

# Rise of the Anatolian Tigers

Turkey Urbanization Review

Social, Urban, Rural, Resilience  
Global Practice Group  
The World Bank

April 2015



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**tepav**  
türkiye ekonomi politikaları araştırma vakfı



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<b>ABPRS</b>	Address-based Population Registration System	<b>LOWESS</b>	Locally Weighted Scatterplot Smoothing
<b>BEEPS</b>	Business Environment and Enterprise Performance Survey	<b>LPI</b>	Logistics Performance Index
<b>BEDES</b>	Project to Support the Infrastructure of Municipalities	<b>LRT</b>	Light Rail Transit
<b>BRICS</b>	Brazil, Russia, India, China and South Africa	<b>LUZ</b>	Large Urban Zone
<b>BRT</b>	Bus Rapid Transit	<b>MENA</b>	Middle East and North Africa
<b>CAPRA</b>	Probabilistic Risk Assessment Initiative	<b>MOD</b>	Ministry of Development
<b>CIT</b>	Corporate Income Tax	<b>MOEU</b>	Ministry of Environment and Urbanization
<b>CVM</b>	Contingent Valuation Method	<b>MOF</b>	Ministry of Finance
<b>DG IPOL</b>	Directorate General for Internal Policies	<b>MOFAL</b>	Ministry of Food, Agriculture and Livestock
<b>DRM</b>	Disaster Risk Management	<b>MTMC</b>	Ministry of Transport, Maritime and Communications
<b>EAAB</b>	Publicly-owned water company for Bogota	<b>NLS</b>	National Land Survey of Finland
<b>EBRD</b>	European Bank for Reconstruction and Development	<b>NMT</b>	Non-motorized traffic
<b>EBTU</b>	Empresa Brasileira de Transportes Urbanos (The Federal Government Agency for Urban Transport)	<b>NUTS</b>	Nomenclature of Territorial Units for Statistics
<b>EDI</b>	Electronic Data Interchange	<b>OECD</b>	The Organisation for Economic Co-operation and Development
<b>EGO</b>	Directorate General of Electricity, Gas and Bus	<b>OLS</b>	Ordinary Least Square
<b>EKB</b>	Government Owned Real Estate Bank	<b>OSR</b>	Own-source Revenues
<b>ESTRAM</b>	Eskisehir Light Rail Transit Company	<b>PER</b>	Public Expenditure Review
<b>EU</b>	European Union	<b>PIP</b>	Public Investment Program
<b>FAR</b>	Floor Area Ratio	<b>PIT</b>	Personal Income Tax
<b>FSI</b>	Floor Space Index	<b>PPP</b>	Purchasing Power Parity
<b>GAP</b>	Southeast Anatolia Project	<b>PT</b>	Public Transport
<b>GDP</b>	Gross Domestic Product	<b>RDP</b>	Reconstruction Development Program
<b>GFDRR</b>	Global Facility for Disaster Reduction and Recovery	<b>RICS</b>	Royal Institute of Chartered Surveyors
<b>GIS</b>	Geographic Information System	<b>ROA</b>	Return on Assets
<b>GLA</b>	Greater London Authority	<b>ROE</b>	Return on Equity
<b>GWl</b>	Global Water Intelligence	<b>SPA</b>	Special Purpose Administrations
<b>HBS</b>	Household Budget Survey	<b>SUKAP</b>	Water and Wastewater Project
<b>HHI</b>	Herfindahl-Hirschman Index	<b>TAKBIS</b>	Turkey's Land Registry and Cadaster Information System
<b>IB</b>	İller Bank	<b>TBMM</b>	Grand National Assembly of Turkey
<b>ICLEI</b>	Local Administrations for Sustainability	<b>TEDAS</b>	Turkish Electricity Distribution Corporation
<b>ICT</b>	Information and Communication Technologies	<b>TKGM</b>	General Directorate of Land Registry and Cadastre
<b>IFI</b>	International Financial Institution	<b>TOBB</b>	The Union of Chambers and Commodity Exchanges of Turkey
<b>IPCU</b>	Istanbul Project Coordination Unit	<b>TOKI</b>	Housing Development Administration of Turkey
<b>ISKI</b>	Istanbul Water and Sewerage Administration	<b>TL</b>	Turkish Lira
<b>ITS</b>	Intelligent Transportation Systems	<b>TurkStat</b>	Turkish Statistical Institute
<b>KENTGES</b>	Integrated Urban Development Strategy and Action Plan	<b>UKOME</b>	Transport Coordination Center
<b>KOSTAT</b>	Korean Statistics	<b>UMTA</b>	Urban Mass Transportation Act
<b>KOYDES</b>	Small Villages Water and Sanitation Project	<b>UN</b>	United Nations
<b>KOTI</b>	Korea Transport Institute	<b>USDOT</b>	United States Department of Transport
<b>LFEPa</b>	London Fire and Emergency Planning Authority	<b>VAT</b>	Value Added Tax
<b>LA</b>	Local Administration	<b>VSL</b>	Value of a Statistical Life
<b>LN</b>	Natural Log	<b>WB</b>	The World Bank
<b>LOTI</b>	Loi d'Oreintation des Transports Interieurs (French Law for Orientation of National Transport)	<b>WDI</b>	World Development Indicators



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## FOREWORD

2008 marked the advent of what some term “the urban century”, the historically significant moment in which more than half of the world’s population resided in urban areas for the first time. This milestone was perhaps even more significant for cities in developing countries, which are expected to double in population from 2 to 4 billion people during the period 2000 to 2030. Indeed, in the coming decades many countries will transform into predominantly urban economies as the process of urbanization takes hold around the globe.

Cities are often engines of growth and social progress, but rapid urbanization has not led to improved living standards everywhere. Managing well the process of rapid urban growth for many developing countries could mean the difference between improved livelihoods and development outcomes and declining living conditions and human welfare. For these late urbanizing countries, Turkey offers valuable lessons.

Rather than resisting urbanization, Turkey embraced it. Indeed, Turkey has been able to harness the potential of urbanization by putting in place the public policies and regulatory elements to allow markets to work, yielding measurable economic and social gains, increasing per capita incomes, reducing poverty, scaling up the provision of housing, and achieving dramatic improvements in municipal service coverage.

This book chronicles Turkey’s process of urbanization. It highlights critical policy measures and interventions taken in response to a doubling of Turkey’s urban population in the last 30 years. Prominent among these policy choices were the adoption of a metropolitan municipality regime that enabled more efficient management of growing cities; scaling up housing supply through state-brokered partnerships with the private sector; and the planning of human settlements and connective infrastructure that facilitated trade and commercial exchange across Turkey’s large land mass and with the rest of the world.

Looking ahead, as Turkey aspires to reach high income status in the coming years its cities will undoubtedly need to play an important role. To do so, the report highlights critical challenges and policy measures necessary to promote sustainable cities, including greater national-local urban policy coordination, strengthened urban planning, investment in urban transport and mobility, and the promotion of social cohesion. And to ensure that Turkey’s cities become magnets for global talent and cauldrons of innovation, city planners and politicians will need to adjust to the increasing complexity of the modern urban economy. Here, Turkey would do well to learn from the experience of cities in the most advanced economies. As Jane Jacobs states in her book *The Death and Life of Great American Cities*, “cities have the capability of providing something for everybody, only because, and only when, they are created by everybody”.

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## EXECUTIVE SUMMARY

### Introduction

**Over the course of the last 70 years, Turkey has experienced one of the most dramatic and transformative urbanization experiences of any country in the world.** In the 1950s, despite concerted efforts by the relatively new Republic to promote industrialization and the concentration of population in urban areas necessary to support it, Turkey still featured a largely agrarian economy with no more than 25 percent of its population residing in urban areas. Today, cities accommodate over 75 percent of the country's population and contribute substantially to its industrially-competitive economy. What distinguishes Turkey from many other developing countries is the *pace, scale and geographical diversity* of its spatial and economic transformation, and, perhaps more importantly, its ability to harness the benefits of agglomeration economies that accompanied rural-urban migration.

**Economic growth and urbanization are predicted to move in tandem, and Turkey's urbanization experience clearly illustrates this principle in practice.** As noted in the World Development Report 2009 – Reshaping Economic Geography -- no country has grown to middle income status without urbanization, and none has grown to high income status without vibrant cities. Turkey's urbanization experience confirms this observation. With rapid urbanization came the concentration of production and consumption markets that contributed to Turkey's productivity-enhancing agglomeration economies. This is reflected in the structural shifts in Turkey's economy during the peak period of urbanization (1960-2013), in which the industrial share contribution to GDP rose from 17.6 percent to 27 percent, while the service sector contribution rose even more dramatically from just over 26 percent to nearly 64 percent. These structural shifts and productivity gains paid dividends for Turkish citizens over the last three decades, as per capita GDP more than doubled from \$5,986 (1980) to \$13,737 (2013).

**For developing countries in incipient and intermediate stages of urbanization, Turkey offers important lessons.** This report chronicles salient features of Turkey's dramatic demographic and economic transformation over the second half of the last century up to the present day. Advancing from an incipient stage of urbanization in the 1950s to its current status in an advanced stage of urbanization, Turkey provides a glimpse for many developing countries of how this process took place, how it managed to harness agglomeration economies, how pressing housing needs were met and infrastructure services delivered, including the policy and institutional adjustments that were needed to more effectively manage urbanization.

**Several factors contributed to Turkey's growth-oriented and inclusive urbanization process.** First, Turkey allowed its markets to work: policies in the 1980s promoting economic liberalization attracted the flow of new domestic and foreign private investment that created a critical pull factor for rural migrants, enabling the convergence of production and consumption markets that promoted agglomeration economies in Turkey's cities. Second, a metropolitan municipality regime adopted in 1984 provided the administrative framework necessary to effectively manage fast growing cities across their economic footprint. Third, a permissive tenure regime granted squatters on urban public land legal status that prompted both households and host municipalities to invest in their dwellings and neighborhood infrastructure, avoiding the squalid conditions of slums prevalent in many other rapidly urbanizing developing countries. Fourth, efforts to scale up housing supply through state brokering services triggered a private sector response that helped accelerate the expansion of housing stock, while, on the demand side, mortgage-based finance was expanded, particularly over the last decade, with extended maturities that allowed the housing sector to go down market. Fifth, interventions through national programs to support the expansion of access



to water, sanitation and other basic municipal services helped fiscally-constrained localities (particularly small municipalities, towns and villages) meet national service coverage targets through the use of matching grant subsidies. Sixth, policies that promoted market-based pricing of municipal services helped attract private investment and partnerships to share the financial burden, while private sector management know-how enabled innovation and efficiency gains in service delivery.

**Despite Turkey's impressive achievements in harnessing urbanization as a driver of economic and social progress, Turkey's challenges in building livable and sustainable cities for a high income future are equally important.** These challenges include improving coordination and urban planning to avoid inefficient sprawl, developing urban renewal policies that leverage commercial interest for wider social gains, ensuring the environmental footprint of growing cities is contained, and creating an urban culture that facilitates social inclusion and citizen participation. Beyond reviewing Turkey's accomplishments in managing urbanization to date, this report seeks to frame a "second generation" urban development agenda that will be critical to the country's transition from a high-middle income to high income economy going forward.

## **Rise of the Anatolian Tigers: The Emergence of a Second Generation Urban Development Agenda**

**Only thirteen countries globally have advanced from middle to high-income status since the 1960s, nearly half of which were the "Asian Tigers."** For all of those countries, as with Turkey, effectively managing urbanization has and will continue to play a critical role. Indeed, as the hubs of innovation, productivity gains, enhanced inclusiveness, and improved livelihoods, cities *that are effectively managed* can reap positive economic spillovers and avoid or at least mitigate the negative externalities that constrain growth, contribute to congestion costs, and undermine city livability.

**Turkey's secondary cities, many known today as "Anatolian Tigers," are at the epicenter of**

**the country's second generation urban development agenda.** A salient feature of Turkey's urbanization experience to date has been its inclusiveness and geographical reach over time. The opportunity for rural migrants to seek and find manufacturing and service sector jobs in Turkish cities not only fueled migration but helped the country record remarkable poverty reduction gains, most notably over the last decade. Much of the burden for creating these new jobs and absorbing rural migrants has been borne by Turkey's three primary cities of Istanbul, Izmir, and the nation's capital of Ankara. However, the last decade (2000-2010) has witnessed a rising share of urban growth in the country's secondary cities. Indeed, while the share of Turkey's urban population in Istanbul, Izmir and Ankara has actually declined during this period, cities like Bursa, Mersin, Kocaeli, Kayseri, and Gaziantep, among others stretching across the Anatolian peninsula, have captured a larger share of new urban migrants and the firms that employ them. Patterns of firm location over the past decade also confirm an emerging trend of establishment in secondary cities. This report analyzes these trends and explores the factors that contributed to this rise of Turkey's secondary cities that are referred to as the "Anatolian Tigers."

**While Turkey's secondary cities have been growing fast, this has brought new challenges, which together define Turkey's second generation urbanization agenda.** Fourteen municipalities, many of the Anatolian Tigers and other cities within the interior of the country, were elevated to metropolitan status with an amendment to the Metropolitan Municipality Law in December 2012 (which came into effect in March 2014), bringing the total in the country to 30. Each now faces the challenge of managing a city with a larger footprint, with expanded planning responsibilities, with greater delegated functions, and with new corporatized water utilities and urban transport systems to plan, upgrade and expand across their economic footprint. These developments make the Urbanization Review Framework -- which emphasizes a focus on *planning, connecting, and financing* -- an important set of policy principles for Turkey's second generation urban development agenda.





**Planning for new Metropolitan Municipalities will be an essential priority.**

Planning refers to the enhanced efforts that will be needed to routinely collect, analyze and monitor urban data to inform policy making at the national and local level. It suggests the need to apply longer-term planning horizons that anticipate future urban growth -- both population and corresponding land consumption -- in environmentally, economically and socially sustainable ways. It will further involve the need for more advanced policy and institutional collaboration across and within different tiers of government, with civil society and the private sector. It will also require more advanced and sophisticated institutional and planning tools that equip Turkish cities to effectively value and manage urban land, deliver larger-scale and more complex infrastructure systems, and coordinate land use planning with infrastructure delivery across an entire metropolitan footprint.

**Connecting housing markets with job markets and promoting overall improvements in the mobility of urban residents represents a second overarching priority for policy makers.**

While most cities in Turkey's system of cities benefit from connective infrastructure between them by air, road, and rail networks, the increasing challenge is to manage connections within cities. As expected in any country experiencing economic growth, motorization rates are dramatically increasing in Turkey. Connecting people to jobs, as well as public areas, institutions, and facilities, cannot be left to private vehicles or private-providers alone.

Although private taxis and buses are operated in most of Turkey's cities today and represent an important market response to growing demand, there are now an additional 14 metropolitan municipalities that need systematic public transit routing systems and more effective traffic management systems to accommodate growing city populations and mitigate the impact of increased congestion. Effective urban transport systems also need to factor in how low-income communities in remote parts of the city will access jobs, and how women, for example, who are more reliant on public transit, are able to access safe, clean and affordable transit options.

**In order to implement plans and improve connectivity, Financing of cities is a third priority policy area for Turkish cities.**

While central government transfers have been robust in view of existing local administration expenditure assignments, particularly in recent years, Turkey's second generation urban development agenda will require the financing of larger-scale investments in growing Turkish cities. Improved capital investment planning and preparing bankable, larger-scale infrastructure finance projects that are needed by metropolitan municipalities, including mass transit systems, wastewater treatment facilities and sanitary landfills meeting higher environmental standards -- will make the financing of cities a third key overarching policy area for Turkey going forward. These three apex-level policy priorities are further explored, along with specific policy measures recommended in the chapters of the report, as highlighted below.





### **Box 1. Advancing from Turkey's first generation to second generation urban development agenda**

In early or incipient stages of urbanization, usually before a country's urban population crosses the 50 percent threshold, the focus of Government urban policy should be on ensuring basic municipal infrastructure service coverage and access levels are adequate (internal roads, water and sanitation network access, solid waste collection), in addition to sufficient access to basic housing for incoming migrants. This is generally what may be referred to as the first generation urban development agenda.

Having passed through this phase and now in an advanced stage of urbanization, Turkey now needs to embrace the second generation urban development agenda. Turkey today has 30 Metropolitan Municipalities, all with populations of 1 million or more, 14 of which are newly established with significant additional responsibilities. The size and scale of these cities will require new, more sophisticated urban planning and management systems to deal with increasing traffic congestion, a larger environmental footprint, increasing infrastructure needs, as well as institutional capacities to prepare and implement statutory provincial territorial plans and sub-plans, establish new metropolitan water utilities, and fulfill other mandated responsibilities. In light of these emerging challenges, Turkey's second generation urban development agenda should focus on the following core policy issues:

- Targeting newly-established metropolitan municipalities with technical assistance, capacity building support, and financing to support their transition
- Supporting metropolitan cities in preparing provincial level and sub-plan level territorial plans in accordance with international good practice
- Investing in public transport systems promoting urban mobility and shifting more commute trips from personal vehicles and taxis to public transit options
- Linking Metropolitan Municipality own-source revenue sources to their growing expenditure responsibilities
- Enhancing Metropolitan Municipality credit-worthiness in order to increase access to market-based finance and PPP opportunities over time
- Developing national and city-level information and data systems to support evidence-based policy making, coupled with inter-agency mechanisms to coordinate policy formulation and implementation, e.g. Urban Commission

### **Cities as Contributors to National Competitiveness**

**Turkey's first sixteen metropolitan municipalities host nearly 60 percent of the country's registered firms on just 8 percent of the area of the country.** Such economic density has helped improve the country's productivity gains by promoting the convergence of production and consumption markets that fuel innovative industries. Not surprisingly, 83 percent of the ICT industry is hosted in these metropolitan municipalities and constitute a critical element of Turkey's aim to promote innovation and advance to high income status.

**Over the past three decades, Turkey's economic development and urbanization processes have been mutually reinforcing.** Tur-

key has performed above the mean and joined an elite group of countries, e.g. China, Malaysia, South Korea, and several European countries, in achieving combined high economic growth rates and high urbanization rates during this period. This pattern illustrates Turkey's ability to leverage the benefits of agglomeration economies, consistent with the pattern of other advanced urbanized countries, e.g. Australia, Austria, Chile, and Germany, and in contrast with the performance of several incipient and intermediate urbanizing countries that have been less successful in managing urbanization to date, e.g. Bangladesh, Gambia, Jordan, Gambia, Morocco and Saudi Arabia.

**Turkey's experience underscores the observation that urbanization is a necessary but not sufficient condition in promoting economic**



**growth.** Urbanization has led to mixed results in different countries. Some countries have tried to resist it. Others face difficulties in managing it, including severe housing shortages and expansive slums, oppressive traffic congestion, rising crime and inequalities among urban residents. For these countries, Turkey provides a glimpse of a way forward. Indeed, many of these same challenges have manifested themselves in Turkey as well for which some solutions have been found, while others remain persistent and nagging challenges.

## Promoting City Competitiveness

**This chapter highlights Turkey's impressive performance to date in harnessing agglomeration economies, demonstrating a clear "metropolitan effect" of Turkey's metropolitan municipality regime.** Using firm data analysis, it reviews the patterns of firm location, noting the sorting of firms with increasing concentration of the ICT sector in city centers of metropolitan municipalities, as expected. A substantial "metropolitan effect" is documented in Turkey's metropolitan municipalities, which are across the board attracting more firms per capita than non-metropolitan municipalities, even in non-metropolitan municipality districts that are equidistant from the central business district, ruling out the factor of distance from the city center as an explanatory variable. Settlement patterns are also more densely developed in metropolitan municipalities than in other Turkish cities and in comparison to averages of 1,500 cities worldwide. Human capital has also played a key role in promoting the competitiveness of Turkey's metropolitan municipalities, enabling the production of more innovative and unique goods and services, particularly in its leading three cities.

**But the patterns of city economic development are uneven across regions and there are increasing trends of firm movements outside the core metropolitan municipality to the periphery.** With the exception of the ICT sector, there is a clear trend of manufacturing, construction and service industries migrating outward within the metropolitan municipality footprint, as expected given the trade-offs between proximity gains and labor/land cost

considerations. However, this trend confirms a visual transformation of the morphological structure and character of many Turkish cities, with many now experiencing large, dense developments on the periphery. This is already creating problems in the absence of well-prepared and implemented comprehensive, integrated city urban plans, with critical challenges of "connecting" these new office parks, shopping malls, and residential developments with the city's current land use and transport planning schemes, creating substantial congestion costs. This trend can become even worse without effective land use and transport master plans in place. Land pricing is also largely distorted and doesn't necessarily send the right signals to developers or serve as a consistent and reliable basis for land use planning. In that regard, the report makes a strong recommendation for scaling up planning efforts in Turkish cities to better anticipate growth and an evolving city economy and firm location across the city's entire footprint. The current practice of preparing "area development plans" in isolated areas in the periphery of cities is wholly inadequate to ensure sustainable development. There is a parallel concern that the new Metropolitan Municipality Law, which extends the boundaries of all such municipalities to the provincial limit, will contribute to sprawl and less efficient land use than prevails today in Turkey's relatively dense and otherwise efficient urban form. *To address this emerging risk of sprawl, especially in the new metropolitan municipalities, this report recommends a concerted effort at promoting integrated metropolitan municipality planning and to ensure appropriate linkages to national and regional strategic, economic and spatial development plans.*

**There are also considerable horizontal imbalances in performance across cities in the west and the east of the country.** Human capital is a major deficiency in cities of the east, dragging down their competitiveness and ability to produce goods and services that can keep pace with market pressures. And while Turkey overall performs reasonably well on logistics index indicators, cities in the east face substantially higher cost barriers to firms, which is also con-



firmed by business surveys. *These key challenges need to be addressed through efforts to target specific imbalances, including strategic planning for eastern cities, aimed in part to attract and retain higher-end human capital, while also strengthening linkages among those cities with connective infrastructure that can reduce costs.* Effective planning will need to take place at different scales and be harmonized with planning at different tiers and by different agencies at the national, regional and provincial/municipal level. This policy priority is outlined in the tenth National Development Plan and will be essential for promoting sustainable city development.

### **Improving Access to Affordable Housing in Turkish Cities**

**In this chapter, urbanization pressures are shown to have caused vulnerabilities in the housing market in Turkey as in any rapidly urbanizing country.** Specific measures taken by Turkish policy makers starting in the 1980s have helped to address this by promoting housing supply in scale and commercial operation structure, where TOKI has acted as a broker to facilitate private sector engagement under Government coordination and supervision. On the demand side, housing mortgage finance has been further developed and expanded into longer term maturities to enable banks to go down market to middle income households. Amnesties were issued by the Government to grant secure land tenure to residents in informal settlements and this has prompted regularization of informal areas, including the delivery of essential infrastructure services, and household-specific investments that have improved the overall quality of housing for the urban poor, particularly in comparison to other developing countries where informality and slums is a persistent problem.

**While Turkey's overall response to housing pressures has been positive and timed appropriately to correspond with periods of rapid urbanization, the housing agenda remains a critical policy focus for Government decision-makers.** Analysis in this report suggests that there is a nine year gap between housing demand and starts and the principal vulner-

abilities are squarely focused on low income households, including affordability, legal rights, housing finance, supportive infrastructure, and access to income opportunities. Housing costs are rising in both absolute terms and relative to the share of household income within the low income segment of the population. The costs, steps and time to obtain a construction permit in Turkey are also a major constraint to housing supply and an area where Turkey performs well below its peers. TOKI's housing supply model, using a "revenue sharing" approach with private developers, has prevented deeper reach into the lower segment of the housing market, with low income households benefitting from not more than 22 percent of TOKI housing today.

**Recommendations to address Turkey's affordable housing agenda include:** (i) Relaxing formal rules and regulations for construction permits, which is harmful to city competitiveness and to the costs of housing; (ii) promoting competition among providers of housing; (iii) enhancing property valuation systems; (iv) deepening and extending the terms of mortgage finance, as a medium to long-term measure and taking into account banking prudential regulations; (v) using transport planning and investments to connect low income housing to job markets; and (vi) reviewing the TOKI model for the provision of mass housing to consider options for increasing transparency of operations and, specifically, ensuring that benefits of the public land subsidy accrue in sufficient measure to low income groups. A further recommendation is to devote greater attention to collecting and monitoring housing market data to monitor trends and identify where critical shortages and affordability problems are concentrated. This latter action would need to be coordinated with municipalities and relevant data can be captured in surveys carried out as part of the comprehensive integrated urban planning work that has been recommended.

### **Why Urban Transport Matters in Turkish Cities**

**This chapter documents Turkey's growing motorization rates and under-planned and fi-**



**nanced urban transport systems.** It highlights the substantial cost of doing nothing, noting that Turkey features motorization rates (number of cars owned by 1,000 persons) that are growing on average at a pace that is twice as fast as economic growth. While this growth is in line with international trends, without concerted policy efforts it is likely to exacerbate already existing congestion costs in city transport systems, generating traffic accident costs estimated at well over 3 percent of GDP today. Personal vehicle transportation is also the least energy efficient mode of transport and generates substantial demand for energy (projected to reach 2.5 to 5 times the current level by 2022), which has serious implications for Turkey as an energy import-dependent country.

**Four broad policy priority areas are defined as the way forward.** *Overhauling the urban transport planning system is desperately needed*, which requires new standards, tools and indicators for monitoring performance. Currently, many Turkish cities operate without a functional transport masterplan. Where planning is being done it often does not extend to and attempt to integrate land use planning, with the key aim of connecting housing and job markets and allowing a city's transport system to serve as the backbone for land use planning. A major reason for this deficiency is the generally inadequate institutional set-up in most Turkish cities, as the existing UKOME (Transport Coordination Center) enjoys no executive functions, financial management controls, or mechanisms and tools to effectively plan, deliver and operate effective urban transport systems. Consequently, unlike in the water sector where water utilities were spun-off from municipalities and corporatized some thirty years ago, being held accountable for cost recovery in their operations, city transport systems appear to be highly subsidized and without appropriate measures for accountability in operations or cost recovery.

**Beyond the need for improved urban transport planning and institutional setup, standards and cost effectiveness principles are**

**needed within a national framework promoting sustainable urban mobility.** *Many cities have opted for higher cost "showcase" transport systems that do not in all cases have the ridership to justify such an outlay in financial resources.* General guidelines are provided in the report for selecting appropriately scaled and cost effective urban transport systems that should serve as a basis for capital investment planning. *A shift in focus to providing mobility for people rather than automobiles* would help Turkish cities to keep pace with latest urban transport policy trends, emphasizing options that promote pedestrianization, expansion of bike-paths, and other public transit options over attempts to accommodate more personal vehicles. Finally, there is a critical yet unfulfilled role that national policy institutions need to play in *creating a national framework for sustainable urban mobility systems.* Insufficient linkages between national policies and local practices underscore a critical challenge in the planning, financing and sustainable provision of urban transport services.

## Financing Cities in Turkey

**Overall, Turkey's intergovernmental finance system is viewed as robust and local administrations are seen as benefitting from substantial resource transfers, which account for over half of local administration revenues.** Local own-source revenue is not necessarily weak but is heavily reliant on enterprise and property revenues, rather than direct taxes corresponding to service provision needs. Property tax collection is singled out as particularly weak, representing about 1.2 percent of GDP, as against the OECD average of nearly double that at 1.9 percent. A significant factor contributing to this is the very low property tax rate of two-tenths of one percent of the property value compared to one percent in most OECD and EU countries. Furthermore, there is a delinking of expenditure assignment responsibilities (for instance at the Metropolitan Municipality level where such responsibilities are significant) from revenue raising authorities (Metropolitan Municipalities have limited or no own source revenues, including such functions as property



tax collection), which suggests weak incentives to fully exploit the existing tax base. And there is reason to be concerned about the horizontal imbalances in local revenue base, particularly between the western and eastern parts of the country and very meager “equalization effect” of fiscal transfers to offset the generally lower economic base in eastern cities.

**Policy recommendations for improving city finances include:** (i) reducing municipal dependence on fiscal transfers by providing incentives for property tax collection, new methods for property valuation and allowing local administrations some latitude in setting the base and rate for property taxes; (ii) reviewing the equalization transfer mechanism, which currently has a negligible effect, and consider introducing a Block Grant or Performance Grant system to benefit localities with a low economic base; (iii) further analyzing the nature and causes of apparent financial distress among some local administrations to resolve mounting arrears and enhance financial performance, particularly at smaller municipalities; (iv) providing support to Ilker Bank and Treasury in updating their municipal credit analysis and risk models and second-tier metropolitan municipalities in improving financial management performance so that more can “graduate” to access market-based financing; and (v) promoting harmonization of subnational capital investment planning and programming across multiple tiers of administration.

## **Inter-Agency Coordination to Support Turkish Cities**

**In this chapter, conventional challenges of managing complex inter-governmental agency relationships are encountered in Turkey,** such as managing multi-tiered responsibilities in planning processes and achieving coordination of functions with respect to socio-economic and spatial planning in particular. Turkey has passed through the early stages of decentralization somewhat successfully, due in no small part to the metropolitan municipality regime, first initiated in 1984 when it was adopted in Istanbul, and now extended to a total of 30

metropolitan areas. This has helped to more effectively manage larger-scale infrastructure and city systems across a metropolitan footprint. However, beyond the metropolitan municipality level, the framework for policy coordination is much less established and will be a needed step to support Turkey in addressing its second generation urban agenda.

**Vertical, horizontal and diagonal interagency coordination mechanisms are reviewed as a framework to consider all policy and institutional options, including the private sector and civil society organizations.** Good practice examples are shared to illustrate how other countries have attempted to overcome such coordination problems, such as the EU’s URBAN and URBACT programs and the UK’s policies in promoting revival of former manufacturing cities into new centers for attraction of investment and human capital.

**Specific policy recommendations include:** (i) consideration of institutional mechanisms to promote coordination and implementation of urban policy, given its cross-cutting nature, in which a temporary commission, committee, or working groups could be formed or, alternatively, setting up long-standing formal structures, possibly modeled after Turkey’s recent establishment of a Higher Committee for Regional Development; and (ii) establishment of an urban data platform to collect and analyze data and formulate standardized indicators necessary to make informed policy decisions.





## CHAPTER 1: ENABLING A SYSTEM OF CITIES FOR NATIONAL GROWTH

*The level of a civilization can be estimated by the size and growth of its cities, an inevitable consequence of the development of human society.*

*Ibn Khaldun, Al-Muqaddimah, 1377*

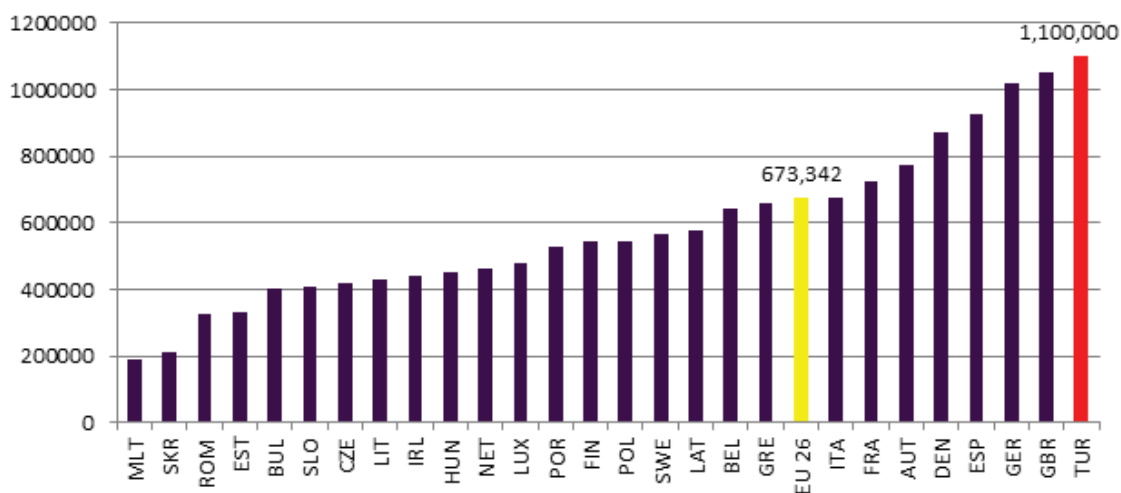
### THE MAGNITUDE AND PACE OF TURKEY'S URBANIZATION

Over six hundred years ago, the eminent Islamic scholar and founder of the modern-day social science of sociology, Ibn Khaldun, extolled upon the transformational nature of cities, and their contribution to the progress of civilization. By that measure, Turkey has performed well. Today, Turkey is among the most urbanized countries in Europe. In comparison to European countries (Figure 1 below), the average size of a Large Urban Zone (LUZ) is over 1.1 million inhabitants, nearly twice as large as the EU average and greater than any other country in Europe. Within the Turkish LUZs, urban centers dominate, where the core cities host 34 percent of the country's population. This share is higher than shares in some of the

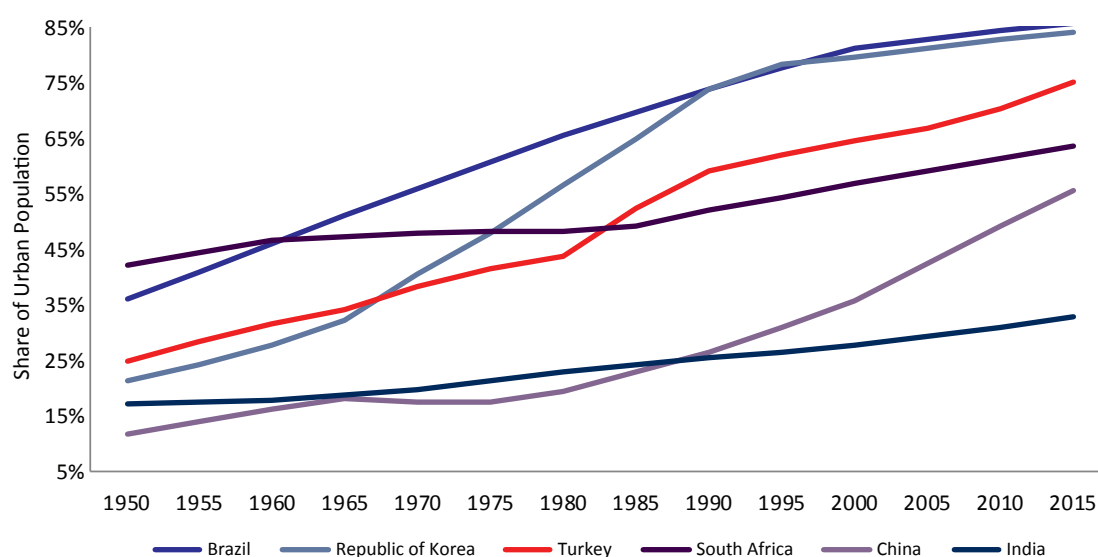
large, urbanized Western European countries, like the UK or Germany.

**Turkey has embraced urbanization.** Among comparator countries, only the Republic of Korea managed a faster rate of urban growth over the period from 1950-2013, while India still lags far behind, and China, with a major push by its policy makers in the 1990s, is now dramatically surging forward (See Figure 2). In 2012, Turkish cities hosted more than 57 million people, representing nearly 75 percent of the national population. In 2000, this rate was only 64 percent (well below the rate of developed countries). Turkey's urban population has in a decade grown three times faster than its overall population. The average compounded rate of urbanization over three decades starting in the 1980s was well over 4 percent. City growth has been dominated by Turkey's first 16 metropolitan municipalities, which account for about 60 percent of urban dwellers and have growth three times as fast as other municipalities. In fact, with 48 percent growth over the past 11 years, these metropolises are expected to double in size over the next 15 years.

**Figure 1: Average Urban Area Population Size Comparison for Turkey and 26 EU Countries**



Source: Peteri and Sevinç (2011)

**Figure 2: Growth in Share of Urban Population in Turkey and Comparator Countries (1950 - 2015)**

Source: World Development Indicators

### **Turkey's System of Cities illustrates a stable and logical ordering of different sized cities.**

Home to eleven million people, Istanbul dominates the urban landscape, accounting for 21 percent of Turkey's urban population. Table 1 below provides a profile of Turkey's system of cities, featuring six other agglomerations between 1 and 5 million people that host another 24 percent.<sup>1</sup> The skewed distribution of city sizes is of considerable concern to policy-makers who would like to stimulate growth in small and medium sized cities. However, this pattern of city sizes is not an outlier, but an empirical regularity across countries and over time. Nearly a century ago, a linguist named George Kingsley Zipf discovered a striking pattern in word usage where he observed that the frequency of a word's use is inversely proportional to its rank in a frequency table. This

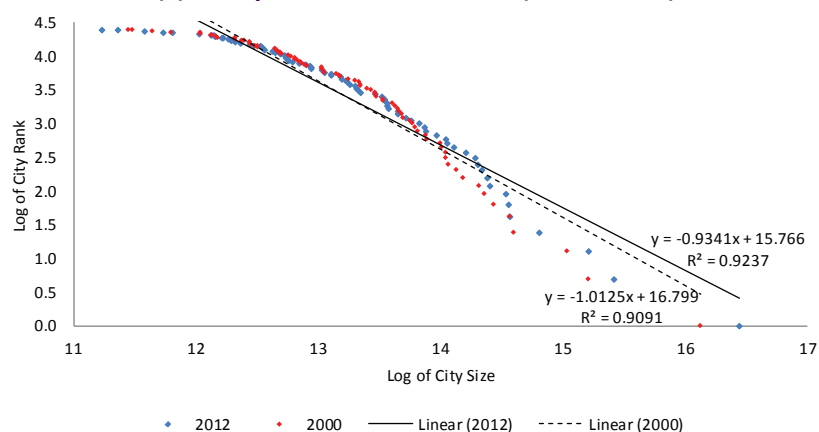
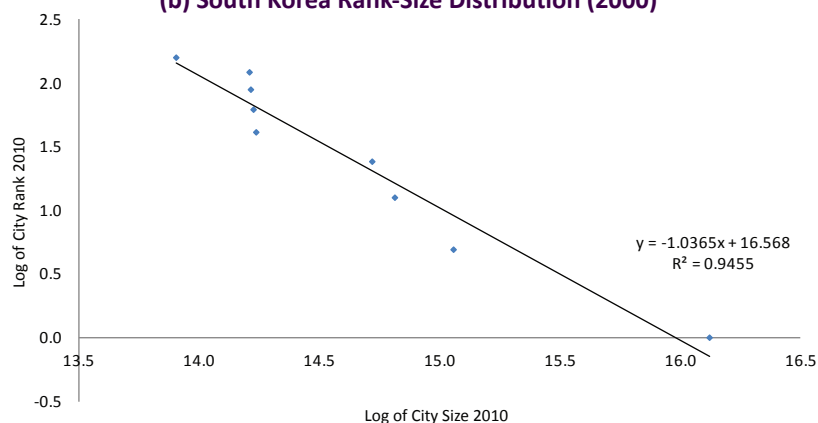
relationship follows the power rank principle commonly known as *Zipf's Law* and has been used to understand and predict rankings in city size as well. In the case of cities, the natural logarithm of a city's rank in population size and city population generates a log-linear graph of a country's city rank size. When applied to Turkey's cities, Zipf's power law is strikingly accurate. Turkey's Zipf coefficient for 2000 was -1.01, very close to the -1 predicted by the law. For 2011 the coefficient becomes -0.93. In other words, a nearly perfect linear relationship exists among Turkey's cities when comparing their rank and size accordingly to Zipf's Law. Figure 3 shows how Turkey compares favorably with South Korea, whose top 9 cities record a Zipf Rank- Size Distribution of -1.04 in 2010.

<sup>1</sup> Until 1955, 82 percent of urban population lived in urban agglomerations with less than 500,000 people; only one urban agglomeration had more than 1 million. Between 1965 and 1980, the number of urban agglomerations with 1 to 5 million people grew to 3. At that time, these large cities were home to about 39 percent of the country's population (Table 1). In the next twenty years, between 1980 and 2000, two more urban agglomerations reached one million, and Istanbul expanded beyond five million people (UN, 2012).

**Table 1: Trend in Size Class of Urban Agglomerations in Turkey**

Size class of urban agglomerations	-1950	1950-60	1960-70	1970-80	1980-90	1990-2000	2000-10
<b>10 million or more</b>							
Number of agglomerations							1
Population							10953
Percentage of urban population							21
<b>5 to 10 million</b>							
Number of agglomerations					1	1	
Population					6552	8744	
Percentage of urban population					20	21	
<b>1 to 5 million</b>							
Number of agglomerations		1	2	3	2	4	6
Population		1453	4113	7504	4302	7699	12181
Percentage of urban population		16	30	39	13	19	24
<b>500 000 to 1 million</b>							
Number of agglomerations	1	1	1	1	4	6	8
Population	967	635	876	568	2829	3781	5109
Percentage of urban population	18	7	6	3	9	9	10
<b>Fewer than 500 000</b>							
Population	4294	6786	8570	11237	18363	20969	23038
Percentage of urban population	82	76	63	58	57	51	45

**Figure 3: Zipf's City Rank-Size Power Law**  
**(a) Turkey Rank-Size Distribution (2000 & 2011)**

**(b) South Korea Rank-Size Distribution (2000)**

Source: KOSTAT, Statistics Korea 2013 Data, WB staff calculations





## PLACING TURKEY IN THE CONTEXT OF GLOBAL URBANIZATION TRENDS

**Rapid urbanization is one of the most striking features of recent trends across the developing world.** Developing countries are urbanizing at rates today similar to what developed countries experienced about a century ago. On average, today's developed countries increased their urban share of population by 7.7 percent between 1880 and 1900; today's developing countries have seen urban share increases of 8 percent between 1985 and 2005. (World Bank 2008). But policy makers in developing countries today have different views on the relative merits and demerits of urbanization.

**The Backdrop: Urbanization and its Discontents.** Urbanization is one of the most vexing development challenges of the 21<sup>st</sup> century. Some would argue it is the most important policy arena for government decision-makers in developing countries today. Demographic projections underscore this claim by suggesting that 90 percent of all population growth in the next 20 years will take place in developing countries. Given the challenges countries such as Britain and France faced with urbanization (Box 2) is its accelerated pace in developing countries a positive signal for developing countries or yet another obstacle to development?

**Urbanization poses a conundrum for policy makers.** Economics tell us that urbanization will bring needed agglomeration economies -- the stuff that makes industrialization possible -- through the convergence of production and consumption markets, the concentration of human capital that can fuel interactions, the exchange of know-how and innovations that matter most to development and growth. Indeed, as stated in the World Development Report 2009 - *Reshaping Economic Geography*, "no country has advanced to middle income status without urbanizing, and none has grown to high income without vibrant cities."

But many countries resist urbanization. They view it as unmanageable, creating congestion costs, social dislocation, and rising crime and violence. What insights can Turkey's urbanization experience offer other developing countries, particularly latent urbanizers? To answer this question, let us consider the experience of some of the BRICs<sup>2</sup>.

**Different policy responses to urbanization generate different outcomes: The case of China.** In China, the prevailing *Hokou* system, a household registration system that tied people to places is claimed to have its roots in the family registration system of the Xia Dynasty dating as far back as 2100 BCE. By the late 1950s, it was used by the Communist regime as a means of regulating labor markets to support stated-owned enterprises. People living outside of their *Hokou* area of registration were not entitled to grain rations, education and health benefits, and employer-provided housing, which certainly would have an influence on people staying in place. In short, access to state-delivered or sponsored benefits was restricted to a person's place of registration. Through a series of reforms and legal acts coinciding with economic liberalization in the 1990s and in recognition of villager movements to Chinese cities even with these restrictions, China began to relax, though never fully abandoned, its *Hokou* system prescriptions, unleashing an unprecedented surge in urbanization beginning in the 1990s, fueling China's rise in productivity and competitiveness witnessed over the last twenty-five years.

**Urbanization in Russia was promoted, but around state-owned enterprises that ultimately failed.** During the period of the communist regime in Russia, urbanization was recognized as an essential ingredient for industrialization and, much like in China, labor markets were strongly shaped by the state to support state-owned enterprises. However, in Russia's case, urban settlements and urbanization were viewed as essential to the

<sup>2</sup> BRICS is a commonly used acronym referring to Brazil, Russia, India, China, and South Africa, a group of fast-growing developing countries or emerging national economies, all of whom are members of the G20 and have a significant impact on regional or international affairs. They represent an important comparator group for Turkey.



## Box 2: An Historical Perspective on Urbanization<sup>4</sup>

To appreciate the merits of Turkey's urbanization experience, consider its precursors in the cities of Britain and France. Not unlike Turkey, both Britain and France experienced an upsurge in urban population growth that coincided with their respective industrial revolutions in the early 19th century. Neither country was prepared for the wave of new migrants to their cities. Britain's experience was particularly brutal: cholera outbreaks in British cities were widespread. By 1841, the crude death rate in British cities was 5.6 per thousand higher than in rural areas and infant mortality rates were 25-50 percent higher than in Britain's rural hinterland, earning them the unsavory title of "killer cities." A major factor in Britain's difficult urban transition was an under investment in infrastructure. According to Williamson (1990), in the midst of industrialization and urban growth, social overhead capital stocks in Britain actually declined over the 70 years leading up to 1830. In France, the experience was no better. The population of Paris doubled over 50 years during the course of the 19th century with inadequate infrastructure and housing to accommodate the new migrants, causing miserable living conditions for city residents. Three cholera epidemics plagued the city, the worst of which, in 1832, claimed the lives of 20,000 people, or nearly 3 percent of the city population. These two historical perspectives on urbanization underscore the needed emphasis on effective city planning and access to finance to invest in infrastructure necessary for an urban society.

state's policy of promoting industrialization, and were planned across the country around state-initiated industries that once formed the backbone of its command economy. With the liberalization of Russia's economy in the 1990s, state-owned industries were rapidly abandoned and their urban hosts – known by their sobriquet of "mono-cities" or single industry cities -- have become synonymous with what today are defined as "shrinking cities," i.e. cities whose economic function has evolved and contracted to the point that they are shedding their population base.

**Urbanization is resisted in some countries as a force that uproots traditional values: The Case of India.** Was it that Gandhi had it so wrong or that future generations interpreted his meaning wrongly when he asserted that "the future of India lies in its villages?" Whatever one's take on Gandhi's views, despite substantial human capital, India remains dramatically behind other BRICs and emerging market economies in its rate of urbanization (See Box 2). Other forces, possibly shaped by this supposition, have been at work as well. Mumbai, for instance, deliberately lowered its Floor Area Ratio (FAR)<sup>3</sup> which resulted in the very

flat, sprawled out city it is today. FAR was first introduced at 4.5 in 1960, but in 1991 Mumbai lowered its FAR to 1.33 in the central city and 1 in the suburban areas. By comparison, cities such as New York, Tokyo, Hong Kong and Shanghai have FAR limits that range between 10 and 15. This had the effect of distorting the city's land market and driving up housing costs to staggering levels. Real estate prices in Mumbai today rival those of Manhattan, and the city is host to one of the largest slums in the world – Dharavi. Traveling across two areas of the city can take well over two hours during rush hour, causing by congestion.

## THE ECONOMIC VOCATION OF CITIES

**What policy implications can be drawn from Turkey's dramatic demographic transformation?** What lessons from Turkey's experience can inform other developing countries in incipient stages of urbanization? The most important lesson is that, by and large, Turkey has been able to leverage urbanization to promote economic growth. Matching Turkey's urbanization experience against other comparator countries underscores the importance of poli-

<sup>3</sup> FAR or FSI (Floor Space Index), the term used in India, is the ratio of a building's total floor area to the size of the parcel of land on which it is built.

<sup>4</sup> Source: Williamson (1990) as cited in Urbanization and Growth, Commission on Growth and Development, 2009

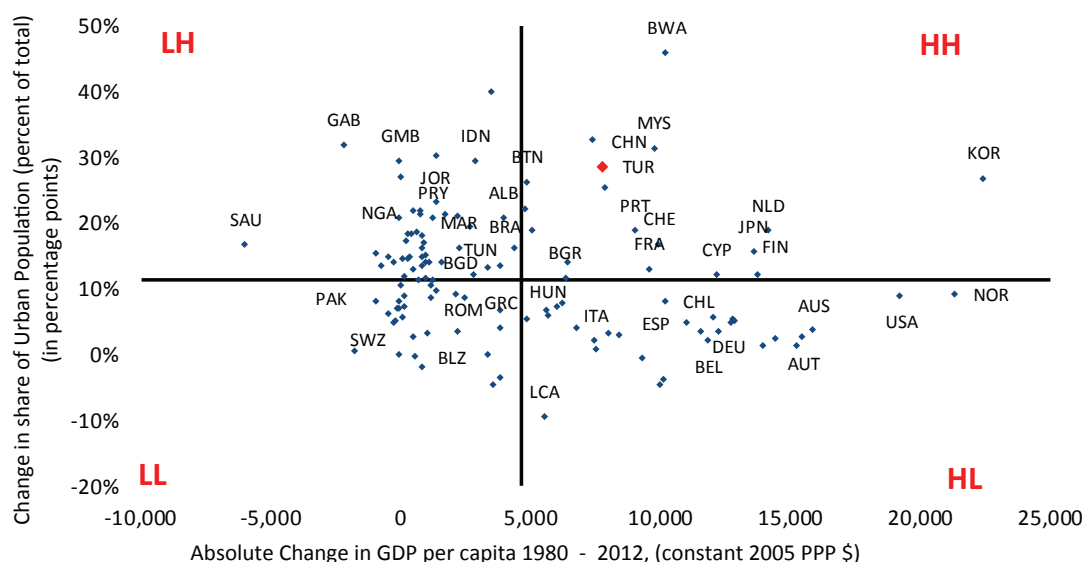


cies that promote urbanization, while enabling cities to reap the benefits of agglomeration economies.

**Historically, urbanization is highly correlated with reductions in poverty and inequality and improvements in access to services.**<sup>5</sup> Turkey provides a poignant illustration of this global phenomenon in practice. Over the past six decades, Turkey has been structurally and demographically transformed from a predominantly agrarian economy to the globally competitive industrial economy it is today. During the country's most rapid period of urbanization, from 1960-2013, Turkey's industrial share of the economy increased from 17.6 percent to 27 percent, and the service sector dramatically rose from 26.4 to nearly 64 percent. Per capita GDP<sup>6</sup> rose from US\$5,986 in 1980 to US\$13,737 in 2012. Some 92 percent of Turkey's gross value added is produced in cities today, and the last decade has witnessed dramatic and consistent declines in poverty in parallel with a rise across most human development indicators.

**Turkey presents a classic example of a country benefiting from agglomeration economies.** In principle, urbanization and economic growth should move in tandem (Spence 2009) and Turkey's development experience illustrates this point with striking precision. Figure 4 demonstrates clearly how Turkey has been able to harness the benefits of agglomeration economies, which paid significant dividends for its overall growth. In the figure, Turkey's economic performance (in increasing GDP per capita terms) is measured alongside its increase in urban share of population during the period from 1980-2012. When compared to a set of countries globally for which data is available, Turkey is positioned among the high performers. The HH Quadrant (High Urbanization and High GDP per Capita Change) where Turkey is located represents countries that performed above the mean on both measures, and benefitted from agglomeration economies, such as China, Malaysia, and South Korea. By contrast, the LH Quadrant (Low GDP Growth per Capita/High Urbanization) includes countries that have rapidly ur-

**Figure 4: Global Mapping of Country Performance in Urbanization Rate and GDP per capita Change (1980 - 2012)**



Source: WDI

<sup>5</sup> See Ravallion, et al. (2007) and Spence (2009)

<sup>6</sup> Per capita GDP refers to PPP based GDP per capita in constant 2005 international dollars as provided by World Development Indicators. Another measure of per capita income is nominal GDP per capita in current U.S. dollars, and it was 10,666 in 2012, up from 1567 in 1980.



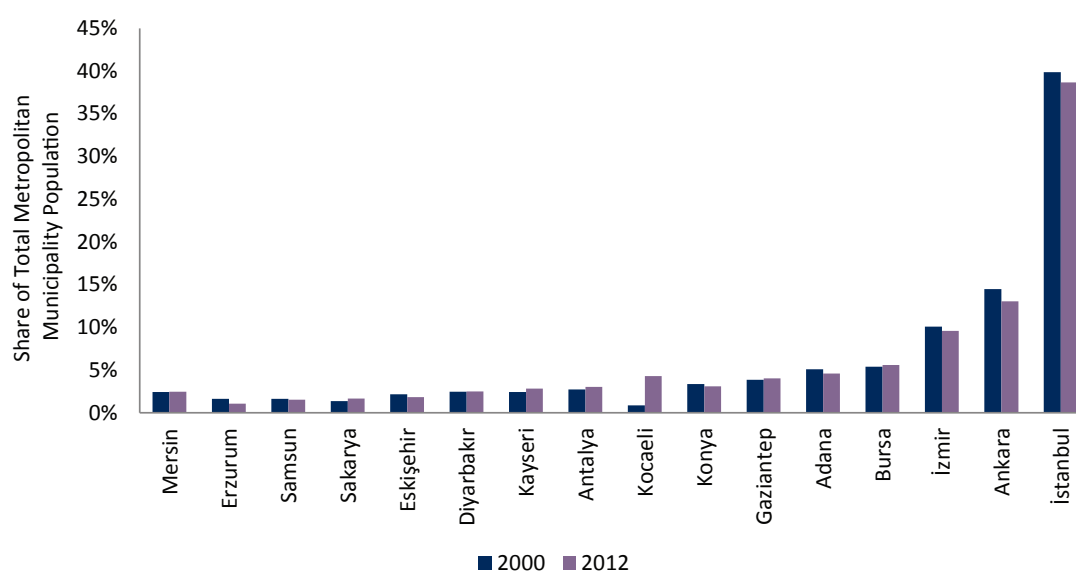
banized during the same period as Turkey, but which have not been able to leverage the full benefits of urbanization, including several African countries. The HL Quadrant (High GDP, Low Urbanization) countries typically present the “steady-state” model, or advanced urbanizing countries whose urban growth took place largely before the 1980s yet continue to benefit from agglomeration economies. Quadrant LL reflects countries in the incipient stages of urbanization (or those that are deurbanizing) that have yet to take full advantage of agglomeration economies as a contributor to national economic growth.

**For much of the last century, it was Turkey’s primary cities that drove the country’s economic growth.** But Turkey’s system of cities is beginning to evolve, particularly over the last decade, giving rise to the “Anatolian Tigers.” As illustrated in Figure 5, the populations of Turkey’s largest agglomerations – Istanbul, Ankara, and Izmir – have actually declined in their share of Turkey’s total urban population over the last ten years. Cities such as Mersin, Gaziantep, Kocaeli, and Kayseri, among others often referred to as the “Anatolian Tigers,”

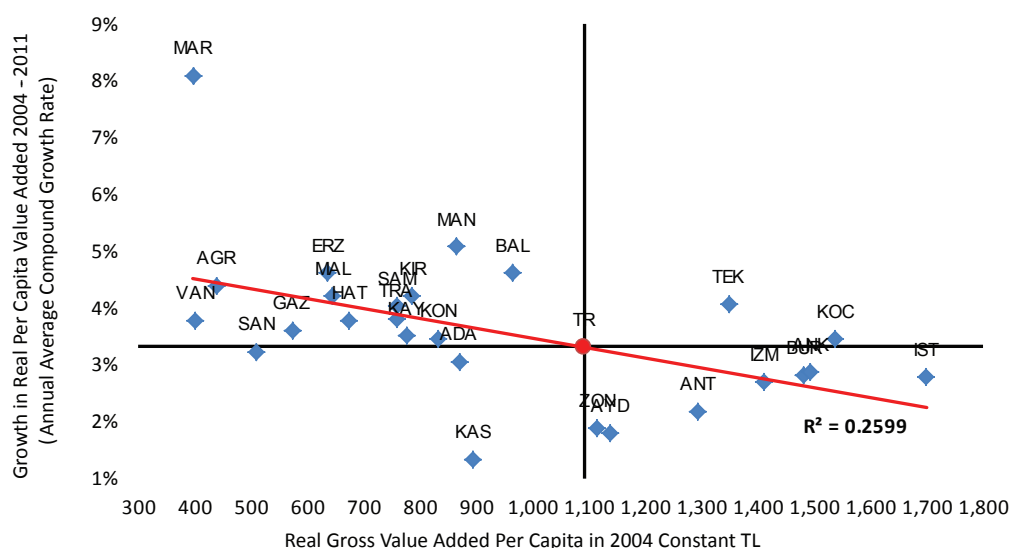
have increased their share of urban population during the same period and continued to experience modest population growth to the present day.

**This demographic growth has contributed to an equally impressive economic expansion among the Anatolian Tigers.** Not only are Turkey’s secondary cities growing faster demographically, but they are also growing faster economically. While Figure 6 shows, as expected, cities like Istanbul, Ankara, Izmir and Antalya well ahead of other Turkish cities in terms of gross value added per capita, many of the Anatolian Tigers have been catching up. Led by Mardin, provincial cities like Gaziantep, Samsun, Malatya, and Trabzon have recorded some of the highest growth in gross value added per capita during the period from 2004-11. This is largely explained by market forces. Turkey’s secondary cities are benefiting from economic spillovers. Rising land-rent values and labor costs in its primary cities force firms to find lower cost alternatives. And connections to external markets have also helped cities like Gaziantep in recent years to position themselves as gateways to regional markets.

