sector. Simulations using basic growth accounting showed that growth could increase significantly with higher capital accumulation and TFP growth.

- Chapter 3 outlined critical areas in the sustainability of progress to the twin goals: energy, water, climate change, and resilience to disaster. In particular, it pointed out that energy and water could become binding constraints to growth within the 10-year time horizon of this SCD, which would lead to lower growth and progress to the twin goals than indicated in the baseline scenarios discussed in Chapters 1 and 2.

This chapter presents constraints and their relative importance in reaching the twin goals on the basis of a conceptual model developed for this SCD through a consultative process, and scoring of the constraints by country experts. Alleviating the key constraints outlined here could greatly improve prospects for poverty reduction and shared prosperity. The model (presented in the next section) shows the complementarity and linkages between many elements that make up a growing economy. The model was developed on the basis of broad consultations with experts inside the World Bank Group and in academia. The first round of consultations took place during March–April 2015 and consisted of the following steps:

(a) Focus group discussions with clusters of World Bank Group staff

(b) Written contributions of issues and constraints for Turkey's path to the twin goals from the IBRD country team and IFC

(c) An online survey of the IBRD-IFC country team for scoring issues and constraints for their importance; the team scored a list of 30 issues and constraints for importance in the areas of growth, inclusion, and sustainability

(d) A full-day IBRD-IFC country team workshop to discuss scoring, prioritization of the identified issues and constraints

(e) Guided, open-ended discussions with Turkey experts, mainly but not exclusively in Istanbul

This first round helped in identifying the broad range of areas to be covered in the development of the conceptual model. The second round of consultations took place in August–September 2015 and consisted of focused discussions of a concept note with selected experts, peer reviewers, and World Bank Group staff mainly from the Ankara office. The concept note was revised following this second round of consultations.

- A first full draft of the paper was discussed with groups of private sector stakeholders including domestic real sector corporates, financial institutions, and foreign institutional investors in February 2016 (in Istanbul); experts from think tanks; World Bank Group staff; and the Government of Turkey (mainly representatives of the Department of the Treasury and the Ministry of Development).

- Based on the initial scoring and the discussions of the draft report, the final scoring of the importance of constraints for growth, inclusion, and sustainability identified within our conceptual model of the road to good jobs was made.

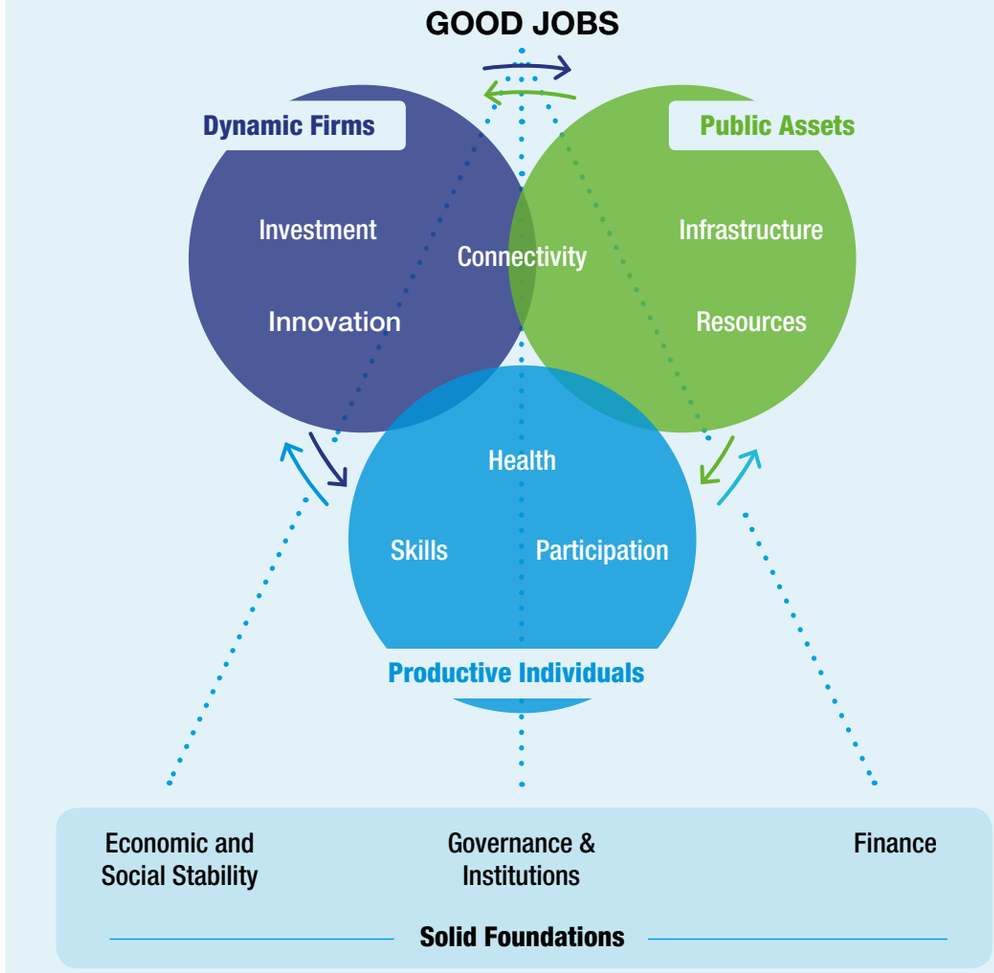
A. A Conceptual Model for Creating Good Jobs