**Figure 5: Share of Total Population for Selected Cities in 2000 and 2012**



**Source:** TUIK 2000 Census Data and ABPRS (2012). World Bank Team Calculations. Note: The sharp increase in Kocaeli’s population share from 2000 to 2012 is partially explained by the expansion of the Metropolitan Municipality area to the provincial boundaries as per the Metropolitan Municipality Law (#5216) in 2004.

**Figure 6: Gross Value Added by Nuts 2 Region, 204-11**

**Source:** TurkStat, WB staff calculations

**Note:** Regions are defined as ADA=Adana, Mersin; AGR=Ağrı, Kars, Iğdır, Ardahan; ANK=Ankara; ANT=Antalya, Isparta, Burdur; AYD=Aydın, Denizli, Muğla; BAL=Balıkesir, Çanakkale; BUR=Bursa, Eskişehir, Bilecik; ERZ=Erzurum, Erzincan, Bayburt; GAZ=Gaziantep, Adıyaman, Kilis; HAT=Hatay, Kahramanmaraş, Osmaniye; IST=İstanbul; IZM=İzmir; KAS=Kastamonu, Çankırı, Sinop; KAY=Kayseri, Sivas, Yozgat; KIR=Kırıkkale, Aksaray, Niğde, Nevşehir, Kırşehir; KOC=Kocaeli, Sakarya, Düzce, Bolu, Yalova; KON=Konya, Karaman; MAL=Malatya, Elazığ, Bingöl, Tunceli; MAN=Manisa, Afyon, Kütahya, Uşak; MAR=Mardin, Batman, Şırnak, Siirt; SAM=Samsun, Tokat, Çorum, Amasya; SAN=Şanlıurfa, Diyarbakır; TEK=Tekirdağ, Edirne, Kırklareli; TRA=Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane; VAN=Van, Muş, Bitlis, Hakkari; ZON=Zonguldak, Karabük, Bartın.

## Lessons from Turkey's System of Cities

**Turkey's urbanization experience offers important lessons for policy makers across the developing world.** As far back as the early days of the Republic, Turkish policy makers recognized the importance of urbanization to the country's ambitions of becoming a modern, industrialized economy, and encouraged rural-to-urban migration flows that fueled agglomeration economies. Early and substantial investments in transport infrastructure helped connect Turkey's large land-mass country, enabling its system of cities to take root over the course of the second half of the last century. 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-rent values and labor costs. Turkey's leading cities, meanwhile, are diversifying and innovating to remain competitive. Indeed, as further detailed in this report, Turkey features a system of cities today that by and large perform above average in achieving density, suggesting efficient land use and higher productivity; and informality in housing is well below what

would be expected for a country that went through such a rapid demographic transformation.

**Several factors contributed to Turkey's growth-oriented and inclusive urbanization process.** First, Turkey allowed its markets to work: policies in the 1980s promoting economic liberalization attracted the flow of new domestic and foreign private investment that created a critical pull factor for rural migrants, enabling the convergence of production and consumption markets that promoted agglomeration economies in Turkey's cities. Second, a metropolitan municipality regime adopted in 1984 provided the administrative framework necessary to effectively manage fast growing cities across their economic footprint. Third, a permissive tenure regime granted squatters on urban public land legal status that prompted both households and host municipalities to invest in their dwellings and neighborhood infrastructure. Fourth, efforts to scale up housing supply through state brokering services triggered a private sector response that helped accelerate the expansion of housing stock, while, on the demand side, mortgage-based finance was expanded, particularly over the





last decade, with extended maturities that allowed the housing sector to go down market. Fifth, interventions through national programs to support the expansion of access to water, sanitation and other basic municipal services helped fiscally-constrained localities meet national coverage targets through the use of matching grant subsidies. Sixth, policies that promoted market-based pricing of municipal services helped attract private equity to share the financial burden, while private sector management know-how enabled innovation and efficiency gains in service delivery. These lessons from Turkey's experience are further explored below.

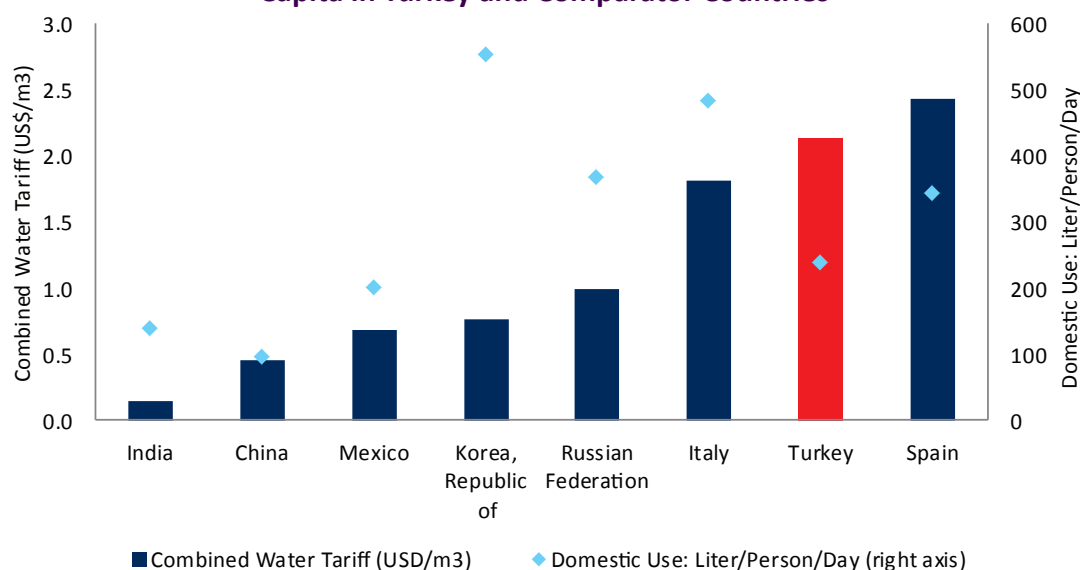
## Developing a System of Cities: The Metropolitan Municipality Law

**Turkey's Metropolitan Municipality Law was a game-changer for managing cities.** It was precisely during the period of economic liberalization and a surge in urbanization in the first half of the 1980s that the Government of Turkey adopted a new municipal administration regime. Not only in Istanbul, Turkey's megacity, but also in newly emerging urban conurbations, there was a need for a regime that would enable more effective metropolitan

management across a broader footprint. Turkey's landmark legislation – the Metropolitan Municipality Law passed in 1984 -- provided the legal and administrative basis for managing cities at a metropolitan scale that so many developing countries are lacking. Sixteen metropolitan municipalities were elevated to that status between 1984 and 2012, and in December 2012, an amendment to the Metropolitan Municipality Law created fourteen more, for a total of 30. The Law contains many key provisions that enable metropolitan municipality regimes to formulate policies and take decisive action that support linkages across a city's administrative boundaries and in line with its economic footprint. For instance, the Law enabled metropolitan municipalities to undertake their own higher scale territorial planning (1:50,000 scale) that provides a strategic framework to plan city development. Urban transport planning and investment functions<sup>7</sup> were also consolidated at the metropolitan municipality level, enabling planners to ensure access and mobility across a metropolitan municipality's entire footprint.

**Turkey's Metropolitan Municipality Law also provisioned for more efficient management of water supply and sanitation services.**

**Figure 7: Water Supply and Sanitation Service Pricing and Domestic Consumption per Capita in Turkey and Comparator Countries**



Source: Global Water Intelligence, GWI Market Report, vol. 12, Issue 9, September 2011

<sup>7</sup> With the exception of interior roads, which remain the responsibility of district municipalities.



Among developing countries, Turkey was one of the innovators in thinking through efficient ways of providing water supply and sanitation services. Faced with growing populations in its cities, it needed to find an institutional model that would achieve greater scale efficiency and it looked for a solution at the metropolitan scale. In 1981, Istanbul initiated the first successful corporatization of water supply and sanitation services. Doing so helped Istanbul to more effectively manage and monitor its water supply and sanitation services, particularly by removing such expenditure outlays from its municipal books and shifting them to ISKI, Istanbul's corporatized water utility. This arrangement helped ensure cost recovery in pricing of water, sanitation and wastewater treatment services and avoid cross-subsidies from other municipal revenue sources. Istanbul's successful corporatization experience was then formally adopted within the Metropolitan Municipality Law in 1984, requiring all of Turkey's metropolitan municipalities to establish a corporatized water utility and to operate them at arm's length distance on the principles and practices of cost recovery. As of 2011, Turkey compares very favorably with peer countries in its market pricing of water supply and sanitation services, as well as cost recovery, and this has also had a positive impact in discouraging waste and promoting water conservation (Figure 7). Market pricing has also helped Turkey to attract the private sector in the provision of water supply and sanitation services.

**Inter-jurisdictional coordination at the city level is a key challenge in many developing countries that lack a metropolitan regime.** Developing country experience for managing metropolitan cities is mixed but generally lacks an effective legal and regulatory framework to enable city management at metropolitan scale. In Cairo, a metropolitan city of nearly nine million people, there is no enabling legislation that supports inter-jurisdictional management and coordination across the metropolitan area's economic footprint. While the core city of Cairo (Cairo Governorate) comprises a land area of 450 km<sup>2</sup>, the metropolitan area of Cairo spans an estimated 1,700 km<sup>2</sup> (over three times the Cairo Governorate), and is administered by four different Governorates with

essentially four different administrative and decision making authorities and structures. Attempting to forge a cohesive metropolitan transport plan or to deliver water/sanitation and other city services in a coherent fashion is a major challenge. Another example is Manila, whose metropolitan area comprises nineteen different municipalities without a higher tier mechanism for coordinating policy, planning and investment decision-making across jurisdictions.

**Turkey's Metropolitan Municipality regime promotes economic growth.** Every city's desire is to remain vibrant as its economy evolves with the ability to attract and retain firms and human capital and to gravitate over time to higher value-added activity. The Metropolitan Municipality Law provides a critical planning framework for Turkey's metropolitan areas that has a direct impact on infrastructure provision and coordination in the delivery of services. Used effectively, its provisions can help a city administration to promote mobility across a metropolitan area and ensure connectivity for residents and prospective businesses. In that regard, the Metropolitan Municipality regime can have an important impact on economic performance and city competitiveness. As further detailed under the City Competitiveness Chapter, this is called the "metropolitan effect." That is, the ability of the metropolitan regime to disproportionately attract firms and generate agglomeration economies. This phenomenon is illustrated by the heavy concentration of firms in Turkey's metropolitan municipalities in comparison to non-metropolitan municipalities.

**Urban form has an important impact on the economic viability of a city and its sustainability.** In principle, achieving urban density can yield multiple economic benefits. It can lower the cost of infrastructure provision, or, put another way, increase the number of beneficiaries per unit cost of infrastructure. It can reduce carbon emissions by making mass-transit more feasible as an alternative to private vehicles. And it can also maximize the efficiency of land use, reducing land costs per built area, which translates into lower housing costs, as well as higher productivity and tax



value of land assets. Cities reliant on property tax as their main source of revenue have a built-in incentive to make efficient use of their land and typically seek to promote density in their development planning. Analysis further detailed in the next chapter highlights how Turkey's system of cities has achieved a high degree of density, suggesting an economically efficient pattern of urbanization, while noting that achieving density alone is not sufficient unless it is accompanied by effective spatial planning and appropriate levels of infrastructure services.

### Connecting the Hinterland: Early Infrastructure and Settlement Planning

**Connective infrastructure was a hallmark of Turkey's nascent system of cities, enabling the flow of goods and human capital that fuel Turkey's urban economies.** Connecting cities with an efficient railway system starting in the early days of the Republic had not only the political objective of linking settlements across the country in an effort to promote national cohesion, but also the motive of improving accessibility and connectivity that provided a

strong economic foundation for Turkey's cities. Turkey's railway network and eventually its highly developed road network provided the economic backbone that supported vibrant local economies, even within the interior of the country.

**Turkey's early investment in settlement planning, dating back to the founding of the Republic, set an important foundation for the future of Turkey's cities.** It was during the Republic Period (1923-1950) that a nation-wide industrialization and urbanization process firmly took root beyond Istanbul. To realize this vision, policy makers recognized the need to actively promote the planning and development of settlement areas. Given its geographical location in the interior of the country without the typical endowments that would attract people and firms, Turkey's capital city of Ankara is a prime example of a planned city. A metropolis of 4.5 million people today, Ankara owes its modern day existence to such planning efforts. Across Anatolia, planners in the early days of the Republic selected small Anatolian cities for the development of industrial enterprise at a time when the State was a majority owner of commercial activity. State

**Figure 8: Development of Railways and Population Concentrations in Turkey in 2000**



Source: Ministry of Transport, Maritime Affairs, and Communications





manufacturing investments, public enterprises and transport investments were designed and executed to expand development eastward. The Marmara region actually experienced a population decline during this period in favor of the Anatolian hinterland. This spatial transformation was spearheaded by state intervention. Twenty-three settlements were planned over a decade starting in 1923 (Tekeli 2009).

**Turkey's planning system evolved during the transition years of the 1960s and 70s.** It was during the two decades of the 1960s-70s that full-fledged urban planning took hold. In 1966 an Istanbul Master Plan Office was established and the city's Masterplan completed, followed shortly thereafter by Izmir and Ankara in 1968 and 1969 respectively. Large public works projects of a monumental scale were undertaken across numerous cities. However, during the late 70s, the State's role as a technocratic agent of development shifted. During this period, the state began to recede from its activist interventionist mode to more of an enabler of the private sector.

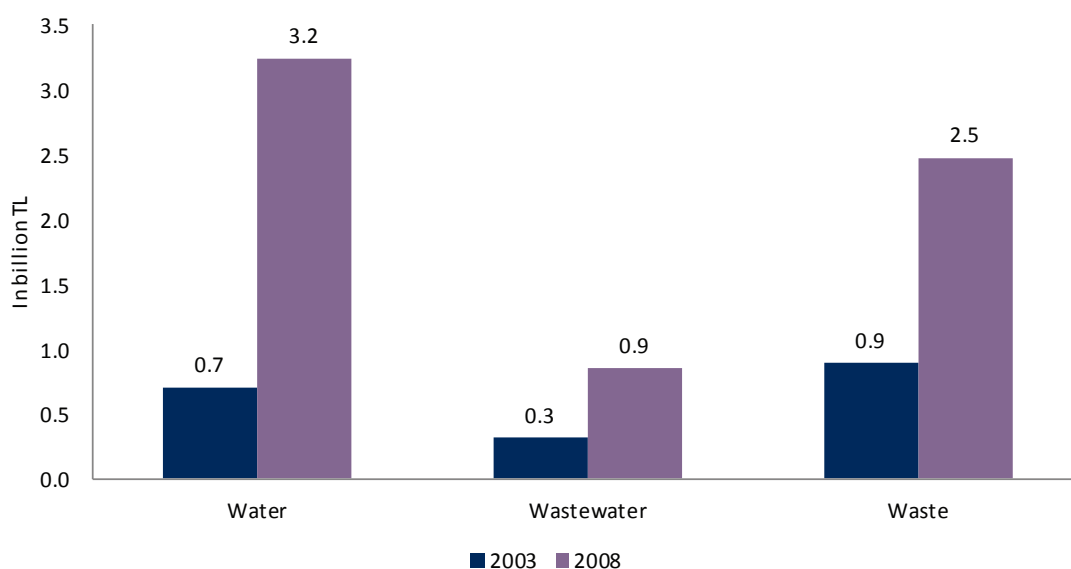
**A further key action of the Turkish Government was to ensure its cities were adequately financed.** As many developing countries have experienced, it is one thing to plan a city and devolve functions to local administrations. It is

quite another to ensure they have adequate financing to fulfill those functions and build the needed infrastructure. Turkish policy makers were keenly aware of this need and with private banks not able or willing to provide long term finance for infrastructure Iller Bank, or the Bank of Provinces/Municipalities, was founded in 1933. Iller Bank's mandate was to provide the long-term financing necessary for newly prepared municipal development plans and infrastructure service needs. Iller Bank remains to this day a critical institution in the financing, planning and development of cities.

### **Addressing Regional Inequities: Targeted Provision of Municipal Services in Small Rural Towns & Engaging with the Private Sector in Advanced Cities**

**Interventions at the national government level in cases of market failure have been a hallmark of Turkey's approach to support its system of cities.** Beyond the Government's foray into Housing Policy in the 1990s, efforts were also made to shore up the provision of basic urban services. Municipalities from their own resources and those supplied by the central government began over time to regularize informal settlements, including the provision of

**Figure 9: Turkey Substantially Expanded Public Expenditures on Water, Wastewater and Solid Waste Infrastructure between 2003 and 2008**



Source: Ministry of Development, Public Investment Data



road infrastructure, as well as network water, sanitation, and wastewater treatment to the point that most have become permanent features of the urban landscape in many cities. As a result, many of Turkey's informal settlements look and are much more habitable, sanitary and livable than the slums that persist in parts of Latin America and South Asia. In addition, Iller Bank provided financing to larger cities for infrastructure network expansion as they grew, enabling many to keep pace with rapid urbanization. But there were also acknowledged gaps in service coverage, particularly among small towns and villages that generally had a very low economic base and insufficient revenue streams to service debt. In response to this market failure, special programs were initiated by the Government to ensure that water, sanitation and solid waste services were adequately maintained in these fiscally dependent areas.

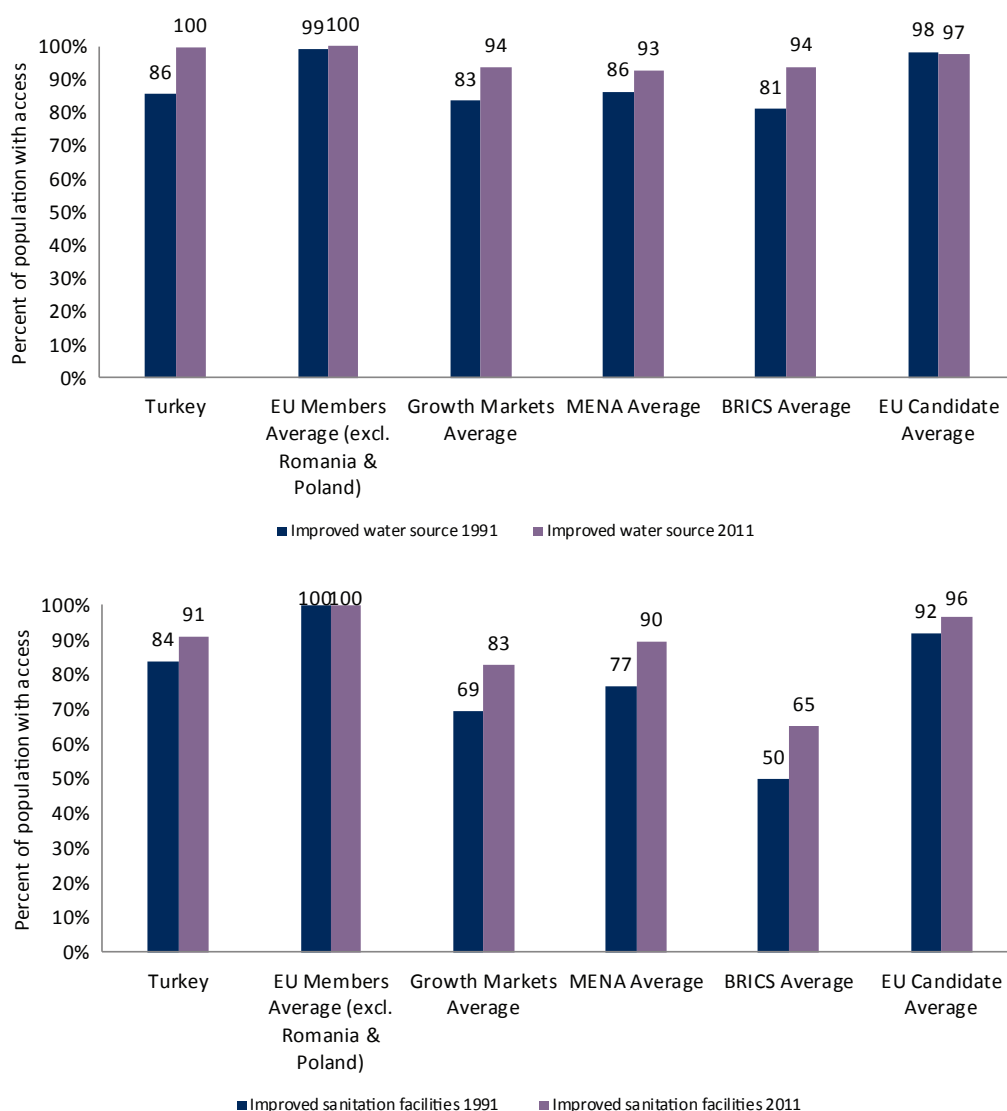
**For small towns and villages, development programs initiated by the Ministry of Development, such as KÖYDES and SUKAP, were designed to fill a critical gap.** KÖYDES, or the small villages water and sanitation project, spanned in its first phase a period of eight years (2005-12). The main aim of this program was to ensure broad-based access to water and sanitation services across all of Turkey's settlements, particularly small villages in remote rural areas. Other programs focused on towns and small cities, include BELDES, the Municipal Fund and, more recently, SUKAP, which was established in 2011 and through Iller Bank has reached millions of beneficiaries in a span of only three years. Its target has been small municipalities and involves a 50 percent subsidy to municipalities to encourage them to borrow from Iller Bank and invest in critical infrastructure service needs. As reflected in Figure 9, investment in water, sanitation and solid waste infrastructure rose dramatically from 2003 to 2008, due in part to programs like SUKAP.

**Programs supporting fiscally-constrained municipalities with matching grant subsidies helped dramatically expand water supply and sanitation service coverage, particularly over the past decade.** These programs, taken

together with a national system that provides financing for municipalities through Iller Bank and commercial banks have contributed to raising Turkey's access to water supply at nearly universal coverage by 2011, and sanitation services at 91 percent (Figure 10).

## **Managing Rural-Urban Migration: A Permissive Policy Stance on Informal Settlements**

**While urbanization was steadily increasing during the 1950s-70s, it was during the 1980s that Turkey experienced a major surge of rural migrants to cities, causing rapid expansion of informal areas in urban settlements.** Many cities were unable to accommodate this growth, and the influx of migrants took place so quickly that these informal settlements became known as *gecekondu*, literally "houses erected overnight." Estimates of informal housing in major cities during that period ranged between 30-60 percent of all urban housing stock. Most in-migration during this phase was concentrated in large cities along the coast (Istanbul and Izmir) and Ankara.

**Figure 10: Turkey's Water and Sanitation Service Coverage (1991 - 2011)**

Source: WDI

Note: Country groups are ranked by urbanization rate in 2011 (highest to lowest).

The "EU Members" refers to Bulgaria, Czech Republic, Hungary, Poland, Romania and Slovak Republic. "Growth Markets Average" refers to unweighted average of Indonesia, Malaysia, Mexico, Philippines and South Korea. "MENA Average" refers to unweighted average of Egypt, Jordan, Morocco, Syria and Tunisia. "EU Candidate Average" refers to unweighted average of Albania, Croatia and Serbia.

**Turkey adopted a permissive policy toward rural migration and this policy stance likely encouraged migrants to flock to cities.** Over the period from 1949-90, eight amnesties (Buğra 1998) were issued by the Government of Turkey legalizing irregular residences. Whatever the motivation may have been the prevailing attitude of the Turkish Government at the time and tacitly accepted by the general public was

the notion that all Turks have a right to some form of basic housing. The amnesties gave residents either outright legal title to the land or the right of usufruct and removed the fear of eviction. With security of tenure, as witnessed in other developing countries, residents of informal areas began to invest in their housing, in some cases adding rooms that were subsequently rented to new migrants<sup>8</sup>. Turkey was

<sup>8</sup> Turkey's attempt to address supply-side housing challenges was similar to what Mexico attempted to do. Both countries recognized what Spence argues, namely that "only a greater supply of serviced land and housing can lower costs, because it helps to solve the problem at its root as well as contain the fiscal burden of subsidies". According to Spence, Mexico offered an upfront subsidy combined with efforts to provide better infrastructure and security of tenure, allowing households to make investments in their home on their own.



also in a fortunate position to take such decisions as the vast majority of land on which the informal settlements took shape was public land. These circumstances perhaps helped circumvent property rights criticisms from private land owners.

**By the 1980s, as rural in-migration was peaking, urban planning responsibilities were devolved to local authorities and planning regulations were relaxed to accommodate rapid urbanization and changes in land use patterns.** With the emergence of the private sector during this period of economic liberalization, development plans lost their dominant role and were not directly led by the central government. This was a period of enormous significance for urbanization, as the largest shift in population from rural to urban settlements took place during this time. The Development Law (No. 3194), which was enacted in 1985, delegated increasing functions to local administrations in planning processes, while the State turned its hand to regional planning focused on economic zones and leveraging of economic endowments of a trans-jurisdictional nature. It was at this time, particularly in the early 1980s that metropolitan cities turned to an “incremental planning” approach<sup>9</sup> (Tekeli, 2009).

### Meeting Housing Needs: Social Housing and Evolution of the TOKI Model

**The mid to late 1980s were also an important period in which other key institutions were established to more effectively manage rapid urbanization, which at this point had reached its peak.** The first measure was the establishment of the Mass Housing Fund through the passage of Mass Housing and Public Participation Law (#2985) in 1984. This law provided one of the first formal state interventions in the housing policy arena to that point. The law recognized the urgency of responding to rapid urbanization, which was peaking, provisioning for financing of low income housing at nominal

rates with long-term payback periods. The Law also called for the establishment of a Housing Agency -- the Mass Housing and Public Participation Administration -- which was set up the same year as an autonomous agency, but later split into two agencies in 1990 -- the Public Participation Administration and Mass Housing Administration (TOKİ).

**The entry of TOKİ to the housing supply market was significant.** TOKİ, founded in 1990, created a “wholesaling” mechanism for the large scale supply of housing for both low and middle income market segments during Turkey’s most pressing period of urbanization. Its purpose and orientation was to create the enabling environment to promote the entry of large scale housing supply by the private sector. This was largely accomplished through TOKİ’s brokering role, which helped to cut red-tape, streamline administrative procedures into an effective “one-stop-shop”, facilitate the assembly of public land at a scale sufficient for large scale housing development, and mobilization of housing finance. This, in turn, created investment opportunities for large contractors and real estate developers, and the scaling up from the traditional cooperative housing model that could not keep pace with increasing housing demand. This could only be achieved because Turkey’s approach to low income housing was not to supply it directly by the public sector but to use market mechanisms to encourage real estate developers and building contractors to go down market. To do so, TOKİ relied on the leveraging of public land which factored in as a subsidy to make housing affordable to low income groups. Provisioning for low income housing was based on small scale, limited space (often around 50-80 m<sup>2</sup> units) housing models that developers would not have developed without the state’s intervention.

**TOKİ’s approach to housing evolved over time and in some respects benefitted from lessons learned.** While early projects were criticized for poor quality and location choices, as well

<sup>9</sup> For many analysts, this planning juncture marked the beginning of the decline of Turkish cities. They argue that the flexibility granted to cities and large-scale private developers ultimately undermined effective city planning, contributing to urban sprawl and unplanned development.



as the absence of amenities and surrounding infrastructure, TOKI factored these considerations into later models. Many later developments also considered mixed income facilities. The mixed income feature of many TOKI housing projects was made possible through cross-subsidies derived from the auction of development rights for the benefit of low income groups. The feature of mixed income housing has also enabled Turkey to avoid clustering the poor in low income housing projects that can lead to vertical slums. TOKI's entry into the housing market may have also helped to improve the country's overall housing supply capacity by providing new housing stock that could free up older stock for incoming rural migrants. This likely scenario, ultimately helped alleviated pressure on the state to provide public-sponsored housing.

**The entry of TOKI to the housing market went beyond the provision of low and middle-income housing.** TOKI's housing model enabled Turkey's housing supply market to scale up by mobilizing the land, financing and a private sector delivery mechanism that promoted the emergence of larger-scale real estate developers and construction companies. This was critically needed during Turkey's period of rapid urbanization, as the prevailing cooperative housing model which facilitated pooling of savings among individuals and investor groups

and an incremental housing supply approach was no longer adequate to keep up with demand.

**Limitations to the TOKI Model: Trade-offs between Efficiency and Accountability.** Despite these positive contributions, TOKI's establishment law and subsequent amendments provides it with significant powers, including the ability to develop land without adhering to the scale and character of the existing built environment as reflected in the city plan. Where there may be popular political support for such residential buildings, as well as market demand, community consultations of those most directly affected have been faulted at times for being perfunctory and without full participation of all stakeholders. More recently, TOKI's financial accounts and the feasibility and financials of specific transactions have been made more open to public access. However, while the concept of combining functions into a single agency made good sense and delivered over 500,000 housing units in the span of less than seven years, there is today a need to work across multiple agencies, including at the national and local administration levels to bring integrated solutions. For such purposes, establishment of a multi-agency "Housing Commission" would be a suitable vehicle for coordinating policies and intervention strategies.



## CHAPTER 2: CITY COMPETITIVENESS

**What features of Turkey's system of cities have enabled them to contribute to economic growth and what key challenges remain ahead?** Having reviewed in the previous chapter in broad economic terms the linkage between Turkey's economic growth and urbanization, this chapter aims to take a more granular look at city performance, considering factors and trends relating to city density, firm location, the prevalence of human capital, urban land values and management, as well as the connectivity of cities. The findings suggest that Turkey's system of cities has had a significant "metropolitan effect," which is attributable in large part to the metropolitan municipality regime adopted in 1984. This has enabled metropolitan municipalities to attract a disproportionately higher number of firms per capita, achieve a higher degree of economic density, promote higher human capital concentrations, and produce a more diverse range of goods and services, many of which are not produced by other cities. Key challenges going forward include: (i) initial signs of urban sprawl with a larger number of non-ICT firms seeking to locate at the periphery of cities; and (ii) horizontal imbalances across the western and eastern parts of the country that suggest the need for a more geographically-diversified policy approach. These issues are further explored below.

**Economic benefits from urban growth come from exploiting economies of scale and agglomeration, enabling substitution between land and non-land inputs.** The link between urbanization and economic growth is based on the propensity of non-agriculture activities, i.e. manufacturing and services – to concentrate in urban areas. Why? Non-agriculture activities respond to the size and density of a settlement. As agriculture is land intensive, there is limited scope for a large number of people to concentrate in one settlement. Even though some degree of substitution between land and capital as well as land and labor is possible, its scope is limited compared with manufacturing and services. For manufacturing, capital can

substitute for land by building high rise factories or by designing processes where use of land is minimized. And services can be carried out in buildings on any size – further increasing the substitution of land by capital. In addition, the presence of scale and agglomeration economies increases likelihood of the spatial concentration of industry and services. The functioning of industries require complementary services such as banking and finance as well as proximity to other manufacturing facilities for procuring inputs as well as selling intermediate products. Similarly for many retail and business services, a minimum population catchment is needed for profitability (inventories in retail trade and consumers for financial services). Hence, the combination of scale and agglomeration economies and comparatively high non land- land substitution elasticities in industry and services enhance gains from urbanization.

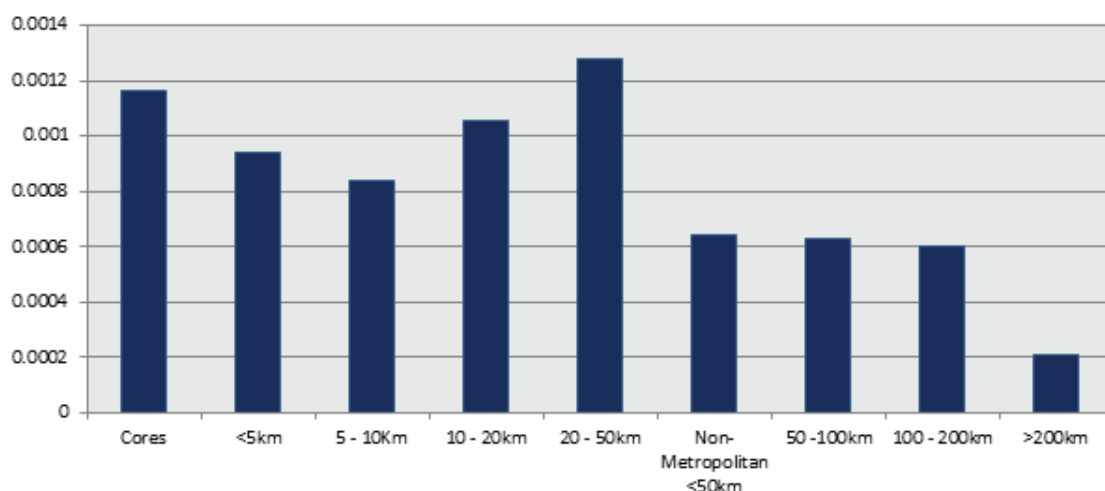
**The Metropolitan Effect: Are Turkish cities leveraging agglomeration economies?** Zooming into metropolitan areas, there appears to be a clear divide in the location of firms within and outside of metropolitan municipalities. Even when controlling for population (by calculating the ratio between the number of firms and total population in the district) the number of firms and employment is considerably higher in districts within metropolitan areas. When looking at the spatial distribution of firms, Figure 11 below shows a considerable decline in the number of firms per inhabitant when moving outside metropolitan municipality boundaries. Districts within 20 and 50 km from the metropolitan core have twice as many firms as districts that are within 50 km of that same core but are not part of the metropolitan municipality.

**Economic concentration within metropolitan municipalities spans multiple jurisdictions.** Evidence suggests that the metropolitan effect goes beyond market accessibility effects and on average, the coordination functions of metropolitan municipalities seem to be paying





**Figure 11: Average Number of Firms per Inhabitant**



Source: TOBB and ABPRS, TurkStat

off in terms of facilitating economic activity. Regression analysis suggests that even after controlling for the distance to the city center (an approximation for market accessibility measures), there is still a positive and significant effect of belonging to a metropolitan municipality, both in the number of firms and employment in a district (see Box 3 below for further technical details). It seems that metropolitan municipalities are able to internalize

negative coordination externalities and therefore can benefit from the inclusion of several districts and fully enjoy agglomeration effects. A likely contributing factor is the metropolitan municipality regime, which is granted responsibility for urban planning and the planning of transportation networks across the entire metropolitan area such that districts inside the metropolitan limits enjoy positive coordination and connectivity effects.



### Box 3: A parametric analysis of the “metropolitan effect”

In order to assess metropolitan effect, it is important to distinguish between firms located in proximity to a metropolitan municipality and those included within a metropolitan municipality administrative unit and benefitting from its regime advantages. Comparison of the average number of firms per district in metropolitan municipalities (260) and outside of metropolitan municipalities (29) shows that districts in metropolitan municipalities host almost **10 times** more firms per district than non-metropolitan districts. This difference exists for population too, but metropolitan districts house on average only **5 times** more inhabitants than non-metropolitan districts. Indeed, in a regression of the number of firms per district against the distance to the closest metropolitan core, proximity to a city center is statistically significant and it shows that, on average, districts have 0.85 less firms per km away from the city.

There are 153 districts situated within 50km of a city center, but not included in the metropolitan city boundary. Regression analysis was carried out to test metropolitan effect by seeing whether distance to the city center can have a different effect inside and outside of the metropolitan municipality and test whether there is an extra-effect of being administratively part of a municipality. To do this, a variable representing the square of the distance to the center is included to allow for non-linear effects (such as suburbanization for example). The results indicate that distance to the closest metropolitan municipality (as well as the square of that distance) does not matter at all for districts outside of the metropolitan municipality (the coefficients are not statistically different from 0), but there is a strong effect inside the metropolitan municipality and a significant non-linear component to it. Beyond these results, the most striking one is that the effect of being within the city limits not only persists (the coefficient is highly significant) after controlling for distance to the city center, but actually increases. Results from this regression, presented in the following table, are used in the simulations.

Number of Firms		Comparison of Averages	Effect of Distance	Full Specification
Constant Term		28.75*** (5.101)	139.39*** (9.261)	39.63** (16.87)
Metropolitan Effect		230.97*** (13.20)	-	336.73*** (28.60)
Distance	Within MM	-	-0.8533*** (0.08630)	-13.18*** (2.779)
	Outside of MM	-		-0.089 (0.289)
Distance Squared	Within MM	-	-	0.188*** (0.0638)
	Outside of MM	-	-	-0.0001 (0.0011)

Note that the effect persists if the four greatest cities are not taken into account (and all the districts for which one of the four largest cities is the closest metropolitan municipality), even if it is smaller. Therefore, while it is true that the effect is largest for the largest cities, it would be wrong to say that it is driven only by the large municipalities, as it is an effect that exists for smaller cities too.

10 \* denotes significance at the 10percent level, \*\* at the 5percent level and \*\*\* at the 1percent level.

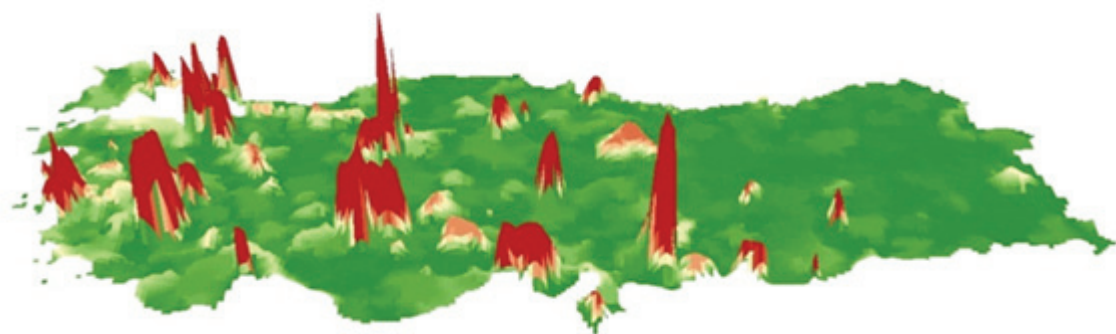




**These market principles are well illustrated in Turkey, as the country features a relatively concentrated economic footprint, dominated by the sixteen metropolitan municipalities.** Analysis of 2006 firm level data by location, employment and industrial type from the Union of Chambers and Economic Exchanges of Turkey (TOBB) shows high levels of geographic concentration of economic activity, as can be seen in Figure 12 (see Box 4 for details on data and analysis). It is clear that there are

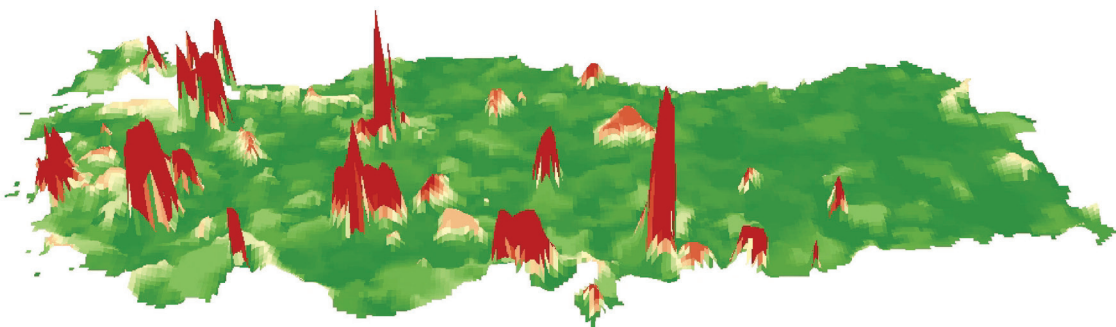
high spatial differences with very high concentrations around the metropolitan cities/ municipalities, as well as along Turkey's borders. On the other hand, some eastern parts of the country witness very low levels of economic activity. Another noteworthy observation is the substantial number of firms being established in the interior of the country, among the emerging Anatolian Tigers, which are now capturing the positive economic spillovers from Turkey's leading cities.

**Figure 12: Spatial Distribution of Firms Established through 2006**



Source: TOBB

**Figure 13: Spatial Distribution of Firms Established between 2007 and 2012**



Source: TOBB, 2012



**Economic activity in Turkey exhibits a great degree of stickiness -- with new activity following historical patterns.** When comparing firms established in or before 2006 with “new” firms established between 2007 and 2012, a strikingly similar pattern of firm location emerges, suggesting high levels of geographical stickiness (Figure 13). The similarity of the two maps shows that new businesses have tended to follow their peers. This issue of stickiness or convergence of districts where districts compensate for an early disadvantage is addressed later in this report. Further analysis of the firm data indicates a very strong correlation (0.9386) between the location of old firm (prior to 2007) and location of the new firms of new firms.

**Analyzing results beyond the dynamic of old and new firms reveals interesting and different industry patterns.** The following table

shows the regression results at the industry level, focusing on the construction sector. It shows that overall activity matters in explaining the location of new construction firms, but that stickiness is above all a within-industry phenomenon, with construction firms locating where other construction firms are and as a second order phenomenon, where overall activity is. The last column shows that there is a “metropolitan effect” for construction firms. In other words, construction firms have recently established disproportionately in metropolitan districts even after accounting for existing differences, such as population. This further underscores the point that markets are functioning well in Turkey, as metropolitan districts have experienced faster population growth than their non-metropolitan counterparts, thereby generating higher demand for construction.

#### Box 4: Data and Level of Analysis

Studies on localization and concentration of economic activity usually use data on real wages or productivity. In the case of Turkey, computing real wages was not possible, as housing or transportation costs are very hard to derive. Similarly, city level data on productivity is not available. Different data sources are used in this study. First, population and education data come from the 2000 Census and the Address Based Population Registration System from TURKSTAT. Second, firm location, employment and branch of economic activity are obtained from the Union of Chambers and Economic Exchanges of Turkey (TOBB). This data consists of more than 60,000 observations representing all registered Turkish firms. It contains their economic activity, number of employees, employment classification, location, and, for most of them, their date of establishment. Therefore, the heart of the analysis is firm or job data.

It is important to highlight that the firm level data contained in the dataset has been aggregated at the district level, when most previous work was done at the province level. Having access to a more granular level of data (there are 957 districts but only 81 provinces) allows for a more in-depth understanding of mechanisms and patterns of distribution of economic activity in Turkey, particularly at the city level. It is a significant contribution made by this report insofar as it allows for a deeper understanding of the dynamics within and external to the metropolitan municipality regime. All of the first sixteen metropolitan municipalities are included within the scope of this report<sup>11</sup>.

**Source:** Urbanization Review Team

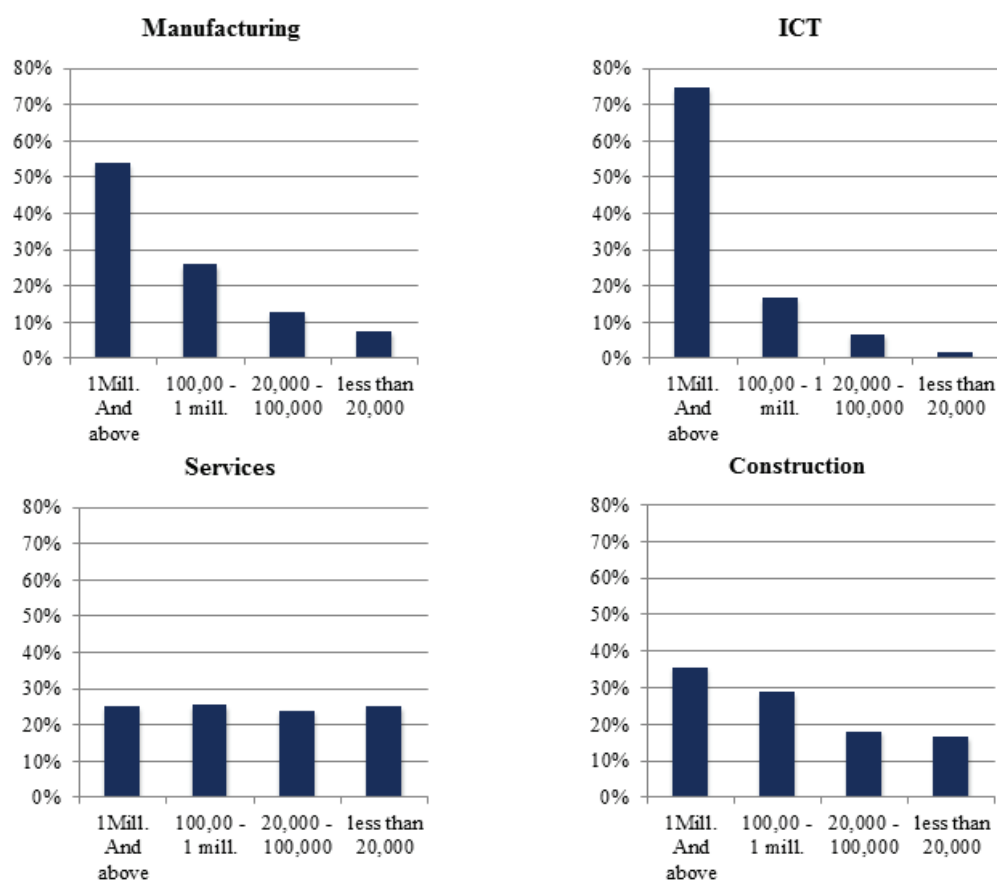
11 Greater metropolitan municipalities are created by the Turkish Parliament according to criteria defined in the Greater Municipality Act of 1984 and the New Greater Municipality Act of 1984. They are (in alphabetical order): Adana, Ankara, Antalya, Bursa, Diyarbakir, Erzurum, Eskisehir, Gaziantep, Istanbul, Izmir, Kayseri, Kocaeli, Konya, Mersin, Sakarya and Samsun.


**Table 2: New firms in construction**

	All Districts		
Number of Old Construction Firms	0.311*** (0.0214)	0.267*** (0.0250)	0.350*** (0.0191)
Number of All Old Firms	-	0.0032*** (0.00056)	-
Metropolitan Effect	-	-	0.3316*** (0.116)
Population	1.77e-06*** (3.68e-07)	-	-

**The metropolitan effect on the ICT industry, as expected, is the most pronounced of all sectors.** Figure 14 shows that eighty percent of ICT firms are concentrated in metropolitan cities. Manufacturing is also concentrated in the largest cities, with over 50 percent of firms locating in cities with more than one million inhabitants. However, the construction sector evidences less of an agglomeration economies effect, while services (because of its broad-

based classification) suggests even less benefits from agglomeration economies. Specific service sub-sector analysis would likely yield a more diverse picture. For instance, it would allow for distinctions to be made between services such as pharmacies (broadly distributed in response to consumption markets) and innovation and know-how services that typically benefit from agglomeration economies.

**Figure 14: Distribution of Firms Across City Sizes - by Sector**


Source: TOBB

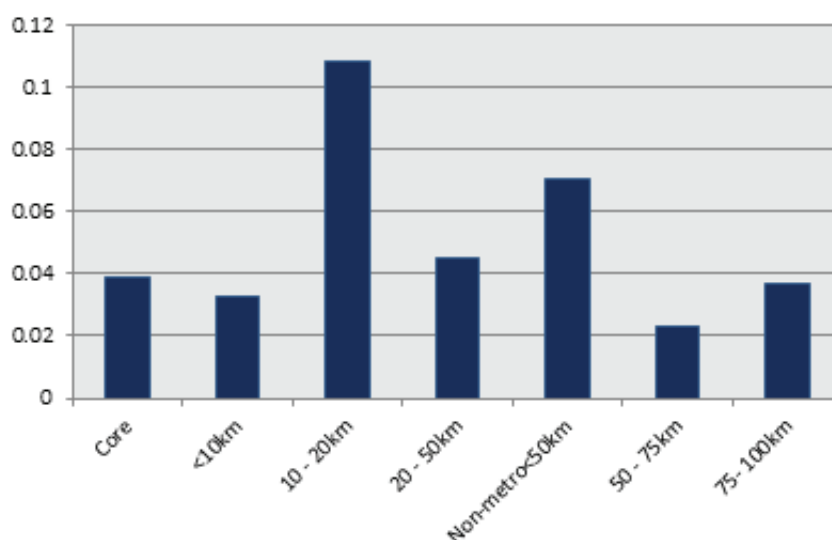


**But the positive effect of a metropolitan municipality attracting firms varies across the system of cities.** While on average the effect is positive, this effect is not present for all cities. In Izmir, for example, some suburbanization is observed in a small radius around the city core (10-20km) when looking at employees per inhabitant. Figure 15 below also shows that for Izmir the metropolitan effect is not apparent, with non-metropolitan districts concentrating a larger number of firms than metropolitan districts in the 20-50 km distance band.

**Creating metropolitan municipalities is not enough to ensure coordination across districts.** The right incentives for coordination need to be provided. For example, the Greater London Authority (GLA) is the top-tier administrative body for Greater London, consisting of a directly elected executive Mayor of London and an elected London Assembly, which has 25 members. As the strategic regional authority, the GLA has three fundamental areas of responsibility: Economic development and wealth creation, social development, and environmental improvement. The GLA derives its funding largely through a direct government

grant, as well as some money being collected through the levying of local Council Tax. Responsible for the administration of an area in excess of 610 sq miles, the GLA shares its powers of local governance with the councils of the 32 London boroughs and the City of London Corporation. Created as a means of improving the coordination of local governance, the GLA's powers were enhanced by the 2007 GLA Act, which saw the Mayor of London and London Assembly gain further influence in a number of areas, including housing, planning, climate change, waste, health and culture. Although the GLA does not provide any direct services itself, it is responsible for coordinating land use planning in Greater London, while also working with the rest of the GLA Group - Transport for London (TfL), London Fire and Emergency Planning Authority (LFEPA), and the Mayor's Office for Policing and Crime – and a range of other stakeholders, to deliver the Mayor's vision for London, as laid out in the London Plan. The GLA, furthermore, offers London a degree of continuity in terms of delivery of this vision as it is a permanent body, unlike the elected Mayor and London Assembly.<sup>12</sup>

**Figure 15: Average Employment per Inhabitant in and around Izmir**



Source: TOBB and ABPRS, TurkStat

<sup>12</sup> <http://www.london.gov.uk/who-runs-london/greater-london-authority/>



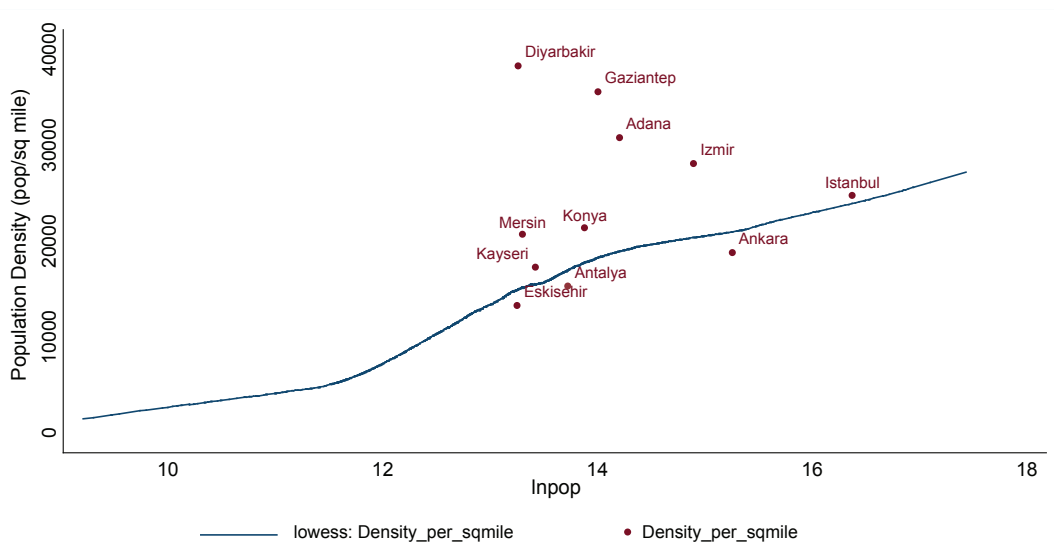
## Urban Density as a Contributor to Agglomeration Economies

Urban density is a key factor in leveraging agglomeration economies and large cities in Turkey exhibit densities comparable to other globally prominent cities. Densities in some of Turkey's cities are comparable to Los Angeles (US), Rio de Janeiro, (Brazil), and Buenos Aires, (Argentina). In fact, compared to other world cities, Turkey's largest cities have performed above the mean. Figure 16<sup>13</sup> shows estimated densities for over 1500 cities around the world and suggests that cities such as Tarsus, Diyarbakir, Bursa, Gaziantep, Mersin, Konya and Izmir are denser than internationally-comparable cities. Istanbul's density is very close to the international average density for its population size. On the other hand, Ankara, Antalya, and Eskisehir have densities slightly below the international average of similar cities in terms of their population size.

While density contributes to agglomeration economies, physical population density by itself is not a recipe for success. What is important is that densities are articulated and allow for capital intensity. For this to happen it is necessary that land markets are efficient, and floor space and other capital structures accompany population density. This brings to the forefront the importance of effective urban planning. Without a concerted effort to plan cities and effectively manage urban land, there are high risks of sprawl and inefficient land uses, a phenomenon that is beginning to emerge in Turkey. Underpinning this approach is a well-designed land valuation system.

**Land prices are central for land markets to function efficiently.** When land prices are high, as they typically are in central business districts, developers will supply dense developments, including high-rise office buildings, large shopping centers and multi-story housing. They do this because they need to gener-

**Figure 16: Population and Density in Turkish Cities**



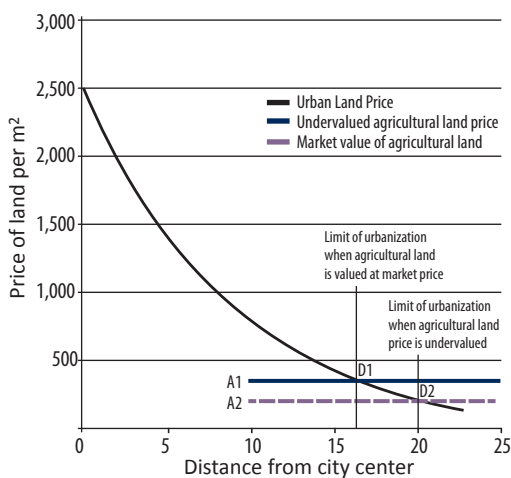
**Note:** Using information on population and densities for over 1500 cities, local averages are estimated and depicted through the blue line. For any given population level the trend line indicates the average, or expected density. Cities above the trend line have densities above the international average for their population size, while cities below the line have densities below the international average.

**Source:** Data from Demographia (2008) and Urbanization Review Team calculations

<sup>13</sup> This report used Lowess plotting to find the non-linear relationship between population and density. LOWESS- Locally Weighted Scatterplot Smoothing- carries out robust locally-weighted time series and scatter plot smoothing for both equispaced and non-equispaced data.



**Figure 17: Inefficient urban expansion when land prices are distorted**



Source: <http://alain-bertaud.com/>

ate revenues from selling or renting buildings that will cover both construction costs and land costs. Higher land prices routinely lead to higher density –enhancing productivity spillovers and potentially increasing supply of affordable housing and managing demand for transport. When ‘official’ land prices do not reflect demand and are depressed at the urban periphery, it is likely that sprawl or suburbanization will be excessive (see Figure 17). In fact, spatial expansion or peri-urban development across a range of countries—Uganda, China, India, and Vietnam—point towards rapid peri-urban development when land is not priced right. This creates a major urban governance challenge as the scale at which urban and metropolitan economies now operate often do not coincide with their physical and administrative boundaries – and the jury is still out on the type of institutional arrangements that can enhance coordination across these entities.

**In moving towards a better system of land valuation and dissemination of land price data, a key step is to move towards property registration values that are closer to market values.** Historically, there has been a tendency to underestimate property values in Turkey due to the existence of taxes and charges associated with transaction values. Moving away from transaction charges and towards a system of property taxes should contribute both to improving the quality of the data collected by the

land registry offices while also providing more predictable and buoyant revenue streams for local administrations.

**Managing peri-urban expansion will be a critical determinant of how successful cities will be in harnessing agglomeration economies as well as in inducing efficient resource allocation into the future.** In Turkey, there is an emerging risk illustrated by the fact that in 2011 the growth rate of the metropolitan municipality population residing more than 20 km away from the center is larger than in 2000. Location of economic activity follows a similar pattern to that of population inside metropolitan municipalities. This is to be expected because land in core urban areas is largely fully utilized, leaving few options for new firms without concerted efforts at urban redevelopment. Empirical data analysis shows that manufacturing, services and construction firms are distributed almost at even rates with respect to distance to the nearest metropolitan core (see Figure 18). However, this is not the case for ICT, which is highly concentrated in the cores. ICT is also disproportionately located in metropolitan municipalities, reinforcing the role of city cores in enabling ICT.

**Traditional activities, such as manufacturing, are moving out to the metropolitan suburbs.** Overall, industries that benefit from urbanization economies and their agglomeration effects (such as ICT) are located in the cores, and industries that benefit from localization economies (such as construction) are situated in the suburbs or more geographically diffused. This can be better seen in Figure 18 plots “firm density” (number of firms per km<sup>2</sup>) for construction and ICT. The curve for ICT is significantly steeper showing that ICT firms are highly concentrated in the cores, when construction firms benefit more from being able to expand outside of the core.

**Suburbs are home to large firms and those benefiting from localization economies:** Economic suburbanization is characterized by the movement of larger firms to the suburbs. Figure 19 suggests that firms in extended suburbs are larger than firms in other parts of the cities. Interestingly, the relation is not monotonic

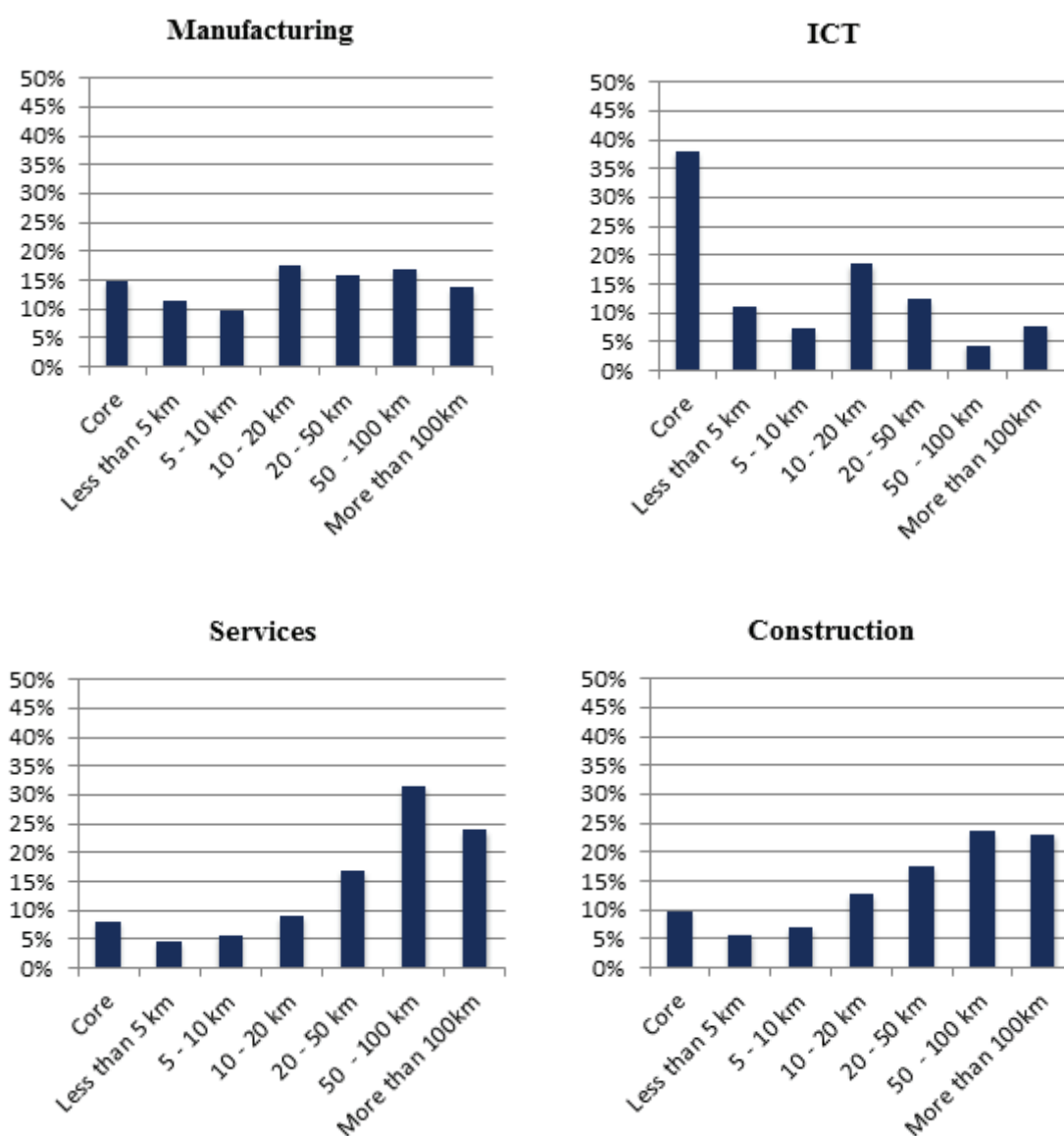




with the distance to the core and, in fact, firms situated inside the cores are larger than what could have been expected given the constraints associated with city centers, e.g. limited access to developable land and increased congestion. This shows that some advantages must counterbalance those constraints, such as ease of access to transportation or the advantages of

being located close to other similar firms. Old firms are systematically larger than new firms, which should not come as a surprise<sup>14</sup>. The slope is steeper for old firms as one moves to the extended suburbs, suggesting that suburbanization happens both because more new firms are created in suburbs (as in Figure 20) and because old firms are larger in suburbs.

**Figure 18: Spatial Distribution of Firms - by Sectors**



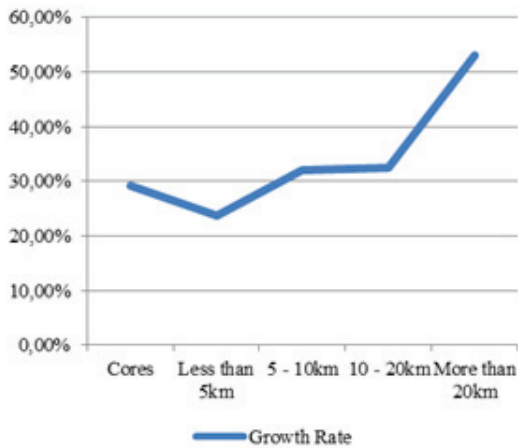
Source: TOBB Data, WB staff calculations

<sup>14</sup> Especially given the potential survivor bias.

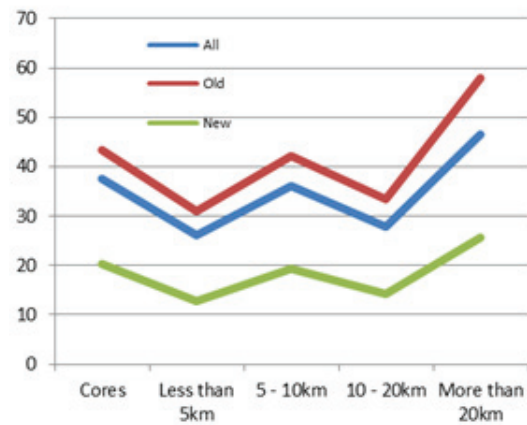




**Figure 19: Average Growth Rate of Population in Metropolitan Municipalities by geographical area (2000-11)**



**Figure 20: Average Size of Firms (Old and New)**

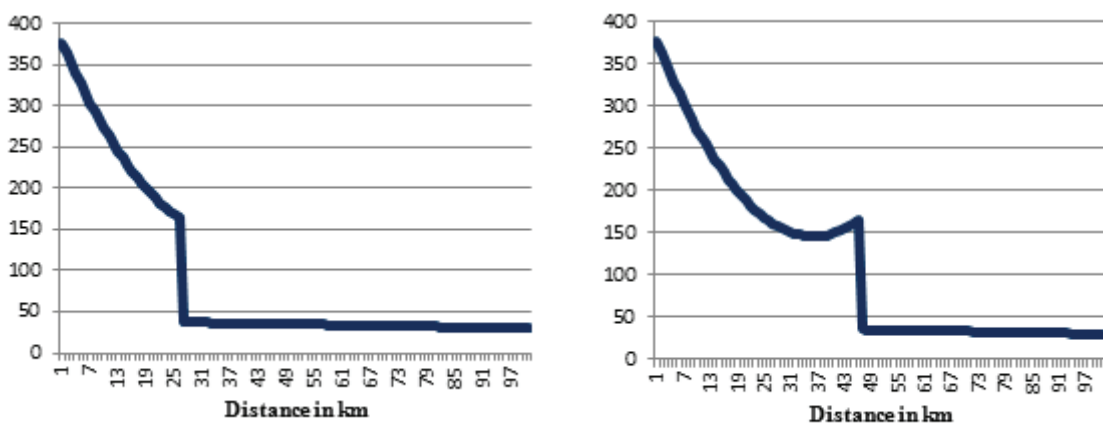


Source: 2000 Census, ABPRS, TurkStat and TOBB data, WB staff calculations

**Suburbanization of economic activity is limited to Turkey's largest cities** in terms of spatial expansion (average size, 45km) as Figure 21 below suggests. In other words, the importance of the non-linearity in the relationship

between distance to the core and economic activity only matters for very big cities. Secondary city cores are emerging in suburbs, while smaller cities remain fairly monocentric.

**Figure 21: Simulated Number of Firms per District and Distance to City Center, for an average city and an average large city**



Source: TOBB Data, WB staff calculations



## The Importance of Human Capital to City Competitiveness

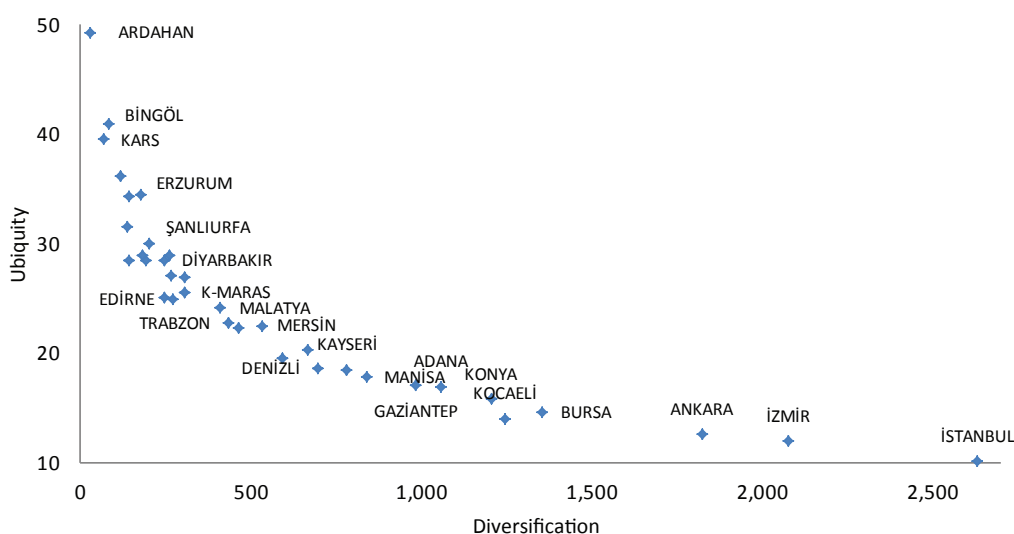
**Building an effective high quality education system is essential for fostering growth and enhancing competitiveness of cities.** Today, half the working-age population in Turkey has less than basic education; this undereducated segment of the population accounts for 64percent of the jobless and 65percent of informal workers (World Bank, 2012). Introducing a system of financing public education that focuses on equity concerns is likely to contribute to the competitiveness of the whole country. Studies suggest that per capita financing schemes for education are more effective in reducing *equity* concerns by generating per student expenditures that reflect variations in the real cost of education across places (World Bank, 2011). Improving targeting of public resources towards groups with greatest needs (the poor, girls, and those in rural areas) may also contribute to decreasing spatial disparities in education and enhancing competitiveness across the urban portfolio (Harmon et al. 2003, Patrios 2008 and World Bank 2011).

**City competitiveness is strongly influenced by a city's human capital base.** Figure 22 below presents the diversity and ubiquity of product and service offerings for a wide range of cities in Turkey. Diversity refers to the range of

products and services offered, while ubiquity refers to the number of cities producing the same good or service. High diversification suggests enhanced competitiveness that relies on a range of human capital. A low ubiquity score also suggests stronger city competitiveness, as it indicates that a given city is able to produce goods and services that other cities are not able to product, relying on high quality human capital. As can be seen from Figure 22, there is a strong negative correlation between diversification and average ubiquity, which shows that diversified cities are not only able to produce many different products but also products that are not produced elsewhere. Large cities situated in the Western part of the country (Istanbul, Izmir, Kocaeli for example) are very diversified and capable of producing non-ubiquitous goods, making them highly competitive. The challenge will be for other cities in Turkey to improve their performance in the diversity and non-ubiquitous (innovative) nature of the goods and services they produce.

**Turkey's largest cities such as Istanbul and Ankara lead innovation.** For these cities to maintain and improve their competitiveness, and to expand their pool of innovators, building a skilled labor force is important. Improving access to and the quality of education – not only in the large cities but throughout the urban

**Figure 22: Diversity and Average Ubiquity in Turkey's Cities**



**Source:** TOBB Database and TEPAV Calculations

**Note:** A wide range of products produced by the city, while a high ubiquity score signals that the city is producing products that are widely produced by other cities, often by firms in easy-entry industries with limited innovation.



system – should be a priority. However, the illiteracy rate among the Turkish population aged 15 and more<sup>15</sup> was 5.7 percent in 2011, while people with more than a high-school education represented 10.8 percent of the population. Figure 23 shows that the distribution of educated people follows very closely the distribution of the urban population. This distinction is even further accentuated between metropolitan municipalities and the rest of the country. While rural districts house a very small fraction of highly educated people, metropolitan municipalities house a disproportionately large number.

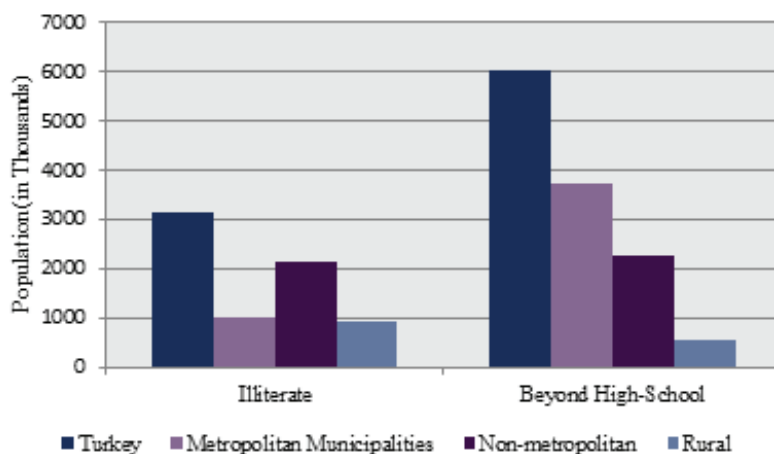
percent (see Figure 24 below). Diyarbakir has an illiteracy rate (11.4percent) that is in fact more than its higher education rate (8.7 percent). Interestingly, Ankara has by far the highest rate of high school or higher 19.9 percent, a city, notably, with Turkey's highest share of ICT firms.

**A “metropolitan effect” is also observed in education attainment:** When comparing city population illiteracy and higher education attainment levels spatially across districts within metropolitan areas and those outside, sharp contrasts emerge. Figure 13 plots the illiteracy and the higher education attainment rate for

city districts by their distance to a city center and whether they belong to a metropolitan municipality. A fairly uniform pattern for illiteracy emerges within metropolitan municipality boundaries, as distance to the city center seems not to matter (there is no suburbanization of human capital). However, there are much stronger dynamics relating to population with higher education attainment across metropolitan

municipalities, where there is a significantly higher level of educational attainment in the city cores and relatively sharp declines when moving toward districts outside the city core. This inverse relationship of higher edu-

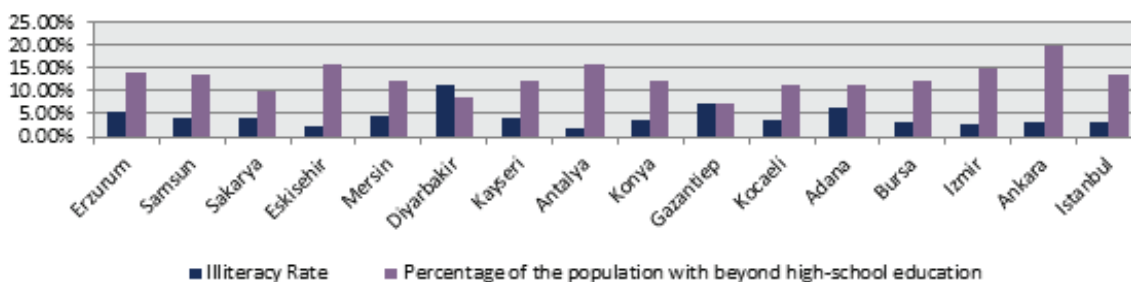
**Figure 23: Human Capital in Turkey**



Source: APBRPS, TurkStat, WB staff calculations

**There are also wide disparities in human capital even across Turkey's largest cities.** In Gaziantep for example, only 7.4 percent of the population has high school or higher education, a rate very close to its illiteracy rate of 7.2

**Figure 24: Human Capital across Turkey's Cities**

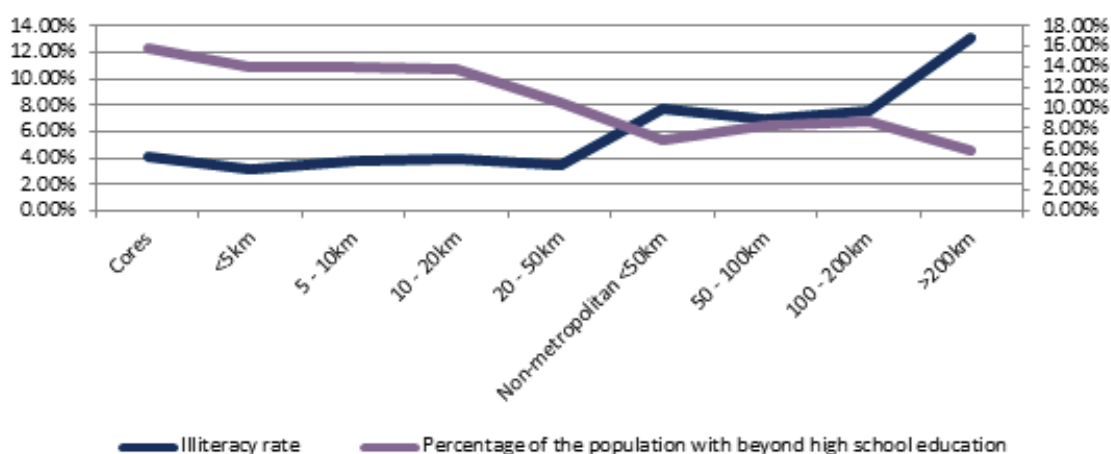


Source: APBRPS, TurkStat, WB staff calculations

<sup>15</sup> In the following analysis, all the education statistics concern the population aged 15 or more.



**Figure 25: Human Capital and Distance to City Center**



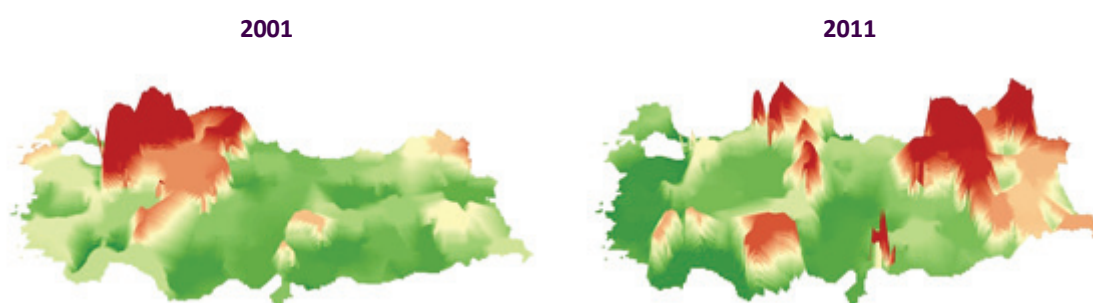
Source: APBRPS, TurkStat, WB staff calculations

cation attainment declining from metropolitan city cores to the periphery and to non-metropolitan areas and illiteracy rates rising with movement away from the center of the metropolitan city underscores the significant metropolitan effect in attracting human capital. Earlier patterns of firm location featuring strong ICT industry presence in the metropolitan city cores is a strong explanatory variable in the spatial patterns of educational attainment.

**As part of an effort to address the human capital disparity in the eastern parts of Turkey, spending on public education has shifted over the last decade, signaling an important policy response.** Significant disparities in private and public financing of education both

across income levels as well as geographical areas seem to perpetuate disparities in education outcomes. Education financing in Turkey is highly centralized and distributed based on a fully norm-based scheme where per school allocations are assigned based on a small set of indicators that do not reflect demand nor include equity considerations (World Bank 2005b, 2006a, 2011). While this remains true for recurrent investments, an analysis of investment spending in Education in recent years (Figure 25) suggests that government is seeking to further improve access to education in the traditionally under-served eastern regions by increasingly shifting new education investments towards these regions.

**Figure 26: Spatial Distribution of National Expenditures on Education in 2001 and 2011**



Source: Ministry of Development Public Investment Data, WB staff calculations



## The Importance of Connectivity to City Competitiveness

**Improved transport infrastructure can increase competitiveness and productivity of Turkish cities.** Recent empirical studies suggest that transport infrastructure can increase competitiveness and productivity in connected areas.<sup>16</sup> Given the wide disparities in terms of income and production across western and eastern provinces and among large and smaller cities in Turkey, connective infrastructure is likely to have a positive effect on competitiveness and productivity in both areas (World Bank, 2011b). Table 3 below shows the top and lowest performing provinces in terms of exports, between 2001 and 2009, together with the average travel speeds when traveling toward a border gate. The numbers in Table 3 suggest that provinces that perform better in terms of exports have better access to border

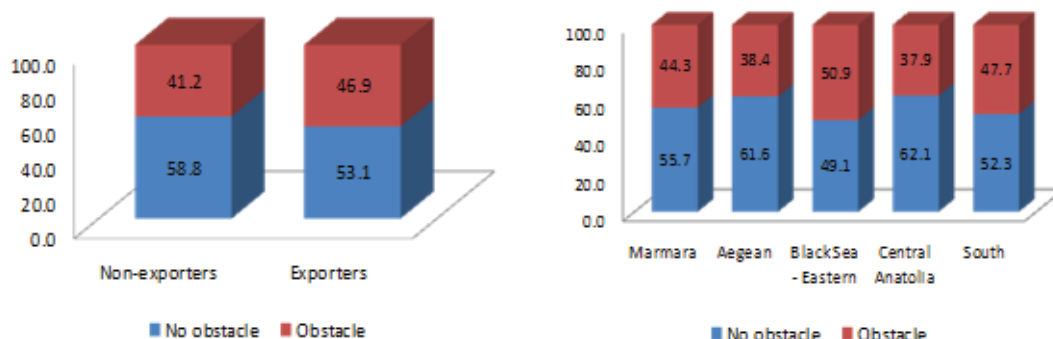
gates than the lowest performers, i.e. average speeds are faster than the top exporters reach major border gates faster than the worst<sup>17</sup>. Better performers save on average 14 minutes for every 100 km traveled compared to the works performers (World Bank, 2011b).

**Some exporters, with variation across different regions in Turkey, identify transport as an obstacle to doing business more frequently than non-exporters.** A recent perception survey among producers suggest 47 percent of exporting firms interviewed report quality of transport as an obstacle for doing business in Turkey as opposed to only 41 percent of non-exporting firms (see Figure 27 below). There are also variations across regions. While more than 44 percent of the firms located in the Black Sea and Eastern regions identify transport as an obstacle, the percentage is below 38 for firms locating in Central Anatolia and Aegean regions.

**Table 3: Provincial Export Performance and Access to Border Gates**

Top Five Exporters	Average Speed	Lowest Five Exporters	Average Speed
Istanbul	73.1	Tunceli	64.7
Bursa	73.2	Gumushane	64.3
Izmir	71.2	Bingol	62.1
Kocaeli	75.1	Ardahan	58.3
Ankara	74.0	Bayburt	63.3
Mean	73.3	Mean	62.6

**Figure 27: Transport as an Obstacle to Doing Business**



**Source:** The EBRD-World Bank Business Environment and Enterprise Performance Survey (BEEPS) 2008 and World Bank mimeo 2010

<sup>16</sup> Donaldson (2009), Banerjee, Duflo and Qian (2009)

<sup>17</sup> The difference between the means of the two groups is significant at the 99 percent confidence level.



**Other international indicators of connectivity, such as the Logistics Performance Index (LPI), suggest Turkey's system of cities may be performing satisfactorily overall, but sub-optimally in some regions.** The 2010 LPI report ranks Turkey 39<sup>th</sup> out of 155 countries with a score of 3.22. According to LPI, more than 63 percent of the survey respondents believe that quality of railways in Turkey is either low or very low. This percent is around 18 percent for roads and ports, putting Turkey below some of its international comparators such as China, Taiwan, Malaysia, Republic of Korea, South Africa and Czech Republic. Recent passage of the Rail Reform Law will help to improve this performance overall, but particularly in cities that suffer most from inefficient rail transport.

**Identifying priorities for investments in connective infrastructure can make a vast difference for cities, and the whole country.** Investments in connective infrastructure are likely to increase competitiveness across the system of cities by setting priorities to identify the most effective additions and improvements to the networks will increase the impact of limited financial resources. Better understanding of flows across the networks can contribute to identifying the segments that are likely to reach high congestion levels in the near future, and where investments would have higher distributional impacts. Connective infrastructure within cities is perhaps Turkey's greatest binding constraint to competitive cities and is assessed in detail in Chapter 3.

## **Key Findings and Policy Recommendations**

**The stylized facts and analysis reviewed in this chapter highlight various aspects of the economic competitiveness of Turkey's cities.** This competitiveness has hinged on a forward looking Metropolitan Municipality Law issued in 1984 that promotes policy and implementation coordination and coherence across a metropolitan footprint, likely influencing the strong metropolitan effect in attracting firms and population. Metropolitan municipalities were also shown to have a degree of "stickiness" that enables them not only to attract firms but also to retain them and to be able

to sustain such trends over time. Over the last decade this was shown to be particularly the case in the secondary cities or Anatolian Tigers. The metropolitan municipality regime is also a likely contributing factor in achieving higher than average urban densities to date in Turkish cities. And metropolitan municipalities, particularly the leading three, have been able to attract human capital necessary to fuel innovation and promote their competitiveness.

**But urbanization is a dynamic process and ongoing trends suggest risks that need to be considered in Turkey's second generation urban agenda.** Turkish cities are experiencing changes in firm location, with increasing numbers seeking to locate at the periurban areas within the metropolitan area. Without strategic spatial planning interventions, this can lead to substantial risks of growing congestion and the inability to align land use planning with urban transport networks. As such, city planning and promotion of connectivity within and between cities will take on greater importance. This reality is compounded by the issuance of the new Metropolitan Municipality Law in December 2012, which extends the boundaries of all metropolitan municipalities to their provincial limits, and is likely to facilitate sprawl without an effective planning regime in place. Improving land valuation systems will also have an important impact on encouraging dense urban development, where land will need to be used even more efficiently in central business districts in particular. Current efforts by the Government of Turkey to test and potentially rollout a more efficient, market-based property valuation system are a very encouraging sign. Such methodologies would also enable improved local revenue mobilization (a key recommendation of Chapter 5 – Financing Cities) to help Turkey leverage the increasing value increment that urbanization brings rather than placing additional burden on the central budget for increased fiscal transfers to meet growing city infrastructure finance needs.





## CHAPTER 3: IMPROVING ACCESS TO AFFORDABLE HOUSING IN TURKISH CITIES

### **Housing is central to successful urbanization.**

Access to housing improves the living conditions and can have a positive impact on health, improve school performance of children, and self-satisfaction among others. However, a well-functioning housing market is also essential for the economic performance of cities and countries. Housing is usually the most important tangible asset of the economy. As an example, housing assets represent over 57 percent of the total value of tangible assets in the British economy. Furthermore housing also plays a role in the creation of jobs. The construction sector is a large employer in developing countries as it is typically more labor intensive than other sectors (Collier and Venables, 2012). Today, over seven percent of employment is concentrated in the Turkish construction sector.

### **Given its importance both for quality of life and economic performance, efficient housing markets are essential.**

However, achieving efficiency is not a simple matter, as it requires coordinated actions of several institutions both at the national and local levels. Collier and Venables (2012) compare 19<sup>th</sup> century London with the challenges that many developing countries face today with rapid urbanization. While in developing countries housing for rapidly growing urban populations has been solved through the informal market, in 19<sup>th</sup> Century London, the formal market kept up with increasing demand. Collier and Venables attribute the successful development of the housing market in 19<sup>th</sup> Century London to a central government that addressed five potential vulnerabilities of the market in a coordinated manner. These five vulnerabilities relate to affordability, legal rights, financial innovation, supporting infrastructure, and opportunities for income.

**Turkey's housing sector challenges have been met with early engagement, as well as persisting supply shortages.** Chapter 1 highlights the numerous measures taken by the Turkish Government to address the low income hous-

ing agenda over past decades. These included the creation of a Housing Development Administration (TOKI) in 1984, which was granted broad powers to facilitate impact and intervention in the provision of housing collaboratively with the private sector. A series of amnesties were also issued, granting residents of informal areas legal tenure and both national and local administrations acted to provide basic services to these settlements that were over time regularized. And access to longer term finance for housing mortgages has improved particularly in recent years. Over time, however, this agenda has evolved and expanded geographically, where urbanization pressures have increased in Turkey's Anatolian Tigers which are less equipped and experienced to deal with the problem. Provision of affordable housing therefore remains a key part of the second generation urban development agenda.

**To better identify and understand the bottlenecks of the housing market in Turkey, this Chapter organizes the challenges the country faces around the five vulnerabilities identified by Collier and Venables.** We start by presenting some stylized facts about the housing sector in Turkey and identify the main challenges its cities face. The five vulnerabilities are then reviewed in the Turkish context. Finally, some policy options to address these vulnerabilities are presented. The coordination of policies across the *planning-connecting-financing* policy framework of the Urbanization Review can lead to expansion of affordable housing.

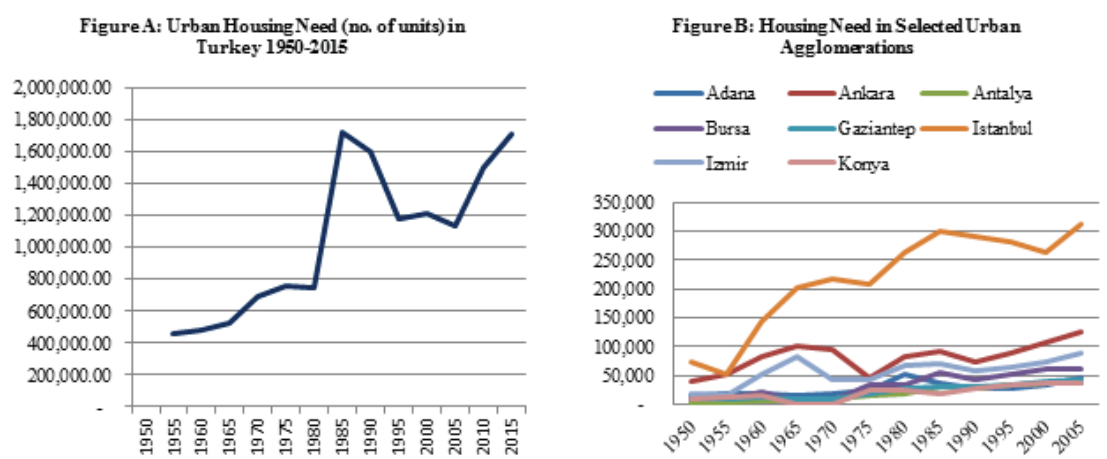


**Turkey's urban areas need an estimated 1.4 million houses.**<sup>18</sup> In 2012, the housing need was estimated at 1.2 million and is expected to have increased to 1.4 million by today (see below). This increase has not been uniform across cities. A couple of cities bore the maximum brunt mostly due to their location and respective economic importance (Figure 28).<sup>19</sup> Among the 8 major metropolitan cities, housing need in Istanbul grew much faster than in other cities, followed by Ankara and Izmir. The remaining five cities, e.g., Adana, Antalya, Bursa, Gaziantep and Konya shared a common pattern. Both Istanbul and Izmir experienced a sudden jump in housing needs during the early 1960s and continued growing for a decade. In the 1980s, one third of the total urban population in Turkey lived in these three metropolitan centers. While this trend of uneven spatial growth in population still continues and there has been concentration of settlements in coastal regions, recent trends indicate that other medium and large sized cities like Ga-

ziantep and Antalya are also experiencing rapid urban growth with increasing housing needs.

There is a gap of 9 years between demand and housing starts. Figure 29 below presents the trend in the ratio of housing starts to housing needs.<sup>20</sup> The annual housing starts picked up during 1990s reaching 500,000 in 1993. However, a massive earthquake in the North-west followed by an economic crisis thwarted the positive growth trajectory (Turel, 2012). With increasing population pressures in cities, the supply of formal housing has lagged demand throughout the period between 1950 and 2010. A Granger causality test between housing starts and housing need for the period between 1955 and 2010 is used to statistically test this hypothesis.<sup>21</sup> The test, evaluated with 1 to 15 annual lags, confirms that between 1955 and 2010, housing starts respond to housing need with a gap of at least 9 years. This causality is strong (statistically significant with a 99 percent confidence level) (Table 4).

**Figure 28: Trends in urban population and housing needs for Turkey and its major urban agglomerations**



**Source:** Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2010 Revision and World Urbanization Prospects: The 2011 Revision, August, 2012.

18 Estimation is based on population data published by Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2010 Revision and World Urbanization Prospects: The 2011 Revision, August, 2012. We consider 4.5 as the average size of a Turkish household to compute housing need.

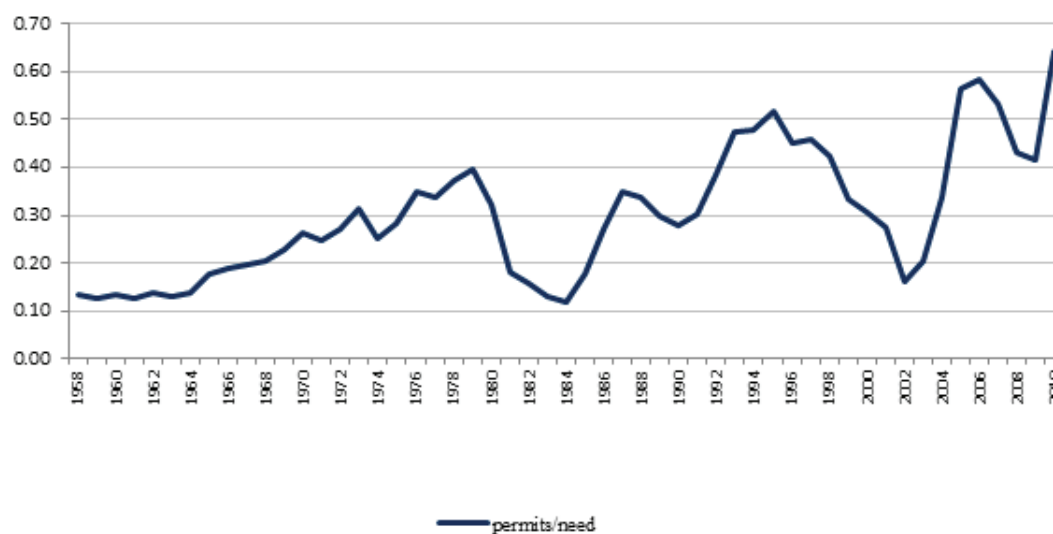
19 Additional housing need is measured as the change in number of households between two years.

20 A lower value of the ratio indicates a wide gap between needs and starts.

21 The Granger test is a statistical test of "causality" in the sense of determining whether lagged observations of one variable have incremental forecasting power over another variable, when added to a univariate autoregressive representation of a variable. For technical details see Box A3 in the appendix.



Figure 29: Trend in housing starts to need ratio in Turkey



Source (for Permits): TUIK, Building Construction Statistics (Annual)

Source (for housing need): Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2010 Revision and World Urbanization Prospects: The 2011 Revision.

Table 4: Granger causality Wald tests

Equation	Excluded	lags	$\chi^2$	Prob> $\chi^2$
$\Delta_2 \log \text{ permit}$	$\Delta_2 \log \text{ housing need}$			
		1	0.355	0.55
		2	0.352	0.84
		3	2.08	0.52
		4	5.21	0.27
		5	7.61	0.18
		6	7.44	0.28
		7	9.39	0.23
		8	11.73	0.16
		9	24.43	0.004***
		10	38.39	0.000***
		11	55.45	0.000***
		12	83.77	0.000***
		13	106.59	0.000***
		14	153.11	0.000***
		15	200.99	0.000***

Note: Detailed methodology is provided in the Appendix.  $\Delta_2$  indicates unit root test with second difference operator.



**In the absence of a fully developed financial market, better off people use housing as a security against inflation.** As shown in Figure 30 below, between 1998 and 2010, the share of gross domestic savings to GDP went down by 10 percent while the share of value added to GDP rose by the same percentage. Between the hyperinflationary period and 2003-04, it was preferable for well off households to invest more on housing rather than putting their money aside on savings; the rise in value addition in dwellings during that period may also have been promoted by the low interest rates and easy access to capital.

**While Turkey has done much to reduce the informality of housing for the poor, it remains a persisting challenge.** Despite early initiatives to address the urban housing pressures in the 1980s, as population in Turkish cities has continued to grow, formal housing supply has not been able to fully keep pace with demand, creating a persisting challenge of dealing with *gecekondu*. Literally translated as ‘erected overnight’, these informal structures are not slums but squatter villages that are home to Turkey’s poorest segment of the population.

**Housing rigidities are creating affordability concerns.** With limited housing supply and a lag of 9 years in reacting to demand, prices of

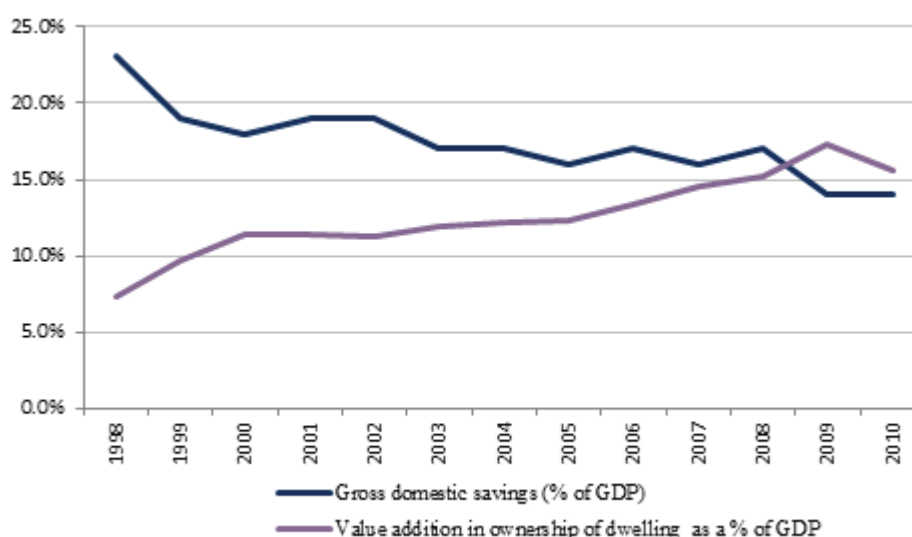
housing are increasing. This is a serious concern as households with limited budgets are making tradeoffs between alternative expenditures. Households make tradeoffs in how much housing to consume and how much to spend on commuting. However, in many cities – zoning prohibits poor people to live close to employment opportunities, and the failure of affordable transport means that people further away pay much more (in time or money) to access jobs.

## IDENTIFYING THE VULNERABILITIES OF THE HOUSING SECTOR IN TURKEY

As opposed to other private goods, the housing market is subject to several points of “vulnerability” given the fact that it is a household asset produced by the non-tradable sector (Collier and Venables, 2012). These vulnerabilities can be addressed through government interventions and policies. But for this to be successful, what is more important is the coordination across all policies.

**The first vulnerability is affordability of housing.** To evaluate housing affordability it is necessary to look at what households spend on housing and get a better understanding of the tradeoffs they are facing as they access housing

**Figure 30: Trends in share of gross domestic savings value addition in dwellings to GDP**



Source: Data Development Platform, World Bank



of different qualities and adjust their expenditures given a limited budget. But understanding where affordability problems stem from requires looking at several things that may influence the cost of housing. Among these are construction costs, including the price of cement and labor costs for example, building standards and regulations, and also the market structure – monopolistic structures may lead to higher prices than in a competitive setting or it may also lead to market segmentation leaving some sectors of the demand without the associated supply and pushing these sectors of the demand into the informal market.

**As urbanization pressures increase, demand for land rises and tools for accommodating urban expansion and redevelopment become increasingly important.** However, the success of these tools is typically based on both the clear definition of property rights and a set of robust systems for assessing land values. This is in fact the second vulnerability, which Collier and Venables refer to as the *vulnerability of legal rights*. This vulnerability affects the housing market in several ways, including through impact on ownership, security and marketability of housing assets. Clear definition of property right and transparent appraised land values prevent land related conflict at the moment of acquiring land for infrastructure expansion. Institutions that improve the information foundations of the valuation process, including a trained cadre of appraisers in property valuation, contribute to ensuring transparency in the valuation process, and to making information of land values widely accessible.

**The third vulnerability is access to housing finance.** Housing finance is essential to ensure access to housing through to different but interrelated mechanisms. First, housing finance is needed for the short term support of construction. When working capital is not available for construction firms, supply will be limited and therefore access to housing may decline, in particular for low income households. Second, long term housing finance is essential to allow households to purchase properties. Financial innovations that contribute to

minimizing administrative costs and reducing risks may improve access to housing.

**Supporting infrastructure is the fourth vulnerability.** This vulnerability is linked to the fact that access is not enough, quality is essential. And quality includes supporting infrastructure that must go hand in hand with the provision of housing. These infrastructure services include things such as roads, drainage, water, and street lighting among many others. Because many of these services are network or simple public goods and investment in infrastructure is associated with a series of positive externalities, there is scope for government intervention in the provision of these goods, either by directly providing them, distributing subsidies, or providing incentives. Coordination of infrastructure provision and housing provision is essential for cost-effectiveness as costs of retrofitting may be prohibitive.

**The fifth and last vulnerability is that of opportunities for income.** As mentioned above, infrastructure is essential. But access to basic services is not enough. Households must be connected to the city to be able to have opportunities for employment both within and beyond the immediate vicinity of where their house is located. For external opportunities, a good public transport network is important, roads that link residential areas with job centers are essential. For internal opportunities, facilitating mixed land uses and encouraging higher densities that promote the colocation of jobs and residences would open additional employment alternatives for households. As densities increase, a positive externality is reflected in the increased economic opportunities that appear in the area. The presence of this externality opens the door for government intervention, to guarantee that the positive externality is reflected in higher densities, even when private costs would prevent it. In what follows, this chapter provides an assessment of Turkey's housing market performance through the lens of the five vulnerabilities described above.



## Vulnerability 1: Affordability

**With limited housing supply in the formal sector, affordability is an increasing concern in Turkish cities.** The share of housing rent and utilities together, increased by 10 percentage points between 2005 and 2009 for the poorest households in urban areas in Turkey (see Figure 31 below). Today, a large number of low-income households do not have the means to purchase or rent housing units within the legal housing stock.

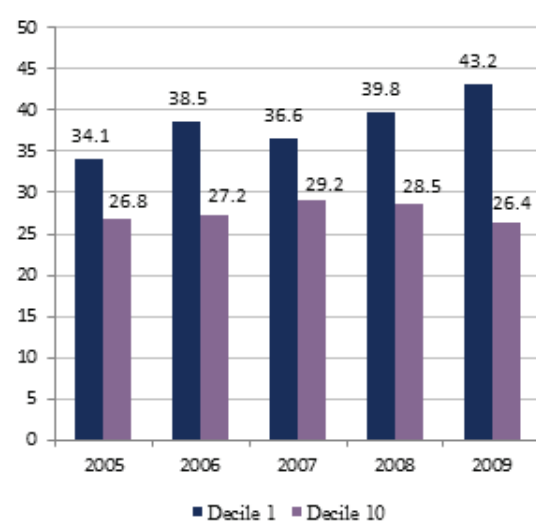
Between 2005 and 2009<sup>22</sup>, the rising share of household expenditure on rent and utilities has been a major concern among the poor. Overall, an increasing trend is observed for the lowest three deciles, while for the middle and high income groups the trend is mostly either stationary or declining (see Table A1 in the Annex A). For the lowest decile, the share of monthly expenditures on rent and utilities increased from 34 to 43 percent between 2005 and 2009 (Figure 31 (A) and (B) above). The situation is however better and does not seem to be a serious concern for middle- and high income groups (for the full distribution of av-

erage expenditure shares see Table A1 in the appendix).

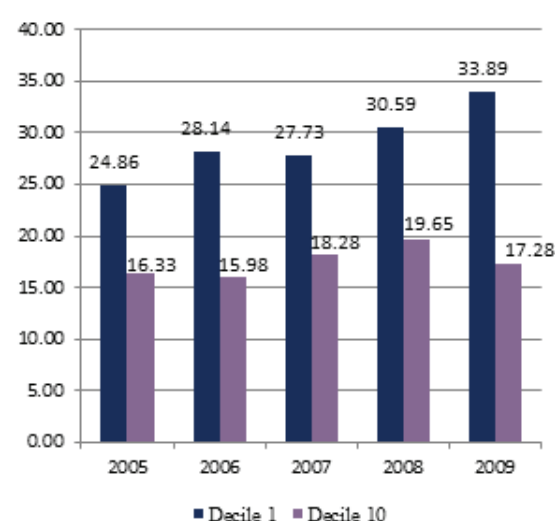
**Rental cost increases for the poorest households represent the highest share of household expenditure increases.** Exploring the growth of average expenditures in rent and utilities between 2005 and 2009 and comparing it with the growth in average consumption through the same period, contributes to further strengthening the above market. This analysis confirms that the increase in share of rent and utilities in total expenditure is indeed due to an increase in average real spending on these items and not due to the shrinkage of overall real consumption. Figure 32 presents the growth in rent, utilities and overall average consumption between 2005 and 2009.<sup>23</sup> As the figure clearly suggest, for the poorest households (decile 1), increases in the budget share of housing costs between this period are driven by increases in rent. While rents in real terms increased on average 28 percent in the period studied for the lowest decile, the average growth for utilities costs and total expenditures in real terms was around 15 percent. This confirms that the increases in budget shares of

**Figure 31: The share of housing rent on total expenditure increased more for the poorest households between 2005 and 2009**

**(A) Share of Rent and Utilities on Total Expenditure**



**(B) Share of Rent and Total Expenditure**



Source: HBS several years and authors calculations

<sup>22</sup> We excluded 2003 from the analysis because being immediately after the crisis and with hyperinflation still lingering, it was no appropriate as a reference year.





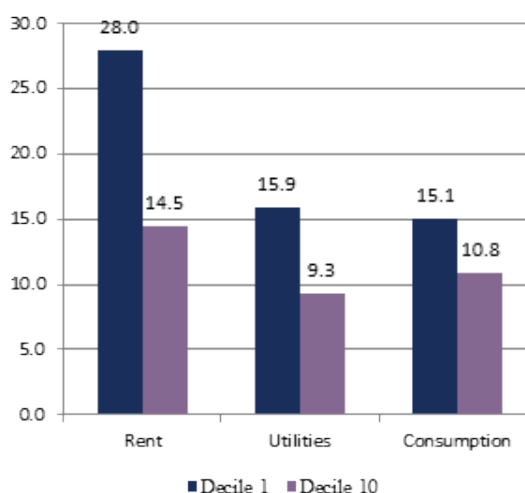
housing costs observed in Figure 34 point at affordability concerns rather than at shrinking overall real expenditures. Further, while rent expenses for the highest decile also increased between 2005 and 2009, their increase was on average almost 14 percentage points lower than that for the lowest decile (for growth rates for all expenditures deciles see table A2 in the Annex).

**But rental rate increases have not fully kept pace with property value increases.** The trends shown in Figure 33 below suggest that in Turkey renting a house may be more affordable than buying one, especially for lower income groups. While property prices have increased steadily starting on the first quarter of 2009 and after a steep decline throughout the 2008, rent prices have remained below 2007 levels.

**Construction costs may be driving up property prices, exacerbating affordability concerns.** Increases in production cost between 2008 and 2011 made housing less affordable to the poor. Figure 34 shows that between 2008 and 2011, the increasing trend in housing price was influenced by rising trends in materials costs. During this period, labor costs increased steadily. While materials costs decreased considerably in 2009, driving property prices down below 2008 levels, they have been increasing at an exponential rate since the first quarter of 2010. The exponential growth of material costs seems to be driving the increase in housing prices. Lack of information does not allow to identify the sources of these increases in costs but this is clearly an area where additional efforts to understand the market dynamics would be of great value.

**Limited competition in the construction sector is a likely contributor to high costs of materials.** Just as in any other market, the structure of housing market should have a strong impact on prices, and therefore, on affordability. If only a few developers are available, it is likely that they will exhibit monopolistic characteristics, driving housing prices up and raising affordability concerns. Further, in a monopolistic

**Figure 32: Growth in rent, utilities and consumption between 2005 and 2009**



Source: HBS several years and authors calculations.

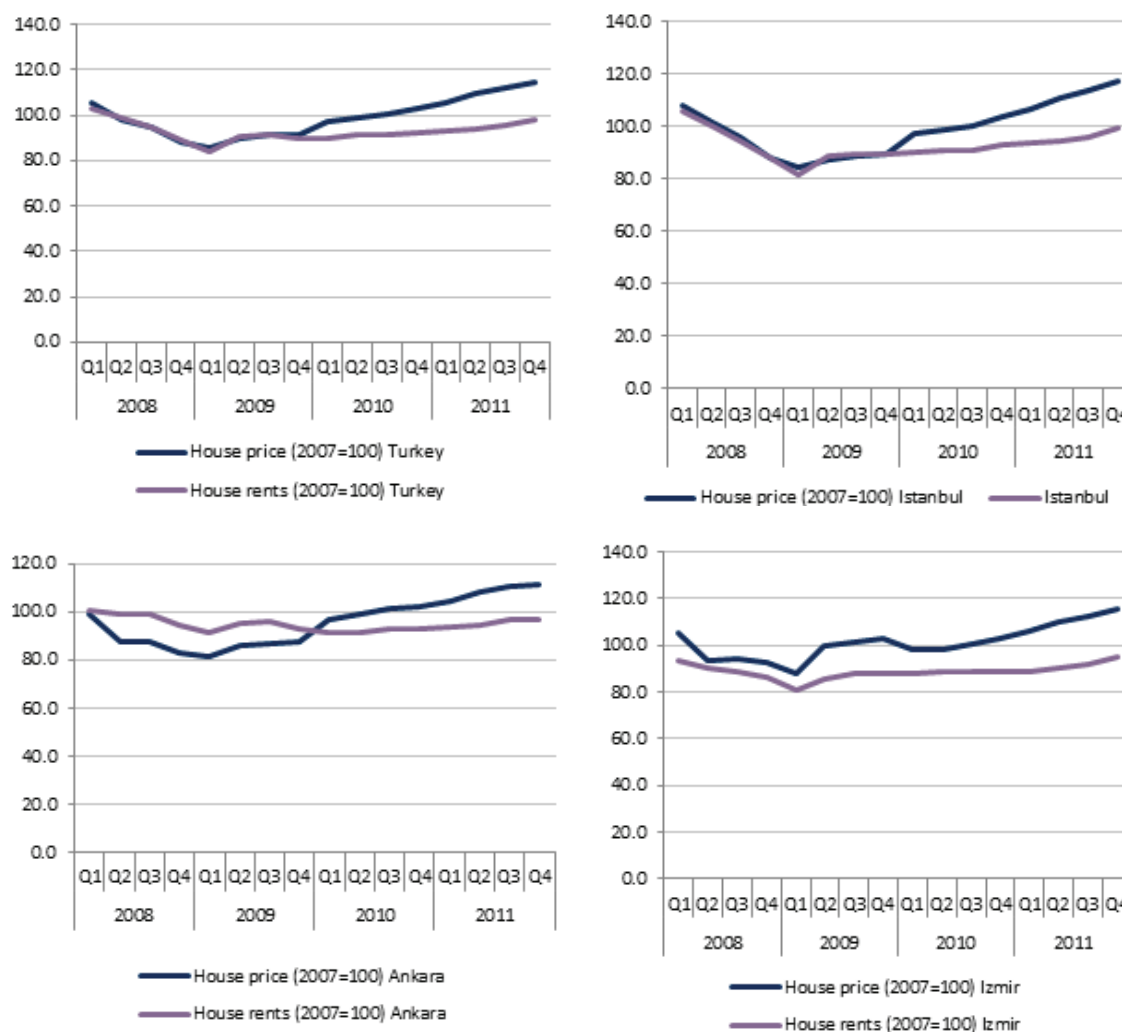
market, developers could also decide to discriminate buyers by focusing only on high quality housing, leaving lower income groups with no choice and creating a segmented market where low income groups rely on self-building for example. Alternatively, in a market where only a handful of developers controls the vast majority of housing production, if one of these developers falters there is a high risk not only of limited housing availability but more importantly, given the role that housing has as the most important tangible asset, there is the risk of overall economic instability.

**Construction market competition is generally healthy at the national level but less competitive in regions.** While information is not available for all new construction in Turkey, analysis of TOKI construction projects in the last years suggest there is not a high concentration of the market at the national level (see Box 5 for a detailed discussion). This means that at the national level, the construction sector appears to behave competitively. At the local level on the other hand, the market seems to be concentrated in a handful of local firms. Considering that TOKI projects are usually mass housing projects and not small scale developments it is not surprising that concentration is observed at the local level.

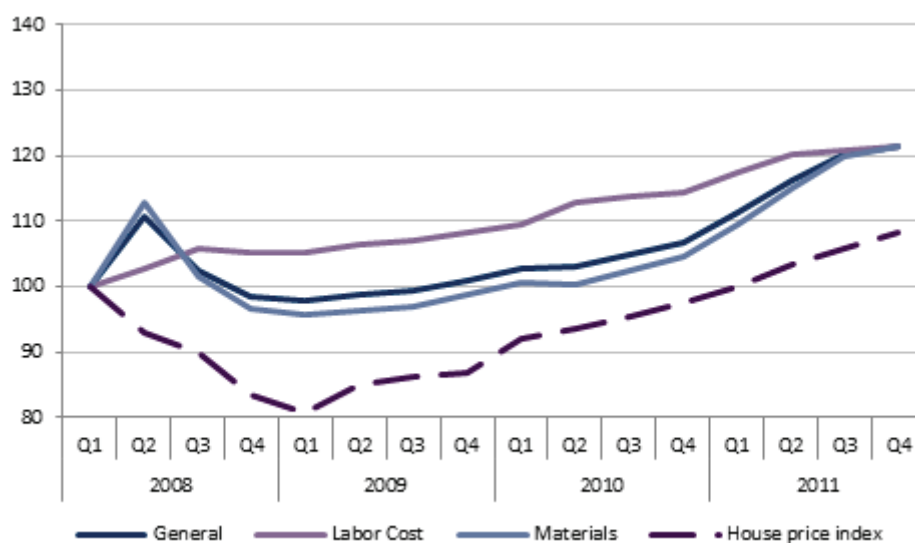
23 Growth rates are calculated on consumption values given in 2005 constant prices.



**Figure 33: The house price index and house rent index across Turkish cities**



**Figure 34: Trends in house price and cost indices**



Source: The Association of Real Estate Investment Companies Report, 2009 and 2011.



### Box 5: Herfindahl-Hirschman Index - Measuring concentration of construction firms in Turkey

The Herfindahl-Hirschman index (HHI) is a measure of industry concentration equal to the sum of the squared market shares of the firms in the industry. A commonly accepted measure of market concentration. The HHI number can range from close to zero to 1 when shares are represented as fraction of the total equals 1. The HHI is expressed as:

$$HHI = (s_1)^2 + (s_2)^2 + (s_3)^2 + \dots + (s_n)^2$$

Where,  $s_n$  is the market share of the  $n$ th firm. The value of HHI tends to 1 as the market gets closer to monopoly. We construct the HHI to find out the concentration of construction firms in TOKI housing projects across metro municipalities in Turkey. The following table presents the Herfindahl-Hirschman index of construction firms across metro municipalities. We used each firm's share in total (i) housing and (ii) worth across metropolitan municipalities separately. The sum of 'squares of share of each contractor' for each metro provides us the HHI/metro.

As per the thumb rule that any value larger than 0.1 (10percent) indicates concentration, the following HHI across shows that construction companies are highly concentrated across cities other than the larger cities such as Istanbul, Ankara and Izmir. Using a similar approach to find nationwide concentration however, there does not appear to be evidence of concentration of the market in the hands of a few construction firms. The results suggest that construction companies are only locally (rather than nationally) concentrated in Turkey.