The conceptual model organizes our knowledge for meeting Turkey's main challenge of mobilizing the demographic dividend through creating good jobs. It helps identify and prioritize constraints to poverty reduction and shared prosperity. It combines economic actors, economic geography, and public interventions. It posits that a Solid Foundation of macroeconomic and social stability, conducive institutions and good governance, and a functioning financial system are needed for economic development (Figure 4.1). Jobs are created by Dynamic Firms, performed by Productive Individuals, and both need tangible Public Assets (blue circles). Firms grow and create more jobs by innovating and investing. Public assets provide connectivity, infrastructure, and resources. Individuals become productive by participating, by being healthy, and by accumulating skills. Policy interventions influence this universe through four channels: (a) macroeconomic policies contribute to stability; (b) institutions make innovation and investment profitable and regulate finance and connectivity (roads, energy networks), through for example a patent law for the protection of an innovation, property rights to allow for the appropriation of returns on investment; (c) public investments improve connectivity, build infrastructure, and protect natural resources; and (d) public services improve health and education, which contribute to human capital, or child care to allow a broader participation of women in the labor force.

The following sections organize our accumulated knowledge on inclusion, growth, and sustainability, using the elements of the conceptual model. Under each section, we identify constraints to achieving the twin goals in their order of importance based on the scoring and consultation process outlined above. The conceptual model and the listing of constraints under four separate headings points to the complexity and complementarity of the development process.

FIGURE 4.1

Conceptualization of the Road to Good Jobs



Source: World Bank staff.

B. Solid Foundations

Constraint 1: Low quality of regulatory and accountability institutions

The main concern in the area of Solid Foundations is the quality of institutions. All the consultations clearly highlighted this as the key constraint affecting growth, inclusion, and sustainability. Institutions that regulate human capital accumulation need to work better to produce the skills needed in more sophisticated production; the rule of law needs to be strengthened to provide a stable environment for investors; competition needs to be supported to provide incentives for innovation and technology upgrading; and voice and accountability institutions need to be more inclusive.

Constraint 2: Geopolitical turmoil in the Middle East and its implications for the East and Southeast of Turkey

Progress to the twin goals has been hampered by the geopolitical tensions in the Middle East and its implications for the East and Southeast of Turkey. This is a major factor in the lack of convergence in these regions with the rest of the country. These regions are home to a large share of the poor in Turkey, who not only face lower incomes but also significant gaps in access to public services, finance, and infrastructure. A stable, safe environment will be crucial to expand services and attract investment and job creation on the labor demand side, and incentivize human capital accumulation, retention, and participation on the labor supply side. It will also improve the management of natural resources, while the electricity sector would benefit from being able to collect more revenue.