Metro_name	HHI in terms of	HHI in terms of
	Number of housing	Total worth of the projects
Adana	0.50	0.30
Ankara	0.24	0.21
Antalya		0.23
Bursa		0.48
Diyarbakir		0.37
Erzurum	0.34	0.24
Eskisehir	1.00	0.38
Gaziantep	1.00	0.39
Istanbul	0.10	0.11
Izmir	0.13	0.30
Kayseri	0.33	0.51
Kocaeli	0.52	0.44
Sakarya		0.37
Samsun	1.00	0.71

### Meeting Housing Needs: Social Housing and Evolution of the TOKI Model

**At the national level, TOKI is a key player in implementing national housing policy in Turkey.** One of the salient features of the housing market in Turkey is the increasing role of

the central government in influencing housing supply, in particular through the role of TOKI. In its own words, the mission of TOKI is to “offer hope to millions of Turkish citizens who, under normal market conditions, would not have an opportunity to own their own home, or live in a neighborhood with modern schools, business areas, hospitals, mosques and libraries.”<sup>24</sup>



**Currently TOKI participates in housing supply under several models.** For the poor and disadvantaged, TOKI provides housing with no down payment and low repayments of up to 25 years. These units are usually quite small, being between 45 and 65 square meters. This model is a housing production program implemented in coordination with the Ministry of Family and Social Policy for the poorest segments of the population and is the most comprehensive project implemented for this income group in Turkey. For low income groups with larger payment capacity, properties between 65 and 87 square meters are offered with down payments around 12 percent and low re-payments of about 200 USD per month for up to 15 years. These two low-income groups are identified as the lowest 20-40 percent of the income distribution. Under the current structure of Turkey's housing supply system, a considerable percentage of households at the bottom of the income distribution are inevitably excluded in mass housing projects, and Turkey needs to consider alternatives to property ownership, including options for affordable rental property. For middle-income groups, properties between 87 and 146 square meters are offered with alternative down-payments (10 and 25 percent) and market adjusted re-payments of up to 8-10 years.

**How much of TOKI housing is reaching the poor?** TOKI officials estimate that about 87 percent of the housing stock they build benefits medium to low income households. Of that about 22 percent benefits the lowest 10% of the income spectrum. Further, TOKI reports that 31 percent of the housing loans have been received by workers, 30 percent by civil servants, 7 percent by retirees, 13 percent by tradesmen and the remaining 19 percent by others. The housing units are allocated among applicants by lottery with notary public<sup>25</sup>.

**An important characteristic of TOKI is that under its business model it includes a revenue sharing structure, where the agency works with the private sector under a PPP model,**

**providing housing for high-income groups.** These projects are expected to generate funds to be used in housing projects for low and middle-income groups as TOKI is an autonomous administration and does not receive any allocation from the central government. Under this model, TOKI participates as a partner in developing projects by providing the land and assigning contracts through a competitive bidding process. TOKI receives the land for social housing projects at no cost. The land that TOKI provides can come from Treasury, public entities, government agencies or individuals (if necessary). For project implementation, the land values are said to be assessed through a market valuation process. TOKI reports that, as of January 2015, the portfolio size of the lands owned by TOKI is approximately 170,705,716 m<sup>2</sup>.

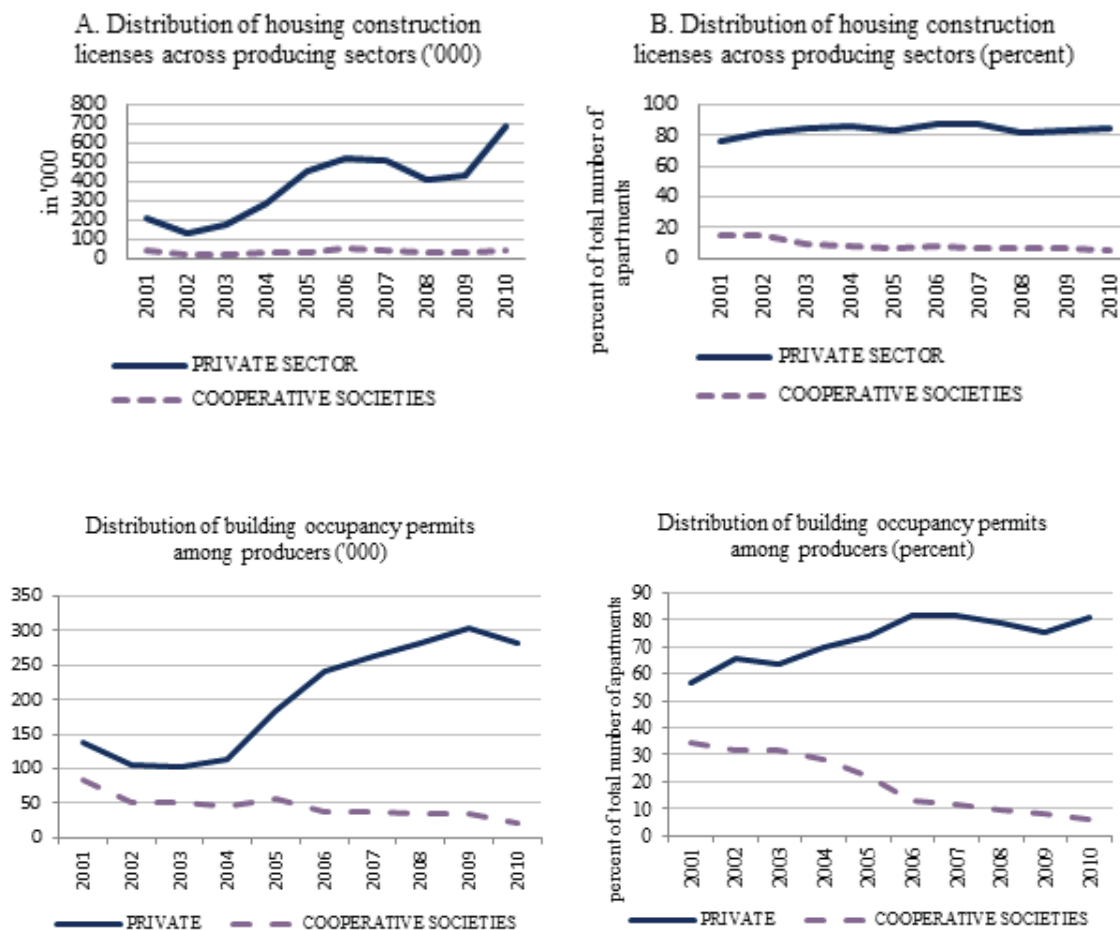
**What role do housing cooperatives play?** Housing cooperatives played a significant role in supplying low and middle-income housing in Turkey for a long time (Turel, 2012). During the import substitution regime, the housing cooperatives generally built on public lands, supplied by the municipalities at a price below market rates. The value added tax (VAT) was either not applicable or at its minimum. The cooperatives improved its credit extension after the mass housing law was amended in 1984. The share of housing cooperatives in total housing supply increased from 8.7 percent in 1980 to 25.2 percent in 1990-92 (Berkim and Osmay, 1996; Ozdemir, 2011, Turel, 2012).

**The importance of housing cooperatives was, however, greatly affected immediately after that.** Cooperatives began to precipitously decline as a business model roughly at the same time that credits from public funds declined heavily. As Figure 35 A and B suggest, the share of private sector starts rose from 75 in 2001 to 85 percent of the total in 2010. During the same time the share of cooperatives in total housing starts has fallen from 15 percent in 2001 to around 5 percent in 2010. Turel (2012) mentions that the inverse relationship

25 [www.toki.gov.tr](http://www.toki.gov.tr)



**Figure 35: Distribution of housing construction and occupancy licenses across producing sectors**



Source: Turkish Statistical Institute, Construction License data.

between rise in the share of the private sector and fall of that for the cooperatives was more important than the termination of financing from public funds (ibid, 2012).

**Cumbersome processes for obtaining construction permits also increase the construction costs by imposing constraints to the efficiency of land and housing markets and increasing coordination problems in Turkey.** Today, Turkey ranks 155 among 183 countries in terms of ease of dealing with construction permits. It takes about 24 procedures and 189 days to process a construction permit, in

contrast, in a country like Colombia, a similar permit takes only 46 days. While the relative cost of obtaining a permit has decreased in the last years –from over 430 percent of income per capita in to 197.7 percent in 2012, it is still considerably high compared to the average in OECD countries (45.7 percent).<sup>26</sup> Taxes, fees and other charges can drive up the prices of land and housing; some have estimated the sum of taxes, fees and other charges to represent as much as one third of total construction costs (Ozdemir, 2011).



## Vulnerability 2: Legal Rights

**Valuation of land is not well developed in Turkey.** While valuation services are provided by domestic and foreign companies for private purposes, valuation methods are not standardized and requirements for public agencies are not clearly established. Further, regulations in this field are multiple and not integrated, and multiple agencies and organizations have been assigned duties, powers and responsibilities (TKGM, 2012). Lack of data availability and low quality of existing data is also a big concern in the estimation of property values. In many cases, property prices are not indicated in the land registry making valuation of such properties a challenge when methods based on sales comparisons are chosen. At the moment, there are no common procedures to routinely gather information about real estate and land transactions. Each municipality defines its own practice and therefore data availability varies greatly depending on local capacity. However, new efforts are being made to improve property valuation, which should help in confirming market values and using such properties as a legal basis for collateral in mobilizing financing.

## Vulnerability 3: Access to Housing Finance

**A weak and limited segmentation housing finance sector has exacerbated affordability concerns, and made housing finance unaffordable for the poor.** During the import substitution regime (1950-1980) there was an overwhelming dominance of only four banks that collectively controlled 50 percent of total outstanding credit (Oncu, 2010). During this period the state policy required to channel credits to priority sectors and commercial banks were prohibited from extending loans to housing. The only non-bank financial institutions that extended credits to housing market were the government owned real estate bank, EKB, and the workers' social security fund. Both of them together covered only 10 percent of the housing produced in the formal market.

**Recent efforts have been made to increase access to housing finance but it is still quite limited.** Between 2003-2006, the share of hous-

ing loans in total bank loans increased sharply from merely above 2 percent to 10 percent. However, it stagnated for the next six years (see Figure 36 (a) below). By contrast, between 1997 and 2011, the average size of housing loans per borrower increased by more than ten-fold. Given the total volume is stagnant, a sharp rise in the average size of loans suggests that banks are providing financing increasingly for larger housing loans (and potentially medium or high income groups) by restricting small borrowers access to housing loans (Figure 36 (b) below).

**Real interest rate for housing finance is not pro-poor either in Turkey in recent years.** Collier and Venables (2012) recommend that the interest rate for housing loans be indexed with wages in such a way that it stays more or less constant in real terms. When the real interest rate fluctuates it creates a cyclical fluctuation in housing demand that undermines affordability (see Figure 37A). The fluctuation in real interest rates in Turkey underscores the fact that it is not properly indexed with wages. In the post-hyperinflation period, particularly during the 2008-early 2010, the real interest rate for housing finance declined substantially before it started rising again in the recent years. And throughout the period, it was always above 10 percent (Figure 37A). During 2011-12, the nominal rate increased faster than the increase in nominal wages. As a result, the real interest rate shot up making financing less affordable in recent years, as compared to 2010.

**The term structure of housing finance also imposes additional constraints on the demand for housing.** Today, long term finance for housing is improving but is still behind the curve (see Figure 37B). The share of housing loans with terms between 15 and 20 years is negligible. Loans with maturities between 5 and 10 years represent the majority of the housing loans portfolio, with over 40 percent of the loans falling in this category. Most interestingly, this category has gained importance since 2011 gaining terrain over shorter term loans of only 3 to 5 years. Between 2007 and 2012, and the share of financing with terms between 5 to 10 years has increased by more than 20 percentage points. While this repre-



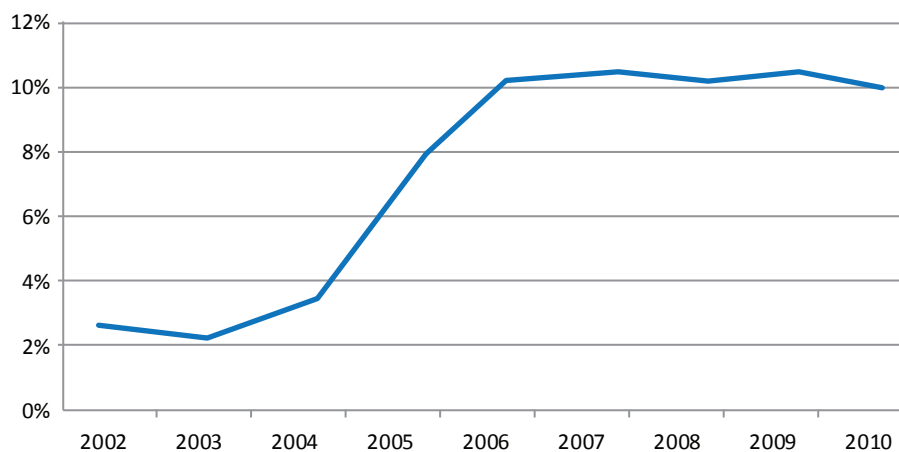


sents a move in the right direction, a stronger financial market for housing loans with longer terms are likely to improve access to housing, especially for middle and lower-middle income groups. Such measures for expanding housing

finance should always bear in mind prudential regulations, avoid “over-reach,” as has been the case in developed country markets, e.g. the United States and Spain most recently, and should be set on a solid policy foundation.

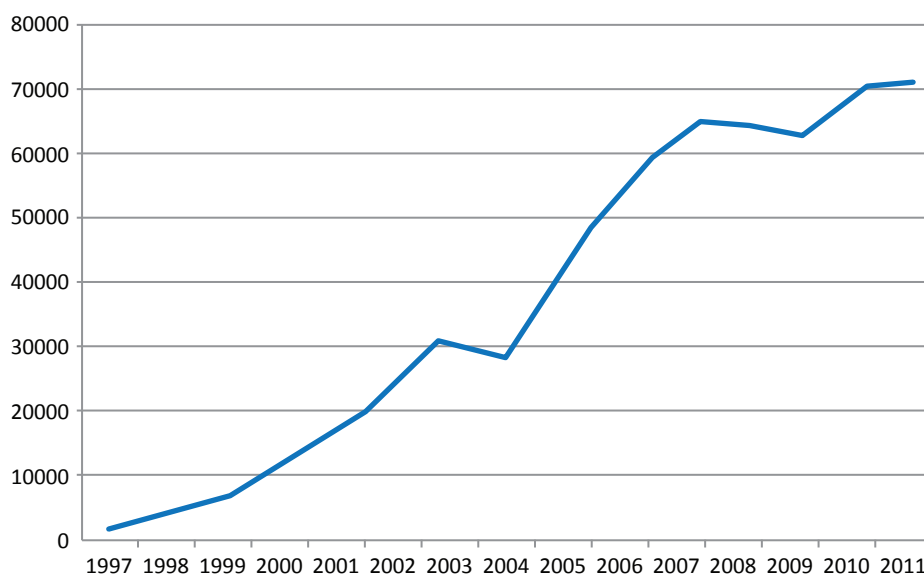
**Figure 36: Trend in Financial sectors’ performance in Turkey**

**(a) Share of housing loan in total bank loans**



**Source:** The Banks Association of Turkey, Banking Regulation and Supervision Agency

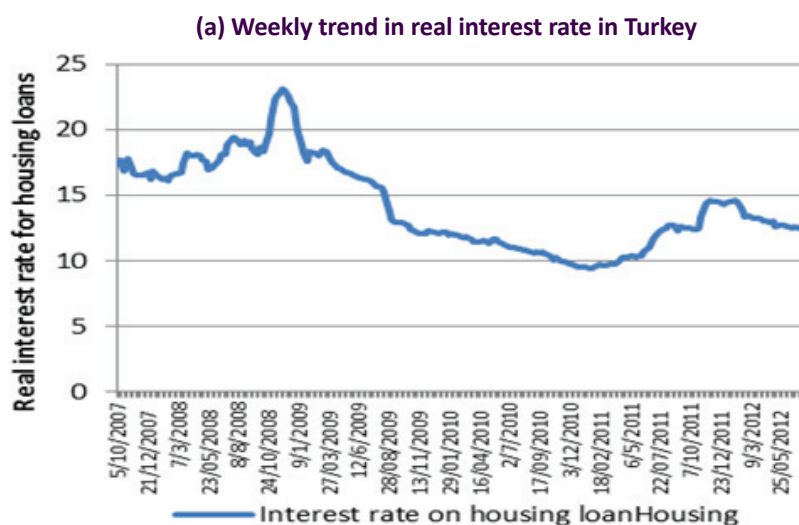
**(b) Average size of housing loans per borrower (TRY)**



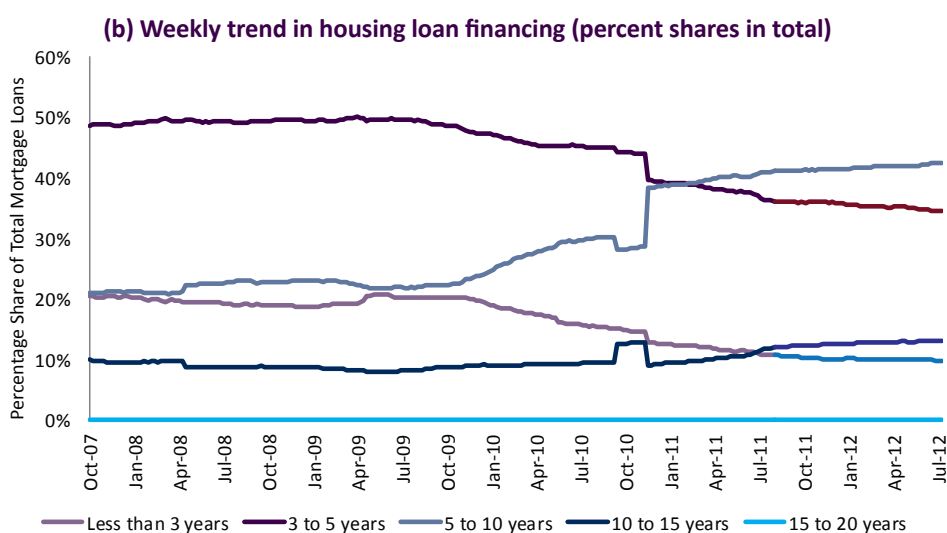
**Source:** Association of Turkish Banks. [http://www.tbb.org.tr/eng/Banka\\_ve\\_Sektor\\_Bilgileri/Istatistiki\\_Raporlar.aspx](http://www.tbb.org.tr/eng/Banka_ve_Sektor_Bilgileri/Istatistiki_Raporlar.aspx)



**Figure 37: Weekly trend in real interest rate and housing loan financing in Turkey**



Source: Central Bank of Republic of Turkey



Source: Central Bank of Republic of Turkey

## Vulnerability 4: Supporting Infrastructure

**Coordination of land use planning with infrastructure provision is lacking in Turkey.** In Turkey, urban planning has, since the 1980s, lost its binding nature and many cities no longer prepare or apply planning instruments that effectively link land use planning with infrastructure provision.

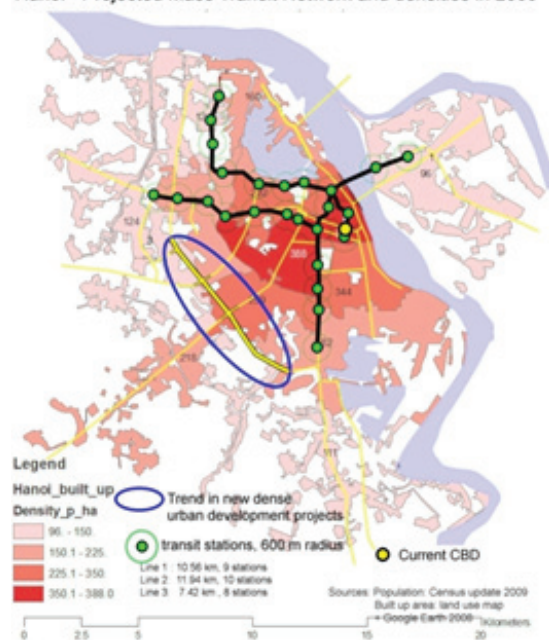
**In Turkey, land use planning regulations are governed under law number 3194 (1985).** This law focuses on spatial development and physical regulations, while socio-economic concerns are left aside. Focusing on physical

regulations leads to a static view of long term planning and rigid laws that do not adjust to the needs of rapidly changing cities. Take the case of Hanoi in Vietnam. A projected new mass transit system will extend out in several directions from today's central business district—but it will not reach an emerging second central business district, southwest of the city, where dense housing developments called New Urban Zones are already being built (Figure 38). While Law 3194 governs land use planning regulations and assigns responsibilities to local authorities, low implementation capacity in Turkey and a series of exceptions, bring in a number of uncoordinated players to



**Figure 38. Hanoi presents an example of uncoordinated plans for housing and mass transport**

Hanoi - Projected Mass Transit Network and densities in 2009



Source: Vietnam Urbanization Review 2011

the process of urban planning. LAW 3194 was the first to provide spatial planning authority to local administrations. Specific planning guidelines are provided at the national level through the Spatial Planning Guideline for Planned Areas, but municipalities are given authority to prepare and adjust these guidelines to their own needs and characteristics. While law 3194 defines and provides the authority for implementing regional plans, development master plans, and implementation master plans, this law also includes several exceptions under which the regulations included in such plans are not binding. Exceptions include provisions under all special laws, such as the Tourism Support Law (2634) and Protection of Cultural and Natural Assets (2863).

**While law 3194 assigned the planning responsibility to local authorities, many local administrations lack implementation capacity.** This, together with a strong central government role in some instances and the existence of the above mentioned exceptions, has led to many central institutions taking a local planning role and preparing spatial plans for certain

areas. Such institutions include the Ministry of Environment and Urbanization, Iller Bank, Ministry of Culture and Tourism, Ministry of Science, Technology and Industry, Ministry of Forestry and Waterworks, and the Housing Development Administration (TOKI). The lack of coordination across institutions and between national government agencies and local administrations has led to several problems including conflicting decisions and plans that do not correspond to the local needs and challenges.

**Furthermore, the new Law on Transformation of Areas at Risk of Disaster and the increasing role assigned to central government agency intervention has the risk of increasing coordination challenges in terms of city planning.** The multiple exceptions included under Law 3194 –of which the Transformation law is the most recent- provide planning authority to multiple central government agencies. The lack of coordination across institutions and between national government agencies and local administrations has led to several problems including conflicting decisions and plans that do not correspond to the local needs and challenges. There is thus a need to clarify and harmonize the different powers and authorities of central and local authorities with respect to development planning, a matter that is now under deliberation in the Government of Turkey.

**The Law on Transformation of Areas at Risk of Disaster is an attempt to include risk considerations in urban planning and redevelopment, but brings very high risk with it: increased number of takings and public discontent.** In a recent effort to increase resilience of cities to disasters and earthquakes in particular, the Grand National Assembly of Turkey (TBMM) passed in June 2012 a draft of the Law on the Transformation of Areas at Risk of Disaster - Law 6306- (see Box 6 for further detail). The law sets out the principles regarding the rehabilitation, rectification, and renovation of areas at risk of disaster as well as the lands and plots involving risky structures in other areas. Under this new law, risky structures will be identified



by agencies and entities licensed by the Ministry of Environment and Urbanization (MOEU) and hired by the owners of buildings or their legal representatives with all costs borne to owners. Once risky structures are identified, they may be selected for transformation and renovation projects to be carried out by MOEU in close collaboration with TOKI. Buildings that are not under risk but are located under areas selected for a transformation project may also be intervened by the government.

**Law 6306 assigns strong competences both to MOEU and TOKI aiming to increase implementation efficiency.** With this new law, MOEU will have the authority to prepare all plans, projects, set land regulation standards and prepare urban designs for transformation laws. This law is also considered an exception under Law 3194 and therefore supersedes such law. In an effort to solve coordination problems that arise in urban development projects, the new transformation Law strengthens the role of MOEU in local planning, assigning it as the main authority over almost any issue related to urban transformation zones and reducing the role of local administrations.

**While efforts to increase resilience of cities to natural disasters in general and earthquakes in particular are commendable, there are also several risks.** First, transformation and renovation projects are likely to involve a large number of takings, which may lead to public discontent and large number of objections if properties taken are not priced properly and owners are not compensated for displacement costs. Having in place the appropriate institutions for land valuation is essential for the success of these policies.

**Second, low capacity in municipalities may put implementation at risk and open the door for corruption.** Many municipalities, including Istanbul, do not have enough accredited engineers and their planning departments are understaffed and under-financed. In these cases, even if restrictions and building codes are

strict they may not translate into safer building structures but rather turn into opportunities for corruption. An example of this is the arrest of 40 municipal officials in three towns in Turkey in 2006. The arrests occurred as it was discovered that officials were taking bribes in return for allowing unlicensed construction (Escaleras, Anbarci, and Register 2007 and World Bank 2010).

**Inclusion of vulnerability and risk considerations in planning strategies is increasingly important in the Turkish context due to high seismic risk.** Seismic fault lines crisscross the country going through many of the major cities. Two highly destructive earthquakes in 1999 provide evidence of the high risk that Turkish cities face. Many, if not all of the buildings that collapsed during these earthquakes did not meet the requirements of the building codes as a result of lack of enforcement.<sup>27</sup> So while in some cases regulations may be stringent as discussed in the previous section, in reality, many regulations such as those for safety and disaster risk mitigation are not enforced.

**There are several ways in which construction can be more resistant to earthquakes.** Even though risk is high in Turkey, a large percentage of buildings are not built to be resistant to earthquakes. About 30 percent of publicly-owned buildings in Istanbul are vulnerable to earthquakes and a large number of households still live in houses with no skeleton.<sup>28</sup> Buildings with a reinforced concrete, steel or wooden skeleton are less likely to suffer considerable damage from earthquakes. Poor households are more vulnerable to earthquakes, with a smaller percentage of households in the lowest quintiles living in houses with a skeleton. Figure 39 below shows that in 2005, only about 55 percent of households in the lowest income quintile lived in households with a structure that included a skeleton while over 90 percent of the households in the highest quintile did.

**Noncompliance of buildings with construction codes that would make them resistant**

<sup>27</sup> World Bank (2010). "It is not too late: preparing for Asia's next big earthquake" Policy Note 57683, GFDRR, The World Bank, Washington, D.C.

<sup>28</sup> World Bank (2010) Natural Hazards UnNatural Disasters



### Box 6: Highlights of the new Law on the Transformation of Areas at Risk of Natural Hazards

Under this new law, MOEU is authorized to give a lead time to the owners of buildings for them to determine whether their structures are considered risky or not. However, if such identification is not done within the lead-time given, it will be undertaken by the MOEU or municipalities and special provincial administrations. Owners of buildings will be able to file objections to such identification decisions within 15 days. The owners of structures found to be risky will be given a minimum 60-day notice for the demolition of these buildings. If the building is not demolished by the owner during such course of time, they will be notified that the building will be demolished by “administrative authorities”, and some additional time to vacate will be provided.

Upon the request of the MOEU, the immovable properties allocated to public administrations in risky areas owned by the Treasury and in reserve structure areas, including those covered by the Law on Military Prohibition Zones and Security Zones will be allocated to the MOEU through a Council of Ministers Decree in consultation with the Ministry of National Defense; those areas not allocated to public administrations will be allocated to MOEU or transferred to the Housing Development Administration (TOKI) or municipalities.

A key point stressed in this law is that both TOKI and the municipalities will be authorized to temporarily suspend all types of developments in risky areas, on immovable properties located on risky areas and in reserve structure areas. These immovable properties will not be sold, leased or allocated by the Ministry of Finance until the conclusion of transfer and allocation procedures.

If requested by TOKI or municipalities, MOEU will not permit the provision of electricity, water and natural gas services for structures located on risky areas and risky structures, upon consulting right holders, and will stop provision of already provided services. Definition of regeneration areas will require an absolute majority of votes of all members of the provisional general of special provincial administrations and municipal council of municipalities. Decisions taken in respect of renovation areas will be submitted to the Council of Ministers through the proposal of MOEU.

The law also amends the Decree-Law on the establishment of MOEU. The Law states MOEU will perform all survey, plan, design, cost calculation and construction works under its domain by creating a building supervision system, and will also perform the duties assigned thereto under the Building Supervision Law. MOEU will establish the principles and procedures to be followed by administrations in the rehabilitation, regeneration and transformation practices to be undertaken in urban and rural areas and settlements, including shanty houses, coastal areas and facilities, and areas excluded from forest areas and rangelands due to degradation.

The MOEU will also carry out, outsource and approve surveys, maps, plans, subdivision plans and building designs of any scale, for special project areas that would enhance the brand value of cities and contribute to the improvement of cities, such as financial and commercial centers specified by the MOEU, fair and exhibition areas, recreational areas, and main gates of cities. MOEU will also conduct all these activities for any project under the Shanty settlement Law, as well as issue building occupancy permits and ensure establishment of apartment condominium rights in these areas. MOEU will facilitate expropriation, licensing and construction processes, issue building occupancy permits and ensure the establishment of apartment condominium rights in these areas.

**to earthquakes is a key concern in Turkish cities.** Noncompliance is to a great extent a result of the fact that currently there is no requirement for a specific license or certification for civil engineers to be able to design any kind of project. Other countries with high seismic activity require civil engineers to obtain special

licenses that require not only testing but also experience. In California for example, recent graduates typically practice with more experience engineers before they take the required exams to obtain their own licenses. The licensing process is enforced by the State of California.<sup>29</sup>

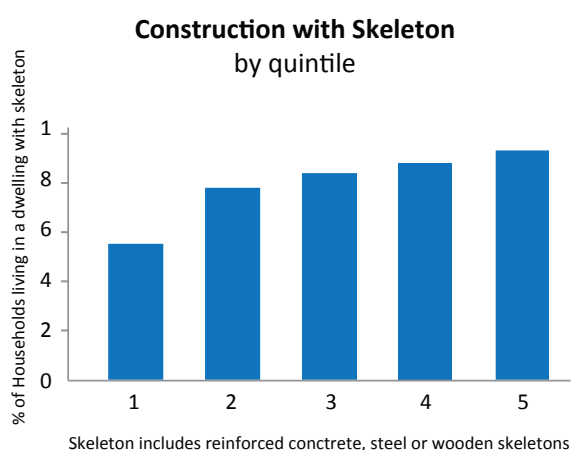
29 Ibid





After the 1999 earthquake, The Turkish government tried three main strategies to reduce the impact of future disasters: First, it increased insurance coverage; second, it tried to improve building quality; and third, it put in place better measures of response in the case of a seismic event. The first effort is commendable in that Turkey promoted insurance on commercial terms. However, despite being mandatory<sup>30</sup>, penetration rates in 2009 were only 22 percent, much lower than those predicted for 2001 and 2006, at 30 and 60 percent, and lower than in California, where insurance coverage is not compulsory (World Bank 2010).

**Figure 39. Poorest households live in more vulnerable structures**



## Vulnerability 5: Opportunities for Income

**Housing needs to be of decent quality and affordable, but it must also enable households to access job opportunities.** This involves physical access to places of work, the accumulation of pertinent characteristics for employability, and information about opportunities in other parts of the city. Physical access is the most straightforward aspect to plan. It requires that in combination, the location of settlement and investment in transport infrastructure permit

commuting. This implies some combination of sites that are more proximate to the city center and therefore have higher land prices, and more investment in transport infrastructure to connect sites further away.

**Many housing projects for low income groups are located in the periphery of the city where commuting costs can eat up a large portion of wages.** While granular data at city level is not available for a robust analysis of project allocations and household location decisions, documented case studies suggest connectivity of new housing centers is a problem in some cases here in Turkey. Given that in TOKI's model the government's participation is guaranteed through the provision of land, developments for lower income groups are in many cases limited to the periphery of cities. In cases where centrally located land is available, projects for higher income groups are developed leading to gentrification concerns. Availability of TOKI's land may influence also the location of new projects under the Urban Transformation program. An increased supply of low-income housing in areas that are distant from city centers may force households to cope with longer and more costly commuting.

## PRIORITIES FOR POLICY

**In this section we highlight priorities for policy makers to reduce the vulnerabilities discussed above.** To identify these policy priorities we use the framework developed under the Urbanization Review program centered on *planning, connecting and financing cities*. This framework is the result of diagnostic work in over 10 countries including Uganda, Sri Lanka, China, India, Indonesia, Vietnam, Brazil, Colombia, and the Republic of Korea among others. The framework identifies three main dimensions of urban development, also the focus of the three main chapters in this report:<sup>31</sup>

**Planning: Relaxing formal rules, including permits and regulations where appropriate, would help reduce construction costs and im-**

30 The insurance was mandatory for all residential buildings within a municipality. For industrial and commercial buildings and private homes outside a municipality the insurance was not mandatory.

31 Priorities for City Leaders. Planning, Connecting, and Financing – Now. Urbanization Review Flagship Report (2012)





### Box 7: The value of safer structures

**Table: OLS regression of LN Rents**

Variable	Coefficients (standard errors)
Age	-0.0038 (0.0015)**
Age Squared	0.00004 (0.00001)***
Banyo	0.0794 (0.0486)
Oda say	0.0711 (0.0199)***
Kon alan	-0.0002 (0.0006)
Skeleton	0.1339 (0.0222)***
Jacuzzi	0.8800 (0.3950)**
Tuvalet	0.2867 (0.0313)***
Mutfak	0.5040 (0.1161)***
Heating	0.2446 (0.0547)***
Su_sis	0.2204 (0.1061)**
Garage	0.0613 (0.0945)
Telephone connection	0.1511 (0.0265)***
Dog gaz	0.5551 (0.0509)***
sicaksu	0.3173 (0.0234)***
klima	0.2553 (0.0558)***
Constant	1.5392 (0.1592)***
R <sup>2</sup>	0.3992

Using information from property prices for owner occupied houses in Turkey, it is possible to estimate the impact that property characteristics may have on prices using a hedonic model. Using the 2005 Turkish Household Budget Survey a hedonic equation was estimated, where the logarithmic of property prices is used as independent variable, and property characteristics are used as explanatory variables. Characteristics of the house include its age, age squared, and a series of indicator variables for things like having a Jacuzzi, a sauna, a bathroom within the house, and a telephone connection among others. Finally, the model includes an indicator variable that takes the value of one if the property has a skeleton of reinforced concrete, steel or wood. As mentioned in the main text of this section, properties with these kinds of skeletons would be more resistant in the event of an earthquake.

The results presented in Table B4.1 suggest that households would be willing to pay a premium for a house that has a strong skeleton and is therefore safer. For an average house and assuming a capitalization premium of 50 years, the premium for a safer structure is estimated at 16,309 TL. Further analysis would be required to determine whether affordability is a barrier for households to actually pay this estimated premium for a safer house. If affordability was a concern, the government could think about the incentives necessary for households to invest in this structures, including for example things like tax breaks.

*Source:* HBS 2005 and authors calculations

**prove competition.** Georgia provides an example of a country that reduced transaction costs and red tape for property registration. Today, registration involves a single procedure with a public registry and on average takes only two days and costs 0.1 percent of the property's price. In Turkey, these costs have increased in recent years, going from 3.3 percent in 2012 to 4 percent in 2014. In Colombia, a country

ranked 29 in terms of ease of dealing with construction permits has only eight procedures. With a third of the procedures required in Turkey, Colombia processes a construction permit in 46 days but costs are more than twice the average in the Latin American region. Table 5 below compares the procedures needed in Turkey to those required in Colombia and suggests avenues for simplification in Turkey; while



**Table 5. International evidence suggest that simplification of rules and regulations is possible**

Step No.	Turkey	Step No.	Colombia
1	Obtain lot plan	1	File for and obtain construction license
2	Obtain cadastral plan	2	Pay variable charges and tax on Urban Delineation (Impuesto de Delineación Urbana) at the bank
3	Obtain road datum document	3	Request water connection approval from EAAB
4	Hire an independent building inspector	4	Receive water inspection from EAAB
5	Obtain approval of architectural drawings from the municipality	5	Obtain water connection from EAAB
6	Obtain approval from the Fire Department	6	Receive inspection from authorized contractor
7	Obtain approval of technical drawings from the Turkish Electricity Corporation (TEDAS)	7	Request and obtain telephone connection
8	Obtain approval of technical drawings from the phone company	8	Receive final inspection by Mayor's office
9	Obtain contractor registration document from the chamber of commerce		
10	Obtain project approval from the civil defense directorate of the district governor's office		
11	Obtain proof of payment and clearance of water and sewerage infrastructure		
12	Receive foundation registration number from the Social Security Institution		
13	Obtain building permit		
14	Obtain proof of tax payment		
15	Request inspection from the civil defense experts		
16	Receive inspection from the civil defense experts in the district governor's office.		
17	Receive final inspection from the municipality.		
18	Obtain occupancy permit.		
19	Obtain proof of real estate tax payment.		
20	Change the title deed from a land title deed to a building title deed		
21	Request water connection and permission for discharge of sewerage and rainwater.		
22	Receive inspection and obtain connection from the water and sewerage department.		
23	Obtain approval of telephone system from the Telephone Regional directorate.		
24	Obtain telephone connection		

Source: Doing Business 2012 Turkey and Colombia

there is not a one to one correspondence in all steps, it is easy to see how some steps overlap and where there is some room for improvement in the Turkish process. While exercising control over the issuance of construction permits to prevent sub-standard buildings and ensure the safety and quality of buildings is

clearly quite important, this can be done more efficiently with fewer control checks that are more effectively administered.

**Promoting competition among developers will also contribute to lowering housing prices.** As the market moves towards a competitive



structure, individual developers would have less power in setting prices and housing may move toward more affordable prices. More importantly, as competition increases, developers are more likely to cater all income levels rather than focusing only on a specific income group. While it is unlikely there are regulatory barriers that limit the entry of a larger number of small private developers, other vulnerabilities may be leading to the concentration of the production of housing and therefore the coordinated policies to address other vulnerabilities is also likely to contribute to the move toward a more competitive market.

### Coordinating land use planning with infrastructure provision and risk mitigation

**To meet new demand, cities must have strategies that are adaptable and respond to demand.** A city's demand for physical structures, infrastructure, housing, and amenities will change with time as its population grows. Cities strategies to respond to demand must be flexible to adapt to these changing challenges. Otherwise their decisions and policies can lock cities into physical forms that may prove to be suboptimal. For example, density limits—though important—should not impede economic growth or prevent the development of affordable urban housing. The city of Bangalore in India provides an example of how density regulations can reduce economic efficiency. Research shows that if the city's density restrictions were lifted, its radius would be 8 kilometers rather than the present 12, i.e. the city would grow in a more compact form. Commuting times would shrink, saving households about 4 percent of their income through lower transport costs.<sup>32</sup>

**Land use policies need to be aligned as well with infrastructure plans (such as plans for public transit).** Singapore and New York provide good examples where density regulations vary by location, planned use, and infrastructure availability (with higher densities allowed

near metro stations). In New York for example, commercial areas in midtown and downtown Manhattan allow much higher densities than do uptown residential areas. To fund infrastructure improvements, cities can sell developers the right to build at higher densities than would otherwise be allowed in a given location. Aligning land use and infrastructure can also help manage the formation and growth of slums.<sup>33</sup>

**It is important for Turkey to think beyond coordination of land use and infrastructure planning and include vulnerability and risk considerations in planning strategies.** In thinking about coordinating land use policies with infrastructure plans, it is also important to consider vulnerability from natural hazard risks as part of the overall planning process. While 70 percent of high-income countries integrate land use and natural risk management, only about 15 percent of low-income countries are doing so.<sup>34</sup> However, countries like Colombia are making efforts to think about urban transformation and risk prevention (see Box 8 below).

**The new Urban Transformation Law has the risk of imposing additional constraints and regulations that may only add to the list of inefficient, and, in many cases, ineffective regulations.** By providing information and appropriate incentives, Turkey may achieve better results in terms of resilience than by forcing stringent regulations that will not turn into practice. The importance of putting independent and transparent valuation systems in place together with information about hazard risk cannot be overemphasized. Prices of land and property incorporate a wealth of information as they reflect the forces of demand and supply. They can reflect all kinds of property characteristics, including information about hazard risk. In 2000, property values in Istanbul were found to be lower near the fault lines in the Sea of Marmara (Onder, Dokmeci, and Keskin, 2004).

<sup>32</sup> Bertaud and Brueckner (2004)

<sup>33</sup> World Bank (2012) Priorities for City Leaders

<sup>34</sup> World Bank (2012). Green Growth for all.



**Increasing awareness regarding disaster risk can also allow individuals to take better and more informed choices.** A first step in increasing awareness is to invest in geological surveys and hazard monitoring stations, as well as dissemination of the resulting information. Making information on risks available as a public good is likely to lead to higher private investment in preventive measures. It is also likely to generate more favorable public reactions when takings necessary to reduce the risk of vulnerable populations. Security of property through titling often leads to higher investments in preventive measures. However, this does not mean providing title in areas that are known to be high risks and allowing people to remain there. In the United States for example, FEMA purchased properties in flood plains to move people to safer locations (World Bank, 2010<sup>35</sup>).

**Participation of affected stakeholders in the formulation of any risk management plan is also essential.** There are several reasons why participation of affected communities is essential for the success of any risk management plan. First, the population at-risk is not only a victim if the hazard manifests, but it can be a key partner in managing and mitigating the risks for the overall population. Second, communities can contribute to understanding the sources of the risks, estimating the potential impacts, defining acceptable levels of risk, and implementing mitigating measures. Collaboration between the community and local authorities will increase the probability of success in managing risks.<sup>36</sup>

**Finally, fostering good institutions to permit public oversight will contribute to successful risk mitigation.** A recent World Bank study suggests that countries with well-performing institutions are better able to prevent disasters. Fostering good institutions does not mean concentrating all powers in a single authority but rather supporting the evolution of

what may be at times a “messy array of overlapping agencies entities (the media, neighborhood associations, engineering groups)” (World Bank, 2010). Bringing the community, the private, and public sectors together and promoting diversity is likely to be more effective in spreading information and increasing community participation in prevention.

**Turkey can also learn from its own experience.** The Istanbul Seismic Mitigation and Emergency Preparedness Program is an example of a successful and on-going earthquake risk management program in Turkey. The program started in 2006 and is expected to be completed by 2015 and focuses on addressing the vulnerability of 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 detail procedures for quality assurance. This has been a collaborative effort led by the Istanbul Governorship through the Istanbul Project Coordination Unit (IPCU), with the support of the National Disaster Management Presidency under the Prime Ministry, the World Bank and other International Financial Institutions.<sup>37</sup>

## Creating institutions for valuation

**In term of creating the institutions for valuation of land and property Turkey is moving in the right direction.** The recent establishment of the Turkish Valuation Specialists Association, as a professional organization recognizes the importance of the existence of a set of well trained and certified cadre of appraisers. This institution is likely to contribute to improving the quality of valuation techniques, promoting unification towards international standards, improving the quality and training of valuation professionals and offering a certification mechanism that provides quality control on the practice.

35 This is World Bank (2010) Natural Hazards, UnNatural Disasters, the economics of effective prevention. The United Nations and The World Bank. Washington, D.C.

36 Correa, E., Ramirez, F., and Sanahuja, H. (2011) “Populations at Risk of Disaster: A resettlement guide”. World Bank and GFDRR, The World Bank, Washington, D.C.34 World Bank (2012). Green Growth for all.

37 World Bank (2012). “Achieving Prosperity for All: Country Partnership Strategy for the Republic of Turkey”, The World Bank, Washington D.C.



### Box 8. Other countries are thinking about urban transformation and risk prevention

Disasters are an increasing concern in developing countries. Between 1970 and 2010, disasters related to natural phenomena have caused more than 3.3 million deaths and US\$2.3 trillion worth of material losses worldwide —slightly more than Brazil's GDP in 2010.

Colombia has not been immune to this. In the last forty years, the country has been hit by disasters, causing US\$7.1 billion in losses. The consequences of the La Niña phenomenon in 2010 and 2011 —heavy rains and floods throughout the country— reflect the complexity of the risk situation prevalent in Colombia and the deficiencies in terms of risk management. This is evident in the following figures: 3.5 million victims, 8 thousand homes destroyed and more than one million hectares of agricultural land affected.

#### A Comprehensive Vision

Colombia has positioned itself as a Latin American leader in terms of developing a more comprehensive vision with regards Disaster Risk Management. The government strategy seeks to reduce damages and losses, paying particular attention to prevention and risk-reduction efforts, as well as controlling the fiscal volatility —the impact on public finances— resulting from these events.

Efforts towards disaster risk management started in Colombia with the formulation of the National Plan for Prevention and Relief in 1989 (following the devastating Popayan earthquake of 1983). Further, the last four National Development Plans (1998 to 2014) have included DRM as an important topic. Efforts have also been made on improving the monitoring of natural hazards, the enforcement of building codes (since 1984), and organizing local disaster response capacity.

The work undertaken in Colombia has resulted in a relative drop in loss of life; however, damage to property, infrastructure and livelihoods continues to increase, proving that disasters are not natural events per se, but rather the result of inappropriate development models. This means that efforts have not been sufficiently effective due to increasing vulnerability. This has led to a success in reducing the loss of lives. However, the damages and losses to property and livelihoods due to natural hazards are still growing every year. The dramatic increase in the number of disaster-related damages reported in Colombia over the past decade is not due to a change in the hazard patterns. It is a result of inadequate land use planning and urban population growth.

Since 1997, Colombia has put its efforts in this direction by giving priority to strengthening the incorporation of DRM into municipal land use plans (POTs) and developing associated risk management strategies. This process has advanced rapidly in some larger cities, which are among the leaders in DRM in Latin America. However, approximately 95percent (1,050) of Colombian municipalities have had significant difficulties in making any progress on disaster risk management due to low technical capacities and a lack of investment. The World Bank and GFDRR are supporting a technical assistance processes using an open-source risk assessment platform to integrate probabilistic risk modeling into specific policy-making processes. This is done through the Probabilistic Risk Assessment Initiative (CAPRA) first developed in Central America is now being implemented in Colombia among other South American countries. CAPRA provides a risk calculation platform that integrates exposure databases and physical vulnerability functions under a probabilistic approach. CAPRA uses a multi-hazard risk approach to evaluate risks in terms of physical damages and estimates direct economic and human losses.

*Source:* Colombia DRM report 2012 and CAPRA project highlights #4

**Korea provides an example of early efforts towards a systematic, professional and transparent system of land valuation.** During the 1970s Korea encouraged the development of a cadre of property appraisers—bringing transparency to the valuation process while making information on land values widely accessible. In previous land acquisitions, market-values

and asset-replacement-costs were used by local administration officials. In 1972 the government introduced the Basic Land Prices system, which mandated the assessment of land and buildings by certified private appraisers. Estimated property values from two appraisers were averaged for a final value; if the two appraisals differed by more than 10 percent, a





third private appraiser was selected and a new average calculated.<sup>38</sup> This provided a first step to define independent assessments. The largest cities of Colombia, and in particular Bogota also have a history of efforts towards land valuation (see Box 9).

**Despite efforts to improve valuation techniques and create a strong cadre of appraisal professionals, the new regulations are not binding for public institutions and therefore serious problems in valuation processes related to land acquisition and other public transactions is likely to continue being a problem.** In fact, Law No. 4650, which regulates the procedures for expropriation of immovable properties, assigns public administrations the power to carry out valuations. Public offices are required to form appraisal committees of at least three individuals, as well as reconciliation committees (also of at least three individ-

uals) to execute the bargaining process based on the estimated value. However, the law does not stipulate any professional or technical requirements for the members of such committees leaving their selection guidelines to each individual entity. Introducing legal and institutional structures that unify the requirements for both public and private sectors is essential. This will contribute to transparency in land acquisition processes and enhance compliance with EU standards. In the current context where the new transformation law is likely to open the door for additional takings, it is essential to first lay the ground for independent, transparent and consistent valuation methods. Without the institutional capacity to help discover and disseminate the value of land, the acquisition process offers considerable scope for undervaluing it and leading to public discontent and what may be considerable negative social impacts.

### Box 9. Updating the Cadaster in Bogotá, Colombia

Bogotá has been considered a pioneer in land valuation in many ways. Between 2008 and 2010, the city successfully updated its cadastral database, revaluing the 2.1 million urban properties in the city. This updating process implied a 30percent increase in property tax revenue and 171 million dollars of additional revenue in FY2009 and FY2010 (Ruiz and Vallejo, 2011). Uribe (2010) summarizes the key elements behind the successful update of cadastral values as follows: improved management of human resources, introduction of information technologies, mitigation of the project's impact on the property tax, engagement of stakeholders and career civil servants, openness to review the project's results, and improved massive assessment techniques.

Improvements to the massive assessment techniques included incorporating the use of spatial information collected using GIS systems into the econometric techniques used for the estimation of property values. Distance to key sites and amenities were used as important determinants in the estimation of property values. Given that no market information was available for the city, initial price data used in this process was collected using a team of expert appraisers that applied a combination of market, cost, and income valuation approaches to arrive at the best possible appraisal value. Further, close interaction between assessors and econometric modeling teams, helped ensure that sensible values were obtained for all areas of the city. Today, this data is made available for research purposes under confidentiality agreements. The information collected is also shared among government institution to enhance the quality of the planning process across different agencies and sectors.

Because there was a considerable lag in the cadastral values, a significant increase in the base for property taxes was expected after the updating process was completed. To maintain the progressiveness of property taxes and minimize resistance from property owners the city put forward a new legislation to introduce an increase ceiling on property tax. Under the assumption that property values are strongly correlated to ability to pay, the maximum increase in property tax was set to augment proportionally to the logarithm of the property's value (differentiated ceilings were also set for residential and non-residential uses). These ceilings partially separated the property value from the increase in taxes and gave property owners additional certainty on the tax increase (Ruiz and Vallejo, 2011).

**Sources:** Ruiz and Vallejo, 2011 and Uribe 2010

38 ADB 2010.





**In moving towards a better system of land valuation and dissemination of land price data, a key step is to move towards property registered values that are closer to market values.** Historically, there has been a tendency to underestimate property values due to the existence of taxes and charges associated with transaction values. Moving away from transaction charges and towards a system of property taxes should contribute both to improving the quality of the data collected by the land registry offices while also providing a constant stream of revenues for local administrations.

**In the context of the new transformation law, it is also essential to promote greater accuracy in the valuation of public land.** The real value of the land used has to be incorporated in benefit-cost analysis to obtain a genuine understanding of the economic components of transformation projects. With increasing land values that accompanied urbanization, public land in urban areas has become extremely valuable. When such lands are turned over to private developers, they can and should yield high returns, which are necessary to deliver supportive infrastructure and to provide targeted subsidies for low income households. Considering the beneficiary profile of public housing in Turkey, it is not clear that the benefits of public land assets are being effectively used for low income groups.

**Connecting land-use planning with housing provision that anticipates growth is essential for rapidly urbanizing cities.** Proactive land-use planning for city expansion can help avoid costly urban redevelopment later. Today, TOKI suggests that in the near future, the main goals of the administration include strong efforts on urban renovation and urban transformation projects, construction of social housing for the lowest income groups, building satellite towns in big cities such as Istanbul, Ankara and Izmir, and increasing the production of land with infrastructure, among others. As Turkish cities think about managing urban expansion and increasing densities, there is the need to provide public open spaces and rights of way for infrastructure. In this context, coordinating land and housing policies with decisions on connective infrastructure becomes increasingly important.

**South Africa provides an example where poor location choices led to limited impact of a very large mass housing project.** Poor location choices and lack of fully tradable property rights are the most likely determinants of the limited impact of the Reconstruction Development Program for housing in South Africa that started in 1994. In a recent study, Lall et al. (2012) suggest that while RDP has had an impressive roll-out in terms of numbers, its impact is disappointing. The study argues that this is the result of a poor match between what the government is supplying and the ac-

### Box 10. Finland - clear and transparent institutions for land valuation

The land registry and cadaster information of Finland is recorded by the National Land Survey of Finland (NLS). The Institution with the headquarters situated in the capital city of Helsinki, conducts similar tasks to those of the General Directorate of Land Registry and Cadaster in Turkey. 12 regional units and 35 local offices throughout the country are affiliated with the General Directorate.

Real estate information in Finland is recorded using a GIS enabling system called “JAKO System” which bears resemblances to Turkey’s Land Registry and Cadaster Information System (TAKBIS) and Cadaster Data Consolidation (KVK). However, as opposed to TAKBIS, all real estate information is available on the internet for public access.

Public availability of regularly collected and standardized data enables systematic and accurate valuations. In fact, mass valuations are conducted every five years by the Finland Technical Research Center and used for taxation purposes. Private valuation companies are left out for public valuation processes where the land registry and cadaster organization plays a key role. But there are situations where the companies are asked for their opinions and studies when necessary. The valuation companies carry out the valuation studies in accordance with International Valuation Standards and RICS Valuation Standards.



tual demand. The study suggests that households who receive RDP housing are not satisfied with their dwellings as these are often far from employment centers: the new houses were often built in the old apartheid locations (which were deliberately sited far from urban centers and white neighborhoods).

**Even examples of housing policies that are considered successful present an array of challenges.** Chilean housing policy has for long been considered in Latin America as an example of a pioneer and successful approach to housing problems. Today, Chilean housing policy model is being imported either directly or indirectly through technical advice to many countries. These policies have contributed to increased ownership rates and improved quality of housing. About 85 percent of the increased owner-occupancy rates ownership between 1992 and 2003 can be attributed to the efforts of the Housing Ministry (MINVU) (see Ruprah and Marcano, 2007).

**A recent evaluation of the housing policies in Chile, however, suggests some weaknesses that may also provide lessons for other countries (Ruprah and Marcano, 2007).** One of the key points highlighted by this evaluation is the fact that as cheap land for public housing became scarce, public housing started being built in isolated areas. Public housing projects moved farther away from the city center and resulted in residential segregation (Sabatini 2001, 2003). Seeking lower costs, both government and private sector provided solutions that are only in areas disconnected from the city center and where in many cases, the poor were already located. As a result of the housing programs the poor have been segregated to the periphery of the city and are now facing reduced income opportunities. Other studies have also confirmed that housing subsidies led to residential segregation in Santiago (Vargas, 2006).

## **Continuing efforts in opening financial markets and increasing credit availability**

**Housing finance through commercial banks is still in its infancy and more efforts are required in this area.** Commercial banks have increased their involvement and became the primary source of mortgage credits by 2004 when the new AK Party government stopped HDA to advance new credits. However, the unvarying share of housing loans to total bank loan between 2007 and 2011 suggests that housing loans became stagnant in recent years. Two other stylized features that identify the major caveats of present housing finance situation in Turkey are – (i) the limited volume of longer term housing loans and (ii) increasing supply of housing loans to potentially medium or high income groups. All these caveats suggest that the banking sector has limited access to risk insurance. Thus to create a pro-poor financing strategy, the government not only has to remove these bottlenecks but, at the same time, has to protect the financial sector by providing proper credit insurance schemes.



## CHAPTER 4:

## WHY URBAN TRANSPORT MATTERS IN TURKISH CITIES

### TRENDS IN URBAN TRANSPORT IN TURKEY

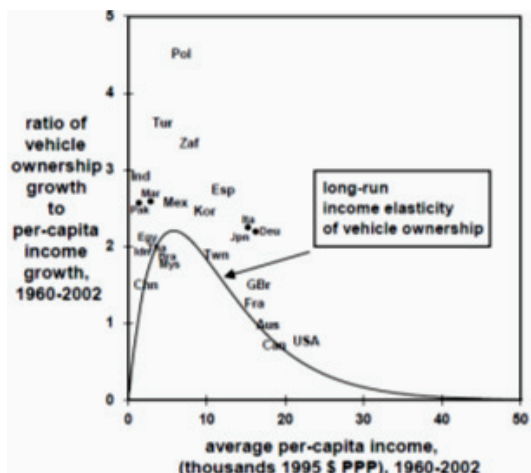
In metropolitan cities in Turkey, urban transport is changing rapidly and facing various challenges that arise from the coincidence over time of several trends. First, urban population is growing rapidly in the metropolitan municipalities over the last four years ranging from 8 percent in Konya to 21 percent in Kayseri and 23 percent in Mersin. In all cases, metropolitan growth is greater than at the provincial level. Second, household incomes continue to grow and have already reached the level at which the growth of car ownership increases at a much greater rate than incomes. As documented in the literature, motorization rates (number of cars owned by 1,000 persons) grow at least twice as fast as economic growth when a country's GDP per capita is between \$4,000 and \$8,000 (see Figure 40). Consistent with these global trends, during 2001-2010 in Turkey, car ownership per capita grew much faster than GDP per capita in most metropolitan areas, almost twice as fast in Kayseri, Konya, Istanbul and Gaziantep. Car ownership growth has reached a saturation point in

larger metropolitan areas in recent years (zero growth in Istanbul today and 1.5 percent in Ankara between 2009 and 2010), while it continued to grow in smaller cities, reaching over 5 percent in most of the metropolitan provinces and as high as 8 percent in Konya (see Figure 41).

And, third, road traffic volumes are now reaching levels in relation to road capacity at which the performance of the road network is particularly sensitive to further traffic increases. It is the non-linearity of the latter two relationships which is at the heart of the challenge.