Constraint 3: Underdeveloped financial markets

Turkey has made substantial progress toward a deeper capital market, but there are non-trivial challenges to overcome. Progress is evident in several areas; for example, in an extended yield curve, the growth

of the corporate bond market, and expansion of institutional investors and in particular pension funds. In spite of these significant milestones, there are still bottlenecks for the development of long-term finance and deeper capital markets, including the low levels of savings, investors' preferences for short-term investments, the relatively small size of institutional investors, limited diversity of corporate debt instruments, low cost-effectiveness of funding through domestic capital markets compared with financing through banks or the international capital markets, and low liquidity in the secondary market for corporate bonds.

Broadening access to finance across the population could significantly expand to close gaps in formal saving and borrowing patterns, financial literacy, and women's access to financial services. A significant proportion of the population remains under-banked and more than 40 percent of the population is unbanked. Women make up a disproportionately large share of the 23 million unbanked Turkish adults. Appropriate financial services can help improve households' welfare and spur small enterprise activity. Improvements in financial literacy could increase saving.

Easier access to finance could greatly help small firms expand. SMEs face greater obstacles to financing than larger, more established firms. This reduces the economy's ability to grow with innovative firms. However, access to intermediate forms of finance such as fund of funds, angel investors, venture capital, and mezzanine financing have been improving. These are expected to help new, innovative entrepreneurs establish their firms and provide a basis for job creation and growth. Bank loans often cannot fulfil these functions because new firms lack bankable collateral.

Constraint 4: Macro-fiscal risks

The economy's Achilles heel remains its dependence on foreign savings. The decline in private saving provided room for more private consumption, which therefore became the driver of economic growth in the 2000s. Ironically, key explanatory factors for declining private saving include improved macroeconomic and political stability, but the risks increased when

current account deficit financing shifted to short-term portfolio flows, which have not been sufficient to finance the current account deficit in recent years.

Increased risk aversion in international capital markets can produce long-lasting setbacks to growth and progress to the twin goals. Deep economic and financial crises lead to loss of incomes and reduction in the availability of public services. Recent examples have shown that recovery can be protracted, especially when impaired assets weigh on banks, and physical and human capital becomes obsolete. Discouragement can lead to a significant decline in LFP. Austerity policies brought on by rising public debt levels lead to reduction in state capacity to regulate, which exacerbates impacts on well-being and reduces public goods.

Closely related to low domestic saving, fiscal risks have increased due to expenditure rigidities and dependence of revenues on strong consumption growth. Fiscal spending pressure will rise and require attention to safeguard hard-won fiscal space. Structural shifts have introduced rigidities into the composition of government expenditures as the debt service burden declined and social expenditures expanded. The growing budget rigidity limits the Government's ability to respond to future shocks.

Fiscal risks are also posed by sustainability of the health system. Health insurance now covers the great majority of the population, and access greatly increased. While still relatively young, the Turkish population will age faster than many of its OECD counterparts. This constraint is closely linked to Productive Individuals below.

C. Productive Individuals

Constraint 1: Low educational achievements

The modernization of Turkey's industry and services requires an enhanced skillset, which points to the importance of developing the educational system. The challenges of 'moving up the value chain' are best met by tertiary education graduates, but more needs to be done to ensure quality

of education. Moreover, tertiary education alone cannot build the cognitive and behavioral skills increasingly required in the workplace. Their foundations are formed early and are the platform upon which later skills are built. The most sensitive periods for building a skill vary across the three dimensions of skills,[42] and skill formation benefits from previous investments and is cumulative. That is why enhanced access to quality ECE for all children offers some of the highest expected returns to education.

Constraint 2: Low female labor force participation

Low female LFP constrains economic growth and as importantly, women's broader social and economic empowerment. Women still have lower levels of education, and lack of employment flexibility, lack of quality affordable child care and elderly care, and overall cultural norms are still a barrier for their inclusion. This is therefore closely linked to, but not overlapping with, Constraint 1: Low educational achievements.