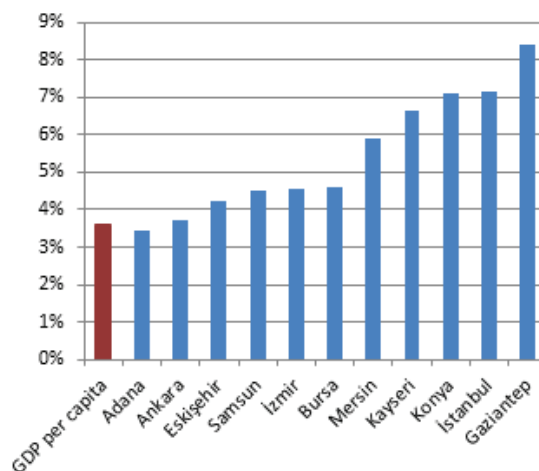
Faced with early signs of deterioration, cities have introduced or are exploring new technologies and solutions, with varying degrees of success. Many of them have invested in moderately inexpensive light rail transit (LRT) systems, suppressed the most polluting and congestion-inducing modes of public transport (particularly the *dolmuş*), and shifted to less polluting energy sources (either electricity or natural gas). All of the cities reviewed for this study considered improved and clean transport an important policy objective. Some of the technology adopted or being developed

**Figure 40: Vehicle ownership growth much faster than GDP growth between \$4,000-8,000 per capita**



Source: Dargay, Gately and Sommer (2007)

**Figure 41: Annual growth rate of private car ownership compared to GDP per capita growth (2001-2010)**



Source: TÜİK Stat, World Development Indicator

Note: GDP per capita measured in constant US\$



is state-of-the-art. Examples of this include the development of traffic signal control systems based on automated vehicle license recognition technology (in Kayseri), modern light rail technology (in Eskisehir), and electronic ticketing systems in public transport and the widespread introduction of LED street lighting systems in several cities. Characteristics of the cities reviewed under this study are summarized in Table 6.

**In some respects legal and institutional arrangements are conducive to a comprehensive response to the emerging problems.** The law on municipalities (Law No. 5216) recognizes that urban transport, along with other municipal services, is a metropolitan scale issue. This legal provision is an important basis on which metropolitan municipalities plan and

operate transport infrastructure and services at metropolitan level. The division of functions between the metropolitan and district authorities is generally appropriate in the urban transport sector: the former is responsible for devising overall planning and operation of public transport services; and the latter for maintenance of some roads and local planning. Municipality Law No. 5393 also allows non-metropolitan municipalities in provinces to make necessary arrangements (presumably investments and planning) relating to public transport, though it does not specify how these will be coordinated between district and central municipalities. In short, both regulatory ambiguities and current practices point to inconsistencies between the assignment of powers and allocation of resources across different

**Table 6: Summary of Urban Transport Characteristics of Selected Turkish Cities**

	Adana	Ankara	Eskisehir	Gaziantep	Izmir	Kayseri	Kocaeli	Konya	Trabzon
<b>Basic Characteristics and Transport Demand</b>									
Population (million)	1.617	4.891	0.700	1.556	3.367	1.090	1.499	1.527	1.601
of which growth rate (% 2009/10)	1.1%	2.6%	1.2%	2.8%	2.1%	2.4%	2.4%	1.1%	-0.2%
Cars registered per thousand people		194	260	196		225		240	
of which growth rate (% 2009/10)	6.3%	1.5%	5.9%	6.2%	2.8%	5.1%	7.6%	8.1%	7.8%
Public transport share of all trips (%)		69%							
<b>Transport Infrastructure and Services</b>									
Metro/LRT	20 km	23.4 km	16 km	9.3 km	94 km	17.5 km			
Municipal buses	160	1,973	40	26	1700	212		241	
Minibus/dolmuş	1,084	2,453	379	487		0		530	
Commuter rail	Yes	Yes							
Bus equivalents <sup>†</sup> per thousand people		3,344	389	621		560		568	
Metro/LRT share of PT trips		11%	20%			20%		24%	
Municipal bus share of PT trips	47%	23%	5%	5%		5%		37%	
Dolmuş share of PT trips	43%	37%	70%	60%				38%	

**Source:** Data collected from selected cities and Bank staff assessment

<sup>†</sup> The calculation of standardized public transport vehicles is a weighted average, where a 12 meter bus has a weight of 1, dolmuş 0.33, tram or LRT 2.0, and special schools or works buses a weight of 0.5 (as they are only in operation for the relevant parts of the day).



types of municipalities. The legal provision for coordination of action in urban transport through the Transportation Coordination Center (“UKOME”: Ulaşım Koordinasyon Merkezi) intends to ensure that the interaction between policies and possible conflicts of interest is well recognized and can be addressed. The actual practice in each city, however, varies.

**At the implementation level, cities are often poorly organized to mobilize technology in a comprehensive and consistent way.** This arises from several causes. The existence of UKOME is often wrongly interpreted as an alternative to a well-integrated urban transport strategy. The UKOME secretariats within the metropolitan organizations are typically very sparsely staffed so that strategic issues such as parking policy, or bus and taxi licensing, are dealt with mechanically and superficially in the absence of strategic principles and city transport data and analysis. As a result, in many cities, UKOME function as a mechanism that resolves conflict among various interest groups, and the decision-making process becomes excessively political. In many cases, decisions are made as political judgments of the mayor, rather than being based on sound technical analysis.

**The legal framework for urban transport development also inhibits policy development in some respects.** In particular, the existence of rights of operation viewed as being in perpetuity, both for *dolmuşes* and for some bus operations that have arisen from conversion of *dolmuş* operations, has limited the flexibility of municipalities in public transport planning. This has been evidenced by the difficulties in reforming either the *dolmuş* or the private bus markets in almost all sample cities. As noted earlier, even the municipalities that succeeded in eliminating *dolmuş* operations have not resolved the issue of perpetuity of contracts in a fundamental way.

## COST OF DOING NOTHING

**With these challenges, urban transport in secondary Turkish cities appears to be balanced on the edge of a precipice.** These cities have not yet experienced the levels of congestion affecting large metropolitan areas such

as Istanbul, but have already begun to see the risks. As experience in other cities suggests, if not met with appropriate transport policies and infrastructure, this rapid increase in traffic volume will lead to congestion and air pollution that generate substantial externalities and economic costs.

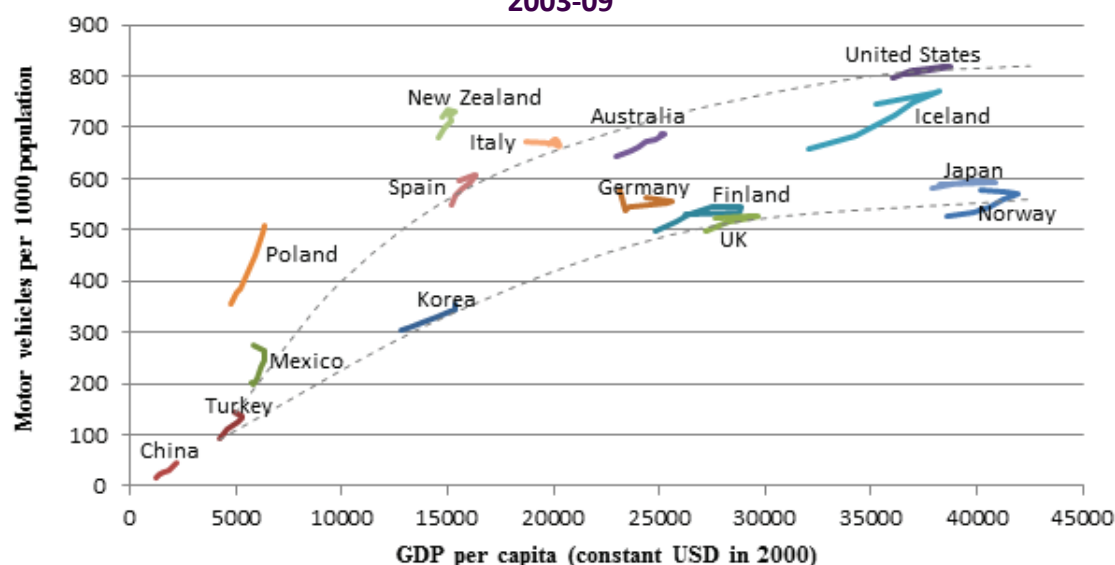
**Patterns found in other countries suggest possible scenarios of future trends in motorization and road sector energy consumption in Turkey, which can increase substantially in the next ten years.** Motorization rate is positively correlated with income (see Figure 42); the future number of motor vehicles in Turkey can be estimated to be between the lower and upper bounds of motorization patterns of higher income countries— the lower bound follows East Asian and Northern European trends and the upper bound is found among countries in North America, Oceania and Southern Europe. By 2022, when Turkey’s GDP per capita could reach US\$20,000 (in constant 2012 prices) at an annual growth rate of 4 percent, the country’s motorization rate could reach between 350 to 700 vehicles per 1,000 persons, which translates into an annual growth rate of between 7 and 13 percent. This could lead to a manifold increase in the share of trips made by private cars in Turkish cities in comparison to the current level.

**Motor vehicle ownership is not the sole determinant of future modal shares and travel patterns in Turkish cities can also be affected by other factors, such as the coverage and quality of public transport, urban form, price of motor fuels, among other things.** Nevertheless, the trends in higher income countries show another very strong positive correlation between the motor vehicle ownership and road sector energy consumption per capita (Figure 42). Assuming that Turkey would follow the average trend among higher income countries (regression line from the cross-sectional analysis shown in Figure 43, by 2022, road sector energy consumption in Turkey is estimated to be between 460 and 915 kg petroleum equivalent per capita. In other words, it would increase between 2.5 and 5 times the current level of 185 kg petroleum equivalent per capita (in 2009).



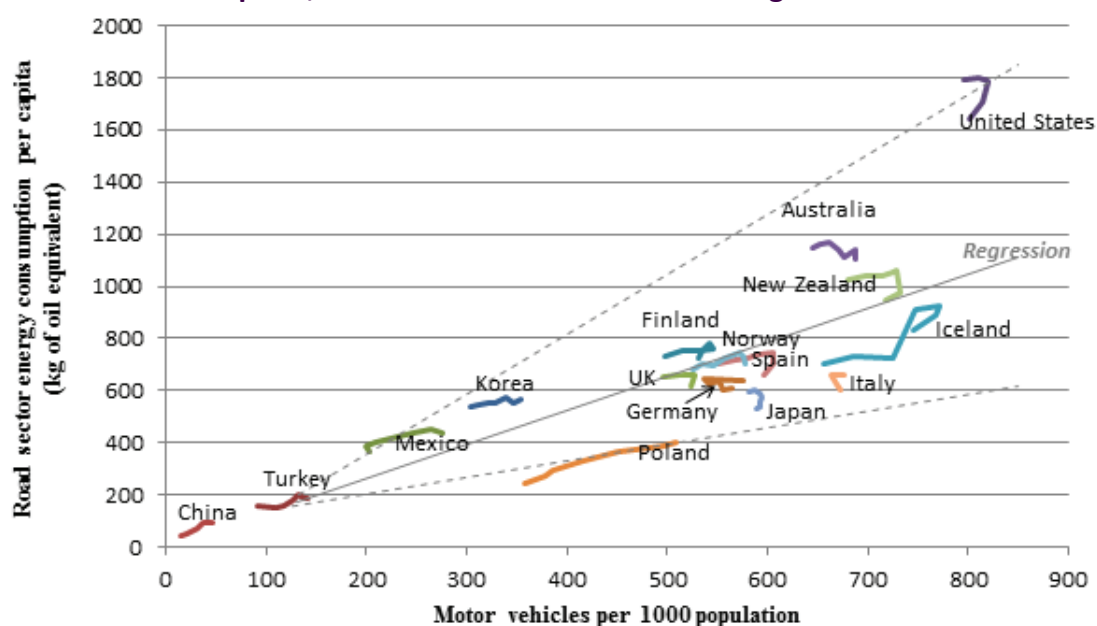


**Figure 42: Relationship between GDP per capita and motorization rate, trends during 2003-09**



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

**Figure 43: Relationship between motorization rate and road sector energy consumption, trends in selected countries during 2003-2009**



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

**Beyond offering a guide to estimate future trends, the above patterns also suggest a wide gap among high-income countries in the automobile- and energy-dependency of their mobility.** At similar income levels, people in New Zealand own 20 percent more vehicles than those in Spain; in the US, there are 39 percent more vehicles per capita than there

are in Norway. Similarly, at the same level of vehicle ownership, depending on the composition of vehicle stock as well as traveler choices and behavior, actual use of vehicles and consequently the intensity of energy consumption varies greatly. Australia's road sector is about 83 percent more energy-intensive than that of Italy, both at a motorization rate of around





680 vehicles per 1000 persons; the road sector of the US consumes about 98 percent more energy than that of Iceland, while the former owns only 7 percent more vehicles per capita. In other words, economic growth can be decoupled from the increase of energy intensity and fossil-fuel dependency to some extent.

**The cost of doing nothing is substantial, since policies and infrastructure set up now will have lasting impact on the economic and environmental sustainability of Turkish cities.** With rising motorization rates and private car use in Turkish cities, external costs of road transport—traffic congestion, high energy consumption and dependency, air pollution and road traffic casualties—will keep increasing. Experiences of other cities and countries offer good estimates of the potential cost of inaction.

**In most developed cities, costs associated with traffic congestion, both in terms of travel time loss and reduced reliability, are substantial.** Cost of congestion is the most studied externality of road traffic growth.<sup>39</sup> In 2009 a special study commissioned by the United States Department of Transport (USDOT) estimated that congestion on the urban road network in the United States cost the nation about \$85 billion per year, the equivalent of \$763 per commuter annually. Significantly the 14 largest metropolitan areas investigated in their report incurred over 62 percent of costs associated with road congestion. Travel time costs accounted for 71 percent of the total (\$60.6 billion annually), while reliability costs are estimated to contribute about \$10.1 billion.<sup>40</sup> Vehicle operating costs are estimated to add \$11.2 billion annually based on the assumption of a \$2 per gallon (53¢ per liter) gasoline price. A study of road congestion costs in large Australian cities, using a similar methodology, found that reliability-related costs added

about 25 percent to the cost of wasted time.<sup>41</sup> Experience in other countries is similar, though there is considerable variation in estimates due to differences in the methods of estimation. For the United Kingdom a relatively recent estimate is that the total cost of congestion with 2005 traffic levels at 1996 prices was just under \$40 billion.<sup>42</sup> Earlier estimates put the cost of congestion as a proportion of GDP at 1.3 percent in the U.S., 2.0 percent in Japan, 2.1 percent in France and 3.2 percent in the U.K.<sup>43</sup> In a more recent study, cost of congestion in Europe was estimated at €200 billion, approximately 2 percent of GDP.

**Air pollution and associated health costs are another very important externality of road transport.** A recent study estimated that additional fine-particulate-matter emissions that can be traced back to traffic congestion in the 83 largest urban areas in the United States led to more than 2,200 premature deaths in 2011 and caused nearly \$18 billion in public-health costs.<sup>44</sup> This covered only the impacts in the 83 urban areas and only the cost of related mortality and not the costs that could be associated with related morbidity, healthcare, insurance, accidents, and other factors. However, the study did find that the number of additional premature deaths and public-health costs due to traffic congestion have been declining over the past 10 years and will continue to decline until about 2030, as older, more polluting vehicles have been replaced with today's low-emission vehicles.

39 In the US, for instance, the Texas Transport Institute publishes annual estimates of total congestion costs.

40 Reliable costs are.

41 Bureau of Transport and Regional Services (2007), Estimating urban traffic and congestion cost trends for Australian cities, Working Paper No. 71, Canberra, Australia

42 Tweddle et al 2003

43 Quinet, 1994

44 Harvard Center for Risk Analysis (2011) "The Public Health Costs of Traffic Congestion: A Health Risk Assessment," Environmental Health.



### Box 11. Evaluating health costs of air pollution and road accidents

For both air pollution and traffic accidents, expressing the impacts in monetary terms requires some evaluation of both morbidity and mortality impacts. Morbidity effects are usually addressed by separately evaluating (1) the value of the work time lost due to the illness; (2) the medical costs of treating the illness; (3) the amount the sufferer would pay to avoid the pain and suffering associated with the illness; and (4) the value of the leisure time lost due to the illness. Lost work time is valued at the wage rate and medical costs are imputed based on the full social costs of providing the care. The cost of pain and suffering avoided and the value of leisure time gained are usually estimated by contingent valuation method (CVM) or stated preference methods. Mortality effects are usually addressed through the calculation of a value of a statistical life through willingness to pay or stated preference studies. This issue was specifically addressed for the Value of a Statistical Life (VSL) by Miller (2000). He found that the VSL averages at least 120 times the per capita income of the country and that income elasticity of the VSL varied between 0.85 and 1.00 in country level regressions, so that income level adjusted values can be obtained for any particular country.

**Accident costs are a third major social cost of urban road transport, where Turkish performance does not compare well.** At the national level the published number of fatalities per one million persons was 134 for Turkey compared with 41 for the Netherlands, 35.9 for the United Kingdom and 29 for Sweden. City data is more difficult to obtain, but are known usually to be lower than national averages, particularly for large cities. For example, deaths per one million persons are less than 30 in London, Madrid and Prague, with rates rising to around 60 per million per annum in many southern and eastern European cities such as Rome, Budapest and Warsaw. According to the World Health Organization the cost of road crash injuries is estimated at roughly 1percent of the gross national product in low-income countries, 1.5percent in middle-income countries and 2percent in high-income countries. The economic costs for traffic crashes range between €7,347 per injury in Portugal and €119,174 in Sweden, and between €105,546 per death in Holland and €2,160,000 in the U.S. The annual cost to the U.K. economy of all deaths and injuries remains significant at around £13 billion (i.e. around 1percent of GDP), with damage-only accidents estimated to cost a further £5 billion. Given the relationship between accident rates in the U.K. and Turkey, and the difference in GDP, this suggests that the cost to the Turkish economy may be well over 3percent of GDP.

**The longer action to address these issues is delayed, the more difficult it may be to address them.** For example, it is much easier—both technically and politically—to provide for segregated road public transport at the design stage of road facilities or when car ownership is relatively low, than to convert existing road space from general to segregated use when roads have already become seriously congested. Similarly, it is much easier to achieve transit-oriented development when that philosophy is the basis for new development than to retrofit it on an existing more dispersed urban structure. This highlights the importance for Turkish cities of having well- integrated land use and transport planning policies, structures and mechanisms. Based on the above assessment, this chapter proposes four priorities in urban transport as discussed in the following sections.

#### **PRIORITY 1 – RETHINKING URBAN TRANSPORT PLANNING**

##### **Narrowing Gaps between Laws and Practice**

**In Turkey, the legal framework is already established for urban land-use planning and design, according to Development Law No. 3194 first enacted in 1985 and subsequently amended.** The system is hierarchical and nested. Ministry of Development is responsible for overseeing preparation of socio-economic di-



mensions of Regional Plans, while Ministry of Environment and Urbanization oversees preparation of Territorial Plans at the regional level and will also prepare Spatial Strategic Plans at the regional level due to an amendment in Law 3194 in 2013. These planning documents set out high-level priorities for the spatial development of the country and the proposed location of economic and other activities within it. The relevant line ministries prepare input to this through a Development Framework Plan which sets out the general guidelines for implementation of the regional plan concerning respective sectors. Both of these are macro level plan documents. Together they form the basis on which the lower level jurisdictions—metropolitan municipalities—are required to produce Provincial Territorial Plans and other sub-plans. These sub-plans consist of master-plans that set out the main land-use allocations, settlement densities, and development principles, including the requirements for transportation systems. The Implementation Plan sets out in detail, on a larger scale, the detailed implications of the Master Plan.

**Despite the legal requirements, current practice of urban transport planning in Turkey is not fulfilling the intended objectives of the legal requirements for planning.** Several weaknesses are noted. First, in most cities, meaningful integration between land-use planning and transport planning is not taking place. While both are required by law, they are usually prepared at different times with neither legal requirement nor institutional arrangement to ensure their mutual consistency. For example, it was stated that both the third bridge and the third airport projects in Istanbul are being developed as transport projects despite the fact that they are not included in the existing land-use development plan. At the municipality level the functions of the UKOME do not extend to the coordination between transport policy and land-use, which is under the responsibility of city architecture department or equivalent. This suggests the need for new mechanisms for planning as well as organizational arrangements at the municipality level, including, preferably, changes to the legal and regulatory framework.

**Second, many cities need to develop strategic transport planning capabilities.** Although many cities are spatially expanding very rapidly, planning is often not done at the strategic level in advance of development and growth of urban areas. Rather, it is often done in a reactive manner and in many cases to justify real estate and development projects, rather than setting the strategic direction for the city's development. This is caused partly by the obvious disconnect between the land-use and transport plans and partly by the institutional capacity (discussed in the following section). While Law No. 5216 requires both an overall master plan and a transport master plan, it does not specify what should be the nature of those plans, or what they should contain. While there is nothing to stop the transport plans from extending beyond physical planning to cover the full range of transport policy issues in the city, there is nothing in the law to require this.

**Third, some problems are not formal or legal but are related to implementation and application of such rules and regulations.** City Implementation Plans, for instance, include urban transport infrastructure such as parking, which is explicitly mentioned in the legislation. Because these are prepared at the municipal level, and are subject to local consultation and approval by the municipal council, the process appears to be quite appropriate for achieving consistency and coordination between land use and transport planning. The weaknesses of the system are thus not in structure entirely, but largely in performance. For example, while some cities—such as Konya—recognize that it will not be possible to provide for unrestrained automobile access to the central city, there is no recognition at the spatial planning level of the implications of parking provision in inner area developments, which cause congestion problems.

### **Building an Institutional Basis for Successful Planning**

**The basis for good planning is always institutional, and successful cities around the world share several common characteristics in their institutional setup.** First, these cities common-



ly have an organization with overall responsibility for planning and coordinating implementation of all the interacting aspects. Where a municipality is the center of a wider metropolitan region, it is common for a metropolitan organization (transport authority) to be formed. And these organizations are adequately funded and staffed. London is a good example of a city which has a strategic transport planning agency at the metropolitan level. Transport for London fulfills this function and is responsible for overseeing road traffic management, parking and public transport in an integrated way.

**Second, cities following good practice have adopted appropriate processes for planning and implementation.** Urban transport is an integral and essential component of any urban development strategy. Indeed, it should be the backbone of the city's planning framework. It is vital in connecting housing markets with labor markets and ensuring that low income households can affordably reach job opportunities, while contributing to the competitiveness of a city's firms. Successful cities start their planning process from setting a long-term vision and goals for city development, recognizing the interactions among multiple and often competing policy objectives, and then address each problem—such as road network development, traffic management, and improvement of public transport performance—in a coordinated manner. Urban transport strategy in the best managed cities is characterized as: (i) being well integrated with other aspects of the city development strategy, such as land-use plans, environment policies, and economic development strategy, (ii) the planning process coinciding with the budgetary process, and (iii) the investment plans being constrained by available fiscal and administrative resources.

**Compared to these characteristics of better-performing metropolitan/municipal transport authorities, typical features of the organizational structure in Turkish cities are presented as in the schematic diagram in Error! Reference source not found..**

**In most Turkish cities reviewed in this study, the institutional structure for addressing urban transport can be improved.** First, the

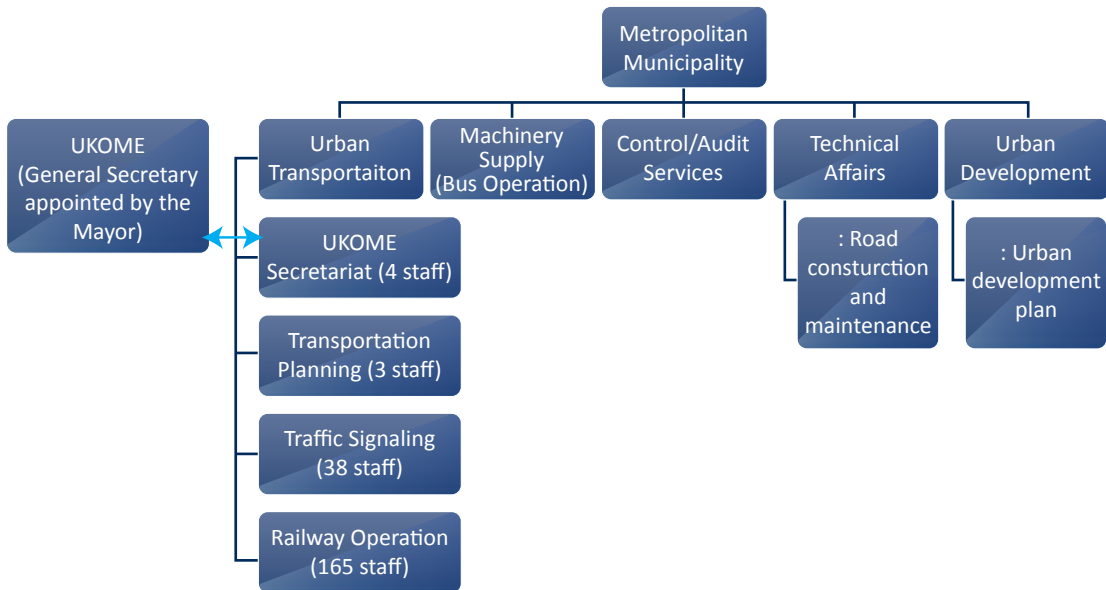
UKOME should base their coordination and decision-making on good quality data, analytical and technical work, which should be done by well-staffed technical units. The current UKOME structure for interdepartmental coordination and decision-making helps ensure that all key stakeholders are represented in making important decisions. However, there are currently two main problems with respect to how the UKOME structure is being practiced: (i) it does not have any powers to participate in and help shape land-use and urban development plans, and (ii) the UKOME secretariat, which performs as a technical unit that produces background work in support of UKOME's decision, is severely understaffed and under-resourced for the job it is required to perform. In a small sample of cities visited, UKOME generally had four or fewer staff for the purpose of analyzing and contributing to planning on a wide range of urban transport issues. This secretariat structure appears to undercut the analytical and technical studies that are undertaken by well-established departments designed for these purposes in better managed cities.

**Sub-sectoral planning also needs to be strengthened at the tactical and operational level.** Consistent with the above recommendation with respect to UKOME, it will be important to assign appropriate responsibilities and staffing of functional units so that they are suitably equipped to perform the tactical planning and technical functions they need to perform. These functional units are (i) traffic management, (ii) parking administration, and (iii) passenger transport planning and regulations.

**It is crucial to strengthen the strategic transportation planning function in Turkish cities.** Many metropolitan municipalities are or will be undertaking preparation of new comprehensive urban development plans, many of which will be outsourced. It will be important at a minimum to ensure that appropriate city inputs are made in these plans. Whether they are outsourced or not, adequate staff and citizen input will be required to ensure that the plan represents a vision of what the populace wants the city to become and not a plan that

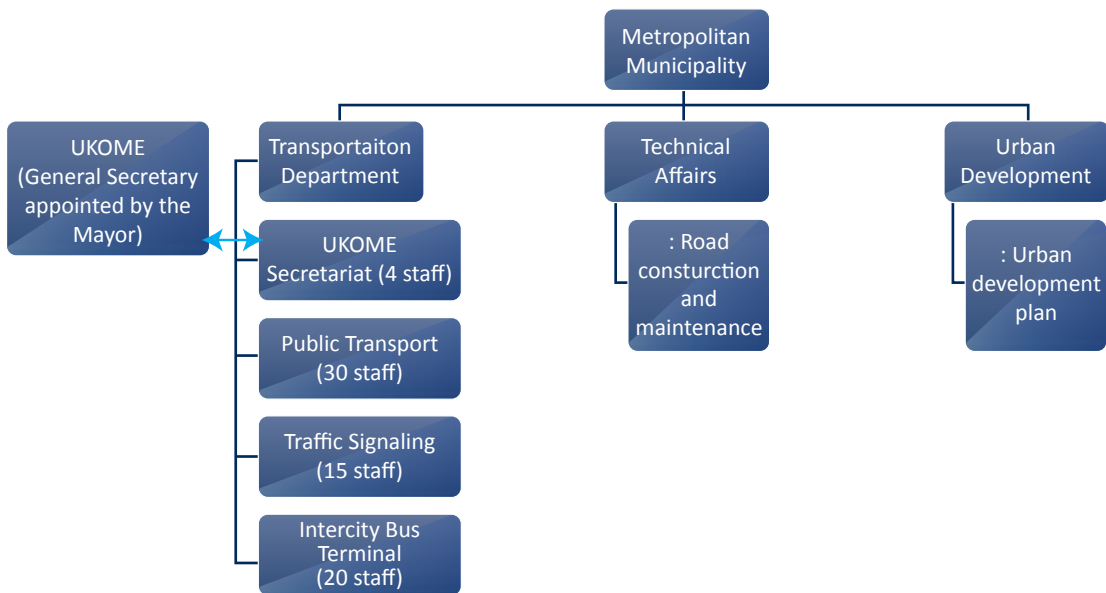


**Figure 44: Organizational Structure of Transportation-Related Functions of the Gaziantep Metropolitan Municipality**



Source: Interview with city officials

**Figure 45: Organizational Structure of Transportation-Related Functions of the Eskisehir Metropolitan Municipality**



Source: Interview with city officials

follows the traditional approach of concentrating largely on capital investments that are designed to accommodate perceived travel demand. At present too much of the scarce supply of skilled municipal manpower is devoted to operations, in particular where the

municipality has chosen to be the supplier rather than the regulator of service provision. And the costs of the administrative burdens of operation deprive more strategic functions of financial as well as human resources.





## Integrating Land-Use and Transport Planning

**Effective planning and implementation requires consolidation of comprehensive strategic powers** in one place, where plans are prepared and implemented and outcomes are monitored. The notion of the assembly of powers at the municipal or metropolitan level is derived from Western European experience and the judgments of the major western European Institutions over the last decade. For example, the European Committee of Ministers of Transport report on “Challenges to Implementing Sustainable Transport Policies” identified a number of impediments to successful policy formation, one of which is the absence of an integrated planning framework at the local or regional level.<sup>45</sup> This points to the fact that Turkey is not alone in facing this challenge.

The European Union (EU) strategy for urban environment, recommends that every city should develop its own “Sustainable Urban Mobility Plans”<sup>46</sup> and set out the rationale for such plans. The EU strategy also provided some recommendations on the planning procedures. In 2010, the Directorate General for Internal Policies (DG IPOL) of the EU further reviewed some key experiences in selected European cities including Paris, Brussels, Vienna, Orebro (Sweden) and Kouvala (Finland).<sup>47</sup> From the review, the DG IPOL drew main lessons that long-term vision, consistency in policy implementation, integration of sector policies, and good monitoring to secure public acceptance are critical factors of good urban transport plans. France and the United Kingdom require the preparation of such integrated plans by law; in other countries, they have been adopted for major cities without legal requirements.

**A number of countries globally have recognized this coordination problem and have**

**taken actions similar to the EU.** In France, the requirement of local plans was introduced by the Loi d’Orientation des Transports Interieurs (LOTI) law as early as 1982; the formation of a metropolitan level association and the establishment of a comprehensive strategy document is a pre-requisite condition for financial assistance by central government for urban transport programs. Similarly in the U.S., federal funding at metropolitan level is contingent on the preparation of a metropolitan transport plan and capital improvement plan. In the United Kingdom, every relevant sub-national authority has the responsibility to produce a 15-year strategy with a 4-year rolling implementation plan. First among Russian cities, the city of St Petersburg has chosen a similar combination of a long-term strategy and shorter-term action plan, broadly following Western European practices. Common among the above frequently quoted good practices is a combination of the following:

- A long-term strategy statement that covers all modes and brings together all of the affected authorities where there is an overlap of interest,
- Engagement of civil society, including a wide range of non-governmental organizations in consultation about strategies throughout the strategy formulation process,
- A short-term implementation plan, including costs of implementation and selection of priorities for action,
- An annual budgetary process which reflects the plan, and
- A secure and largely predictable income stream to make the planning realistic and meaningful.

**Successful integration of transport and land development can yield high social and eco-**

<sup>45</sup> ECMT (2002), “Challenges to Implementing Sustainable Transport Policies”, Paris. Other key impediments identified in the report are: (i) lack of a national policy framework, (ii) poor policy integration and co-ordination, (iii) unsupportive legal or regulatory framework, and (iv) inefficient or counterproductive institutional roles or procedures. The last is expanded onto (a) lack of ministerial co-ordination at the national level, (b) inappropriate degree of national government intervention in detail, and (c) the absence of an integrated planning framework at the local or regional level.

<sup>46</sup> European Union (2007), “Sustainable Urban Transport Plans”, Brussels.

<sup>47</sup> EC (2010) Directorate General for Internal Policies “Sustainable Transport Plans” EC Brussels





**nomic dividends.** Experience shows that when urban development is intimately tied to major fixed-guideway transit investments, the results are almost always positive: high ridership and environmental benefits, fiscally sound investments, and pro-poor outcomes.<sup>48</sup> Cities that are well known for their sustainable policies, such as Curitiba, Singapore, Stockholm and Copenhagen, have succeeded in developing sustainable urban spaces by improving mobility and built environments in a synergistic way.

**To improve the land-use and transport integration at the micro-level, traffic impact assessments should be instituted and practiced.**

The importance of traffic impact assessments has been recognized by many if not most Turkish metropolitan municipalities, but it is not clear that these tools are used consistently across the board. This may be due to the fact that the process of preparing traffic impact assessments has not been properly instituted in some if not most metropolitan areas. It will also be important to specify under law to what extent the municipality can require the developer to make road improvements both on-site and off-site to alleviate traffic problems.

## PRIORITY 2 – MAKE BEST USE OF LIMITED FINANCIAL RESOURCES

### Maximizing Value-for-Money of Capital Investments

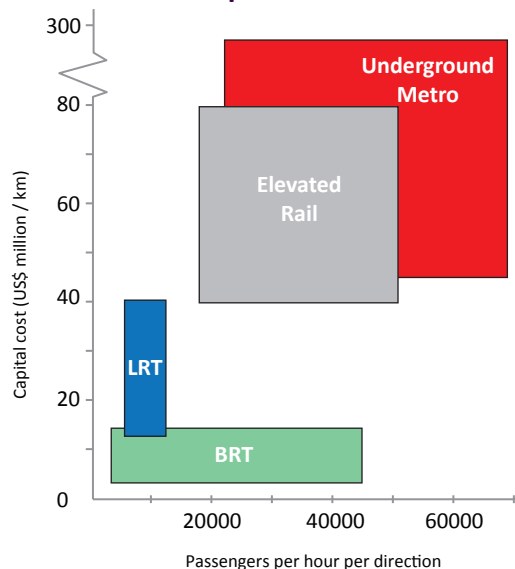
**Transport infrastructure is among the most capital-intensive physical assets owned by a municipality.** Decisions on capital investments should therefore be made carefully on the basis of their technical and financial viability, in order to maximize the long-term value-for-money of the investments. This section discusses how Turkish cities have made decisions on two of the most critical and capital-intensive transport infrastructures—mass transit systems and urban road networks—and how they compare with international best practices.

## Mass Transit Systems

**In many medium-sized Turkish cities, mass transit is often thought of simply in terms of rail-based modes and emphasis is usually on the technology choice.** In reality, the range of mass transit system options is very broad, covering not only choice of technology (e.g., rail, light rail transit, bus rapid transit, monorail, cable car), but also choices of horizontal and vertical alignment (underground is by far the most expensive), station spacing and location, and degree and mechanisms of system integration (i.e., schedule and fares coordination among multiple modes, multi-modal transit stations). In a sample of cities analyzed for this report, decision-makers in several cities rejected certain technology options without rigorous alternative analysis. One of the exceptions was in Eskisehir, where multiple technology options were being considered to complement the existing LRT.

**Choosing a technology inevitably involves confronting important trade-offs.** Traditional metros can carry over 60,000 passengers per hour in the peak direction, but cost between

**Figure 46: International comparison of public transport mode: Capacity vs. Capital Costs**



Source: Vietnam Urbanization Review 2011

48 Geerlings, H., and D. Stead (2003), The Integration of Land Use Planning, Transport and Environment in European Research, Transport Policy, Volume 10, Issue 3 pp 187-196.


**Table 7: Comparison of Selected Typical Rapid Transit Systems**

Example	Caracas Line 4	Bangkok BTS	Mexico Line B	Kuala Lumpur PUTRA	Tunis SMLT	Recife South	Quito Busway	Bogota Phase 1
Technology	Rail	Rail	Rail	Light rail	Light rail	Suburb rail	Electric trolley	Diesel busway
Vertical segregation	100 percent tunnel	100 percent elevated	55 percent at grade	100 percent elevated	100 percent at grade	95 percent at grade	100 percent at grade	10 percent at grade
Stop spacing (km)	1.5	1.0	1.1	1.3	0.9	1.2	0.4	0.7
Length (km)	12.3	23.1	23.7	29.0	29.7	14.3	11.2	41
Capital cost US\$ mln per km	90.25	73.59	40.92	50.0	13.3	11.6	10.3	5.2
Maximum cap (pphpd)	32,400	50,000	39,300	30,000	12,000	36,000	15,000	35,000
Avg. operating speed (km/hr)	50	45	45	50	13/20	39	20	20/30
Operations ownership	Public	Private (BOT)	Public	Private (BOT)	Public	Public	Public	Private
Year completed	2004	1999	2000	1998	1998	2002	1995	2000

Source: World Bank (2002)

\$50 million and \$150 million per kilometer, depending largely on the proportion of at grade, elevated and underground running. LRT systems usually have shorter trains, more frequent stops and lower maximum speed than metros. North American systems have cost between US\$15 million and US\$100 million per kilometer. In middle-income countries, the Tunis light rail system, which is mostly at grade, cost US\$13 million per kilometer, while Putra and Manila LRT Line 1 cost around US\$50 million per kilometer. A well-designed two-track system can handle up to 30 trains per hour per track, achieving peak rates of over 20,000 passengers per hour in each direction. More advanced systems with separate rights-of-way using moving block signaling, as in the Putra system in Kuala Lumpur, can exceed 25,000 passengers per hour per track. Bus rapid transit (BRT), as exemplified in the system in Istanbul, is usually the most cost-effective alternative to build and the quickest to implement. They are also flexible and can be closed—using specialized vehicles for the BRT right-of-way—or open—allowing vehicles to run on and off the segregated right-of-way. They cost between \$5 million and \$15 million per kilometer. Gener-

ally higher capacity and higher speed is associated with the more expensive alternatives.

**The conventional way to make this choice is by a classical cost/benefit analysis** in which, in addition to the monetary costs and benefits, various intangibles, such as the value of time, of life or of environmental quality are monetized in order to reduce the issue to a single decision criterion. However, for a more “broad brush” initial identification of alternatives it is common to use simpler criteria. For example, in China, Decree 81 (2003), sets ‘minimum criteria’ necessary for metro development to be seriously considered shown in Table 8.

The existence of an appropriate policy and institutional context is just as necessary for BRT as it is for a rail metro. For example,

- The greatest success has been achieved where all elements of a BRT system have been designed together as an integrated system;
- BRT has been most successful when accompanied by strong traffic management and land use strategy support;

**Table 8: Criteria for Mass Transit Technology Selection used in China**

Criterion	Metro	LRT
City population [million]	>3 million	>1.5 million
City GDP [RMB p.a.]	>100 bn	>60 bn
Passenger demand [passengers/hour/direction]	>30,000	>10,000
City equity investment [this guards against excessive borrowing]	>40 percent	

Source: Chinese government decree 83.

- BRT is therefore likely to be most successfully implemented where there is a strong metropolitan planning function and institution;
- Implementation of BRT can be used as a catalyst for general structural change and system improvement, and is most successful when it forms the core of such a reform;
- BRT can be superimposed on, and made compatible with, other existing mass transit modes, such as rail metro; however,
- Attempts to secure effective multi-modal systems require both physical and commercial integration.

**The choice of mass rapid transit technology need not be “all-or-nothing”.** An increasing number of cities—particularly in Asia—are combining technologies, using heavy rail metros where the volumes are heaviest and lighter technologies where demands are more moderate. That is the case in Beijing and Shanghai in China, as well as in Seoul, Korea, where BRT and traditional metros have been combined in an integrated system. Similarly in Singapore LRT links have been added where volumes are relatively lower in the integrated system.

## Urban Road Networks

**Investments in road network development should be made strategically under a clear urban transport strategy and master plan, but should not aim to accommodate unrestrained traffic growth.** A city’s road network is one of the most capital-intensive physical assets of the city, and thus its development has high opportunity costs—the resources that could be used for other municipal infrastructure and services. It is therefore crucial to ensure

that capital investments in new roads development, rehabilitation and repair are strategically chosen and prioritized. Given that motor vehicle ownership and use are growing rapidly in all Turkish cities (and as experiences in larger Turkish and foreign cities suggest), simply building more roads would not solve current and future traffic problems. Resources should thus be focused on high-priority roads rather than mere expansion of total road length, taking into consideration trade-offs between additional road capacity and lower-cost alternatives, such as traffic management and demand management schemes. Some general principles of road network development include the following:

- Typically, bypasses that are built around the cities can effectively reduce traffic congestion in city centers by insulating through traffic from in-city traffic.
- As important as the total road length and coverage (i.e., kilometer per square-meter), if not more, are the completeness of the road system. The trunk road network—highways and major arterials—needs to be completed without missing or low-capacity links, so called bottlenecks; it should be well connected to lower-hierarchy feeder roads with clearly defined functions.
- In city centers, however, expansion of road network is however generally not recommended, not only because it is less cost-effective in reducing congestion than other measures such as traffic management schemes and parking policies, but also because more roads in the city center ultimately encourage more trips made by private cars.



## Improving Operating Efficiency of Public Transport Services

In many Turkish cities, municipal public transport service provision is not institutionally designed on a commercial basis, undermining the long-term financial sustainability of public transport services. Public sector agencies providing public transport services are not unique to Turkish cities, but commonly found in many countries. However, in better performing foreign cities, they are established as a commercial company with comprehensive responsibility for equipment and service provision, and subject to financial objectives or limits. In other words, the books of public transport operators are managed separately from the city budget, and their financial performance is fully accounted for. Tariff or rider fee charges are assessed on market principles. This contrasts with the current arrangements in Turkish cities, where the operating expenses are often not fully captured and accounted for against the operating revenues from ticket sales. In the absence of financial accountability, as in many Turkish cities, vehicle replacement tends to be inadequate and service suffers, while cost-efficiency is low.

**Ensuring financial accountability and commercial arrangements is independent of whether public transport operations are subsidized or not.** In many countries, it is a policy decision to provide certain public services below cost for various economic and social reasons. For instance, many cities with good public transport services do often provide operating subsidies to keep the fares low, as part of transport policies to promote public transport use and benefit low-income households. Such decisions on subsidies should, however, be strictly distinguished from wasteful spending and uninformed management, particularly as these practices can undermine the long-term sustainability of the system. This is apparently a critical problem in the several Turkish cities reviewed in this analysis, which did not have the knowledge about whether public transport operators are being subsidized and, if so, to what extent.

The underlying cause of this problem is that, when municipalities provide services directly, management of public transport services is fragmented, with responsibility for service planning, operational control, vehicle maintenance and replacement and finance resting in different departments. No single manager is held responsible for the transit system operation as a whole. As a result, service decisions are taken without regard to their financial consequences, and wasteful practices are perpetuated. This applies equally to bus as to tram and light rail services. Even when there is an apparent company structure, as in EGO in Ankara, there does not appear to be any unified commercial management. There are exceptions: for example, the LRT system in Eskisehir is undertaken by a separate municipal company ESTRAM, which ensures much better financial as well as operational discipline than in similar systems in other Turkish cities. This model may be worth considering in other Turkish cities.

**The present role of the *dolmuş* is often considered inappropriate.** Most of the cities visited—including Ankara—have at some time or other committed to eliminating the *dolmuş* minivans as being too small a vehicle for efficiency purposes and too difficult to regulate for environmental purposes in large cities. But these passenger vehicles still carry a large proportion of total trips (more than a third of all public transport trips in Ankara, Konya, and Gaziantep).

**Many Turkish cities face a legacy problem of having issued long-standing permits to private operators – Dolmuş Minibuses, for instance -- that only recently have been converted to more environmentally- and cost-efficient alternatives.** Incentives provided to *dolmuş* operators only occur by negotiation. One city (Kayseri) has eliminated the *dolmuş* entirely through a 2 for one transfer to bus permits. The largest private bus company operating in Ankara had its origins in such a transfer. Two other cities (Gaziantep and Konya) have offered a conversion at a rate of 3 *dolmuş* per bus, but have not yet been accepted. Izmir has already succeeded in moving the *dolmuşes* to less densely-demanded suburban or rural



routes, and Kocaeli has managed to increase the size of the vehicles in the sector from 16 to 25 seats.

**Regulation of the private bus sector has also been ineffective.** In some cities many of the buses operate with permits in perpetuity like the *dolmuş*, with similar adverse effect on the capability of the authority to manage public transport supply. Conversion of *dolmuşes* to buses with similar legal status simply shifts the problem without solving it. Even those buses operated under contracts with the authority tend to have long term contracts which they have paid for in advance, and hence are difficult to shift. Moreover, as the private bus industry is very fragmented it has been necessary in some cities to manage them through a complicated rotation system so that ensures all a similar share of revenue potential. This is difficult to manage and involves excess running of dead mileage. There would appear to be a simple solution to this, as introduced in Kocaeli. Given that revenue collection is mostly off-vehicle and is any case carefully controlled through the electronic ticketing systems, it would be much simpler merely to pool the total revenue and pay the operators on the basis of the distances operated. Once this system is accepted it would then set the stage for a subsequent introduction of competitive tendering of franchises to increase efficiency.

## Maintaining Transport Infrastructure Assets

**The overall management of the metropolitan area road network can be improved.** Among the current problems in the management of the metropolitan road network are (i) the lack of adequate functional road classifications and the questionable method for assigning road maintenance responsibilities between the metropolitan municipalities and district municipalities, (ii) questionable contracting practices, and (iii) the lack of adequate road inventory and asset management practices. These issues are described below.

**Road classification and assignment of institutional responsibilities needs to be reviewed.** At present the assignment of road responsibili-

ties between the metropolitan and district municipalities is based on the width of the road as measured from edge of pavement to edge of pavement (including the median). All road surfaces of 20 meters in width or more are the responsibility of the metropolitan municipalities. This policy should be reviewed particularly considering that traffic volumes are increasing in all cities. Many roads of less than 20 meters in width either are or will soon be carrying significant traffic volumes and might more appropriately be the responsibility of the metropolitan municipalities. Many well run cities functionally classify each road segment according to their intended use (typically arterial, collector, and local service) using such considerations as trip length, traffic volumes, and speed as considerations. The advantage of this approach is that a more rational division of responsibilities is likely and perhaps as important decisions on road investment and maintenance priorities could be better determined.

**Road contracting practices in some cities are not cost-efficient.** A very important aspect of road management is the approach to be taken in either using in house staff or contracting out road maintenance, and the method of contracting out if this option is to be used. It appears that road departments routinely contract out new road construction and major road rehabilitation. The practice of contracting out road maintenance is mixed with some cities contracting out some or all such maintenance and some doing all this work in house. It would be useful to review the experience of cities using both methods by assessing the quality and cost of these alternative approaches in determining which approach is most cost effective. Where contracting of road maintenance is used it also would be useful to assess the effectiveness of various kinds of road maintenance contracts. Among the options to be considered are (i) the time period of the contract, (ii) the number and scale of maintenance contracts to be issued, and (iii) the use of performance-based contracting as an option.

**Road asset management measures need to be implemented as a priority measure in metropolitan cities.** Given the huge fixed cost of





the existing road system, it will be important to install and maintain an appropriate road asset management system in all large metropolitan municipalities. A computerized system supported by an adequately established and maintained database could provide valuable information for decision-making, including: (i) an optimum road network maintenance strategy and related budget; (ii) impact of different funding levels on future quality of the road network; (iii) economic consequences of budget constraints in road maintenance financing; and (iv) preparation of a multi-year work program for network maintenance and rehabilitation within available budget resources. Currently there appears to be a lack of funds or unwillingness to allocate such funds in many cities to fully maintain the road system to a desired standard, which is not uncommon in many cities, even comparatively rich ones. Given this condition a well-conceived road asset management program could become invaluable in making informed decisions. Few cities have such a system in place at present.

### **PRIORITY 3 – PROVIDE MOBILITY FOR PEOPLE, NOT AUTOMOBILES**

#### **Traffic Management as a Centerpiece of Transport Policy**

**Many successful cities have long focused on traffic management as a cost-effective, policy and technical tool that allows them to utilize the existing road capacity more efficiently.** In fact, in most well-performing cities, traffic management is one of the core elements of transport strategy, and one of the most cost-effective measures to tackle congestion. Recognizing that congestion cannot be solved by adding more roads, traffic management focuses on the demand-side and is provided with adequate institutional support and financial resources. Since the introduction of intelligent transportation systems (ITS), the definition and scope of traffic management has also broadened. It goes beyond simple mechanical controlling and marking/signing (i.e., static and one-directional information), and includes real-time traveler information, performance management of public transport services, in-

cident detection and response, and demand-responsive controlling (i.e., dynamic and two-way information).

**In most Turkish cities, traffic management is still narrowly defined, functionally, spatially and institutionally.** In better performing cities, it has long been that traffic management covers much more than simple signal controlling and road marking. Traffic management as an integral element of urban transport includes (i) city-wide traffic management policy, (ii) traffic research, (iii) city-wide as well as local traffic management plans, (iv) traffic regulations, (v) parking management policies and programs, and (vi) evaluation and approval new road developments and the traffic impact of land developments. Overall, there is a need for comprehensive traffic management policies and plans in Turkish cities. Due to the rapid emergence of traffic problems in Turkish cities it is understandable that cities have often reacted in a piecemeal fashion to this problem. This typically can be a wasteful or even an unproductive approach. Metropolitan areas need to prepare comprehensive traffic management and parking plans within the framework of an overall urban transport and land-use planning strategy.

**In accordance with the broader and more comprehensive definition of traffic management function, its institutional and staffing arrangements need to be improved.** Turkish cities have not placed enough emphasis on securing adequate numbers of competent staff in the traffic management discipline nor have they organized themselves properly to address a range of traffic management issues. This is in part due to the lack of adequate professional training in this discipline in Turkey. Moreover, the consolidation of a range of traffic management functions in a single traffic management unit (metropolitan transport authority), which is accepted practice in most cities with good traffic management practices, has not been accomplished in most Turkish cities. Cities have established traffic signal units which operate and maintain traffic signals and also install and maintain road signing and marking. Among the cities reviewed for this report, most traffic management staff has been assigned to





operate and maintain the traffic signal system. This function in many cities around the world is contracted out to the private sector. Greater emphasis on staffing of traffic management units should be on addressing the functions listed above.

**An urgent but relatively easy step to take is to improve the quality and effectiveness of the existing traffic signal installations.** At the present time many if not most metropolitan municipalities do not have an effective central control system for their traffic signals although many are in the process of making this improvement. This will be an essential tool to implement a coordinated traffic management scheme as cities expand and traffic volumes increase. As more cars come out to the city streets, there will be a need to install more traffic signals and to manage and coordinate them better. As rough guidance, it is interesting to note that for most North American cities there are typically 1,000 to 2,000 persons per traffic signal in cities; and in Western Europe slightly more. For developing countries with substantially lower motor vehicle ownership the need for traffic signals is less, but where the number of persons per signalized intersection exceeds 5,000 in a major city this might be considered a rough threshold to suggest that the city is under-signalized. Among the four cities reviewed in this report, the population per traffic signal varies from a low of 5,400 to a high of 9,800 persons per signalized intersection.

**Use of advanced technologies including various ITS applications is still in its infancy and more investments need to be made in the medium-term.** In most Turkish cities, advanced applications of Intelligent Transportation Systems (ITS) such as motorist/passenger information systems, bus management systems, incident management systems, and traffic enforcement systems are at very early stage of deployment. These technologies can offer cost-effective solutions to reduce congestion and improve the service quality and ridership of public transport modes. The investment in new technologies should be carefully prioritized on the basis of needs and based on a medium-term plan in order to maximize cost-

effectiveness. MTMC's National Smart Transportation Systems Strategy Paper and Actions Plans, which call for inter-city and intra-city intelligent transport systems, are a move in the right direction.

## Parking as a Demand Management Tool

**In most Turkish cities, parking as a traffic management and demand management tool has been underutilized.** As traffic volumes increase in Turkish metropolitan areas considerably more reliance needs to be placed on expanding on-street and off-street paid parking programs. The objectives of this initiative should be to (i) improve the utilization of available parking spaces, (ii) reduce traffic circulating for parking spaces, and (iii) use this measure as a travel demand management measure. An attractive feature of paid parking is that it should not result in a net cost to the city if properly instituted and might become a significant source of municipal revenue (even though this should not be the primary objective). At present the amount of on-street paid parking in the cities reviewed in this study could be considered minimal as is off-street paid parking in most cities. Overall both paid and free parking arrangements in most cities suffer from the following defects: (i) parking programs are not being developed within a comprehensive parking plan, (ii) parking requirements are often not appropriate, (iii) parking technology utilized to date is inadequate, and (iv) the institutional arrangements for planning and managing parking are not appropriate. These issues are discussed in turn below.

**For most Turkish metropolitan municipalities, a city-wide comprehensive parking plan needs to be developed.** Provision of parking is a complicated issue as it interacts with traffic management objectives, land development, city finances, and urban politics. To date cities have typically provided parking in reaction to perceived needs but without the useful framework of a comprehensive parking plan which should also fit within an agreed city development strategy and land-use plan. Those cities which have not produced parking plans should do this as a priority task.



**Current parking requirements are inappropriate and need to be revisited.** Parking requirements by type of land-use are set out in a national law. While this was probably an understandable initiative at lower levels of vehicle ownership in guiding cities to set appropriate parking requirements, it is too rigid a guideline to be applied uniformly across all cities. For example, it is common practice in well-organized cities to reduce parking requirements in congested areas as a demand management measure. In addition, there are apparently limitations on the amount cities can charge for parking. This also works contrary to the objective of pricing as a basis for appropriately managing the utilization of available parking spaces. Cities should be allowed greater freedom in implementing their parking requirements, parking charges, and fines.

**Use of modern parking technology is limited.** Among the cities visited there appears to be a reliance on parking enforcement personnel as opposed to use of more advanced technologies as the basis for charging for parking. As cities move toward implementing more paid parking spaces the introduction of more advanced parking technology should be considered as a basis for better management of parking, for better monitoring of real time parking conditions, and for better management of funds received. Various smart transport systems and technologies have been established in well-managed cities to accomplish this goal.

**An institutional home for parking planning needs to be established in metropolitan municipalities and granted with adequate powers to develop policies and to enforce them.** While the operation and management of paid parking facilities both on-street and off-street is typically contracted out to the private sector or to separate municipal institutions, there is the question of who manages the preparation of the parking plan and the management of the overall parking operation. In most advanced cities there is a separate unit that is placed in charge of managing the parking operation whether this work is contracted out or is accomplished in-house. This function now ap-

pears to be at least partly handled by UKOME staff in some cities, but as noted with limited resources and policy making authorities. As the parking program grows in larger cities, the establishment of a separate full time parking unit should be seriously considered. The parking plan or strategy might be handled either by a traffic management authority or transportation planning unit.

## Transport for Livable Cities

**Setting standards for, and measuring, air quality is a national responsibility in Turkey.** At the national level, Environmental Management General Directorate within the Ministry of Urbanization and Environment is responsible for air quality monitoring. This directorate has taken responsibility for air quality measurement, with 120 monitoring stations in 50 cities, the results of which are publicly available on the Turkstat website. Important transport generated pollutants such as  $PM_{10}$  and  $SO_2$ , are among the pollutants measured. However, with such a small number of monitoring stations, and in the absence of any scientifically-established and formal procedures of source apportionment, there appears to be little of an evidence basis to demonstrate the cost effectiveness of environmentally oriented policy actions (such as different investments in electric transport) at the municipality level. There is also a national level action plan on air quality, including advocacy to city governments to convert their bus fleets to CNG or LPG. However, this is only policy advice and is not backed by incentive schemes or established targets for fleet renewal, or powers of enforcement.

**In many cities, urban freight movement can have severe environmental impacts.** While all major cities suffer from the environmental impacts of truck movements, few have a comprehensive policy on the issue. The creation of special freight transport units and the articulation of specific plans for freight have been successful in both London and Paris, and such measures have helped these cities to improve their competitiveness as well. A critical feature in both cities has been the involvement of the freight and distribution industry in a collaborative process. For *transit traffic* many cities pro-



vide by-pass roads, sometimes supported by bans on movement within the outer ring for traffic without a legitimate destination in the city or by prescribed lorry routes within the city. Direct limited access connections from national motorway systems to ports have a similar effect. For *terminating* traffic the problem is more complex and a number of controls have been used, such as:

- *Controls on vehicles* may be to limit vehicle size – where the problem is congestion caused by very large vehicles – or to limit emissions – where the problem is air pollution. Low Emission Zones, from which high polluting vehicles are excluded, exist in London, Rome, Madrid, Paris, Copenhagen and several Swedish cities. Enforcement can be assisted by charging systems. In Milan, the road pricing system or “congestion charge” for the central area is designed primarily to discourage polluting vehicles by differentiation in the charges levied.
- Controls on *activity location* have mostly been concerned with shifting the location of manufacturing and warehousing activities to the periphery of the city, as has been very successfully achieved in many Dutch cities. Changes in the structure of the retail distribution sector have also seen a shift to hypermarkets on the periphery of cities, supported sometimes by restructured bus routings.
- Controls on *distribution systems* are an extension from the control of activity locations, and involve the establishment of peripheral depots at which goods are transhipped and consolidated into acceptable vehicles for the inner city. Publicly organized plans were popular in Germany in the 1980s but have declined since. Only those that have a single agency controlling the whole supply chain – as in the case of Heathrow Airport in London – have survived. That suggests a more collaborative, free market approach to the issue. In the UK Freight Quality Partnerships (FQPs)

are promoted to secure collaboration between firms to develop a sustainable distribution strategy. Information technology has a role to play in the development of such transshipment systems, with GPS, tracking systems, route planning software, and electronic data interchange (EDI) contributing to a more efficient distribution pattern.

- Controls on *journey timing* usually aim to separate truck movements from car traffic and aim to reduce the disturbance caused to residents by heavy lorries at night and weekends by requiring night delivery to retail premises at night-time or during the ‘shoulders’ of the day on specified non-sensitive routes. For example, the London Lorry Control Scheme set up in 1986 led to long diversions, resulting in increased emissions and increased cost to industry.
- Controls on *truck routing* exist in many cities but must be supported not only by effective enforcement but also by appropriate infrastructure. For example, the absence of rear or off-street access for deliveries may necessitate that a high proportion of deliveries to urban high streets and shopping centers are made by direct curb-side access to the frontage.

**Non-motorized transport is frequently seen as an important element in policy to limit the environmental impact of urban transport.** In the last decade walking and cycling has been increasing slightly in the industrialized countries—mainly for health and recreation purposes while in Africa and Latin America little has changed, with 50percent of trips still walking trips in Africa. In contrast, there has been a steady decline in aggregate in the bicycle sector in Asia. In China, bicycle ownership fell from 1.9 to 1.1 per household between 1995 and 2005 and the share of trips by bicycle is falling. In several countries, including Vietnam and India, the bicycle is being rapidly replaced by the motorcycle.<sup>49</sup> This has not been helped by public policy. For example, although the

49 In Hanoi, motorcycle ownership had reached 0.5 per capita and they accounted for 65percent of all vehicular trips in 2006 (World Bank, 2006).



2004 national Road Traffic Safety Law in China in principle affirmed pedestrians' rights, in practice policy at the municipal level was often inimical to the bicycle.<sup>50</sup> Even in Europe, while many cities pay lip service to NMT by the creation of cycle paths (for example, both Warsaw and St Petersburg have cycle path plans), for the most part they are directed at leisure cycling (e.g. in parks) or are not fully segregated from motorized traffic.

**Internationally there are signs of change in policies on cycling.** A number of recent World Bank projects in China have assisted cities in providing a more cycle-friendly environment, including road design on a "safe corridor" philosophy, re-introduction and strengthening of separation barriers, and a shift from investments in primary to secondary and tertiary roads (Mehndiratta, 2011). Many pedal cycles in China are being replaced by electric cycles which have much of the same environmental advantage but offer greater range, speed and comfort. Cycling is also increasingly being addressed as part of a system. A pattern of coherent, complete, segregated cycle networks has been introduced with great success in Bogota, Colombia. Since the completion of the 300 kilometer cicloruta network in 2001 bicycle use has been increased by five times, and now nearly 400,000 cycle trips are made daily in the city. The synergy between the cycle (pedal or electric) as an access mode to mass rapid transit in cities is increasingly recognized and planned for. Bogota's Transmilenio and the new major BRT network in Guangzhou are good examples of that integration with well-organized bicycle parking facilities provided. In Turkey, benefitting from its level terrain, Konya has instituted a bike-path network that is claimed to run over 150 km., as well as a bike-share program. Such examples could be studied and adapted in other Turkish cities.

**The importance of "walkability" is also increasingly recognized in urban design.** Cities featuring large block sizes, sparse secondary

and tertiary networks and wide roads with large set-backs reduce pedestrian accessibility to buildings – less than one quarter of the numbers of jobs are accessible within a ten minute walk of major rail stations in Beijing than in New York (Torres et al, 2010). This is often accentuated by insufficient and poorly designed street crossing places, lack of pedestrian phases in signal setting, poor road condition and impediments such as cars parked on sidewalks.

**Some relevant lessons for Turkish cities can be learned from this international experience.**

The World Bank urban transport strategy paper<sup>51</sup> argued that there should be clear provision for the rights of pedestrians and bicyclists in a national traffic law which would be a facilitating framework for explicit formulation of local NMT plans by municipal authorities. These plans should provide for separate infrastructure where appropriate (for safe movement and for secure parking of vehicles), while standards of provision for bicyclists and pedestrians should be included in new road infrastructure design. Traffic management should be focused on improving the movement of people rather than of motorized vehicles and traffic police trained to enforce the rights of NMT in traffic priorities. In 2008 the South African government published its draft proposals for NMT, which included the obligation for NMT plans to be prepared at both the provincial and local levels, and for an NMT fund to be established from part of the national Road Fund revenues (South Africa Department of Transport, 2008).

**Transport for the disabled has been receiving increased attention during the last decade.**

At the *international level*, the UN adopted a Convention on the Rights of Persons with Disabilities in 2006, and in 2010 established a group to prepare practical guidelines for countries which have signed the Convention. The development banks have also incorporated provisions for the disabled in their investment projects, such as the World Bank's funding of

<sup>50</sup> Up to 2009 Guangzhou had not built a new bike lane for 12 years; Shanghai prohibited the use of bicycles on trunk roads in 2007; and Shenzhen changed its urban road planning standards, removing bicycle lanes to improve capacity for cars. In Zhengzhou the Bureau of Education prohibited primary school students cycling to school

<sup>51</sup> *Cities on the Move*





accessibility improvements in sidewalks associated with the new Lima Metro. At the *national level* some large developing countries have now adopted laws on transport for the disabled (Brazil in 2004 and the Philippines, Vietnam and Mexico in 2010), though this has not always had very immediate results. At the *city level*, accessibility improvements are now being introduced particularly in the context of new mass rapid transit facilities (elevators in metro systems and extended platform boarding of BRT systems in Latin America) and existing bus systems (for example low floor or wheelchair ramp equipped buses and vans). In Shenzhen, China, a substantial program of investments in curb ramps, tactile guide ways and accessible taxi and metro services, has been developed on the basis of a municipal regulation (AEI, 2011).

**Not surprisingly, poorer countries and cities tend to do the least, partly because the informal sector transit services on which they depend are particularly difficult to influence.** But even in middle income countries, if there is no legal obligation, progress tends to be concentrated in “show” cities, often the capital. For example, while two thirds of buses in Buenos Aires are accessible low-floor models, the proportion is only 5 percent in the rest of Argentina. Retrofitting to existing systems is more costly and therefore more difficult to achieve than in new systems where good design rather than substantial extra investment is required. Co-ordination between interacting agencies is also often poor. For example, it took protracted legal action to secure compliance in making the city’s subway stations fully accessible in Rio de Janeiro. So there is still much to achieve

## PRIORITY 4 – CREATE A NATIONAL FRAMEWORK FOR SUSTAINABLE URBAN MOBILITY SYSTEMS

### Developing a National Policy for Urban Transport

**Currently the responsibility for urban transport policy is fragmented at the national level.**

The Ministry of Environment and Urbanization (previously Public Works and Settlements) has a wide ranging remit on urban development issues, and has included the development of sustainable transportation under Objective 5 of the Integrated Urban Development and Action Plan for 2010-2023 (Kentsel Gelişme Stratejisi, which is abbreviated as KENTGES). Meanwhile, the Ministry of Development is responsible for allocation of some financial support for critical urban public transport investments. Urban transport projects financed by the Treasury (e.g., Ankara metro project) are overseen by the Infrastructure Investments Directorate General of the Ministry of Transportation, Maritime and Communications (MTMC). The Ministry of the Interior also has some influential involvement as the leading proponent of the extension of the metropolitan areas, but without offering a comprehensive strategy.

**Turkey’s national policy on urban transport is consequently weakly articulated and even more challenging to implement.**

The content of the transportation section of KENTGES offers a general direction but lacks substance to be able to guide actual transportation plans and implementation at the city level. Moreover, there appears to be no relationship between what is being developed in that plan and the processes or principles for allocation of funding for urban transport projects through the Ministries of Development and Transport. National level finance is also being channeled to the metropolitan municipalities through the operations of the İller Bank and a Development Fund, without reference to any explicit national policy in the sector.

**Responsibility for implementation and management of urban transport formally lies at**



the local or sub-national level in all major countries.<sup>52</sup> However, in most cases, national governments play several important roles in the urban transport sector, while local authorities are responsible for implementation.

- *Technical standards* for vehicle emissions and safety are usually set at the national level, and are often administered by local departments of the national ministry rather than by local administration.
- *Framework laws* controlling the entry to and regulation of the public transport market are also usually set at the national level. Examples are the British Transport Acts of the 1980s, which introduced competition into the sector, and the French LOTI of 1982 which established the arrangements for conurbation level strategic transport planning.
- *Competition laws*, which are critical to the success of competitively tendered franchising or concession agreements, are also usually national. In some cases—for example in the Russian Federation—the fact that they are general rather than transport-specific has sometimes hampered the development of processes appropriate to the sector.
- *Fiscal regimes* are also nationally determined. Where significant responsibilities are constitutionally assigned, or legally devolved, to the local level they can only be properly performed if the responsible local authorities have a proper financial basis. This requires either the exercise of local taxing powers or, in case the tax system is highly centralized, the establishment of predictable arrangements for inter-governmental transfer of funds. The failures of many public transport enterprises in Eastern Europe after 1990 were largely due to the decentralization of responsibilities unaccompanied by adequate financial provisions.

## Providing Incentives for Reforms and Investments

The roles for the national government are essentially those of “holding the ring”, setting general conditions within which local and initiative can be effectively exercised. They are universally acknowledged, though sometimes not well performed. More controversial are national measures which go further than this in attempting to mould the actual policies that are pursued at the local level. These include the following:

- *Research and technical assistance* on urban transport may be managed at the national level because of the economies of scale and scope in the collection and dissemination of information on best technological and commercial practice. The French nationally funded urban research institutes (CERTU and INRETS/IFFSTAR) and the Korea Transport Institute (KOTI) continue to be effective, while those in some other countries (NIAAT in Russia and TRL in the UK) have lost their effectiveness as national governments have distanced themselves from intervention in the sector. In Brazil, a time-bound program of assistance was given by the federal government to municipalities. See Box 12.
- *Formula-based counterpart funding programs* for capital investments are common where the local fiscal or borrowing capability is weak. The danger of such arrangements is that they distort the choices made by local authority by effectively changing the relative costs of different policy interventions.
- *Special financial assistance programs* from central government have been used in several countries. In some they have focused on encouraging the take-up of technical innovations, such as subsidies to the purchases of front entrance/ rear-engined buses in the UK in the eighties and the much larger on-going program of support

<sup>52</sup> In some countries traffic management is viewed primarily as safety issue for which the national police have responsibility. This attribution of responsibility has tended to limit the comprehensive integrity of urban transport policy, and has certainly weakened the traffic management function in many developing countries.





for approved mass transit investments by the UMTA of the USDOT. In other cases, including Russia and Uzbekistan, they have simply been used as injections of “emergency” support for vehicle replacement as fleets have deteriorated unacceptably. This had the unfortunate disincentive effect of encouraging the municipality to rely on such occasional support in place of the establishment of proper vehicle replacement programs and therefore need to be applied judiciously.

**Turkish cities display a wide variety of policies and policy instruments.** Both the road traffic infrastructure and the operating transport fleets range widely in age and technological vintage, with some of the technology reflecting state of the art. In mass transit technology there is a similar range, with some very modern and some very antiquated technology, some very expensive and some very cheap. Some of

the city plans for the expansion of mass transit appear to be based on fashion – and the hope that capital grants from central government will be available. All of this suggests that there would be much to be gained from a concerted effort by Turkey’s national government to assemble and distribute information on the economics as well as the technologies of the alternatives. To that end, MOTMC has launched studies for the preparation of a new Transportation Master Plan (TMP) that will establish a balance between the transportation modes and guide transportation policies of Turkey in future years, as well as create transportation infrastructure responsive international good practice standards. The TMP will cover the period 2016-2035 and one of its most important outputs will be a “Manual for Development of Urban Transport Masterplans,” which will be used for the development of guidelines for the preparation of such masterplans at the city level.

### Box 12. Federal Urban Transport Agency in Brazil

The federal government agency for urban transport, Empresa Brasileira de Transportes Urbanos (EBTU), was set up in 1975 by Law # 6261. The main objective of EBTU was to promote the goals of the National Urban Transport Policy and to act as coordinator of its implementation. Specifically, it was to:

- Promote and coordinate the national strategy to prepare, analyze and implement transport master plans at the metropolitan and municipal levels.
- Manage the Federal Government’s shareholding interests in companies linked to urban transport
- Manage the Urban Transport Development Fund (which was defined by the Law that established EBTU)
- Issue opinions on the priority and the technical and economic feasibility of proposed urban transport projects
- Assist in implementing a national urban transport planning process. Aim for compatibility between the metropolitan and local transport policies with integrated development planning of metropolitan regions, as well as National Transport and Urban Development policies.
- Promote and carry out the development of urban transport technology.

EBTU was then abolished in 1991, when it was viewed that the capacity of municipalities has improved to the level at which active federal leadership was no longer necessary.





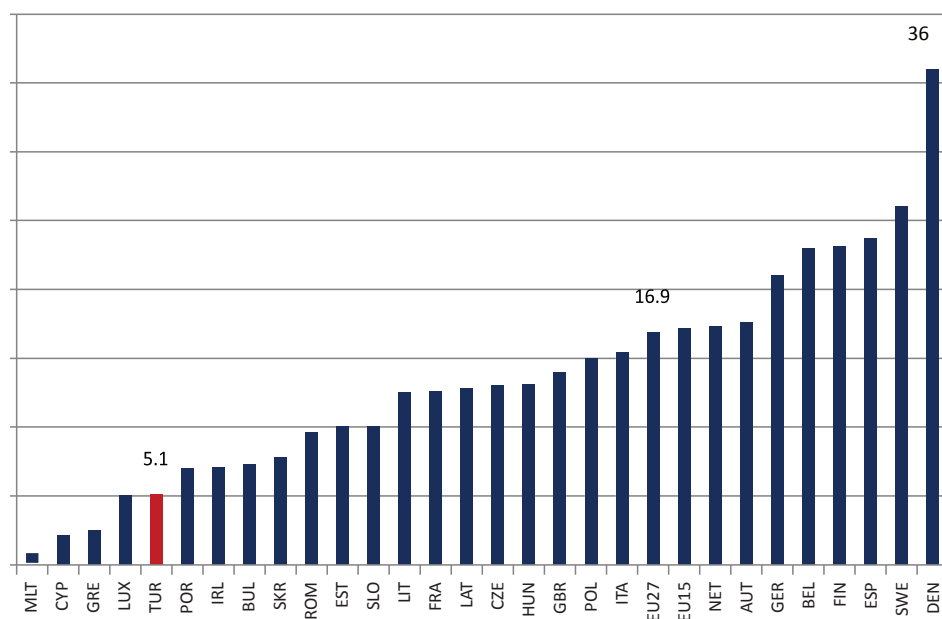
## CHAPTER 5: FINANCING CITIES IN TURKEY

**Financing of cities takes on increasing importance in periods of rapid urbanization.** Traditional approaches to taxation and revenue-raising strategies advocate marginal taxation practices, i.e. taxing at the margin to raise needed revenues for the delivery of desired services in a particular locality. But rapid urbanization presents a challenging dilemma because often planning and investment decisions need to be made in anticipation of newcomers to the city. In most cases, this also means that an increasing share of the tax base has yet to materialize. A municipality's ability to leverage itself by accessing long term finance and using other debt and land equity instruments can often help to bridge this gap, while introducing the principle of inter-generational equity in infrastructure finance. In this chapter, we review the various elements of Turkey's system of financing cities, drawing comparisons to other peer countries and pointing to policy areas that may need further examination and could benefit from international experience. The chapter begins by reviewing the macro picture by comparing

municipal revenues and expenditures as a share of GDP. The chapter then delves into specific policy questions and practices that may benefit from further review and international experience.

**Subnational expenditures present a mixed picture: they are relatively low as a share of GDP, but not entirely out of line considering expenditure assignment.** The size of the local administration sector is currently about 5 percent of Turkey's GDP. In comparison with other EU countries, Turkey's subnational expenditures are among the lowest. This may appear as somewhat surprising given the increased pressures of urbanization and the size of Turkey's cities when held up to EU comparators. The two main reasons behind this are: a) the low level of locally-collected revenues; and b) the narrow scope of local service responsibilities. Unlike most European municipalities, Turkish municipalities are not responsible for expensive social services like education, health, and social assistance, which for the most part are provided at the national level. Even street lighting has been paid over

**Figure 47: Sub-national expenditures in percent of GDP, 2010**



Source: OECD and Turkey Data; and Peteri and Sevinc (2011)



the years by public electric distribution companies prior to privatization when only a 10 percent share of that cost was passed on to municipalities. International trends suggest that local provision of these social services would shift the subnational share of expenditures over 10 percent of GDP in Turkey, still substantially below the EU average (See Figure 47). While the Turkish subnational sector has some room for expansion in the short term, over the long run, as local administration capacity expands, there would likely need to be a further devolution of service responsibilities from the central to local administrations and a potentially a corresponding increase in fiscal transfers.

**The aggregate budget of the Local Administration sector is stable with a five year trend of growing current revenue surplus.** Capital expenditures were on average 38.0 percent of the budget total, financed from operating surplus, capital revenues, and debt (29.7 percent, 6.4% and 3.7 percent of Budget total respectively in 2013). These averages feature significant differences in revenues, expenditures, and debts between various clusters or tiers of local entities: metropolitan municipalities, non-met-

ropolitan municipalities, and towns & borough municipalities, SPAs, and municipal affiliated entities.

**Municipal revenues and expenditures are both steadily growing, albeit just keeping pace with inflation.** There is a steady, robust current balance<sup>53</sup> at about 30 percent of total revenues that indicates a healthy control over current expenditures and appears as a good cushion for financing investments and securing debt. By 2013, this has contributed to a gradual accumulation of cash reserves (about TRL11bn.), which are concentrated in two institutional segments: the Special Provincial Administrations (SPAs) (TRL6.6bn.) and Towns and Borough (T&B) municipalities (TRL2.1bn.). However, over the past five years, the current balances have moved very differently, namely metropolitan municipalities have steady and robust current balances, while the non-metropolitan municipalities and the towns have small positive current balances. These cash balances and current balances would drop if the local entities were to pay out their overdue liabilities for certain taxes and loan arrears owed to Treasury and social security payments.

**Figure 48: Local Administration Sector Revenues and Expenditures 2007-2013 (TRL bn.)**

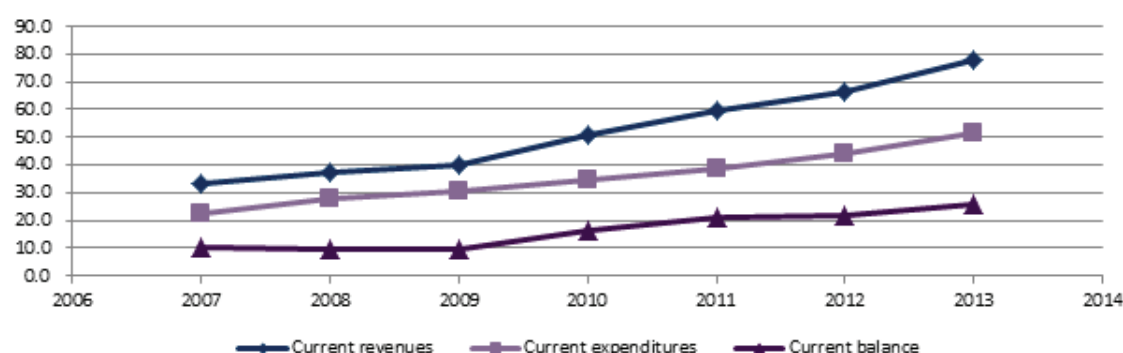
	2007	2008	2009	2010	2011	2012	2013
Current revenues	33.286	36.991	40.079	50.875	59.884	66.177	77.759
Current expenditures	22.767	27.707	30.509	34.367	39.008	44.203	51.768
Current balance	10.519	9.284	9.570	16.508	20.877	21.974	25.992
Non-recurrent Revenues	2.188	1.851	2.397	2.707	3.532	3.086	5.617
Capital Expenditures	16.617	18.235	17.718	17.859	22.004	25.096	35.822
Capital balance	(14.429)	(16.384)	(15.321)	(15.152)	(18.472)	(22.010)	(30.205)
Debt financing net	8.953	4.247	(6.887)	10.146	(0.901)	2.249	0.981
Balance total	5.044	(2.852)	(12.637)	11.502	1.503	2.214	(3.233)
Budget Total	39.384	45.942	48.227	52.226	61.011	69.299	87.590

Source: Turkey Ministry of Finance <https://portal.muhasebat.gov.tr/mgmportal/>

53 Turkish municipalities do not prepare separate current and capital budgets, but this can be created from the line items and provides useful insights about their budget situation. Thus in this chapter we distinguish between current and capital revenue and expenditure items whenever it is possible.



**Figure 49: Local Administration Sector Current Budget 2007-2013**

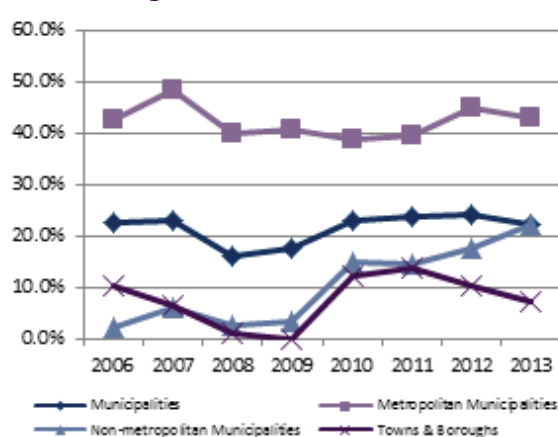


Source: Turkey Ministry of Finance <https://portal.muhasabat.gov.tr/mgmportal/>

The local administration sector is reliant on transfers, including shared tax revenues and government aid and donations. Central government fiscal transfers and donations stood at 38.3 percent and 16.7 percent respectively in 2013. The bulk of government aid and donations are provided for the SPAs, not for municipalities. Enterprise and property revenues dominate the local administration sector's own-source revenues (21.5 percent of

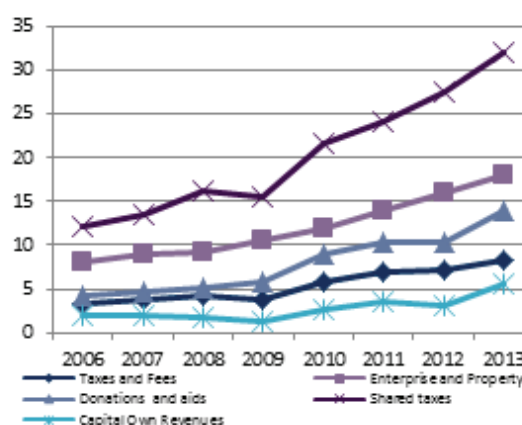
total in 2013); in contrast taxes and fee revenues are very small; they provide about 9.9 percent of total revenues, which is very low by international comparison. However, several service fees are accounted as enterprise revenues. The share of transfer revenue is also increasing, driven by the booming economy and growing national tax revenues sources of the divisible pool.

**Figure 50: Current Balance in percent of Budget Revenues 2006-2013**



Source: Turkey Ministry of Finance <https://portal.muhasabat.gov.tr/mgmportal/>

**Figure 51: Sector Main Revenues 2006-2013**

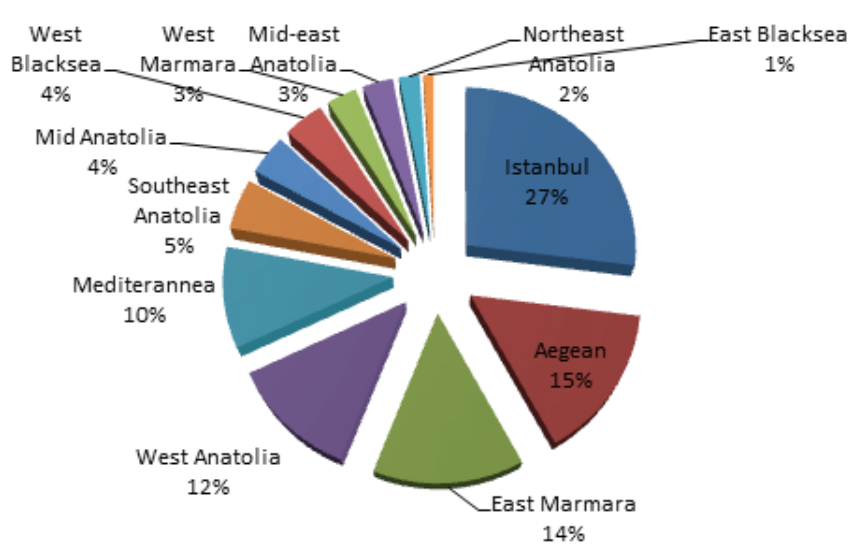




**Horizontal imbalances dominate the revenue picture.** Behind the aggregate and comparable total revenue figures, there are horizontal imbalances in municipal revenues across regions and by size of local administration. As expected, local revenues are highly concentrated in the large metropolitan municipalities and in the western regions of Turkey where the tax base is robust. Four NUTS-1 regions collect over two thirds of municipal revenues, while the other 8 regions share less than a third of municipal revenues. There is a 27-fold

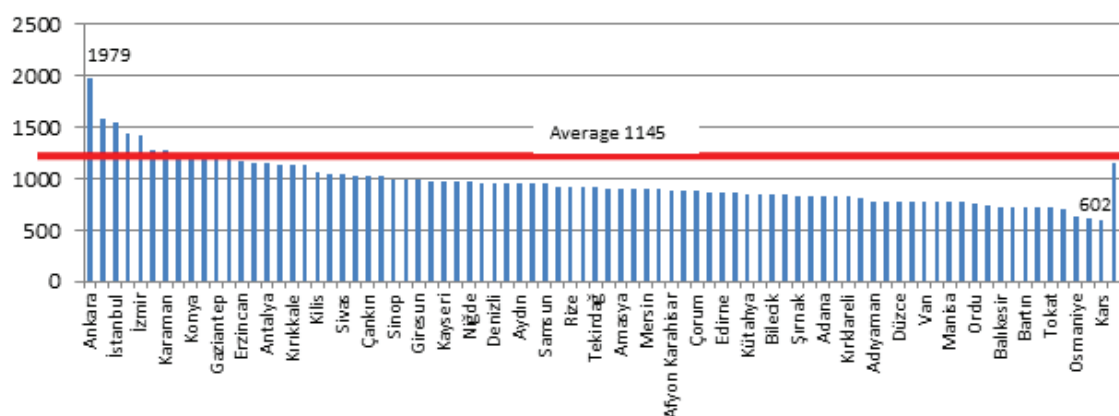
difference between the largest and the smallest NUTS1 region share in municipal revenue. The population, the local economic situation, and particularly the presence of large companies strongly influence municipal revenues. Disparities in municipal revenues and expenditures are substantial and slightly growing. The disparity between the richest and the poorest provinces in terms of municipal expenditures was over three-fold in 2013. (See Figures 52 and 53)

**Figure 52: Share of NUTS-1 regions in percent of total municipal revenues**



Source: Peteri & Sevinc 2011

**Figure 53: Per Capita Municipal Expenditures by Provinces in 2013 (TL)**



Source: World Bank staff calculations based on MoF data (<https://portal.muhasebat.gov.tr/mgmportal/> and <http://www.turkstat.gov.tr/PreTabloArama.do>)





**On a per capita basis, transfer revenues are less skewed.** The per capita revenues show fewer differences than the total revenue volumes because of different population sizes by locality and some equalization effects. Municipalities in the richest province (TL1758 per capita) had 2.9 times higher per capita revenues than municipalities in the poorest province (TL601). Indeed, equalization transfers have a role to play. However, some rich Turkish regions receive higher transfers not only in absolute terms, but many also on a per capita basis. This is largely a result of the revenue sharing system that returns 5 percent of tax revenues back to source collected within the boundaries of metropolitan municipalities; and many of these cities host large companies that generate high corporate income tax (CIT), and personal income tax (PIT) revenues. Revenue sharing by source should be maintained, but the disparities above indicate the need for enhancing the revenue equalization system.

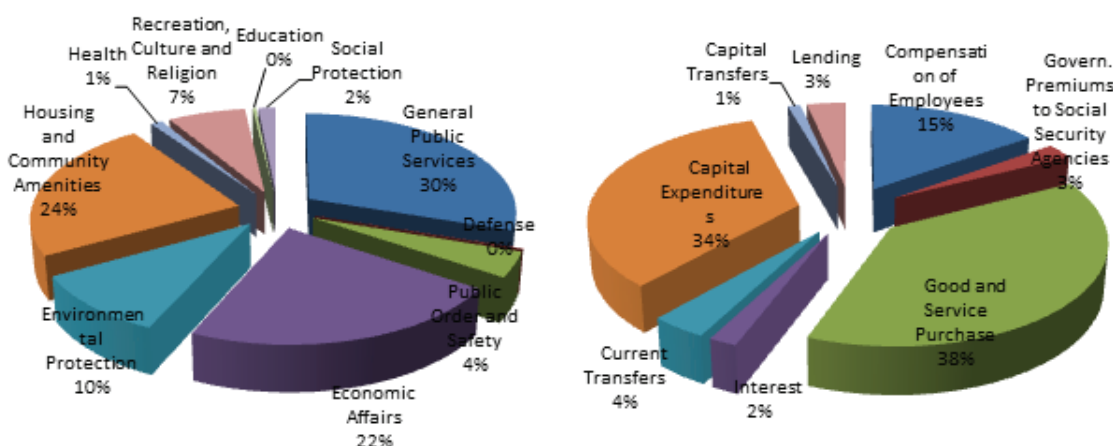
## MUNICIPAL RESPONSIBILITIES AND EXPENDITURES

**In comparison to other European countries, local administrations in Turkey have fewer responsibilities.** The core municipality responsibilities in Turkey are: a) transport, including urban road construction and maintenance; and public transportation, which is substantially private; b) water and wastewater services; c) solid waste management, and d) housing services. The municipalities are also responsible for land use planning and development and management of the environment. Among these responsibilities, environment and housing and communal services are heavily dominated by local administrations: 95 percent of total public expenditures in these two service areas were carried out by local administrations in 2013.

**Expenditure assignment is formally limited and differs by tier of municipality.** The Law entitles municipalities to develop and operate 22 various local services or expenditure functions. In practice, they focus largely on general administration and basic functions, economic and urban services, housing, environmental protection, and recreation. Some urban services are off-budget in large metropolitan municipalities and are provided by municipal-affiliated entities like water and sanitation, light rail and metro lines and transport companies. Municipalities play a negligible role in the provision of main social services like health, education, and social protection. The division of expenditure and service responsibilities between the metropolitan municipality and the towns, boroughs<sup>54</sup> and villages within their boundaries is blurred both legally and in practice. The roles and functions in practice are sometimes found to be overlapping, though to a different extent.

**The composition of municipal expenditures clearly reflects the narrow scope of the Turkish local administrations.** The general public administration expenses represent the largest share of local expenditures (30 percent in 2013); the second is housing and community services, while municipalities spend very moderate amounts on other core municipal services. However, the expenditures on “economic affairs” represent the third largest share (22 percent), including market services and other economic activities. Municipalities own commercial enterprises that are not directly connected to the core services, but rather aim in most cases to enhance revenue generation, or have been maintained in place for historic reasons. Such practices are common among cities globally, but economic activities of this kind should not undermine establishing a sound local tax and fee system, nor should it unduly crowd out private sector providers.

<sup>54</sup> Local entities within the metropolitan municipalities are accounted as “Town & Borough Municipalities” in the MoF database; while they are also known as metropolitan “Districts” or “District Municipalities”. This report uses the MoF terminology for the sake of consistency.


**Figure 54: Municipality Expenditures Breakdown 2013**


Source: Turkey Ministry of Finance (<https://portal.muhasabat.gov.tr/mgmportal/>)

Local services are provided either by municipalities or through municipal enterprises or affiliated entities. Outsourcing is also substantial; purchasing of services represented about 20 percent of local expenditures in 2013. There are some overlapping responsibilities of special provincial administrations and the municipalities and between the metropolitan and district (T&B) municipalities in business development, administration, road building, and special services such as disaster management.

## MUNICIPAL REVENUES - SCOPE AND COMPOSITION

### Municipal Revenues

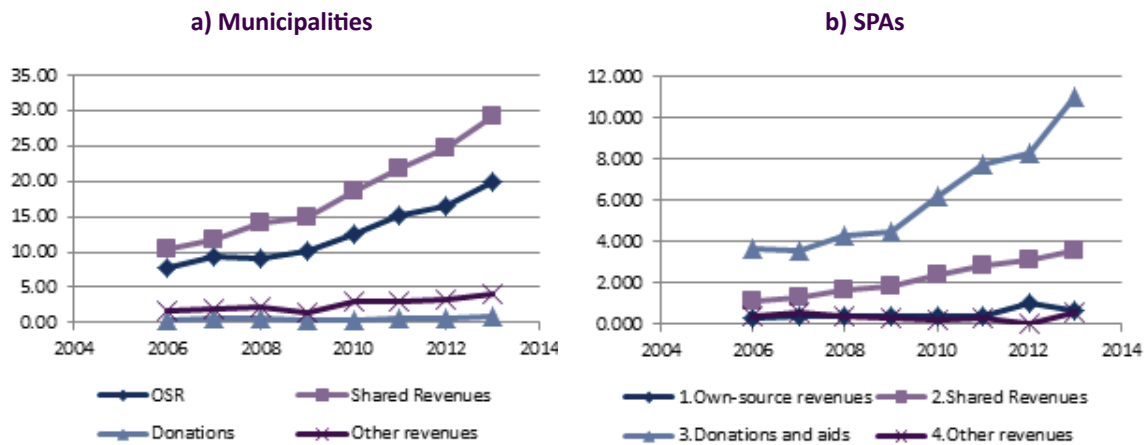
Municipal revenues observed steady growth over the last decade with a substantial

boost between 2009 and 2013. This is largely attributed to dynamic growth of the economy and the national taxes shared with the local administrations. The consolidated revenue budget indicates that the Turkish municipalities collect a fair amount of own revenues by international comparison, which represents over a third of total income; however, they strongly rely on state transfers and grants for over half of total income; and incur debt in varying degrees – about 43.6 percent, 44.5 percent and 11.9 percent of total financing correspondingly in 2009. The situation changed after 2011 because of a robust increase of both transfers and own revenues and debt maturity structure; these changes resulted in a net reduction of debt for local administrations in aggregate (Figure 49 and 56).

**Figure 55: LG Sector Revenues 2009, 2011, 2013 (TRL bn. and in percent)**

	2009		2011		2013	
OSR	21.029	43.6%	29.015	47.6%	37.471	42.8%
Transfers	21.447	44.5%	34.401	56.4%	45.905	52.4%
Debt financing	5.751	11.9%	(2.404)	-3.9%	4.213	4.8%
Total	48.227	100.0%	61.011	100.0%	87.590	100.0%

Source: MoF (<https://portal.muhasabat.gov.tr/mgmportal/>) ref Annex 3 table

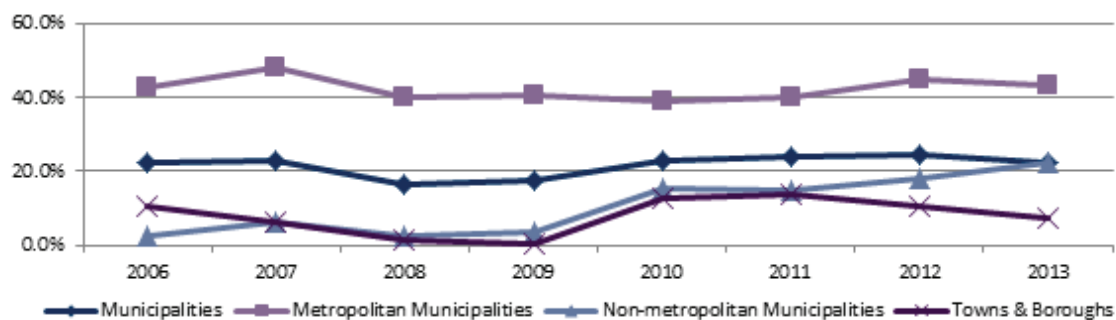
**Figure 56: Subnational Revenue Breakdown by Institution in 2006-2013 (TRL bn.)**

Source: Authors based on MoF (<https://portal.muhasebat.gov.tr/mgmportal/>)

The dominant revenue sources for Special Purpose Administrations (SPAs) are classified as donations and aid. These budgetary resources do not appear to follow allocation rules as systematically as fiscal transfers to municipalities, as they are less regulated and accounted outside the divisible revenue pool. SPAs do receive some shared taxes based on the revenue sharing formula, but aid and donations for both current and capital development purposes are by far much larger for them.

The very low current balance of the non-metropolitan municipalities and towns is a matter of concern. This situation essentially provides very limited fiscal space for financ-

ing development directly or by debt repayment. The low current balances suggest low fiscal capacity and likely constrain the capital investment capacity of the secondary cities in Turkey. These shortcomings could be addressed in three ways: a) expanding local revenue bases and improving collection at these municipalities with incentives; b) providing specific targeted development grants to these entities; c) slightly modifying the inter-governmental transfer formula (e.g. changing the allocation shares, or improving equalization, or introducing a revenue incentive factor). However, an in-depth analysis of the accounting, bookkeeping and budgeting practices would be advisable before designing and introducing any such changes.

**Figure 57: Current Balance in percent of Budget Revenues 2006-2013**

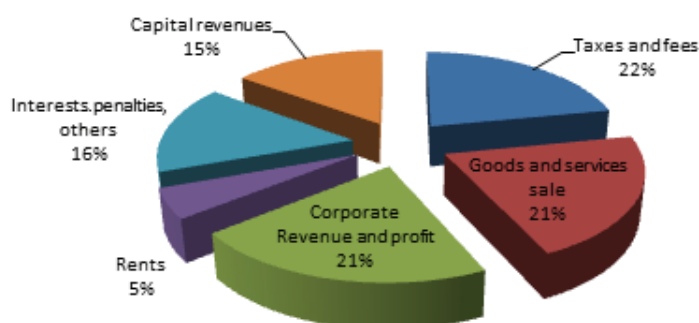
Source: Authors based on MoF (<https://portal.muhasebat.gov.tr/mgmportal/>)



## Own-source Revenues

**Own-source revenues (OSR) can be grouped into six main categories: taxes and fees, sale of goods and services, enterprise revenues, rents, property proceeds, interest and penalties, and capital revenues.** Tax and fee revenues are the largest with a 24 percent share, which includes mostly small administration fees. Enterprise and property revenues are accounted together and provide for the bulk of OSR, including sales of goods, services, permits (23%), and municipal enterprise revenues and profits (20%). However, the enterprise revenues include a substantial amount of fees collected through municipal-affiliated entities. This is illustrated in part by the fact that taxes and fees of Turkish municipalities *without the enterprises* appear to be low in share of local tax revenues when weighed against European comparators.

**Figure 58: Local Administration Sector  
Own-source Revenues 2013**



Source: Authors based on MoF (<https://portal.muhasabat.gov.tr/mgmportal/>)

**The level and composition of OSR is comparable to countries with similar levels of development.** Taxes and fees are the largest revenue sources (22 percent in 2013), if the cluster of “property and enterprise” revenues are disaggregated to sale of goods and services, enterprise proceeds, and rents. Municipal enterprises and other entities are commonly provided services and collect fees especially in metropolitan municipalities. Some of these are accounted on-budget, others off-budget, and thus provide revenues or profit shares to the municipal budget. Capital revenues (15%

in 2013), largely proceeds from sale of land and buildings, are relatively low by international comparison, because of underutilized sources of land-related revenues (discussed later).

***OSR has witnessed a declining or stagnating share of total municipal revenues in recent years.*** The level of OSR is high by international comparison, particularly in the non-metropolitan provincial and T&B municipalities. However, in the context of improving overall municipal revenues over the past five years, the share of own-source revenues did not keep pace and were actually declining as a share of total revenues particularly in non-metropolitan provincial municipalities. This is a negative trend and signals shortcomings in revenue management and/or low motivation for own-revenue collection. This may be due to the increasing volume of central transfers during the same period, which, if not properly monitored, could become a disincentive for local revenue mobilization.

Property tax collection is primarily assigned to Towns and Boroughs, and, as such, account for about 50percent of their own source revenue. The graphs below illustrate how reliant Towns and Boroughs are on property tax and fee collection. This is due to current municipal tax assignment, as they collect property taxes within the jurisdiction of the metropolitan municipalities. The graphs below reflect the declining share of taxes and fees and even more so of property taxes

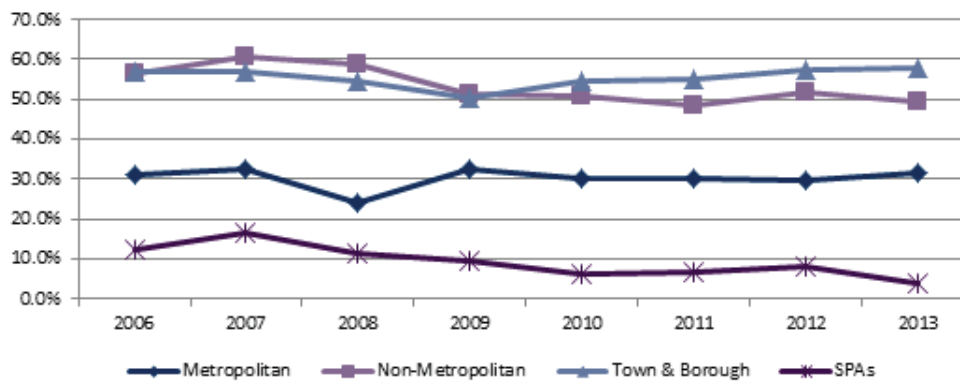
in own-source revenues that raises the question of shortage in capacity and motivation.

***Gap in incentives and coordination:*** This raises major issues in the Turkish subnational revenue assignment system, including:

- Metropolitan Municipalities, as the largest local entities do not have buoyant OSR tax revenues (e.g. property tax) and thus have effectively no power over what is typically the most important source of local revenues. Consequently, they must rely on collecting own revenues from enterprises,



Figure 59: OSR in Percent of Budget Revenues Total 2006- 2013



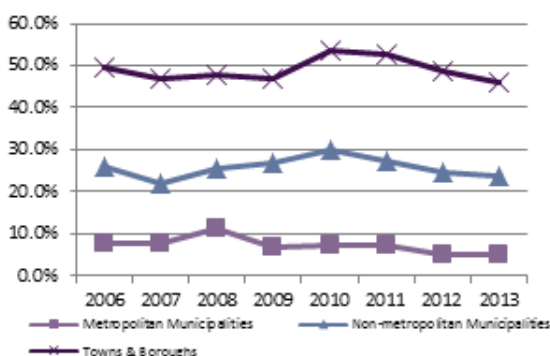
Source: Turkey Ministry of Finance Local Administration Budget Data

- economic activities and land and building leases and sales that should be a complement to but not a main source of revenue;
- This systemic issue suggests there may be a gap in incentives for local revenue mobilization, namely municipalities within metropolitan districts (towns and boroughs) have property tax collection assigned to them within the metropolitan jurisdictions, but they may lack motivation to boost these revenues, because of the narrow scope in their service responsibilities. Solid waste collection and some interior road resurfacing are their exclusive service responsibilities, though they have the option but not the mandated responsibility for other services;

- Metropolitan planning and zoning, a main function of the metropolitan municipalities, can play a key role in expanding the property tax base. But there is a disconnect between the master and land use plans and the property-related revenues, because the metropolitan government manages metropolitan planning in the jurisdictions, while the lower tier district municipalities are entitled to collect property taxes, as a type of windfall revenue.

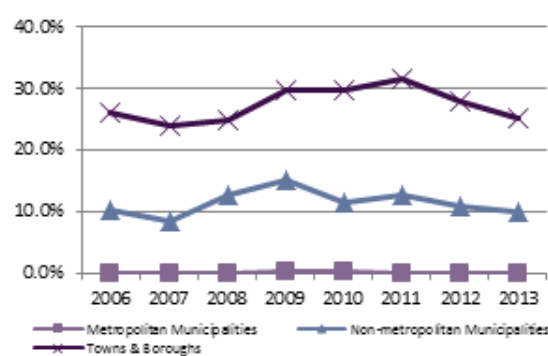
**Turkey's property tax revenues are low in comparison to OECD country and some EU comparators.** Recurrent (annual) property taxes amounted to 0.2 percent of GDP, less than one-fifth the OECD countries average (1.1 percent) in 2012. This is in part due to national leg-

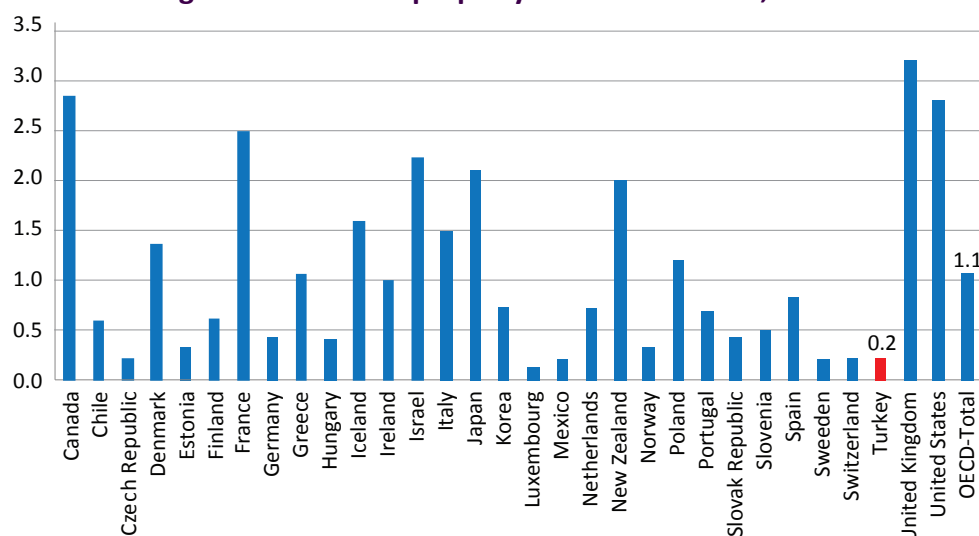
Figure 60: Taxes and Fees in percent of OSR 2006-2013



Source: Authors based on MoF (<https://portal.muhasebat.gov.tr/mgmportal/>)

Figure 61: Property Tax in percent of OSR 2006-2013



**Figure 62: Taxes on property in Percent of GDP, 2012**

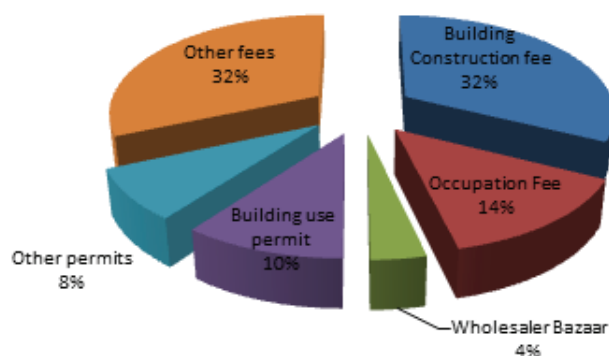
Source: OECD Country Taxation Statistical Data, 2014

islation that sets the property tax rates in Turkey at one-tenth of one percent for land and residential buildings, and two-tenths of one percent for other buildings, and three-tenths of one percent for empty lots. Metropolitan districts (towns) can levy 100 percent higher (double rate) taxes. But both rates are very low by international comparison; the OECD and EU countries levy property taxes on average at around 1 percent of the assessed property value, which is ten-times larger than the Turkish base rate. The base property tax rates of Turkey are at the lower end even of the developing countries' average (0.3 percent), with only the double rates for empty lots being higher than the tax rates in other developing countries. Thus, further increase of property tax revenues are among the promising options for the Turkish local governments.

yield among local fees. There are several prerequisites for establishing a good local user charge system. First, local administrations, as the price setting authority, should have proper information on the direct and indirect costs of specific services and aim for full cost recovery gradually (at least for most services). Current cost accounting seems to be inadequate for assessing full cost recovery, since the Chart of Accounts reflects economic classifications (labor, material, administrative costs) rather than cost centers. There is an apparent lack of consistent cost accounts established for main local services, and investment accounts are delinked from the specific operation. Second, metering consumption is critical, or alternatively some proxies should be used (like electricity consumption, property value, size of connection

## Taxes, Fees and Charges

**Increasing municipal revenue collection of fees and charges fairly and effectively is an important objective.** Fees and charges represent less than 3 percent of the municipal revenues. Building construction fees (32 percent), occupation fees (14 percent), and building user permit fees (10 percent) are the three major categories with the highest

**Figure 63: Municipality Fee Revenues 2013**

Source: MoF (<https://portal.muhasebat.gov.tr/mgmportal/>)





capacity etc.). Third, pricing should be based on the volume of services consumed, but the actual charge setting policies and techniques matter a lot in creating incentives for users.

**The affordability of user charges is critical, because with the introduction of full-cost-pricing mechanisms they became significant items in the household budgets.** On average, all housing related costs might reach one-third, one-half or more of household expenses of low income families. Thus, full cost pricing may require targeted subsidies for low-income families. Targeted demand side subsidies (direct to eligible households) are more effective than supply side subsidies (deficit grants to municipal enterprises)<sup>55</sup>, which often discourage efficiency. Some cities internationally have developed new methods of managing arrears on user fees, introducing early warning and prevention techniques to avoid unmanageable accumulation of collectibles.

## Capital Revenues and Land-based Financing

**One option available for local administrations to boost own source revenues is land-based financing.** Land-based financing denotes a set of instruments used to convert land or land-related regulatory powers into funds for infrastructure or service delivery. The three main strategies include:

- **Land sales** or long-term leasing of land, buildings or other infrastructure assets;
- **Development impact levies or taxes**, which comprises taxing direct beneficiaries of infrastructure development in specific locations by extracting from the gains in land values as a result of public infrastructure development that impacts their properties;
- **Regulating and using regulatory power** to generate revenues for infrastructure.

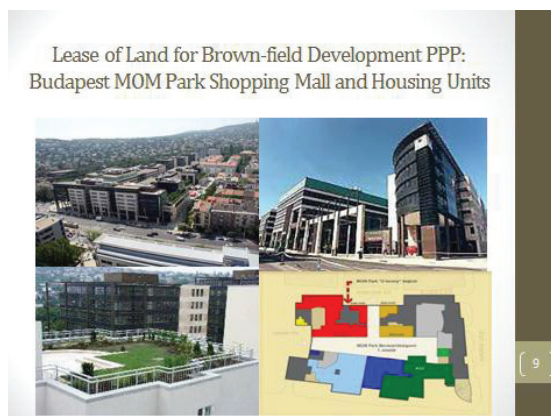
**Selling in-city land can generate exceptionally high one-time revenue for a municipality.**

Cairo sold periphery desert land for new towns and gained the equivalent of 117 years of property tax revenue in 2007 (Peterson 2009). Selling land may appear simple, yet there are many challenges: (i) cities often fail to have updated and reliable public land inventories and thus knowledge if the given parcel is surplus land or possibly a strategic reserve for future development; (ii) lack of experience in valuation and pricing land or property (what price should be used: market value, social value, or price before or after development?); (iii) lack of expertise in managing the sales or lease transactions; (iv) transparency in managing transactions; and (v) limitations on available surplus in-city land.

**Proper valuation of municipal land or calculation of the longer term gains and future values can also be a risky endeavor.** Cities that successfully employ this strategy generally benefit from having a well-prepared city strategic development plan, property valuation at or close to real market value, a land-use plan, and zoning in order to optimize benefits from the land sale and avoid selling land that would be vital for public infrastructure as the city develops.

**Urban transformation or redevelopment is another strategy that cities use to improve the efficiency in land use, particularly as a city economy evolves.** This strategy, commonly applied in some cities in Turkey, usually involves transforming industrial or commercial land or informally-settled areas into housing and commercial development associated with a shift in the city economy from manufacturing activity to higher value-added services. The hollowing out of a city's manufacturing base that often occurs over a 20-30 year timeframe can be transformed to much more valuable urban development. The main challenges include: often complicated legal issues because of mixed ownership; the need for environmental cleaning and rehabilitation of the area with excessive costs in the case of brown-

<sup>55</sup> The concept of triple bottom line captures an expanded spectrum of values and criteria for measuring organizational (and societal) success: economic, ecological, and social. With the ratification of the United Nations and ICLEI TBL standard for urban and community accounting in early 2007, this became the dominant approach to public sector full cost accounting. Similar UN standards apply to natural capital and human capital measurement to assist in measurements required by TBL



field redevelopment; transactions and rehabilitation can take a long time; temporary or permanent displacement of existing tenants or residents and the need for interim financing; difficulties in generating accurate valuation of the land before and after rehabilitation. Istanbul provides a good example of how this process works in practice when it generated USD1.5 billion equivalent revenue in 2007 for the sale of a derelict bus station for redevelopment. Second-tier metropolitan municipalities may be less experienced in these practices and could benefit from Istanbul's and other global experience.

**Careful planning of urban land expansion through conversion of rural land is an option.**

This should be done through prior *ex ante* planning and should be reflected in a city's long-term strategic plan. Coordination with national and regional plans, such as Turkey's Strategic Spatial Plans, would be essential. If the expansion is on general public land without encumbrances or restrictions, the costs can be free or at nominal "row-land" value (Pakistan). However, this is often not the case, as the land may be in the hands of small private landowners and private developers from whom it must be purchased in parcels and transformed to land suitable for development projects. The challenge and responsibility for the city in this case is to ensure: the development is consistent with the city's master plan, development plan and avoid creating urban sprawl, including new privately-developed housing areas that soon demand connection to the city's road, water and sanitation systems and create pressures for social services, health, and education

facilities to be located nearby. Important planning and tax regulatory instruments should be used in such cases to avoid creation of or reduce negative consequences of sprawl.

**Land-pooling is an effective instrument to support harmonious city development in areas of largely private ownership.**

A well-developed city needs substantially different land parcels and subdivisions than the land-ownership structure on an original rural or agricultural land area. More importantly, well-managed cities often need to provision for substantial land-uses for public purposes (green areas, set-backs, public infrastructure and rights of way, etc.). While the practice of land pooling is generally applied in Istanbul and other major cities in Turkey in accordance with Article 18 of the Land Development and Planning Law, No. 3194, some of Turkey's second-tier cities may be less familiar with this tool and how to use it. In such cases, land pooling could be a useful strategy and is a program in which the city contributes by providing planning inputs, zoning, and infrastructure development in exchange for a share of land that the private owners give up. The entire area is then consolidated into one single area for development based on planning regulations, an urban design concept, local cultural characteristics, and other considerations. The initial land owners could receive in exchange one or two plots in the designed town for own use, the surplus parcels are sold and the revenues are distributed in accordance with the initial land contribution. Many cities apply this technique effectively, and Ahmedabad, India offers just one very successful case to learn from.

**In Turkey, revenues from the sale and lease of assets and development contributions by citizens or enterprises can be considered as own-source capital revenues.**

Revenues from the sales of land represent a small share (6.7 percent in 2013) of the total revenues of the local administration sector. In reality Metropolitan and T&B Municipalities are able to raise the lion's share (about 90 percent) of revenues from building site sales. Building site sales revenue represents 9.1 percent of the total revenues of



T&B Municipalities; however, this is a one-time opportunity since municipal land is a scarce resource. Municipalities can also benefit from land development by increasing property tax revenues from the more valuable developed land and newly constructed buildings, provided that the tax base is changed timely and properly.