Constraint 3: Wide regional differences and lack of convergence

Finally, **wide regional differences and lack of convergence** in poverty incidence slow down progress to the twin goals, and important parts of the population risk being left behind.

D. Dynamic Firms

Constraint 1: Low performance in technology absorption and innovation

While the transition away from low-tech production is under way, high-tech products provide only a small share of overall value added, and the share has been declining in recent years. Low performance in innovation is especially visible in R&D and entrepreneurship indicators. This constraint is closely linked with Constraint 1: Low educational achievement under Productive Individuals;

42 - The three dimensions of skills are socioemotional, cognitive, and job-relevant skills.

poor human capital reduces the scope for innovation. It is also linked to Constraint 1: Low quality of regulatory and accountability institutions, which do not provide the right incentives for innovation and entrepreneurship.

Constraint 2: Weak corporate governance

Corporate governance reduces firms' ability to access new markets, technology, and finance. In particular, concentration of decision making in one person, weak oversight, risk management, and accounting standards constitute an important obstacle to accessing financing, and to growth and innovation.

Constraint 3: Weak competition policy and its enforcement

Restrictive PMR, state control of activities, and weak competition reduce the incentives for innovation and productivity enhancements. There is significant scope to achieve efficiency gains from pro-competitive sector policies and more effective economy-wide competition policy enforcement. High barriers to entry affect in particular modern business services, which would become a source of growth as the economy upgrades from low-end manufacturing to pre- and post-production services. The TFP dispersion analysis has shown that the scope for productivity enhancements from the reallocation of production factors is large, and pointed to weak structural policies for leveling the playing field. This constraint is closely linked to Constraint 1: Low quality of regulatory and accountability institutions.

Constraint 4: Being stuck in small, mixed cropping agriculture

Exit from agriculture may be the best option for people engaged in small, mixed cropping operations. While many people have left small farms in the past, the lack of effective mechanisms for land consolidation meant that they often abandoned plots, which were then lost to agriculture. This has also left them without assets as they started a new life in the cities. More effective land markets would thus contribute to a continuing flow of labor from agriculture to industry and services, while providing important safety nets for

migrants. They would also benefit growth in agriculture by bringing fallow land into production, and allowing consolidation of too-small parcels and farms into more efficient sizes. This constraint is therefore closely linked to Constraint 4: Inefficient land management under Public Assets and Resources.

E. Public Assets and Resources

Constraint 1: Congested cities

Urbanization and the opportunities for scale economies it brought greatly contributed to growth in recent decades, but rising congestion costs in the biggest metropolitan areas jeopardize their sustainability. Financing and capital investment planning, consistent with territorial plans, is essential for sustaining urban growth. Connecting people and jobs efficiently at low environmental cost is essential for safeguarding competitiveness and sustainability. Central government transfers have been robust in view of local administration expenditure assignments, particularly in recent years. But Turkey's second-generation urban development agenda requires the financing of larger-scale investments in growing cities. For mass transit systems, wastewater treatment facilities, and sanitary landfills meeting higher environmental standards, Turkey's cities will need to improve the planning of capital investments and devote more concerted efforts to preparing bankable, larger-scale infrastructure projects that promote sustainability.

Constraint 2: Declining availability of water

Irrigation technology and area pricing lead to inefficient water use in agriculture. Irrigation systems are mostly gravity based, with the majority of irrigation water distributed through open canals rather than pipes. Canals lead to higher losses particularly when not maintained over time and are not amenable to allow volumetric water pricing, which means there are fewer incentives to adopt efficient surface irrigation methods. The adoption of greater irrigation efficiency is hampered by (a) land fragmentation; (b) distorted water pricing mechanisms based on land area rather than volume consumed; (c) inefficient planning of crop patterns and subsidy mechanisms with respect to water budget of basins; (d) managerial

weaknesses of Water User Associations; and (e) inability to expand the pressurized irrigation systems. Better irrigation could translate into better yields, and better yields could lead to improved marketability and higher incomes for the rural poor.