**Taxing the gains in land-based financing is vital for three main reasons:** a) to ensure consistency of private developments with the city's master plan, zoning, and strategic plans; b) to generate public revenues for needed infrastructure development corresponding to the land area of the tax base; and c) to ensure fair sharing of the development gains between the public and the private stakeholders. The taxing instruments include betterment tax or impact fees charged for capturing gains attributed to developing external infrastructure. These are one-time payments to be combined with increasing the property tax due to the long-term increase of property value as a result of the nearby public infrastructure development. Developers are aware of, calculate, and account gains from major transport (metro-rail), water, or road development well ahead. Developers' extraction or contribution is used to charge developers for on-site infrastructure development.

**Development impact levies or taxes have not generated substantial revenues for Turkish municipalities.** Local administrations have the authority to determine the share of property owners in contributing to development impact improvements in a particular district. Such levies or taxes are assessed when citizens in a district demand a type of municipal investment or service for which they make a contribution toward the capital investment. The revenues collected under this category were only 1.4 percent of the total municipal revenues in 2009 (68 percent of which is collected in metropolitan areas). Requesting citizens' contribution for infrastructure development is a generally accepted and a well-regulated practice in Turkey. The Council of Ministers determines, may differentiate or reduce, the contribution that cannot exceed 2 percent of the property value

of the paying citizens. The contribution shares for road construction represents 44 percent, sewage investments 11 percent and drinking water 5 percent of the revenues in this group.

**Regulatory instruments to generate municipal revenue are based on zoning and spatial planning regulations which are general and broad.** Private developers often initiate different plans and greater development in part because they have different views, but also to boost their financial gains from the projects. Turkey's local administrations first need to be cautious in assessing these private initiatives from the perspective of the city territorial or master-plan and development strategy. Secondly, local administrations should use their regulatory power to generate revenue for the public and capture a fair share of the value gain from the private developers. The instruments used include: (i) rezoning in exchange for a development fee, and (ii) sale of development rights – the right to exceed the planned parameters of land use (FAR, number of floors, land coverage, etc.) in exchange for a fee or building of public infrastructure. Using this regulatory power is very common in developed countries, and sometimes over-used in developing countries with no protocol in estimating the gains, room for corruption, or penalizing high charges (such as in Iran, and the Balkan countries).

## Potential for Boosting Own-Source Revenues

**The background above suggests that Turkish municipalities have limited room for boosting OSR within the current local tax framework.** Incremental improvements in local revenue mobilization, however, can be achieved through more effective property tax revenue collection, and the use of various land development schemes and development fees. Beyond this, international experience suggests a number of options for raising local revenues through taxes typically collected locally in other countries, but which are not yet collected in Turkey. The following revenue sources deserve attention and their suitability and modalities for implementation would require further investigation:



- *Tourism tax.* Tourism taxes are widely used all over the world, because they have a close link between local services, tourism attractiveness, and the burden that tourists may pose on local infrastructure, albeit usually only seasonally. Such taxes do not represent a high administrative burden and thus are attractive to many cities, as they are relatively easy to collect and enforce via travel agencies and hotels. Finally, revenues can be used for visible improvement of tourist sites and capacities.
- *Local business tax.* Many European cities use this extensively. Their advantages are several: they provide a buoyant, stable revenue source even with a low tax rate; are relatively easy to collect, enforce, and gains can be used for improving local areas or services preferred by the business community. However, such business taxes need to be considered carefully, as they may distort investment decisions, export tax burden to citizens in other regions (buyers of the products), and undermine business profitability. These are all valid concerns, but negative effects can be minimized by levying this tax on value added sales or net turnover at a low rate, rather than assessing a flat tax on major inputs like labor (head tax) or capital.
- *Trade tax:* The trade tax in form of a small local surcharge is widely used in the US.
- *Motor vehicle tax.* Motor vehicle taxes are a very common local tax in many countries, often shared evenly by the origin municipality and higher government tier. The justification behind such taxes include mainly local environmental impact, as motorized vehicles create environmental, traffic, and noise burden primarily within the municipal boundaries, thus owners should contribute to respective expenditures (traffic management) and investments (roads, bridges). The administrative burden to levy and collect such a tax is also limited as it is attached to the vehicle licenses and ownership transfer transactions. Motor vehicle taxes in Turkey are currently part of the divisible transfer pool. It would be well justified to distribute these taxes on a derivation source collection basis.
- *Land-based financing instruments:* Charging betterment tax, tax increment or development impact fee and using the regulatory power to charge private development has great potential. Infrastructure development has a major impact on both value of properties and business opportunities. A respective tax increment or development fee is justified to generate public revenues from a share of private benefits. Estimating the impact and the fair share in benefits are among technical and political challenges.
- *Tapping into private equity:* Private equity contributions could be a substantial indirect local revenue source in financing capital investments, but also in improving management of local public services and functions. Turkish municipalities have limited track records in attracting and utilizing private equity in various forms of public-private partnerships. Nevertheless, PPPs and attracting private equity is worth testing, careful piloting, and gradual expansion in large metropolitan municipalities. Such transactions should always be pursued within an appropriate legal framework with seasoned advisory services to avoid costly mistakes and risks.
- *Donations and philanthropic aids:* Municipalities in developed countries are quite successful in attracting private donations from national or international foundations or private persons, and this practice is applied in limited ways in Turkey's largest cities. Successful donations include funds for renovation of historic sites, building cultural or sport facilities, schools or school facilities, but also parks or even a bench in a park local road or water facilities<sup>55</sup>.
- *Boosting EU funds:* EU structural funds may not be seen as own revenues; however, they should be treated like OSR in the sense that they are not entitlements nor central government transfers; rather specific and concerted local actions are required for timely submission of proposals





and fulfillment of all technical, financial, and fiduciary requirements. In this sense EU funds should be approached like OSR, rather than central government transfers. Experiences in EU accession countries (recent new members) show manifold revenue differences between well performing and poor performer municipalities in accessing EU grants.

**A further option for enhancing own source revenues is enhancing local tax policy and administration.** There is no comprehensive analysis on the quality, capacity, cost, and effectiveness of the municipal tax and broader revenue administration in Turkey, but these issues deserve further investigation. Some suggest broadening the taxing power of Turkish municipalities and enabling them to set their tax base and rate, levying and collecting most local taxes and fees alone. International experiences suggest that this move could boost local tax revenues<sup>56</sup>. For instance, half of the local taxes in Europe are devolved to the local administrations, who set rates and fees and grant tax exemptions. However, this power only works if there is a robust local tax administration in place correspondingly.

**Local tax administration costs can be high and should be evaluated prior to assuming new responsibilities.** The cost of revenue collection is intertwined with the level of revenues levied and the collection and enforcement capacity of local administrations and related entities involved in collection like banks. A recent study found<sup>57</sup> that cost of revenue collection is very high compared to the collected tax revenues in some Turkish regions. Tax revenues were insufficient to cover the cost of required administrative services in 35 provinces and property tax revenues were less than the cost of one collection officer in 1,333 small municipalities. For them, the local tax authority is a burden rather than a revenue source. International experience suggests that visible improvement

can be achieved by robust capacity building, establishing joint tax/revenue administration for neighboring municipalities, and using cost-effective and customer-friendly payment instruments like electronic transfers, cell phone and internet-based billing.

## INTERGOVERNMENTAL FISCAL TRANSFERS

**Municipal transfer revenues are stable and predictable.** The transfer system includes revenue sharing, equalization grants, and discretionary grants. The revenue sharing system is transparent with well-regulated revenue divisible pools filled with 11.5 percent of the central budget tax revenues (TRL32.0bn. in 2013) largely from CIP, PIT, and VAT general tax revenues. Revenue sharing between the central government and the local administration sector is clear, transparent, and predictable. The central government also provides a very small equalization grant (0.1 percent of the budget tax revenues) for municipalities with population less than 10,000 inhabitants.

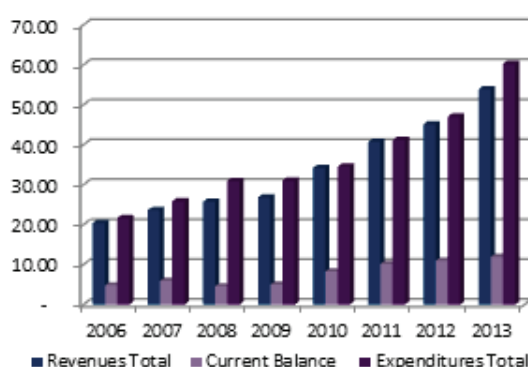
**The current intergovernmental transfer system appears to benefit from overall good design and balance.** It allocated 21 percent of the transfers by source of origin, 40 percent by population, 9 percent by other criteria, like development index, area, and rural population, and 30 percent in grants and aids. Since the population is widely considered as a main proxy for expenditure needs, the system is designed to moderately respond to expenditure needs. The development index and the share of rural population are considered as equalization factors. The allocation formulas may seem to be overly complicated, yet they are clear and manageable. The consolidated budget of the local administration sector suggests that the transfer system together with own-source revenues provides for a stable and sustainable financing of the current expenditures with a steady robust current surplus. However, this

56 "Donate a Highway" (i.e. support cleaning and maintenance of a section) is a popular program in the US.

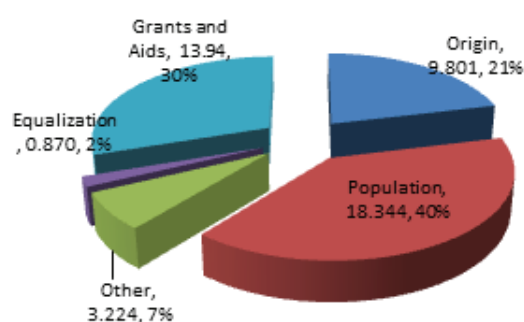
57 Amman Municipality in Jordan took over property tax collection from the central government tax agency and more than doubled property tax revenues in a 2-3 year span of time in the early 2000s. Two other large cities in Jordan following Amman by terminating their arrangement with the national collection agency and contracted the Amman tax administration to collect their property taxes



**Figure 64: Revenues, Balances, Expenditures 2006-2013 (TRL bn.)**



**Figure 65: Allocation of Transfers in 2013 (TRL bn. and %)**



Source: WB staff calculations based on Municipalities Act (N.o. 5393, 2005) and MoF (<https://portal.muhasabat.gov.tr/mgmportal/>)

aggregate picture does not reflect the situation of the metropolitan municipalities beyond the largest four. Horizontal imbalances across local administrations mask critical challenges for municipalities located in less developed regions.

**Discretionary grants should be avoided if at all possible and alternative instruments such as a defined “Block Grant” system could be adopted to address specific deficiencies in the system.** In addition to the regular shared taxes, the Ministry of Finance provides for grants/donations in response to “urgent needs”. This discretionary grant is the unregulated part of the transfer system that may soften the otherwise hard budget constraint. This is also a departure from the rules of Law # 5779 which stipulates that “No transfers can be made from the central government budget (ministries and other central government institutions) other than tax shares and the equalization appropriation.” International experience suggests that first, discretionary grants should be avoided; and second, if they are used, tight conditions and clear selection and allocation criteria should be attached in order to reduce the demand for these grants and to harden the budget constraint<sup>58</sup>. In that regard, and depending on the nature of the need, Block Grant programs have been developed in numerous countries to sup-

port specific policy objectives, often linked to having an equalization effect or to support local administrations with a low tax base or in response to an emergency or crisis recovery.

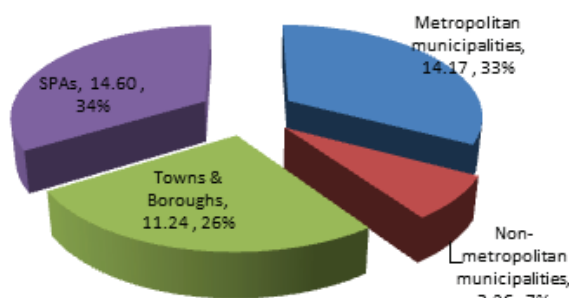
**In Turkey, improvement of the collection and sharing of data used in planning and establishment of a monitoring mechanism for urban indicators is a paramount priority.** The measures to be taken are set out in Turkey’s Urban Development Strategy (KENTGES) and are ongoing. To date, MOEU has defined the standards for the collection of basic geographic data within a common content and format, as part of the Country’s GIS Infrastructure. Urban Information System Standards have been developed to ensure that geographical data are developed with more detailed contents at the city level. This system will eventually be rolled out across Turkey’s many cities to serve as a more effective urban monitoring system. Amendments also have been made to the Land Development and Planning Law in order to align the existing standards with the new standards. In addition, a system called “Plan Transaction Number” has been established so that spatial planning may be effectively overseen by MOEU, and a common set of standards has been published in the Spatial Plans Preparation Regulation.

<sup>58</sup> In mid-1990, Hungary introduced a “deficit grant” for municipalities that were facing unsustainable structural deficits. The municipalities had to apply for this grant, but they received it with strict conditions; including no development expenses, and no salary increases for the municipal staff, officers, and bureaucrats as long as the structural deficit remained and grant was served. (Kopanyai et al 2004).





**Figure 66: Share of local administrations in transfers, grants, and donations combined in 2013 (TRL bn.)**



Source: WB staff calculations based on MoF (<https://portal.muhasabat.gov.tr/mgmportal/>)

**Donations and aid have a major effect in reducing disparities between large metropolitan and smaller municipalities.** The MoF provides donations and aids largely to SPAs and Unions of Municipalities that represent a quite substantial share of local revenues (TRL14.6bn. or 34percent of local administration revenues in 2013). However, donations represent a non-regulated part of the transfers, and have a major impact on development finances. The detailed impacts of donations on disparities within SPAs and within the groups of unions are still to be explored. The combined volume of shared transfers, grants, donations suggests that the metropolitan municipalities and T&B municipalities received more than half (59 percent) of total central transfers, the non-metropolitan provincial municipalities, affiliated institutions, and LG unions received the rest.

**Two additional factors influence the volume of transfer revenues of the local administration sector.** First, five percent of transfer revenue is deducted, and then accounted as investments in the form of an equity contribution by the local administration sector to Iller Bank's paid-in capital (nearly TRL1.0bn. in 2009). This will continue in the coming three years or so when the paid-in capital of the Iller Bank will reach the statutory TRL9.0bn. limit; and it will increase further because of the recent lifting of the statutory limit. Second, Iller Bank provides project grants for small municipalities from 30 percent of its net profit (TRL104 million and

TRL72.0 million in 2009 and 2010 respectively). These grants have important equalization effects.

## Infrastructure finance framework

**Debt financing is a main pillar of the Turkish local infrastructure finance system, which overall provides important access to finance for municipalities but faces key sustainably challenges.** Aggregate municipality current surplus and capital revenues from sales of assets are the main sources of financing development. The surplus can be used as cash funds or for securing and repaying debts. Indeed debt-finance plays a substantial role in financing Turkey's municipalities. Over 10 percent of total municipal expenditures and over a third of capital investment expenses were financed by debt instruments over the last 5 years. However, a substantial part of the debts are still short-term, non-development liabilities that may distort the debt financing figures. There is no development grant system in place for municipalities. There are substantial *donations and aid* (a third of municipal revenues in 2013) that include in large part earmarked or targeted "*project grants*" to SPAs.

**Debt financing represents a burden for some small municipalities, both institutionally and financially.** Evidence of this is the significant share of problem projects that fail to service interest and/or principal payments in a timely manner. A routine correction factor has been applied, namely capitalizing overdue interest and rescheduling problem loans; this practice raises legal, banking, financing, and budgeting issues, but also induces adverse incentives. Furthermore, debt financing may revert back to grant financing in principle when overdue debts are cancelled. This is a practice that should be avoided, since it is non-equitable, non-transparent, and induces perverse incentives i.e. expectations of central government bailouts is the likely consequence of recurring patterns of overdue liabilities or non-payments. Judgments are not easily made in determining which municipalities are in financial distress due to circumstances beyond their control or due to reckless spending.



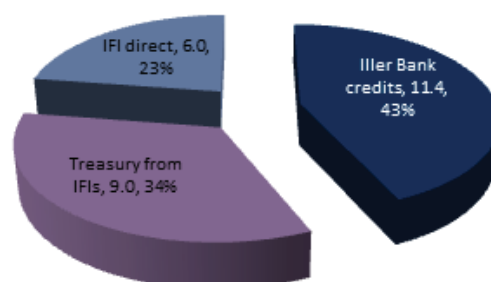
***Development grants are used in limited ways in Turkey's municipal finance system and could be expanded.***

Debt finance is the basic principle of the Turkish municipal development finance system, but current practices are often in conflict with a basic banking principle, namely *not to lend money to an entity that is unable to repay it*. In light of similar challenges, most developing and many developed countries use development grants or grant-loan combination for specific segments of the local administration sector (small and backward municipalities) and for specific priority sectors (like water and sanitation). The underlying arguments include: a) the central government provides grants to incentivize municipalities for developing priority infrastructure; b) to provide grant for municipalities with low fiscal capacity and low or no borrowing capacity to help gradual equalization without jeopardizing their solvency and basic service capacity; c) the grants are often mixed with loans, when the central government provides a grant to finance a portion (30-50 percent or more) of core infrastructure projects important for social or environmental reasons (water, drainage, social housing etc.). This grant works like a letter of credit and is considered as cash by the financing entities (public funds or private banks alike). Such instruments have been put in place at various central government agencies, the most prominent of which are the SUKAP, BELDES, and GAP Programs of Ministry of Development. These programs are small by volume compared to the overall budget of the local administration system, but they provide subsidies, usually about 50percent, to enable small, low tax base municipalities to develop urgent and basic water and sanitation services.

### **Main financing sources and entities**

**Turkey's municipalities have ample access to finance through relatively few sources, with a largely untapped domestic debt market for municipalities.** Municipalities generally borrow from IFIs with Treasury approval and guarantees, from Treasury on-lent IFI funds, from Iller Bank, and from domestic banks or the capital market; Iller Bank's guarantee portfolio suggests the latter. The structure of debt stock still needs to be clarified and verified, but can

**Figure 67: Stock of Infrastructure Debt TRL bn. and percent 2013**



Source: Turkey Ministry of Finance and Iller Bank

be reconciled from various reports. The stock of long-term debt in 2013, reveals a relatively heavy reliance (more than half of total) on foreign funds either on-lent by the Treasury (9bn) or direct borrowing from IFIs for large programs (6.0bn.), likely due to Turkey's overall low domestic savings levels. The domestic banking sector, mainly Iller Bank, finances mostly medium and small municipalities (11.4bn.). The small share of Iller Bank also serves as a financial intermediary for IFI-financed projects. It provided or 43 percent of total of long term total funding to the local administration sector, largely to non-metropolitan and T&B municipalities in 2013.

**Authorizations for borrowing can come from multiple sources.** By law the municipalities have full discretion to prioritize, plan, structure, finance, and implement capital investment projects in Turkey. In practice, however, they have low capacity and much less discretion. There are several agencies that authorize debt financing: The City council or municipal council approves priority projects, the specific project plans, and the project and debt application. However, the Ministry of Interior, the Ministry of Development, the Public Investment Program (PIP), the Treasury, and in some cases even the Council of Ministers has a say in debt financing to varying degrees. This multi-layer decision making apparently reduces both the autonomy and the accountability of the local administrations.

**Long-term infrastructure financing is generally not available in the market and there is consequently heavy reliance on IFIs.** Due to



various local market conditions, large-scale Turkish municipal infrastructure is mainly financed by IFI funds, and investments on advanced technology are often proposed by the Ministry of Development and approved by the Council of Ministers. (Public Financial Management Law #5018, Article# 16.) The municipalities, their affiliated entities and the public corporate entities, are jointly responsible for the repayments of the foreign debt under the guarantee of the Treasury. This project selection and approval mechanism does not create strong commitment and accountability at the local level. It appears that these guarantees are sometimes called and the Treasury pays either the due interest or the principals or both; these may be converted to loans to the Treasury and often accumulate as stock of short- and/or long-term debt without true repayment.

**Various multi- and bilateral agencies support local development through a combination of technical assistance and financing capital investment projects.** The project selection, approval, and implementation criteria and practices are different, but generally Treasury processes and oversees these loans as mandatory guarantor of the projects. But in most of the cases the IFIs preselect the “partner municipalities” and Iller Bank assists in processing the projects with or without incurring the IFI funds into its balance sheet. That means the IB takes neither commercial, nor foreign exchange risk in IFI operations; while it covers the banking risks by the revenue intercept. Such practices do not necessarily reflect a commercial banking relationship, and it would be important for Iller Bank and participating municipalities to enter into lending terms that more closely reflect market circumstances, with the aim that municipalities over time would improve their credit worthiness and be able to access other sources of market based finance.

**The World Bank-financed Municipal Service Project is possibly unique, because it is processed through Iller Bank’s balance sheet.** This project generally follows closely international investment bank practices, i.e. Iller Bank is the Borrower (with Treasury guarantee) and the municipal entities are the sub-borrowers

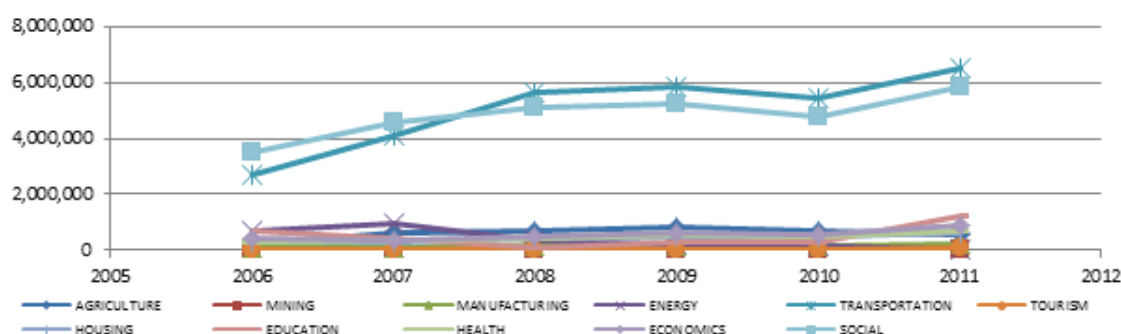
who also take the foreign exchange risks. This is the only program that provides real long term maturity in the Iller Bank portfolio. The experiences are rather positive, including a generally good disbursement ratio, while also providing technical support on municipality feasibility studies, and environmental and social safeguard procedures. Iller Bank supports participating municipalities by providing standard templates and guidance. Iller Bank’s risk management has been substantially improved by mandatory establishment of escrow accounts for securing repayment of interest and principal. Measurable positive impacts include: decreasing water losses, increased volume of purified water, increase of number of people with access to purified water and solid waste services, and, importantly, decrease in financial operating ratios in municipal accounts. These practices and procedures can be replicated in other IB projects, including own investments and IFI programs alike.

## The Public Investment Program

**Turkish municipalities basically consider MOD development grants, the PIP, and Treasury as main entities for local investment projects, since the vast majority (80 percent) of the long term municipal debt portfolio is under the direct control of the Treasury.** The significant role that the central government plays in municipal development finance raises long-term questions about municipal capacity to tap into commercial credit markets. The range of government entities in charge of commenting or approving municipal projects constrain not only the municipal autonomy and accountability, but may undermine the power of core banking finance functions in selecting and approving projects. Attempts to strengthen municipal credit worthiness and the accountability rules and practices for debt service would help strengthen the long-term financial sustainability of Turkey’s municipalities. The public investment programs reflected in the PIP in the local administration sector are strongly focused on social/urban service projects and the large metro-rail development programs over the past decade. This is the fact in part because projects that require Treasury approval and/or guarantee are mandated to be approved in the



**Figure 68: Local Administration PIP Program 2006-2011**



Source: Turkey Ministry of Finance

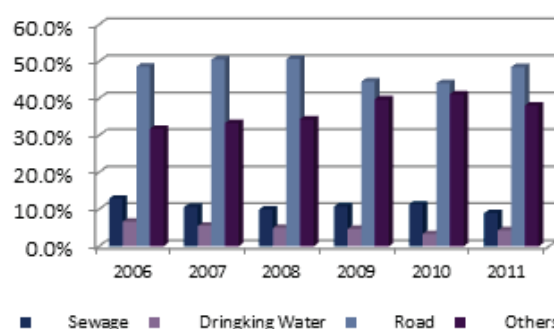
PIP program. It is a bit of surprise that neither the municipalities nor the SPAs invest in health and education to noticeable scale.

**The detailed sectoral breakdown of PIP projects by main local entities reveals that local investments are mainly used for roads, and water & sanitation, or reported in a general “other” category.** The charts also show that the metropolitan municipalities and the T&B municipalities (within the metro jurisdictions)

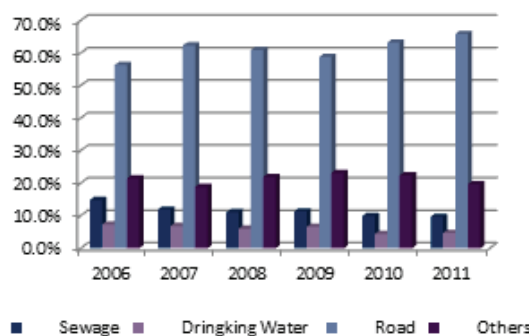
are investing largely in the same services, like roads and water & sanitation, which may signal a lack of common strategy and poor coordination. The large (60-70 percent) share of other investments in SPAs is apparently a reporting issue that needs to be clarified and corrected, but other information suggests that SPAs focus on transport and social infrastructure investments substantially. Establishing an effective system for metropolitan and regional investment strategy with harmonized investments in

**Figure 69: Sub-National Public Investment Programs 2006-11**

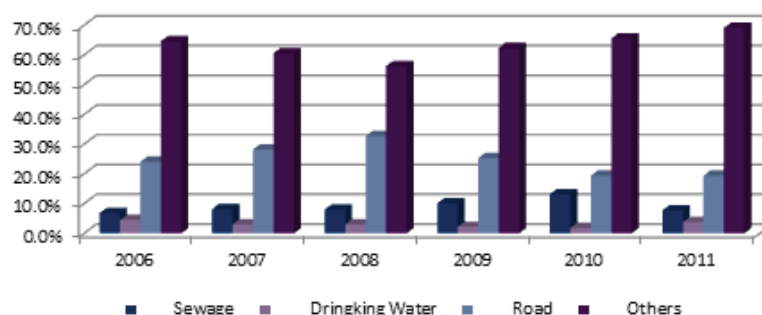
**(a) PIP Municipalities**



**(b) PIP T&B Municipalities**

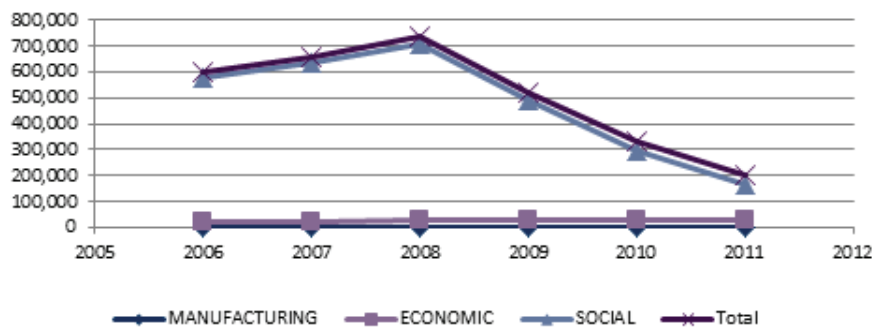


**(c) PIP program for SPAs**



Source: Turkey Ministry of Finance

Figure 70: Iller Bank PIP Program 2006-2011 (TRL million)



Source: Iller Bank 2012 Annual Report

key local infrastructures is emerging as among the most important actions going forward.

**Even Iller Bank's investment projects financed from IB's equity must be approved by and accounted in the Public Investment Program (PIP).** Anecdotal evidences suggest that as a result of the PIP procedures, a large number of projects are approved and started, but the completion period is extremely long (2-3 times longer than international examples found and cited in Peteri and Sevic 2011). It is also worth noting that many programs approved and committed in PIP failed to start and some dropped from the program without progress after a few years.

**The projects financed by Iller Bank should be structured, approved, and processed under strict banking rules and procedures to the maximum extent possible.** Strong emphasis should be placed on financial feasibility, borrowing capacity of the municipality, and capacity and ability to operate the project including budgeting sufficient funds for operation and maintenance. The Iller Bank PIP project files 2006-2011 show a steady and steep diminishing role of IB in implementing and financing PIP projects. The projects are accounted as "social" infrastructure that supposedly covers basic urban services.

### The Role of Iller Bank in Development Finance

**Iller Bank is a focal point of the Turkish local development finance system.** Iller Bank has various roles and responsibilities, including: a) transferring allotments from state funds to mu-

nicipalities, b) loan financing for local investment projects, c) technical assistance for structuring, designing, and implementing municipal investment projects, often actively involved in engineering design, procurement, contracting and project monitoring; d) providing training and various forms of capacity building for municipal staff; and, e) supporting strategic planning by sponsoring development of city maps, spatial plans. Law 6107, 2011 has transformed Iller Bank into an incorporated company and mandates to work as an investment bank with substantially broader functions; actions include transferring funds (some combined with loan) under various special Government programs, including SUKAP, GAP, and BELDES aiming to support smaller and backward communities. The implications are still to be fully explored and implemented.

**Iller Bank was established in the 1930s and has been financing municipal investments for over 80 years.** The municipalities are its majority shareholders with minority shareholding by the Treasury. Its registered capital is TRL9.0 bn. and the paid-in capital reached TRL8.5bn. in 2013; municipalities will continue investing in Iller Bank till the paid in capital reaches TRL9.0bn. Iller Bank is running with low but stable profitability in harmony with its statute; ROA was 2.2 percent, ROE 3.2 percent in 2013. Iller Bank pursues mainly equity lending, with a small on-lending portfolio using IFI financing. As a result, its capital adequacy ratio is high (59.9 percent in 2013). Iller Bank is a cost effective intermediary; operating expenses were 2 percent on assets, 3.4 percent on the loan



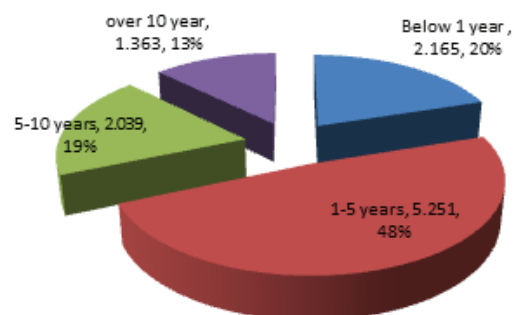


portfolio; but also the operating costs are less than half of the interest margin without taking the cost of equity. It lends with revenue intercepting provisions, thus deducts overdue receivables from the municipal allotments. This is a high security that gives good comfort to Iller Bank; however, this leaves the efficiency of risk management and debt recovery unclear and unmotivated. Using regular risk mitigation instruments has just started with mandatory escrow accounts under the IBRD on-lending.

**Iller Bank provides preferential loan terms to municipalities.** Iller Bank offers longer maturity and lower rates than the market and became the largest contributor to the debt financing of the local administrations in 2013 (Figure 67). The long-term interest rate was lowered from 9 percent to 6 percent in 2010 and further down to 5.3 percent in 2012. It provides short term (1-12 month) loans from domestic financial markets and charges municipalities a small markup; its short term lending rates were offered at competitive rates in 2013. Iller Bank used to be burdened with a huge non-performing loan portfolio that was accounted as due immediately, thus short term (up to 1 year) loans were 56.7% of the portfolio in 2009. By 2013, its loan portfolio became much healthier (Figure 71) as a result of repeated restructuring, mostly by rolling over unmanageable debt in agreement with debtors. Short term loans dropped to 20 percent, in line with the average 5 year maturity lending. It should be noted, that the 5 year term is still a short maturity, unsuitable for financing infrastructure with 20-30 years useful asset-life, like water and sanitation, roads, and sanitary landfills. Extending loan maturity for municipal infrastructure should be among the highest priorities, making municipal investment financing more affordable.

**Equity-based lending constrains Iller Bank's development finance capacity.** IB is facing double constraints in lending by following equity and asset-based/collateral lending. It provides loans mainly from its equity and provides loans against the liquid assets of the municipalities, namely the projected flow of central government transfers that can be intercepted. This practice provides good security, but

**Figure 71: Maturity Structure of Iller Bank Loans to Municipalities 2013**



Source: Iller Bank Annual Report 2013

strongly constraints IB's capacity in supporting infrastructure development of the municipal sector. The stock of loans have exceeded the paid-in capital and there is little room left in shareholders' equity to continue equity-based lending; thus the Council of Ministers Decision no. 2014/6045 (March 14, 2014) increased the IB nominal capital from TRL9.0bn. to TRL18.0bn. (IB Annual report 2013). Besides lending and instead of short liquidity loans, IB has started to provide letters of guarantee for municipal borrowing from domestic banks. This could be an entry point for Iller Bank in supporting municipal access to domestic financial markets; however, it needs to build capacities for mitigating the risk of guarantees. Finally, on-lending that has started to take off could expand IB's financing capacity as IFIs plan a number of new programs.

**Some of Iller Bank's business lines imply and may induce conflicting roles.** For instance, its loan financing is very secure because of its ability to use the fiscal intercept, which is convenient, but may discourage Iller Bank from applying traditional banking risk mitigation instruments. The other side of this coin is that Iller Bank may avoid the intercept; instead it may roll over loans, capitalize overdue interest if the full deduction is not possible for financial or political reasons (about half of the total loans was rolled over in 2010). Project structuring, appraisal and implementation are other areas of conflicting roles. Projects structured by the Iller Bank may be appraised without deep due diligence on credit risk, which may undermine project feasibility and eventually debt service over time. International experience suggests





that development banks indeed have similar multiple functions under one roof, but they establish very independent functional units and segregate them with fire walls in order to reduce the negative consequences of conflicting functions.

### Central Government Oversight

**A very positive attribute of the central transfer system is that the central government transfers are unconditional.** This leaves spending decisions entirely to the discretion of the local administrations. The central government agencies apply other forms of control over Turkey's municipalities mainly through the Ministry of Interior and the provincial and district governors. The central government oversight relies largely on ex-ante controls and emphasizes the center's obligation to ensure legal compliance.

**Generally, several municipal budget control measures have helped stabilize the finances of the sector.** The control measures fall under three categories: administrative, budgetary, and financial. The local administrations are supposed to submit their detailed quarterly financial statements to Ministry of Finance, Ministry of Interior, State Planning Organization and the Treasury to make sure that the debt limitations are implemented properly. Those local administrations that do not comply with the debt raising rules will be subject to the rules of the Criminal Code; but there is no precedent in which such actions have been taken regardless of whether there is evidence

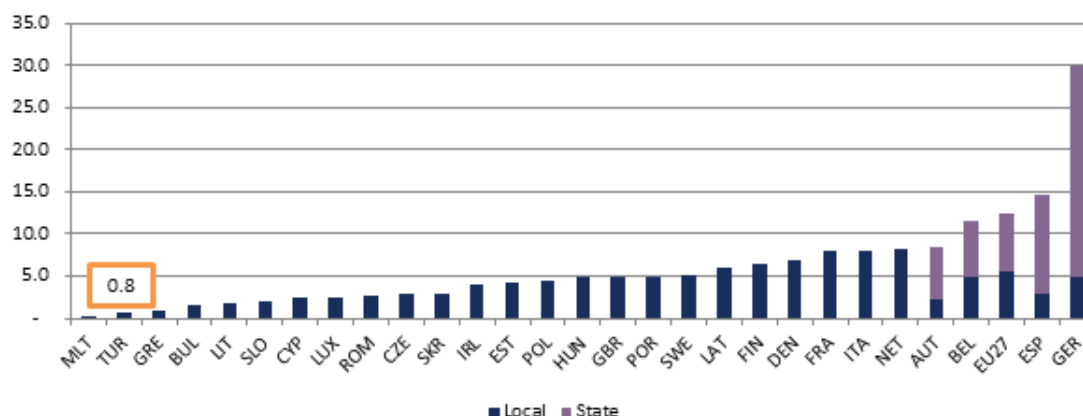
of borrowing limit violations. Thus, the above rules seem to have remained as basic principles without complete enforcement.

**Central government oversight and involvement in reviewing municipal development projects is quite significant.** Such practices tend to constrain municipal sovereignty, responsibility, and accountability, and eventually transfer project risks to the central government entities, largely to the Treasury. The role of the central government agencies would be better focused on setting clear national infrastructure development and infrastructure finance policy, and enabling the local administrations to take full responsibility, as well as the risks for their decisions, but also to ensure adherence to the laws and regulations for maintaining discipline and strong financial control in investment finance.

### MUNICIPAL BORROWING AND INDEBTEDNESS

**Municipal borrowing and debt financing is substantial in the Turkish local administration system.** Municipalities are well aware of and most of them are actively practicing debt financing. Yet, the Turkish subnational debt to GDP ratio is among the lowest in Europe comparison. Underlying reason behind include the small share of local administration sector in both public revenues and expenditures. As a result, the municipal debt is low to GDP, but at the mean time the debt stock is very high to the municipal revenues.

Figure 72: Sub-national government debt, 2010



Source: Peteri and Sevinc 2011



## The Framework for Borrowing

**Legal framework:** Municipalities, SPAs, and affiliated municipal institutions are authorized to raise debt, borrow or issue bonds to cover the investment and costs of municipal services under their responsibility (Laws #5302 and #5393, respectively). Local administrations may raise domestic debt from the Iller Bank, from private banks, for both current and capital expenditures. Foreign financing from international financial institutions (IFIs) is permitted only for the projects that take place in the investment program, and requires approval and often guaranteed by the Treasury. Some further conditionality applies to financing through bonds, which is a non-existent instrument in Turkish municipalities.

**Debt limitations:** There are specific debt limitations, including: a) the consolidated debt stock of SPA + Municipality + Affiliated entities in over 50percent municipal ownership should be less than 100percent of Revenues (150 percent for metropolitan municipalities); b) new consolidated debt of SPA + Municipality + Affiliated entities cannot exceed 10percent of Revenues – over 10percent debt requires approval by the local council (parliament); c) These limitations do not apply for large investment programs proposed by the State Planning organization and approved by the Council of Ministers; d) The Debt Law 2002 regulates that *to apply for a Treasury guarantee, municipalities must clear outstanding obligations to the central government* and justification for the investments must be provided through feasibility studies. The steady accumulation of short term debt and overdue liabilities suggest that the Debt Law is poorly enforced.

**The above debt rules and limits are quite liberal by international comparison on two accounts.** First, debt financing is not limited to development; as opposed to many countries where short term debt is prohibited or strictly forced to be repaid within the same fiscal year. Second, the 100percent and particularly the 150percent debt limit are very high by international comparison. Both of these rules are apparently softening the budget constraints

and jeopardize the financial stability of the local administration sector. Furthermore, the majority of the municipalities seem to have reached the said high debt limits.

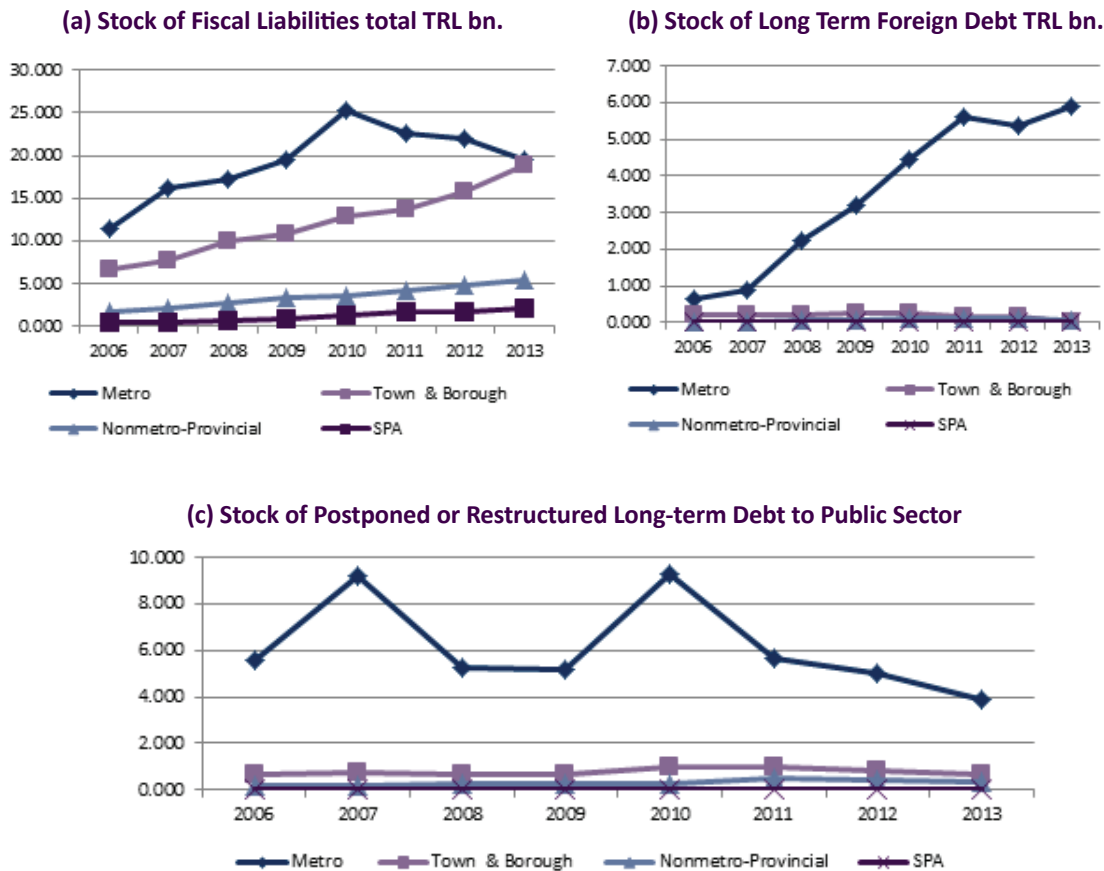
## The debt stock and composition

**The stock of municipal debt signals major financing, accounting, and budgeting challenges.** These include: a) growing debt stock that has reached 121 percent of the municipal revenues, which is above the statutory limits and way above in a number of municipalities; b) what is more worrying is that the stock of short term debt is larger than the long term and it is growing; this places a question mark on the reality and accuracy of planned budgets; c) the stock of immediate payables to suppliers and tax and social security dues were in the tune of 20 percent of the annual municipal revenues, that again questions the budget reality. The 2010 debt reconciliation has somewhat reduced the short term debt largely by workout of overdue immediate liabilities (TRL6.0bn.) largely by cancelling or rolling over dues vis-à-vis the treasury and intercepting allotments. d) Finally, municipalities tend to borrow heavily through their affiliated institutions; the debt stock to revenue ratio of the municipal affiliated entities reached 259 percent in 2010. This is not a problem in itself; however, municipalities by law are guarantors as dominant shareholders of Iller Bank and should account for these as contingent liabilities, and by law must consolidate the debt stock of their affiliated entities.

**The composition of fiscal debts and liabilities by various local administrations would need to be a policy area of greater focus in the years ahead.** Metropolitan municipalities hold by far the largest share of fiscal debt, due to large infrastructure developments funded from foreign funds via the Treasury. Very substantial fiscal liabilities are on the books of municipal entities mostly affiliated with the metropolitan municipalities, thus this debt is subject to consolidation for measuring debt limits. Finally T&B municipalities are steadily expanding their fiscal liabilities. The SPAs and non-metro provincial municipalities have negligible fiscal liabilities. The small but substantial foreign



Figure 73: Subnational Debt Stock 2006-2013



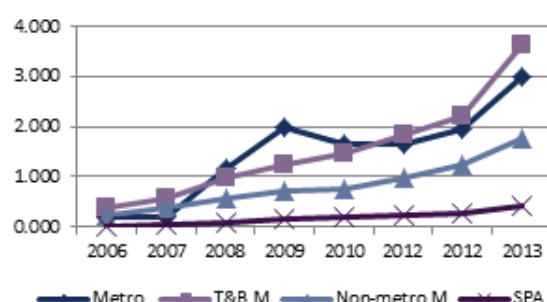
Source: MOF Treasury

debts incurred by affiliated municipal entities are presumably also burdens of the metropolitan municipalities directly (via guarantees) or indirectly as contingent liabilities of the majority owner municipality. Finally, the medium and small T&B and non-metro provincial municipalities steadily expand a portfolio of postponed and restructured debts. The above facts and tendencies suggest a need for enhancing the debt management capacity, effectiveness, and strategic focus at all local administration levels and entities.

**Metropolitan municipalities, Towns and Boroughs (T&B), and the municipal affiliated entities hold the vast majority of the LG sector bank credit portfolio.** The T&B municipalities have expanded both their short and long term bank credit portfolio steadily and dynamically since 2006, starting from a negligible level. The municipal affiliated entities hold a steady and large bank credit portfolio that is aging

and switching long-term debts to short term, which might challenge cash-flow and liquidity. The bank debt portfolio of the metropolitan municipalities is also aging and now the majority of the portfolio is short term, which might challenge cash-flow and liquidity. The stock of overdue short term taxes and other liabilities is generally low for the LG sector, but growing in the T&B municipalities. This in combination of the growing restructured (overdue) long term liabilities for the same group of T&B municipalities is an area of concern.

**The size and composition of short term debts makes reconciliation (silent bail-out) unavoidable.** These reconciliations have happened repeatedly nearly every 5-10 years in the last few decades. The most recent debt reconciliation was carried out via the Iller Bank in 2010. Of the total TRL8.7bn. overdue debt TRL5.6bn. was worked out and TRL3.6bn. carried forward to 2011. The majority of the workout

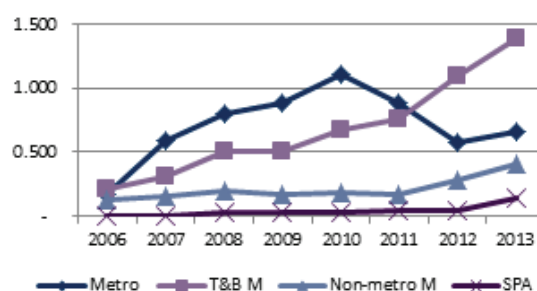
**Figure 74: Stock of Long term Bank Credits 2006-13 (TRL bn.)**

Source: MOF Treasury

was debt owed to the Treasury and MoF (nearly TRL5.0bn.) which was cancelled. The rest was due to be deducted from municipalities' transfer allotments (IB Annual report 2010 pg 35), but most of this stock has remained uncollected still in 2013 (IB Annual report 2013, pg.36). Clear municipal insolvency regulations are needed in order to limit the potential consolidation burden on the national budget.

**Changing policy in order to get short term borrowing under control is an urgent action the government needs to consider.** The above experiences suggest the urgent need for assessing, exploring the underlying causes, procedures, and incentives for generating short term debt or nonpayment of dues; and then reregulating the short term borrowing and respective budgeting, accounting, and financial reporting principles and rules.

**The stock of long-term debt is around 50-55 percent of annual municipal revenues.** This

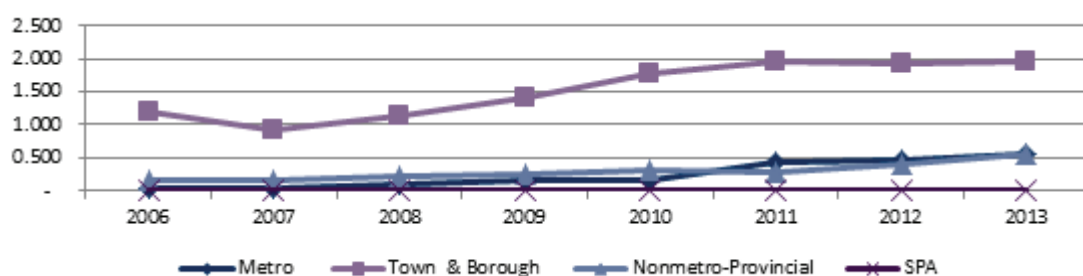
**Figure 75: Stock of Short term Bank Credits 2006-13 (TRL bn.)**

appears to be manageable and offers room for further development, provided that the short term debts can be restructured and reduced. The relatively weak credit record of some municipalities remains a fundamental problem for the development of the sector and creates a particular impediment in moving towards private sector financing.

### Policy Priorities

**With the aim of ensuring adequate financing of Turkish cities to promote sustainability and continued economic growth, this report suggests several policy options, as follows:**

- *Reduce municipal dependence on fiscal transfers* by maintaining the current share between central and local administration sectors, while providing incentives and taking policy measures to encourage improvements in own-source revenue collection. One of the most practical measures

**Figure 76: Stock of Short Term Overdue or Postponed Taxes and Liabilities 2006-2013 TRL bn.**

Source: MOF Treasury



would be to revisit the property tax base and rates, which are currently one-tenth of what most OECD countries assess, and provide flexibility to local administrations in setting their own. Consideration of a new property valuation system – moving from quantitative to qualitative (market values) would be highly recommended.

- *Review the equalization transfer mechanism* and improve equalization effects. One option would be to consider a Block Grant or Performance Grant System (conditional and unconditional can be explored) to localities with a low economic base. Many of them, such as Van, have fully exploited their property tax, recording the highest yields among Turkish administrations, but still appear to have inadequate resources to deliver their mandated services.
- *Further review and study in more depth the financial distress and sustainability risks* that small municipalities as a segment of local administrations are facing. Inability to access disaggregated data prevented further coverage in this report. But as a market segment, this cluster of municipalities appears in need of further detailed review.
- *Updating risk models and creditworthiness assessment procedures.* Provide support to Iller Bank and Treasury in updating their municipal credit analysis/risk models and tools to promote optimal credit decisions, combined with support to cities to enhance their credit worthiness. While Turkey appears to have put in place a reliable budgetary system with a hard budget constraint on municipal expenditures, some aspects of the loan portfolio and debt stock suggests a soft constraint on borrowing. Building up long term finan-

cial sustainability in the sector will require the use of training and credit enhancement tools and exercises where the World Bank and other international development agencies can help.

- *Promote improved harmonization of capital investment planning and programming across multiple tiers of administration.* Anecdotal evidence suggests that there may be some overlaps and possibly duplication of investment planning and implementation across different sub-national administrations. A more detailed review could bear this out and potentially point to methods to better rationalize capital investment planning. At the metropolitan municipality level, in particular, multi-year capital investment planning could be improved by linking it to land-use planning within city master plans, helping to better mobilize domestic and international finance for bankable investment projects.





## ANNEX 1: THE INTERGOVERNMENTAL TRANSFER FRAMEWORK

**The divisible pools:** Central government tax revenues are the basis from which the various subnational entities receive allotments in established shares. The source of the five divisible pools includes four major budget tax revenues: PIT, CIT, VAT, and excise tax (on petroleum products, motor-vehicles purchases and sprites and other sodas) and some other minor taxes. The divisible pools are: Metropolitan Municipalities receive 6 percent<sup>59</sup> of budget taxes by collection origin; from the rest of the budget tax revenues the metropolitan districts receive 2.5 percent, other municipalities receive 2.85 percent, SPAs receive 1.15 percent of budget tax revenues, and there is a small 0.1 percent pool for equalization grants assigned for the smallest municipalities.

**Shared taxes, grants, and equalization:** The bulk of central transfers are said to be shared taxes that is true in allocation between the central and local administration sector. However, most of the municipal dues are distributed based on some formula not returned to source, thus better to be considered as central grants according to the Council of Europe revenue definitions<sup>60</sup>. The Turkish tax sharing system is generally good by international comparison and particularly positive that it provides for unconditional grants and leaves spending discretion to the municipalities. Yet, there is room for further improvement, as discussed below.

This system includes several tax sharing formulas; some of these can be associated with *expenditure needs*, like population and area, others aim *reducing disparities* in development, like development index, rural population, and number of villages in SPAs. The revenue disparities discussed above, however, suggest a need for revising the current revenue allocation

system and increasing the equalization effects. First, one reform option to consider is to reduce the share of metropolitan districts by the 30 percent amount currently channeled to the metropolitan municipalities, and use the funds for additional grants to under developed municipalities, maybe in a form of specific development grant. Second, incentives for increasing OSRs are the missing element of the Turkish transfer system; thus another reform option to consider would be to segregate a portion of the transfer allotments and distribute it by fiscal performance. This could be particularly effective for the large municipalities.

**Metropolitan Municipalities:** The metropolitan municipalities receive 6 percent of the tax revenues collected within their jurisdictions; 70 percent of this is returned to source which is true sense revenue sharing. The rest (30 percent) of this pool is distributed by share of population, which responds to development needs to some extent, since it is provided equally regardless of local economic conditions that influence tax generation. In addition, metropolitan municipalities receive 30 percent share from the Metropolitan District pool, since they are part of the districts. This 30 percent share is hard to justify. This allocation further increases the transfer revenues to the largest metropolitan municipalities, which should have capacity and adequate revenue assignment responsibilities to collect more OSR. It should be noted that metropolitan municipalities do not have a buoyant revenue source, since property tax revenues are collected by their districts and towns, while many fees and charges by affiliated service entities. In this regard, further consideration should be given to assigning metropolitan municipalities with greater direct tax revenue responsibilities, thus linking significant expenditure responsibilities with incentives to collect local own-source revenue.

**Metropolitan Districts:** The metropolitan districts pool gets 2.5 percent of the general tax

<sup>59</sup> This percentage was recently revised upward from 5 percent with the December 2012 amendment to the Metropolitan Municipality Law, which came into effect in March 2014.

<sup>60</sup> Shared taxes are financial transfers; if they are not in direct relation to the amounts collected locally, they are also considered as grants. (Definition of Shared Taxes, Council of Europe, 2006).





revenues and 30 percent of the pool supports the metropolitan municipalities mentioned above, while 70 percent supports the other non-metropolitan district municipalities; all allocated by population. As said, the distribution of shares by population has a minor equalization effect that might be sufficient for the metropolitan and metropolitan district municipalities.

**Other Municipalities:** The pool for *other municipalities* (towns and boroughs beyond the metropolitans) is filled with 2.85 percent of the budget tax revenues and provides for 80 percent of the transfers based on population, and 20 percent is based on District Development Index. The districts are grouped into four development categories, and then the municipalities in the poorest districts groups receive 23 percent the next 21, 20, and municipalities in the “richest” districts receive 19 percent from this sub-pool with population based allocation to municipalities. The justification of this allocation metrics (23, to 19) might be subject of further analysis.

**The Special provincial Authorities:** The SPAs pool is filled with 1.15 percent of the general tax revenues and provides funding to the *other municipalities* by the following formula reflecting the districts’ characteristics: 50 percent population, 20 percent area, 20 percent number of villages, 15 percent rural population, and 15 percent development index, later allocated with the above procedure for the four “*development groups*” (in 23, 21, 20, and 19 percent share). Beyond and above the regular transfers, national budget grants, in the form of donations and aids, are the main budget sources for the Special Provincial Administration and the Unions.

### Administration of transfers

The Ministry of Finance (MoF), Treasury, and Iller Bank (IB) are involved in managing and administering the transfers system. The Treasury with the consent of MoF transfers allotments

from the 5 percent shares to the metropolitan municipalities. Iller Bank receives the rest of the transfer funds from the Treasury and distributes allotments according to the said formulas on a monthly basis. Iller Bank’s Law authorizes it to intercept transfers, thus it automatically deducts debt service dues from the due transfer shares of municipalities who failed to provide timely repayment of interest and principal. This is a fundamental loan security instrument for the Bank that is used extensively. Because transfers depend on monthly tax collections and are subject to the intercept, municipalities have only a vague understanding about their monthly due shared revenues.

Transfers are typically managed by MoF or Treasury in a vast majority of countries; albeit a number of developing countries use specialized entities for distributing transfers<sup>61</sup>. There are three weaknesses of this Turkish administrative arrangement: a) the allotments are estimated on a monthly basis that provides security for the central budget (i.e. only collected revenues are distributed), but weakens the predictability and cash management at the municipal level, which might induce short-term borrowing. A common practice in many countries is to provide equal installments of annual estimated transfers; b) IBank transfers the allotments ten days after receiving them, and gains interest on overnight bank deposits. This creates a substantial cash-flow challenge in municipalities. This processing time seems to be too long given the simplicity of the formulas and the possibilities offered by a modern electronic transfer system; c) management of the transfer system seems to be mixed with banking activities in IBank; this should be a segregated function, and run as a fee-based service.

61 Municipal Development Fund, Republic of Georgia; Cities Village Development Bank, Jordan. of Shared Taxes, Council of Europe, 2006).