Constraint 3: Energy consumption closely linked with GDP growth

Improving the efficiency of energy consumption is critical for Turkey's competitiveness and sustainable economic growth. Recognizing the importance of energy efficiency (EE), Turkey adopted a broad policy framework and supporting legislation to encourage EE, and a number of pilot efforts including energy audits and financing mechanisms are ongoing. Turkey's National EE Action Plan for 2015–2023 period, which has been prepared in accordance with EU acquis, is under way. However, municipal service delivery is frequently energy inefficient and the industrial sector itself is two to three times more energy intensive than factories in the EU-15 countries. The potential for EE in Turkey is therefore significant. There is also considerable potential for greater resource efficiency and pollution abatement. Reaching EU performance standards would lead to output and employment cuts in pollution- and emission-intensive sectors.[43]

Constraint 4: Inefficient land management

Better public land management could open avenues for better city planning and financing of municipal infrastructure. Rules for conversion from rural land to urban settlement areas and property valuation and taxation are areas that could transform development of cities and their financing.

The current Government's reform program bears important similarities to the SCD prioritization. Box 4.1 summarizes the latest national development plan (2014–2018), and produces a comparison between the pillars of the plan and the priority areas identified by the SCD.

43 - One of the goals in the 10th NDP is to reduce energy consumption in public buildings by 10 percent by 2018. In support of this goal, the World Bank recently completed a report on 'Energy Efficiency Financing Options' for public buildings.

TABLE 4.1

List of Constraints and Scores

List of Constraints	Scores: Relevance to Growth	Relevance to Inclusion	Relevance to Sustainability	Sum of Scores
Solid Foundations				
Low quality of regulatory and accountability institutions	4	4	4	12
Geopolitical tensions affecting East and Southeast	4	4	3	11
Underdeveloped financial markets	4	4	2	10
Macro-fiscal risks	3	3	3	9
Productive Individuals				
Low educational achievements	4	4	2	10
Low female LFP	4	4	2	10
Wide regional differences and lack of convergence	3	4	3	10
Dynamic Firms				
Low performance in technology absorption and innovation	4	2	3	9
Weak corporate governance	4	2	3	9
Weak competition policy and its enforcement	4	2	3	9
Being stuck in small, mixed cropping agriculture	3	4	1	8
Public Assets and Resources				
Congested cities	4	3	3	10
Declining availability of water	3	3	4	10
Energy consumption closely linked with GDP growth	2	3	4	9
Inefficient land management	3	3	2	8

Source: World Bank staff and Turkey experts' survey.

Note: Scores are: 4 = critical, 3 = very important, 2 = important, 1 = relevant.

BOX 4.1

The Government of Turkey's Reform Agenda

The Government of Turkey's analysis of development challenges and priorities for addressing them overlaps to a large extent with our analysis in this SCD. The Government produces five-year plans that present its views on development priorities and policy measures. The latest is the 10th NDP (covering 2014–18) published in 2013. The NDP set ambitious targets for Turkey's development, among them to cross the threshold to high-income status (per capita income of US$12,800) by 2017, and diagnoses the key challenges that Turkey needs to address to reach them. It then proposes measures under four pillars. We discuss only the first three and link them to the priority areas identified in the SCD (Table B4.1.1). The fourth pillar is on International Cooperation and Development and is not discussed further in this box.

The NDP identifies 25 so-called Transformation Areas, and it published comprehensive action plans for each of these areas. Most of the 25 Transformation Programs can be grouped together under the pillars of the NDP, although some are cross-cutting in nature and best correspond to the Solid Foundations priority area in this SCD (Table B4.1.1). To operationalize plans further, the Government then published its reform plan for 2016 after the election in November 2015, which lays out specific measures and a timetable for implementation. We highlight a few key measures that correspond to some of the priorities identified in this SCD as follows.

- The first pillar 'Qualified Individuals, Strong Society' identifies the need to boost LFP and human capital, and make growth more inclusive, including regarding regional differences. The reform agenda under this pillar covers skill development and labor market reforms.
  - Under this pillar, improvements in education follow the 2012 reforms that made 12 years of schooling mandatory. The Government now targets enhancing quality of education, the relevance of the curriculum to the demands of the labor market, and enhanced vocational training.

- The second pillar 'Innovative Production, Sustainable High Growth' focuses on productivity growth through technology upgrading, innovation, financial sector development, and business climate improvement.
  - Under this pillar, the Government has taken measures to increase the level of R&D spending, making start-up financing available, and using public procurement to help domestic technology development.
- The third pillar 'Livable Spaces, Sustainable Environment' recognizes environmental impacts of development and proposes measures to increase efficiency of energy and water use, as well as urban development and urban regeneration.
  - Under this program, the Government is developing domestic renewable energy sources, and supports investments to reduce water losses in agriculture, and better land use in cities.

TABLE B4.1.1

Links between NDP, Transformation Areas, and SCD Priority Areas

NDP Pillar	Coverage and Transformation Program	SCD Priority Area
Qualified Individuals, Strong Society	Covers actions related to the need to boost participation and ensure inclusive growth through reforms of the labor market and improvements in skills. The action plans corresponding to this pillar are the following: • Healthcare Related Industries Structural Transformation Program • Health Tourism Improvement Program • Basic and Occupational Skills Development Program • Attracting Qualified Human Resources Program • Healthy Life and Mobility Program • Family and Dynamic Population Structure Conservation Program	Productive Individuals
Innovative Production, Sustainable High Growth	Addresses the need to sustain productivity growth and move to an innovation-based growth model. The action plans corresponding to this pillar are the following: • Program on Enhancing Productivity in Manufacturing • Import Dependency Reduction Program • Program for Increasing Domestic Savings and Avoiding Waste • Istanbul International Financial Center Program • Business and Investment Climate Improvement Program • Program on Improving Labor Market Effectiveness • Program for Commercialization in Priority Technology Areas • Program for Technology Development and Domestic Production through Public Procurement • Transformation Program from Transportation to Logistics	Dynamic Firms
Livable Spaces, Sustainable Environment	Covers important environmental and resource management challenges as well as better planning and more accountability for public services at the local level. The action plans corresponding to this pillar are the following: • Domestic Resource Based Energy Production Program • Energy Efficiency Improvement Program • Program for Enhancing Efficiency of Water Use in Agriculture • Competitiveness and Social Cohesion Enhancing Urban Regeneration Program	Public Assets and Resources
Cross-cutting areas	Covers the following action plans: • Rationalization of Public Expenditures Program • Public Revenue Quality Enhancement Program • Statistical Infrastructure Development Program • Program on Combating Informal Economy • Institutional Capacity Improvement Program at Local Level	Solid Foundations

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Annex 1

Data Gaps Diagnostic

1. The objective of this section is to identify key data gaps that constrain better diagnostics on the constraints for sustainable poverty reduction and shared prosperity, to contribute to an agenda of better measurement, monitoring and evaluation, and understanding of impact of public policy efforts in Turkey's path to high-income status.

2. The diagnostic on data gaps singles out areas where there is absence of data, as well as areas that suffer from lack of quality data in the broadest sense, taking into account:

- Coverage,
- Accessibility,
- Timeliness,
- Frequency, and
- Disaggregation and similar aspects.

3. Data gaps are identified in relation to the objective of the SCD, that is, the identification of constraints for sustainable poverty reduction and shared prosperity.

4. This section presents a priority list of data gaps, selected on the basis of their importance to improve the country diagnostics on bottlenecks for economic growth, inclusion, and sustainability.