## ANNEX 1: LOCAL ADMINISTRATION SECTOR EXPENDITURES & REVENUES 2006-2013 (TRL billion)

	2006	2007	2008	2009	2010	2011	2012	2013
<b>EXPENDITURES</b>	<b>33.008</b>	<b>39.383</b>	<b>45.942</b>	<b>48.227</b>	<b>52.226</b>	<b>61.011</b>	<b>69.299</b>	<b>87.590</b>
<i>Current expenditures</i>	<b>19.968</b>	<b>22.767</b>	<b>27.707</b>	<b>30.509</b>	<b>34.367</b>	<b>39.008</b>	<b>44.203</b>	<b>51.768</b>
Personnel	7.096	7.516	9.044	9.531	10.286	11.259	12.193	13.489
Social Security	0.995	1.147	1.257	1.483	1.818	1.904	1.968	2.173
Purchase of goods and services	9.915	11.785	14.343	15.468	17.984	22.105	26.196	31.736
o.w. Purchase of goods and services	3.182	3.402	4.286	4.373	5.162	6.303	7.133	8.301
o.w. Purchase of services	3.772	5.124	6.370	7.168	8.239	10.358	12.670	15.408
Interest paid	0.607	0.634	0.938	1.454	1.361	1.322	1.433	1.412
Current Transfers	1.355	1.685	2.125	2.573	2.919	2.417	2.413	2.957
o.w. Transfers to non-profit organizations	0.236	0.345	0.492	1.017	0.647	0.834	0.869	1.180
o.w. Transfers to households	0.421	0.519	0.739	0.637	0.987	0.688	0.759	0.917
o.w. Shares from the revenues	0.522	0.657	0.694	0.721	1.083	0.629	0.529	0.583
<i>Capital Expenditures</i>	<b>13.036</b>	<b>16.617</b>	<b>18.235</b>	<b>17.718</b>	<b>17.859</b>	<b>22.004</b>	<b>25.096</b>	<b>35.822</b>
Capital Expenditures	12.255	15.771	17.391	15.332	16.391	19.780	23.315	33.577
o.w. Real estate acquisition	1.135	1.438	1.211	0.998	1.686	2.046	3.187	4.166
o.w. Capital investment expenditure	8.113	10.832	12.325	11.200	11.601	13.666	15.172	22.767
o.w. Capital maintenance	1.785	2.050	2.211	1.612	1.621	2.234	2.603	3.568
Capital Transfers	0.425	0.313	0.241	0.733	0.385	1.167	0.740	0.524
Lending	0.356	0.533	0.603	1.653	1.082	1.056	1.040	1.720
<b>REVENUES Total</b>	<b>31.724</b>	<b>35.474</b>	<b>38.842</b>	<b>42.477</b>	<b>53.582</b>	<b>63.416</b>	<b>69.263</b>	<b>83.376</b>
<i>Current revenues</i>	<b>29.363</b>	<b>33.286</b>	<b>36.991</b>	<b>40.079</b>	<b>50.875</b>	<b>59.884</b>	<b>66.177</b>	<b>77.759</b>
Tax and Fees	3.377	3.691	4.190	3.776	5.904	6.901	7.250	8.213
o.w. Property Taxes	1.628	1.724	1.983	2.143	2.979	3.851	3.911	4.232
o.w. Charges	1.060	1.237	1.335	1.294	1.794	1.857	1.936	2.350
Enterprise and Property Revenues	8.060	8.993	9.188	10.558	11.922	13.869	16.050	17.917
o.w. Goods and Services	0.097	4.502	4.157	4.611	5.462	6.655	7.180	7.946
o.w. Enterprises	7.058	3.307	3.849	4.262	4.758	5.686	6.331	6.875
Donations and aids*	4.305	4.589	5.209	5.860	8.876	10.262	10.331	13.939
o.w. Central Government	0.329	2.796	3.179	3.519	4.462	5.857	5.754	8.742
o.w. Project aids	3.527	1.071	1.414	1.652	3.336	3.340	3.415	5.197
Interest Shares and Penalties	13.621	16.013	18.404	19.885	24.172	28.852	32.547	37.691
o.w. Shared Taxes	12.042	13.513	16.220	15.587	21.721	24.139	27.485	31.966
<b>Current balance</b>	<b>9.395</b>	<b>10.519</b>	<b>9.284</b>	<b>9.570</b>	<b>16.508</b>	<b>20.877</b>	<b>15.732</b>	<b>20.805</b>
<i>Non-recurrent Revenues</i>	<b>2.361</b>	<b>2.188</b>	<b>1.851</b>	<b>2.397</b>	<b>2.707</b>	<b>3.532</b>	<b>3.086</b>	<b>5.617</b>
Capital Own Revenues	2.003	1.949	1.732	1.333	2.690	3.484	3.049	5.607
o.w. Land and Building	1.651	1.875	1.689	1.280	2.544	2.062	2.996	5.509
Collections from Receivables	0.358	0.239	0.119	1.064	0.017	0.048	0.036	0.010
<b>Capital balance</b>	<b>(10.675)</b>	<b>(14.429)</b>	<b>(16.384)</b>	<b>(15.321)</b>	<b>(15.152)</b>	<b>(18.472)</b>	<b>(15.768)</b>	<b>(25.018)</b>
<b>Budget Balance/ Deficit wo Debt financing</b>	<b>(1.284)</b>	<b>(3.909)</b>	<b>(7.099)</b>	<b>(5.750)</b>	<b>1.356</b>	<b>2.404</b>	<b>(0.035)</b>	<b>(4.213)</b>
<b>Debt financing**</b>	<b>n.a.</b>	<b>8.953</b>	<b>4.247</b>	<b>(6.887)</b>	<b>10.146</b>	<b>(0.901)</b>	<b>2.249</b>	<b>0.981</b>
Short	<b>n.a.</b>	<b>3.504</b>	<b>5.235</b>	<b>(3.707)</b>	<b>3.176</b>	<b>0.393</b>	<b>2.274</b>	<b>0.769</b>
o.w. Immediate payables	<b>n.a.</b>	<b>0.723</b>	<b>1.973</b>	<b>(1.171)</b>	<b>0.512</b>	<b>(0.005)</b>	<b>0.639</b>	<b>2.024</b>
o.w. Tax arrears	<b>n.a.</b>	<b>0.364</b>	<b>0.737</b>	<b>(0.201)</b>	<b>0.795</b>	<b>(0.566)</b>	<b>0.021</b>	<b>0.286</b>
Long	<b>n.a.</b>	<b>5.448</b>	<b>(0.988)</b>	<b>(3.180)</b>	<b>6.970</b>	<b>(1.295)</b>	<b>(0.025)</b>	<b>0.212</b>
Arrears to public institutions	<b>n.a.</b>	<b>1.423</b>	<b>(0.136)</b>	<b>(1.379)</b>	<b>0.354</b>	<b>0.031</b>	<b>1.325</b>	<b>(3.187)</b>
<b>Budget balance total after debt variations</b>	<b>n.a.</b>	<b>5.044</b>	<b>(2.852)</b>	<b>(12.637)</b>	<b>11.502</b>	<b>1.503</b>	<b>2.214</b>	<b>(3.233)</b>

\* Donations and aids include both current and development grants; latter mostly provided for SPAs

\*\* MoF has recently revised debt financing statistics 2006-2013

Source: Ministry of Finance General Directorate of Public Accounts (MoF) (<https://portal.muhasebat.gov.tr/mgmportal/>)



## CHAPTER 6: INTER-AGENCY COORDINATION TO SUPPORT TURKISH CITIES

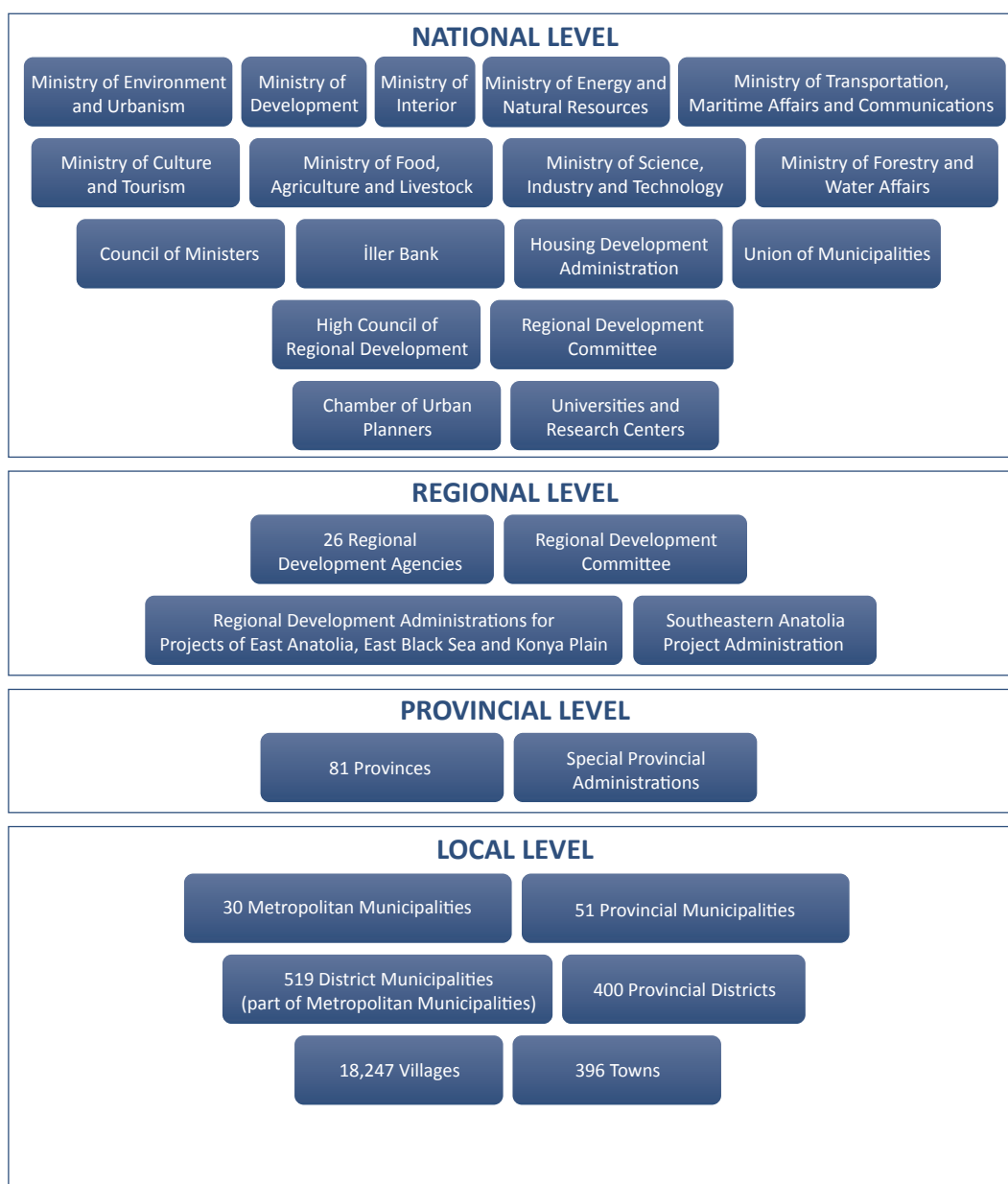
Over the course of the past two decades, in keeping with the subsidiarity principle, Turkey has increasingly decentralized and devolved authorities from national to local administrations. As this shift in responsibilities takes place over time, it is essential to maintain coherence and coordination in the institutional arrangements and policies of different tiers of government in *planning*, *connecting* settlements to infrastructure services, and in the *financing* of cities. The most recent example in Turkey of this devolution of powers is the amendment to the Metropolitan Municipality Law in December 2012, which expanded the number of metropolitan municipalities from 16 to 30 and delegated to them the responsibilities of preparing provincial territorial plans, which were previously carried out directly by the Ministry of Environment and Urbanization.

**Interagency coordination takes on increasing prominence in countries transitioning through decentralization.** Not only will changes in functions take place with decentralization, but there are also important capacity issues that arise that may require transitional arrangements to ensure a smooth transfer of responsibility. Understanding the different modes of interagency coordination therefore becomes essential, particularly during the transitional period. Inter-agency coordination generally takes on three different forms:

- **Vertical coordination** – between different administrative levels, usually in a hierarchical ordering (e.g. a national ministry and a local authority);
- **Horizontal coordination** – between institutions/agencies/departments/units from the same administrative level (e.g. between two ministries; between two units within a ministry; between two municipalities; or, between two departments within a municipality);
- **Diagonal coordination** – with actors external to the public administration sector (e.g. the private sector, NGOs, universities, think tanks).

**Vertical inter-agency coordination requires a clear delineation of responsibilities between different tiers of government.** It is important to know what agency is responsible for policy making in different policy spheres, which agency is responsible for enforcement, which is mandated to deliver different services, and how communication can be improved to ensure timely and efficient responses to challenges that arise. Rodrigo et al. (2009) indicate that many OECD countries have created inter-agency coordination systems that are not organized in a top-down, hierarchical order, but are rather conceived as an integrated public support mechanism, which continually evolves in response to changing needs and challenges. As such, lower and upper levels of government are expected to work together to provide key public services, and they assign responsibilities and tasks according to competency, capacity, and effectiveness. The diagram below shows some of the public stakeholders in Turkey that have a function on urban development issues.

**Horizontal inter-agency coordination ideally enables more coherent and streamlined policies, more efficient service provision, and better social outcomes.** At the national level, horizontal coordination can involve joint-work of two or more ministries on certain policies, regulations, or standards; it can involve joint work and coordination between a policy making agency (e.g. Ministry of Environment and Urbanization) and a development agency (e.g. Housing Development Administration); or between a policy making entity (e.g. Ministry of Development) and an investment entity (e.g. İller Bank). At the local level, it can involve coordination through a joint service council among a number of individual municipalities in close proximity to achieve economies of scale in service provision; or, it could involve coordination in trying to mitigate negative externalities of urban development (such as pollution, congestion, and poverty). For example, the Washington DC metro system is managed, financed and expanded with contributions and inputs from different government tiers (the

**Figure 77: Range of Agencies Influencing Urban Development in Turkey**

federal US government, the District of Columbia and the states of Maryland and Virginia, individual counties and municipalities that are serviced by the metro, and the private sector). Policy makers in the Washington metropolitan area recognized the need for a metropolitan transit system that spanned several jurisdictions to promote the competitiveness of the city-region. Recognizing the need for improved mobility and access to job opportunities for residents living across the metropolitan area helped break down the collective action dilemma even with policy makers with quite different political views and affiliations.

**Horizontal coordination at the local level is most frequently observed when economies of scale in service provision can be achieved, or when urban development externalities (e.g. pollution and congestion) require regional level interventions.** Decentralization builds on the principle that certain public goods and services are much better managed and coordinated at a local/regional level, because there is more direct accountability and a more intimate understanding of local/regional problems. In many local jurisdictions, particularly in a rapidly urbanizing country like Turkey with fast growing cities, service

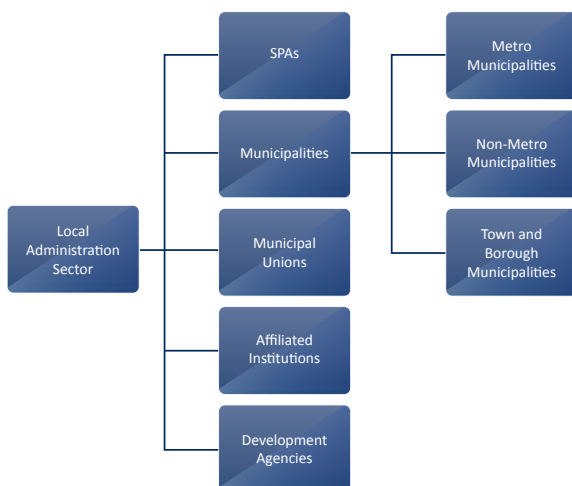


provision (e.g. water, sewage, waste, public transport) often needs to be extended across jurisdictional boundaries to take advantage of economies of scale (e.g. a water reservoir or a landfill that can serve several jurisdictions). Polluting industries in one jurisdiction can often have negative consequences for its adjacent jurisdictions. What may benefit one locality (e.g. investment, taxes and jobs), may undermine development prospects in a nearby jurisdiction. While competition between different jurisdictions can lead to better service provision, it can also lead to a squandering of resources. Consequently, higher scale institutional options at the metropolitan, provincial or even regional level may need to be considered to take advantage of economies of scale. Such solutions can range from voluntary agreements between individual jurisdictions, to the creation of a new jurisdiction (e.g. amalgamating more jurisdictions into one), or the creation of a second tier of government (e.g. metropolitan government).

**The Turkish intergovernmental system has several tiers with complementary but also interlinking responsibilities.** These tiers are depicted in the chart below and are comprised of: Metropolitan, Non-metropolitan Provincial, and Town & Borough (T&B) municipalities, Special Provincial Administrations, and Municipal Affiliated Institutions like utility companies. Districts or Towns or Boroughs in metropolitan areas are part of the metropolitan jurisdiction as independent affiliated entities; their func-

tions are only partly subordinated to the metropolitan government, like in master planning and transport planning. Hereafter, local *administrations* denote the entire sector and *municipalities* the sum of the three basic clusters as the chart below depicts this relationship.

**Turkey has a metropolitan municipality law that is an example of global best practice in organizing service provision and management at a broad metropolitan scale.** Most countries, including many developed ones, have not managed put in place such an administrative regime. In international practice, such a system, where a second level of government is added to improve service provision at the local level, is known as a two-tier system. The upper tier covers the region as a whole (e.g. metropolitan area), to take advantage of economies of scale and to properly mitigate negative side-effects that affect the whole area (e.g. air pollution). The lower tiers are responsible for services of a local nature, with limited economies of scale effects and regional side-effects (e.g. street lighting and local parks). Enid Slack (2007) indicates that upper tier governments should be responsible for “services that provide region-wide benefits, generate externalities, entail some redistribution, and display economies of scale”, while lower tier governments should be responsible for services that “provide local benefits”. As the table below indicates, metropolitan municipalities in Turkey mirror international practices in terms of functions for which they are responsible.




**Table 9: Assignment of Functions in Two-Tiered Governments**

	<i>International Experience*</i>		<i>Turkey**</i>	
	<i>Upper Tier</i>	<i>Lower Tier</i>	<i>Metro Muni</i>	<i>District Muni</i>
Welfare assistance	X		X	X
Child care services	X		X	X
Social housing	X			
Public health	X		X	
Land ambulance	X		X	
Roads and bridges	X	X	X	X
Public transit	X		X	
Street lighting		X		
Sidewalks		X	X	X
Water system	X		X	
Sewer system	X		X	
Solid waste collection	X			X
Solid waste disposal	X		X	
Municipal police/Fair marketing	X		X	X
Fire suppression		X	X	
Fire prevention/training	X		X	
Local land use planning		X	X	X
Regional land use planning	X		X	
Economic development	X		X	
Parks and recreation		X	X	X
Libraries		X	X	X
*According to Slack, Enid. 2007. "Managing the Coordination of Service Delivery in Metropolitan Cities: The Role of Metropolitan Governance", The World Bank Policy Research Paper.				
** Turkey Metropolitan Municipalities Law				

**Horizontal coordination between two units that are part of the same institution is often over-looked but critical for efficient service delivery.** The fact that two departments are part of the same agency does not necessarily mean that they also communicate efficiently. For example, the development arm of a national level agency may make investment decisions without following policy guidelines provided by the policy arm of the same institution. Similarly, the urban transport department within a municipality may plan transport investments without linking those investments to the land use plans of the urban planning department;

or, roads may be paved or resurfaced without prior coordination with other underground public service providers (e.g. water, sewage, electricity, telephone, cable).

**Diagonal coordination is an increasing practice of governments seeking to make the most effective use of public funds and to leverage themselves through private participation and citizen engagement.** Diagonal coordination (such as public-private partnerships, partnerships with NGOs, universities or think tanks) starts from the premise that the public sector is not always best equipped or financed to provide directly all of the services it





is mandated to deliver. Among other features, diagonal coordination creates the opportunity to mobilize and attract private capital; it enhances fiscal space for local administrations, shifting resources to public goods and social services that the market does not necessarily respond to; and it shifts commercial risk to a private sector provider. Most market-based economies engage the private sector in pub-

lic service provision, and there is broad experience of both successes and failure. Turkey's public sector institutions have extensive experience of working with the private sector, from water and sewage provision, to operation of solid waste management systems, and provision of public transport. A relevant example is the rehabilitation of Mamak Landfill in Ankara (see Box 13).

### Box 13: Leveraging Private Sector Participation for Municipal Solid Waste Services

ITC-Ankara was established in 2002 as a branch office of a Swiss originating company -- Invest Trading and Consulting AG -- which specializes in construction of infrastructure and superstructure projects, including recycling plants. Its ability to bring financing, assume commercial risk, and apply innovative solutions to landfill management provided a perfect opportunity for Ankara Metropolitan Municipality to partner with this private sector firm in addressing its solid waste disposal needs with a growing urban population now exceeding 4.5 million.

Structured as a 49 year concession, Ankara's partnership with ITC was initiated through a competitive selection process. ITC was selected as the preferred bidder to redevelop the Mamak landfill starting in 2005 with a commitment to realize a total investment by the private operator of US\$260 million in return for operating rights.

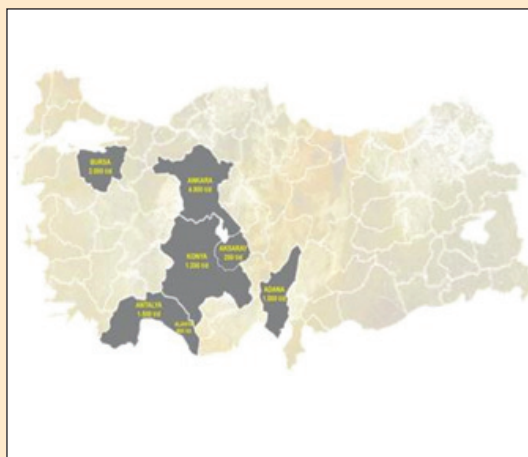
A classic win-win initiative, the partnership features multiple benefits for Ankara's residents, the municipality, the private sector concessionaire and the environment. For residents, sanitary conditions and land values in the vicinity of landfill have substantially improved in the years since the private sector operator took over. The picture below shows the plant operating across the street from a high-end shopping mall with IKEA as the anchor tenant, and the landfill provides hot water and heating for the mall through the biogas operation. Through the project, the municipality was able to shift the initial US\$29 million and all subsequent capital investment costs to ITC. It also saved on the landfill operating costs and tipping fees. For the operator, the project offered the opportunity to earn a profit while entering a market in which it now has operations in seven Turkish cities (see map below).

The partnership also had substantial co-benefits for the environment. Methane gas, which is generated by the decomposition of solid waste, is 25 times more potent as a greenhouse gas than carbon dioxide. The facility design features a methane gas capture technology that dramatically reduces methane gas emissions. The facility then harnesses this gas to produce electricity, generating revenue streams for the firm, while providing an alternative renewable energy source for Turkey, an energy dependent country. The anaerobic digestion system processes organic waste to compost in addition to generating methane gas. The energy plant linked to the operation generates 135 million kWh of renewable energy annually with total installed power of 25.4 MW. The facility also features a waste sorting plant to recycle plastic, glass and other materials.

**Mamak Landfill Site**



**ITC Operations in 7 Turkish Cities**





## COORDINATION MECHANISMS

**Depending on the nature of the required coordination, different mechanisms can be established.** Continuous interactions may require the establishment of coordinated work units (joint agencies or commissions), staffed specifically to help coordinate and communicate across agencies where policy is dependent on effective joint action. On the other hand, temporary interactions may be better served by more informal arrangements, such as steering committees or working groups, where policy makers and/or technical staff from already established units convene to jointly solve common problems. Globally, different coordination mechanisms have been created to help solve a variety of policy and institutional challenges, and Turkey already has experience in the field.

**The Higher Committee on Regional Development is one example of a formal structure intended to promote central government coordination in Turkey.** The Committee is headed and formed by the Prime Minister, and includes the Minister of Development, as well as other ministers that may have a say in the topics that are to be discussed. The Committee is not a self-standing body and meets periodically to discuss issues that cut across sectors. For example, to better coordinate policies and public investments, representatives from agriculture, industry, tourism, transportation, and spatial development may be brought together. Such a coordinated framework is necessary to ensure the linkage between these two vital dimensions of regional development.

**At the provincial and local level in Turkey, vertical coordination is ensured along sectoral lines, with individual ministries represented through provincial governors.** The fact that the central government executive has representatives at the local level allows central government decisions to more easily find their way at the local level. Such a mechanism is also important because local administrations are not responsible for key functions, such as education and health care, and, as such, these coordination mechanisms serve an important purpose.

**Coordination mechanisms are shaped by the institutional and administrative framework in which they are created.** In the US, which has a tradition of decentralized administration, of strong and autonomous local administrations, one third of local administrations are organized as special purpose districts (e.g. school districts, urban transport districts, water and waste management districts, economic development districts, etc.) (Slack 2007). In France, which is made up of an astonishing 37,000 municipalities (80 percent of which have fewer than 1,000 people), nearly all urban areas are administered through inter-municipal cooperation agreements (Swift and Kervella 2003). Germany, which has a federalist system that diffuses power and authority, has put in place a regional policy that enables separate municipalities to come together and form regional governments (Greenblat 2008).

**Coordination structures and mechanisms are likely to vary over time, depending on changing needs and context.** For example, Toronto went from a system of municipalities with individual governments, to a two-tiered government system with metropolitan governance added on top of municipal governments, and then again to a one-tier government, with administrative powers concentrated in the hands of the City of Toronto (which was established through the amalgamation of all the individual municipalities). London was governed by a two-tier system between 1964 and 1986, with the upper tier being abolished by Margaret Thatcher in 1986, and then reinstated through the Greater London Authority Act in 1999. Cape Town in South Africa, had a one-tier government structure under Apartheid, then moved to a two-tier metropolitan structure in the mid-1990s (to allow a larger representation and better service provision in the dominantly black suburbs), and then again moved to a one-tier city government in 2000. (Slack 2007)

**Given the broad, cross-sectoral dimensions of local development, an overarching framework that can be a vehicle for formulating and implementing policy is worth considering.** For example, the Government of South Africa has put in place in 2005 an *Intergovernmental*



*Relations Framework*, to ensure that “the machinery of government works better, in a more integrated way, and more efficiently to deliver services to communities and people” (Layman 2003). The Framework established a President’s Coordinating Council (which is meant as a consultative forum between the central government and provincial and local administrations), and laid out the conditions for the establishment of national, provincial, and municipal intergovernmental forums (Republic of South Africa Government Gazette 2005). Such a mechanism was needed in post-Apartheid South Africa where a major demographic shift was taking place as urban areas were being revitalized.

**Good inter-agency coordination mechanisms are a product of good government, and good government requires qualified people and an efficient bureaucracy.** In *Extreme Government Makeover*, Ken Miller argues that good government often tends to be slender government – i.e. a government where bureaucratic processes are simplified, and where people are given more autonomy to work on the issues they are experts in, and more scope to work on issues that give them a higher sense of purpose. The best coordination mechanisms will not work if the people that are charged to lead them are not motivated to improve performance, and coordination may ensue spontaneously if motivated people recognize this as the best avenue for improving performance.

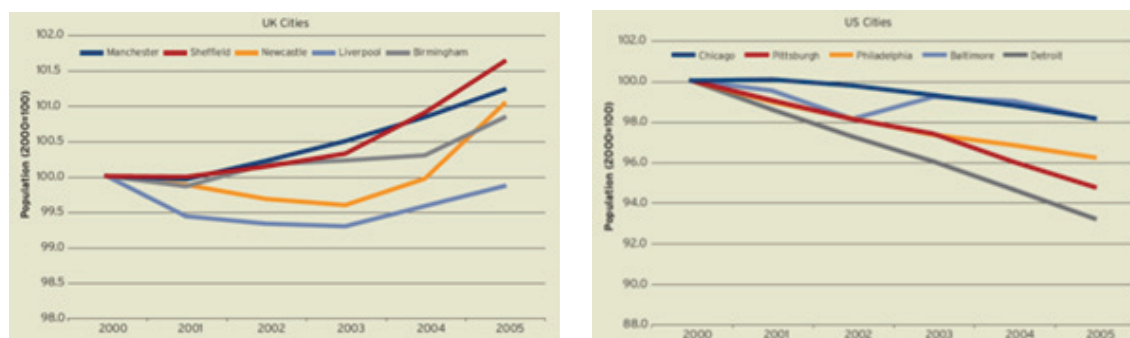
**In Turkey, as in all other countries, inter-agency coordination should be primarily motivated by past inefficiencies, present needs, and future objectives.** In other words, coordination should only be sought when something is not working well and/or when it could help improve present and future performance. Coordination mechanisms should be tailored to the problems that arise and adjusted as often as new realities demand it.

## NATIONAL POLICY FOCUS ON CITIES

**Many developing countries have yet to devise policies that aim to reap the benefits of urbanization.** Although the world is undergo-

ing a shift, where cities are not seen solely as the source of a country’s problems, but also the source of many solutions (see for example World Bank 2009a), in many countries there is not been a parallel shift in the way policy makers in these countries think about cities. It is widely understood that decentralization and devolved powers to the local level help cities become more dynamic and resourceful, but there are usually few attempts to understand cities as part of a system.

**In the developed world, with many cities undergoing de-industrialization and decline, there has been an increased interest in urban systems and the type of policies that could help revive their economic base and make them more competitive.** In the EU, programs like URBAN and URBACT are tailored to generate solutions to urban challenges throughout the Union. These programs foster knowledge exchanges, fund urban development and redevelopment projects, and encourage policy changes that benefit cities as a whole. In the UK, following years of decline of its former industrial cities, the National Government has made cities a priority and has devised policies aimed at promoting regional economic growth, addressing issues of social disadvantage, and provided support for regenerating the physical environment. As a consequence, in the past decade, UK cities have experienced a renaissance, with population and employment numbers beginning to rise again. What is more remarkable is that former manufacturing cities (such as Birmingham, Manchester, Sheffield, Liverpool, or Newcastle), which have experienced population decline since the 1960s, now appear to be going through a revival. This can be contrasted with former manufacturing centers in the US, which also started declining in the 1960s, but in several cases have not been able to avert this downward trend (see figure below). The difference between the US and the UK, is that the US continues to be a highly decentralized system, where cities are generally left to devise their own solutions to the urban decline. There are national programs, such as the US Environmental Protection Agency program on brownfields redevelopment, which aim to tackle some of the key

**Figure 78: Population Trends in Selected UK and US Cities, 2000-2005**

Source: Webber and Berube, 2008

challenges cities encounter, but there is no distinct national policy that focuses on city development and redevelopment.

**National governments need to work with local administrations to provide policy tools, regulations, incentives, and, at times investment financing required for sustainable urban development.** A limited but growing number of national policy makers are recognizing the importance of their cities and how their nation's development trajectory may very well hinge on how well their cities are doing. In the UK, several successive governments have issued planning statements in the 1990s and the 2000s, pushing "smarter growth" in cities. For example, in 1996, the Central Government issued a "town center first" development principle, which aimed to limit the development of retail centers (e.g. malls) on the outskirts of cities. Retailers and developers have to first prove that an in-town development is not possible or viable, before they allowed to develop land at the city periphery. In effect, out-of-town sites are seen as a last resort, whereas in the US they continue to be the norm for most new retail developments. The "town center first" principle is widely acknowledged as a success, and it has not only played an important part in limiting sprawl in UK cities, but it has also prompted cities to develop comprehensive masterplans that focus on city center revival. For example, the Sheffield One Masterplan, has targeted several key areas in the city for new development and redevelopment projects. One of the main tenets of the Sheffield masterplan was to bring life and economic activity back to the city center. The strategy

adopted has quickly borne fruit, generating a positive upward spiral, with more pedestrian traffic in downtown areas attracting more businesses, and with more businesses attracting even more pedestrian traffic and even more businesses. People and businesses tend to respond positively to vibrant and dynamic urban cores. These give the impression of city health, and act as a catalyst for further investments (public and private) and redevelopment.

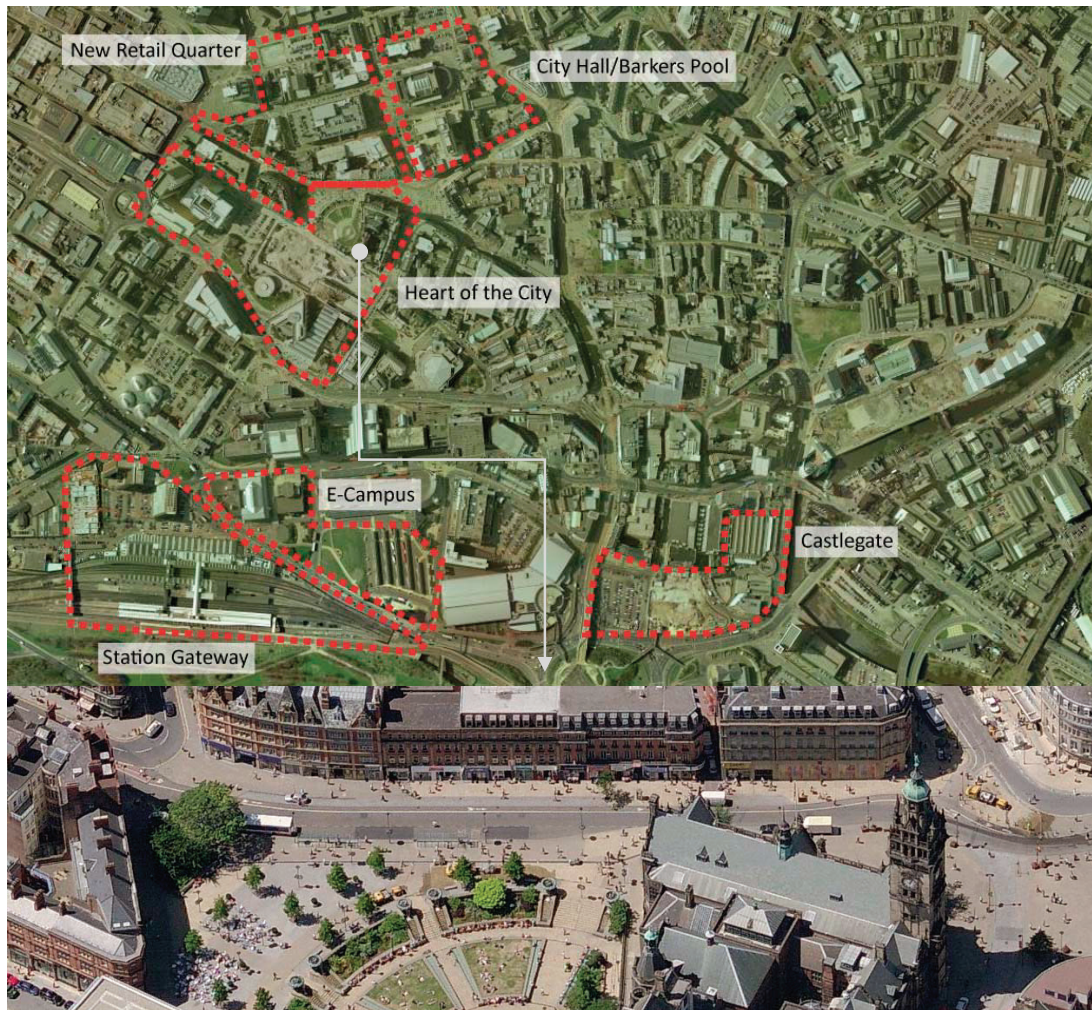
**National policies on urban development should aim to help local initiatives rather than taking away the initiative from local authorities.** Decentralization and devolved local powers are a sound principle to follow, but local and national policy makers should be keenly aware of the negative side-effects that increased decentralization brings with it, and should try to address these side-effects with well-targeted and coordinated policy measures.

**Recognizing the importance of cities and the challenges of urbanization, KENTGES, Turkey's Urban Development Strategy, lists as the first of its 100 actions, the need for the development of an Urbanization and Spatial Planning Framework Law.** The law is still in the drafting stages, and ideally it would include clear provisions for sound urban development, based on identified issues and challenges. This law should be periodically amended and changed, in tandem with general urban changes in the country. Cities are living organisms and urban policies should be understood as a continuous work in progress.





### Sheffield One Masterplan



## COORDINATING ACROSS ADMINISTRATIVE TIERS

**Efficient and effective planning requires the coordination of several administrative tiers.** As the table below highlights, there are different administrative tiers preparing plans at different levels. Thus, MOD prepares the National Development Plan and the Regional Plans, which focus primarily on socio-economic strategies. The MOEU prepares the Spatial Strategy Plans at the National level, and provides the framework for the drafting of provincial and local level plans. Ideally, these plans should be done in a coordinated, synergetic way.

Thus, for example, if the regional development plan indicates that the regional economy would benefit from having better connected cities, provincial administrations and the national government could work on supplying the necessary infrastructure. This means that the strategies and plans prepared at different administrative levels should be prepared in a coordinated way. Since according to the Law on Public Fiscal Administration and Control (5018/2003) public institution have to prepare Strategic Plans<sup>62</sup>, proper coordination would require that at a minimum, these plans are not done in a vacuum.

<sup>62</sup> Strategic plans include "medium and long term goals, basic principles and policies, objectives and priorities, performance criteria of public administrations, as well as methods and the allocation of resources to achieve such goals."

**Table 10: Planning Tiers in Turkey**

Plan Type	Responsible Institution(s)	Level of the Plan
(Socio-economic) Development Plans	Ministry of Development	National Level
(Socio-economic) Regional Plans	Ministry of Development via Development Agencies	NUTS 2 Regions
Strategic Spatial Plans	Ministry of Environment and Urbanization	National and Regional Level
Regional Territorial Plans	Ministry of Environment and Urbanization	Regional Level
Provincial Territorial Plans	By metropolitan municipalities within the boundaries of metropolitan municipalities, by the Ministry of Environment and Urbanization in non- metropolitan provinces	Provincial Level – linked to water basins
Provincial Development Plans	Governorships (non-Metropolitan areas)	Provincial level
Provincial Institutional Strategy Plans	Governorships, Metropolitan Municipalities	Provincial level
Development master plans	Metropolitan municipalities and municipalities subject to Code nr. 5393	Within the built-up urban area of municipalities
Implementation master plans	Municipalities subject to Code nr. 5393 and first degree and district municipalities within the boundaries of metropolitan municipalities	In general, the adjacent area of the municipality

**The preparation of Strategic Plans for regions, provinces, and local administrations in Turkey are not coordinated.** Strategic Plans prepared by Regional Development Agencies, by Provincial Administrations, and by Metropolitan Municipalities are often prepared independently and at times lack cohesion and “nesting” of hierarchical planning objectives. Metropolitan municipalities and provincial governments tend to focus on physical investments (e.g. roads, new tram lines, housing development, cultural heritage preservation), while regional development agencies draft comprehensive socio-economic strategies. For example, the vision stated by the Gaziantep-Adiyaman-Kilis Regional Development Agency is for the region to become a logistics center to the Middle-East, while diversifying agriculture and enhancing competitiveness. The vision of

the Gaziantep Province is to achieve international standards by investing in infrastructure, education, and health, and by collaborating with other public agencies. At the third tier, the Gaziantep Metropolitan Municipality has as its vision the need to enhance its organizational structure and become an efficient and participatory municipality. While these can be complementary objectives, they lack cohesion in inter-linking elements that could make them more mutually reinforcing.

## COORDINATING ACROSS SECTORS

**Several actors play a key role in spatial planning and they need to be actively engaged.** MOEU and MOD are two critical players in development planning, but they are far from being the only players. A number of stakehold-





ers, both at the national and at the local level have influenced the way Turkish cities have developed, and will play a critical role in the way they will develop. The Ministry of Transportation, Maritime and Communications (MTMC), for instance, could and should play a more active role in promoting sound urban transport policy and investments at the local level. This could take the form of developing more detailed guidelines and standards, as well as providing a platform through which local administrations can share experience and learn from one another, as well as international good practice. Currently, MTMC's oversight role does not come into the picture until a metropolitan municipality contemplates investing in light rail or metro mass-transit systems.

**Infrastructure is one of the most powerful tools for guiding city growth.** As the figures from Mersin and Trabzon have highlighted, new city growth often follows existing infrastructure. Even if development master plans and implementation master plans aim to set the tone for peri-urban expansion, new developments will tend to follow the easiest point of entry. Thus, many new developments will sprout up along exiting roads, both due to easy access to the rest of the city, and because other vital service infrastructure (e.g. water, sewage, electricity) is usually close by. Naturally, new residents will want to settle not only where land is cheaper, but also where transport costs and service infrastructure costs can be lowered. Many cities throughout the world strategically use infrastructure development not only to improve transport and reduce congestion and pollution, but also to guide city growth. For example, ring roads often serve as un-official growth boundaries which control the outward expansion of the city. However, such investments are usually large in scale, they may be outside city administrative boundaries, and they may cross several jurisdictions. As such, there is often the need to involve a central government agency (e.g. MTMC) to both coordinate and fund necessary works.

**In Turkey, peri-urban agricultural land acts as a de-facto growth boundary.** No class 1 agricultural land can be converted to urban land

without the consent of the Ministry of Food, Agriculture and Livestock (MOFAL). As such, city competitiveness is inherently linked to a Ministry that does not have a key role in urban development. In order to put together development or implementation masterplans for accommodating new city growth, local authorities have to coordinate with this Ministry. Several of the local authorities that were interviewed during the drafting of this report indicated that their city growth was stunted because of a coordination failure with MOFAL. While having a growth boundary has a number of positive side-effects (through the densification of the urban core), it can also negatively affect city competitiveness, by prohibiting access to land that might be essential to a city's future development.

**Military bases within proximity of Turkish cities can fracture the urban fabric and affect city sustainability.** Many cities in Turkey have military bases within their boundaries, which are controlled by the Ministry of Defense. It is not likely that the cities were planned that way, but rather the result of uncontrolled urban expansion and sprawl. These military bases are not subject to any national or local spatial planning regulations, and they are in a sense not part of the urban fabric. Initially, those bases were developed on the outskirts of cities, as strategic army outposts. Over the years, as cities have expanded, many of those bases started to be engulfed by new developments, and they de facto became urban voids. As the aerial picture below shows, the City of Eskisehir is basically, cut in two pieces, with communities from the north of the city being separated from communities in the south of the city. Ideally, local authorities should coordinate with the Ministry of Defense and discuss the opportunities of moving these military bases further outside the city, and turning the prime real estate they now occupy into developable land.



## Military Base in Eskişehir



### STREAMLINING AND COORDINATING DATA COLLECTION AND MONITORING

**“What doesn’t get measured doesn’t get done.”** Peter Drucker, an international authority on effective management delivered this telling statement. One of the biggest challenges to urban development in Turkey is the lack of a well-designed system of data collection and monitoring of urban indicators. Some examples include urban planning data (e.g. monitoring of green space area per city), energy efficiency data, and urban transport data (e.g. monitoring of transport networks and modal share). Moreover, different agencies collect data independently and often use their own methodologies, and they prepare their strategies, policies, and plans based on those data. When different agencies measure the same phenomenon in different ways, this may lead to different outcomes, and policies can be formulated in contradictory ways. It is therefore critical to have an information platform for collecting, managing and analyzing urban data to provide an overview of the performance of the cities within the system. KENTGES, Turkey’s Urban Development Strategy, provides a basis for systematically monitoring urban development indicators and the opportunity to analyze and formulate policy on this data while ultimately enhancing Turkey’s ability to make informed policy decisions.

**Reliable data should lead to the development of monitorable performance indicators.**

According to Law 5018/2003 on Public Fiscal Administration and Control, public institutions have to prepare Strategic Plans which include measurable objectives, and they have to measure their own performance according to pre-determined indicators. Moreover, the Ministry of Finance is authorized to determine “the compatibility of administration’ budgets with the performance indicators stated in the strategic plans”. These measures are important because they encourage the development of programmatic budgets, but in practice they can be a challenge to implement without proper information systems and common standards for monitoring. Many local authorities simply include a list of indicators in their Strategic Plans, but more often than not these indicators come without a baseline and specific targets that would allow their proper monitoring.



### Note on the new Metropolitan Municipality Law (#6360)

After the most recent local elections in Turkey, which took place in March 2014, an extended system of metropolitan governance was put into effect. The main objective of Act No. 6360 was to improve public service quality at the local level by expanding the number and geographical coverage of metropolitan municipality administrative area to the provincial boundaries. The Act was intended to take advantage of economies of scale and to increase efficiency of service provision. The Law increased the number of metropolitan municipalities from 16 to 30, expanding total population served by the 30 metropolitan municipalities from 34.8 million to 57.2 million citizens. In terms of spatial coverage, the Law increased the metropolitan municipality service coverage area to 395,000 square kilometers, approximately 51 percent of Turkey's land area. The Law eliminated the need for Special Provincial Administrations in the 30 metropolitan municipalities, and eliminated 16,500 village administrations within the 30 provinces, as well as some 1,000 municipalities across the country that had populations of less than 2,000.

The expansion of metropolitan municipality boundaries to the provincial limit was based on prior observed efficient delivery of services in Istanbul and Kocaeli, both of which feature built urban form that extends to the provincial boundaries. However, the new metropolitan municipality law extends this provision to some provinces that have a very different built environment, such as Konya, Sanliurfa, Ankara and Erzurum, where extensive rural areas are now incorporated into the metropolitan municipality administrative area. Going forward, there will likely be risks associated with this new configuration that should be carefully monitored, such as the need to prepare differentiated service standards within the metropolitan municipality area in accordance with land use function, density, urban/rural character, etc., as the cost of applying a dense urban area service standard to a rural area within the new Metropolitan Municipality jurisdiction would be uneconomic and inappropriate. This definition of differentiated service standards should be addressed at the policy level in order to ensure that the policy framework is clear for city-specific planning. A further question that arises is whether procedures have or will be altered in converting rural to urban land as cities grow over time. Where such an issue might have involved multiple agencies in reviewing and confirming the appropriateness of such conversion in the past, there is less clarity with both urban and rural lands now under a single metropolitan municipality regime. Here again, city-specific planning will take on greater importance so that master development plans can resolve land conversion issues a priori in a coordinated manner rather than incrementally, as has been the case in Turkey from many years.

## CONCLUSIONS AND POLICY RECOMMENDATIONS

**In this chapter, a stock-taking of Turkey's inter-agency coordination challenges was reviewed in the context of international experience.** Despite the fact that the main thrust of urbanization is now behind Turkey, urbanization pressures persist in secondary cities and the country continues to address the related policy implications of these dynamics by such measures as the recent amendment to the metropolitan municipality law. While earlier sections of this report highlight the enabling aspects of the metropolitan municipality regime, managing urbanization in an increasingly decentralized environment brings new challenges for inter-agency coordination. To address these challenges, a framework for considering three dimensions of inter-agency

coordination is presented – *vertical, horizontal and diagonal*. Comparisons are also made with international norms in the assignment of responsibilities, and Turkey generally follows international norms quite closely.

**International experience provides an opportunity to reflect on policy options for improving interagency coordination in Turkey going forward.** As suggested at the outset of this report, Turkey now faces a second generation urban development agenda. The policy agenda for managing a system of cities needs to evolve and adjust to new realities, and, building on Turkey's record of accomplishments to date, these areas of focus can draw inspiration from the important milestones of progress already achieved. Inter-agency coordination is one such policy area for focus in the years ahead and it will include: First, improved coordination in socio-economic/strategic and physical plan-



ning, possibly extending the regional development framework, which now benefits from a Higher Committee to promote coordination, to the municipal level. Different institutional arrangement options exist, including temporary structures or free-standing permanent structures, e.g. an Urban Commission, that bring relevant line ministries together to formulate policies, institute incentive structures, and harmonize linkages across sector boundaries. European Union and United Kingdom

examples are cited as having important policy effects in revitalizing cities, promoting redevelopment and containing urban sprawl. Second, underpinning good urban policy is the need for a well-developed urban data platform. Instituting such a platform could help develop a set of indicators that will help establish baselines, enable cities to adopt performance indicators for improvement, and benchmark against good performers both within country and internationally.



## Annex 1: Improving Access to Affordable Housing in Turkish Cities

**Table A1: Housing expenditure share by deciles of the expenditure distribution**

Year		1	2	3	4	5	6	7	8	9	10
2005	Imputed rent	24.86	24.75	22.93	23.13	22.31	21.59	20.91	18.53	17.89	16.33
	Imp. Rent+utilities	34.08	35.07	33.31	33.68	33.30	32.85	31.33	29.23	28.14	26.82
2006	Imputed rent	28.14	24.82	24.42	24.03	22.96	22.19	20.72	20.06	19.02	15.98
	Imp. Rent+utilities	38.53	34.64	34.54	34.88	32.69	33.00	31.83	31.21	29.42	27.17
2007	Imputed rent	27.73	27.54	26.14	24.86	24.94	23.33	23.37	22.82	20.62	18.28
	Imp. Rent+utilities	36.55	37.15	36.20	35.29	35.56	33.00	33.94	33.11	31.43	29.19
2008	Imputed rent	30.59	27.12	26.60	26.50	25.38	24.50	22.59	22.02	21.09	19.65
	Imp. Rent+utilities	39.79	37.84	37.23	37.24	35.63	35.10	32.79	32.19	30.77	28.53
2009	Imputed rent	33.89	28.94	26.92	25.06	23.69	22.55	21.73	21.19	18.49	17.28
	Imp. Rent+utilities	43.20	38.80	38.44	35.70	34.49	34.02	32.40	31.61	28.35	26.44

*Note:* Based on authors' calculation from Household Budget Surveys (2005-2009).

**Table A2. Growth Rates of Expenditures between 2005 and 2009**

	Deciles									
	1	2	3	4	5	6	7	8	9	10
Rent	28.0	30.1	25.6	22.7	19.3	19.6	18.9	18.6	17.6	14.5
Utilities	15.9	14.9	14.2	18.9	18.2	15.2	15.4	13.7	13.3	9.3
Consumption	15.1	14.6	14.8	15.3	15.5	15.3	14.7	14.4	14.2	10.8

*Note:* Based on authors' calculation from Household Budget Surveys (2005-2009).





### Box A1 Cluster Analysis using Population and Density of Cities

Cluster analysis is one of the many *multivariate* techniques that is used to classify observations into natural underlying groups. The goal of the clustering is to have observations in the same cluster be more alike than observations in other clusters. Unlike other types of multivariate analysis, e.g., factor analysis that works on variables, cluster analysis works on observations, finding underlying factors that each subset of variables appear to have in common.

We cluster more than 1500 cities across different countries including 13 Turkish cities. We used population size and density of each city as the selection criteria. Table C2 presents the clusters with Turkish cities and similar cities around the world. Between two iterative algorithms— *Kmeans* and *Kmedian* (based on mean and median), we used “*Kmedians*” for our clustering analysis. The algorithm is an iterative procedure that partitions the data into *k* groups or clusters. We used 10,000 iteration with initial seed as 999.

One drawback of the k-means/median approach, however, is that the number of groups is specified in advance, rather than let the procedure find the optimal number of groups. Cluster-analysis stopping rules are used to determine the optimal number of clusters. A stopping-rule value (also called an index) is computed for each cluster solution. Larger values indicate more distinct clustering. Between two stopping rules, (i) the Calinski and Harabasz (C&H, 1974) pseudo-F index and (ii) the Duda and Hart (D&H, 1973) index, we used the former one because the latter one goes with hierarchical data. Given this rule, we find that going with 200 groups is optimal for our analysis.

**Table A3: Calinski / Harabasz pseudo-F test to find out optimal number of groups.**

Number of clusters	Calinski / Harabasz pseudo-F values
150	319.43
200	444.58
300	275.64
350	343.11

Based on this algorithm the following table clusters Turkish cities with other similar cities across the globe.

**Table A4: Clustering of Turkish cities with other cities in the world**

Cities in Turkey	Similar cities in the rest of the world
Izmir	Kiyev, (Ukraine),Lisbon, (Portugal),Pyongyang, (North Korea),Urumqi, XJ, (China),Changzhou, JS, (China),Algiers, (Algeria)
Diyarbakir	Kolhapur, MAH, (India),,Hubli, KL, (India),Yangquan, SAX, (China),Tirana, (Albania),Zahedan, (Iran),Bokaro Steel City, JHA, (India)
Mersin	Cagayan de Oro, (Philippines),Changzhi, SAA, (China),,Trujillo, (Peru),Huangshi, HUB, (China),Veracruz, (Mexico),Acapulco, (Mexico)
Gaziantep	Copenhagen, (Denmark),Qiqihar, HL, (China),Samara, (Russia),Sofia, (Bulgaria),Liuzhou, GX, (China),Durg-Bhilainagar, CH, (India),Maceio, (Brazil),,Joao, Pessoa, (Brazil),Omsk, (Russia)
Kayseri	Padang, (Indonesia),La Plata, (Argentina),Kumamoto, (Japan),Nottingham, (United Kingdom),,Allentown,PA, NJ, (United States),Liaoyang, LN, (China),Winnipeg, MB, (Canada),Cuernavaca, (Mexico),Danyang (Zhenjiang), JS, (China)
Ankara	Porto Alegre, (Brazil),Suzhou, JS, (China),Barcelona, (Spain),Coast Abidjan, (Ivory),Salvador, (Brazil),,Monterey, (Mexico),Phoenix, AZ, (US),Rome, (Italy)
Istanbul	Cairo, (Egypt),Kolkata, WB, (India),,Rio de Janeiro, (Brazil),Buenos Aires, (Argentina),Shenzhen, GD, (China),Lagos, (Nigeria),Los Angeles, CA, (United States)



Cities in Turkey	Similar cities in the rest of the world
Bursa	Lome, (Togo),Brisbane, QLD, (Australia),Vittoria, (Brazil),Montevideo, (Uruguay),Santos, (Brazil),Conakry, (Guinea),La Paz, (Bolivia),Thiruvanantha puram, KL, (India),Santa Cruz, (Bolivia),Luoyang, HEN, (China)
Adana	Meerut, UP, (India),,Davao City, (Philippines),Rajkot, Guj, (India),Varanasi.UP, (India),Yangzhou, JS, (China),Mogadishu, (Somalia),Mjubi Mayi (Bakwanga), (Congo (Dem. Rep.)), Kannur, KER, (India)
Tarsus	Suqian, JS, (China),Petropavlosk-Kamchatka, (Russia),Lanxi (Jinhua),Zl, (China)
Konya	Salt Lake City, Utah, (United States),Nay Pyi Taw, (Myanmar),Chandigarh, (India),Ufa, (Russia),Haifa, (Israel), Nuremberg, (Germany),Merida, (Mexico),Adelaide, (Australia)
Eskisehir	States, (United),Machackala, (Russia),Jaroslavl, (Russia),Chabarovsk, (Russia),Liepzig, Mannheim, (Germany),Nagano, (Japan),Acron, OH, (US), Kanazawa, (Japan)
Antalya	Kingston, (Jamaica),Quetta, (Pakistan),Voronezh, (Russia),Upon Tyne, (UK),Palermo, (Italy), Guilin, GX, (China), Daqing,, (China),,Raleigh, NC, (US),Aba, (Nigeria)

## Box A2: Granger causality to test the lagged response of housing start to housing need in Turkey

Granger causality tests are most useful in situations where one is willing to consider two-dimensional systems. If the data are reasonably well described by a two-dimensional system then the Granger causality concept is most straightforward to think about and also to test.

“Granger causality” tests are statistical tests of “causality” in the sense of determining whether lagged observations of one variable have incremental forecasting power when added to a univariate autoregressive representation of another variable. A variable,  $x_t$ , is said to Granger cause another variable, say,  $y_t$  in period  $t$  if the variance of the optimal linear predictor of  $y_{t+h}$ , based on a certain information set, has smaller variance than the optimal linear predictor of  $y_{t+h}$  for any  $h$ . The test itself is just an F-test (or, as above, a chi-squared test) of the joint significance of the other variable(s) in a regression that includes lags of the dependent variable.

The first step for a Granger causality is to use a vector auto regressive (VAR)-model with stationary data. We used a series of unit-root test, such as the Dickey Fuller test and the Philips Perron test with second difference operator, to test unit root. With first difference operator we did not find stationarity in the data so we used second difference operator. Dickey Fuller performs the augmented Dickey-Fuller test that a variable follows a unit-root process. The null hypothesis is that the variable contains a unit root, and the alternative is that the variable was generated by a stationary process. The Phillips–Perron test (named after Peter C. B. Phillips and Pierre Perron) is also a unit root test. That is, it is used in time series analysis to test the null hypothesis that a time series is integrated of order 1. It builds on the Dickey–Fuller test of the null hypothesis in  $D1$  ( $D2$ ), where  $D1$  ( $D2$ ) is the first (second) difference operator. Like the augmented Dickey–Fuller test, the Phillips–Perron test addresses the issue that the process generating data that might have a higher order of autocorrelation than is admitted in the test equation - making endogenous and thus invalidating the Dickey–Fuller t-test. While the augmented Dickey–Fuller test addresses this issue by introducing lags of  $h$  as regressors in the test equation, the Phillips–Perron test makes a non-parametric correction to the t-test statistic. The test is robust with respect to unspecified autocorrelation and heteroscedasticity in the disturbance process of the test equation. We also used Schwert’s rule of thumb to start with 15 lags to find out proper lag length. A Wald test in VAR model is commonly used to test for Granger causality. The null hypothesis in a Wald test assumes that –“ $H_0$ : the coefficients on the lags of the predetermined variable (in the “excluded” column) are zero’ in the equation for (variable in the “equation” column). For example, the small p-value (in 9th row and beyond in the last column) is evidence that the coefficients on the lags of housing need are not jointly zero in the equation for log permit with 9 to 15 years lags, indicating that the evidence favors the alternative hypothesis that ‘housing need’ Granger causes housing permits with at least 9 years lags.



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