TABLE A.1

Priority Data Gaps Identified, Implications and Recommendations

Priority Data Gaps Identified	Implications and Recommendations
Poverty measurement. Poverty lines (absolute 'dollar a day' lines) are measured in nominal terms, that is, their value is not kept constant in real terms.	Official poverty statistics use an absolute poverty line of US$4.3 per day that is converted to Turkish lira using current PPPs, and therefore miss the effect of inflation and lead to artificially low poverty rates. Poverty lines should be set up for a base year, converted to Turkish lira with the corresponding PPP factor, and updated over time using CPI to properly capture the effect of inflation.
Rural-urban disaggregation. Since 2014 it is not possible to observe living conditions and economic opportunities separately for urban and rural areas.	Urban and rural areas were redefined at the administrative level. For 2014, 2015, and 2016 there are no data on rural and urban living conditions and economic opportunities. Household survey design and sampling needs to be updated to be able to monitor rural-urban trends across different dimensions of well-being. If possible, the old definitions should still be included in public release datasets to allow for a longer time series.
Syrian refugees. Household surveys used to monitor poverty and living conditions of the country's population (HBS, SILC, LFS) do not capture issues of interest for poverty and shared prosperity such as Syrians under temporary protection (SuTPs). Presently government efforts for SuTPs' social and economic inclusion are not captured by official statistics. Other groups of interest may include internally displaced populations (IDPs), Roma.	Collecting data on SuTPs in HBS, SILC, and LFS would allow to track the impact of policies and programs on their access to services and opportunities, and assess any impact of SuTPs on host communities. Efforts can build on SuTPs' location information; for example, DGMM database, Muhtar reports, and work toward adapting survey design and sampling to capture a representative sample of SuTPs. The World Bank is providing technical and financial assistance to collect a first survey and work with DGMM, AFAD and TUIK toward that objective.

Priority Data Gaps Identified	Implications and Recommendations
Education quality and equity. There is lack of data on student achievement at the regional level. Both PISA and TIMSS are national representative samples that do not allow for exploring differences in achievement by regions.	PISA assesses cognitive (and problem-solving) skills in 15-year-old students, while TIMSS assesses students in 4th and 8th grades against an international curriculum. Both assessments complement each other and allow for a 360-degree view of the quality of the education sector. The PISA data (latest round: 2015) allow for an in-depth analysis of students' cognitive skills with cross sections as well as with time trends. The TIMSS data (latest round 2015) has a more comprehensive teacher questionnaire than PISA, and it allows to explore different aspects of the most critical factor for student learning (teachers).
Skills for the labor market and tracer studies. There is a lack of skills assessments (both technical and non-cognitive, socioemotional aspects) of working-age population, and tracer studies tracking graduates' experiences in the labor market by field of study. Analysis of labor force and household surveys for estimates on the average wage premia (by levels of education) needs update and disaggregation by occupation.	As Turkey heads toward high-income status, there is greater need for innovation and an upgraded mix of skills, with a different technical content, and more complex socioemotional aptitudes, to transition toward less-mechanical and more-creative occupations. Investing in collecting surveys (or expanding the current LFS) to periodically measure technical and non-cognitive, socioemotional skills, and trace job market experiences of higher education graduates would be important to understand progress in this future transition. In addition, the latest wage premia estimates date back to 2010 (presented in the World Bank 'Back to Work' report). It would be useful to update those estimates not only by education levels, but also by different occupations.
Regional economic output. Turkey does a good job in tracking prices and inflation across different regions (NUTS2). However, regional GDPs (gross domestic product) or gross value added (GVA) is not measured since 2011.	Given the importance of regional disparities, it would be crucial to collect and make available data on each region's value of production, to better track regional gains and policy impact on regional economic development.
Agriculture. The last agricultural census was conducted in 2001. The 2014 efforts for a new agricultural census suffered from serious shortcomings in data collection methodology that led to the decision of not releasing the data. Therefore, there is a major data gap for agricultural research.	In the SCD analysis, to overcome the constraint imposed by the lack of agricultural census data, the Ministry of Agriculture's publicly disclosed data have been utilized. However, these data are quite limited. Improved diagnostics could be produced if there was access to the ministry's broad database, including Farmer Registry System and Livestock Registry System. While a new census is prepared and collected, the ministry could make available a more detailed and disaggregated public release, perhaps through formal data-sharing protocols.
Energy and environment. Data on economic value of natural resources by type and by region are not available in Turkey.	Diagnostics and policy decisions related to natural resource utilization and protection could be strengthened if data were collected on value of natural resources disaggregated by type and by region.


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