Turkey in 2050
Creating Sustainable Economic Growth and an Inclusive Society

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International Futures- Fall 2012
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Executive Summary

By some measures of development, Turkey is doing exceedingly well. In the last thirty years it has dramatically improved its economic and development profile and has begun to address some of the governmental deficits that have made developed European countries wary of Turkish membership in the European Union. The most recent update on Turkey’s progress towards the Millennium development goals showed significant improvement on a number of measures including child mortality, progress towards universal education, and reductions in maternal mortality. These reforms have been driven in part by Turkey’s continuing efforts to join the European Union, which have been ongoing since they first applied to the European Economic communities (EEC) in 1959. Particularly since the late 1980s, the need to harmonize Turkish institutions with EU ones have reinforced and locked in reforms in almost every area imaginable (Togan, 2004, p. 1016)

Nevertheless, challenges remain. The government of Turkey has identified 5 key areas to emphasize in future government programs: increasing competitiveness, increasing employment, strengthening human development and social solidarity, ensuring regional development and increasing the quality and effectiveness of public services (Republic of Turkey, 2006, p. 14). Development agencies like the World Bank and IMF have also offered suggestions for Turkish policymakers that emphasize the need to increase women’s visibility in employment, and increasing domestic savings and investment to help buffer Turkey against international capital flows. This paper selects two major targets for policy reform: promoting sustainable economic growth based on increased productivity and domestic investment, and increasing participation by marginalized groups in public political and economic life. Our model uses policy reforms in infrastructure, education, private investment, gender empowerment and government effectiveness to increase both the potential for economic growth and enhance the inclusiveness of Turkish society. The effectiveness of our interventions demonstrates that there is a significant positive feedback loop that develops between these indicators, prompting improvement in a wide variety of indicators over the forecast period. Turkey has made great strides, and is only now beginning to come into its full power politically and economically. The purpose of this paper is to analyze the prospects for Turkey to maintain its developmental momentum and to assess the progress in addressing potential pitfalls to continued development. Some of the recommended policy changes in this report are already being implemented, which means that this report is as much about identifying impacts and feedback loops as it is about recommending areas for developmental focus.

Image credits: (previous page-clockwise from upper right)
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Introduction

Turkey is a relatively large, populous country situated at the nexus of Europe, Asia and the Middle East. It has a population of approximately 73 million and a population growth rate of 1% a year. Turkey’s GDP in 2011 was approximately US$ 773 billion according to the World Bank (World Bank, 2012). Its per capita gross national income was approximately US$ 9300 in 2011 (World Bank, 2012). Over 60% of the population lives in cities, and the economy is primarily driven by services and manufactured goods (International Futures 6.63, 2012). About 99.8% of the population is Muslim, and the majority of them follow the Sunni school of Islam. A substantial minority identify themselves as Alevis, and they largely live in the south eastern part of the country. Approximately 12 million of the inhabitants of Turkey identify themselves as Kurdish, making this the largest ethnic group in the country (“Background Notes,” n.d.).

### Economic Indicators

<table>
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<th>Indicator</th>
<th>Turkey</th>
<th>OECD</th>
<th>Upper Middle Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP per capita (constant 2000 US$)</td>
<td>5,356.00</td>
<td>24,579.02</td>
<td>3,238.75</td>
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<td>12,564.04</td>
<td>30,004.35</td>
<td>8,708.30</td>
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<td>GDP growth (annual %)</td>
<td>9.16</td>
<td>3.20</td>
<td>7.83</td>
</tr>
<tr>
<td>Exports of goods and services (% of GDP)</td>
<td>21.21</td>
<td>24.86</td>
<td>28.80</td>
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<td>Gross domestic savings (% of GDP)</td>
<td>14.47</td>
<td>17.46</td>
<td>31.65</td>
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<tr>
<td>Manufacturing, value added (% of GDP)</td>
<td>17.70</td>
<td>15.88</td>
<td>21.27</td>
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<td>Services, etc., value added (% of GDP)</td>
<td>63.75</td>
<td>74.44</td>
<td>55.76</td>
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<tr>
<td>Central government debt, total (% of GDP)</td>
<td>50.74</td>
<td>58.06</td>
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<tr>
<td>Labor force participation rate (% of pop 15-64)</td>
<td>52.80</td>
<td>70.36</td>
<td>74.16</td>
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### Development Indicators

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<td>Fertility rate, total (births per woman)</td>
<td>2.08</td>
<td>1.82</td>
<td>1.80</td>
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<td>Poverty headcount ratio at $1.25 a day (PPP) (% of pop)</td>
<td>0*</td>
<td>--</td>
<td>8.97</td>
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<td>School enrollment, tertiary (% gross)</td>
<td>45.82%</td>
<td>66.68</td>
<td>34.66</td>
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<tr>
<td>Unemployment, total (% of total labor force)</td>
<td>11.90</td>
<td>8.33</td>
<td>5.86</td>
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<td>Life expectancy at birth, total (years)</td>
<td>73.70</td>
<td>79.32</td>
<td>72.64</td>
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<td>Literacy rate, adult total (% of people ages 15 and above)</td>
<td>90.82%</td>
<td>--</td>
<td>93.59</td>
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</tbody>
</table>

Notes: Data are for 2010 unless otherwise indicated. * indicates 2008 data, ^ indicates 2009 data (World Bank, 2012)

The country is strategically located on the eastern edge of the Mediterranean Sea, where it overlooks the Bosporus Strait, an important shipping route between Russia and the rest of the world. Turkey was a staunch ally of NATO during the Cold War and has continued its commitment to that organization, while simultaneously trying to gain deeper integration with Europe via entry into the EU (Kaya, n.d.). Turkey is currently pursuing accession talks with the EU, a process that has been ongoing since 2006. Turkish ties to the Middle East were relatively weak until the beginning of the current decade when the government of Recep Tayyip Erdogan, made a conscious effort to reach out to MENA nations.

The Republic of Turkey was established in 1923 by Kemal Mustafa Ataturk following the collapse of the Ottoman Empire. Turkey was a single party state until 1950, when multiparty democratic politics were introduced. Despite a number of coups conducted by the military when it believed the secularism of the state was under threat, democratic politics have always been the
norm within Turkey (Kaya, n.d.). The tension between the military and civilian leadership came to a head in the 2000s with the landslide victory of Erdogan and the Justice and Development Party, a religiously conservative party. Other sources of domestic conflict include the continued issue of Kurdish identity and autonomy, most prominently represented in the violent separatist conflict in the Southeast, but also by discussions about cultural representation and rights at the level of civil society (Yeginsu, 2012).

Turkey has experienced tremendous growth and development over the past fifty years, and will experience yet more upheaval over the next fifty. How policymakers adjust to the challenges of the coming decades will determine whether Turkey is able to preserve the gains that it has made since 1960.
Past Demographic Success and Current Challenges

Fertility, Mortality and Urbanization

In 1960, the Turkish population was approximately 28.2 million, the total fertility rate was over 6 children per woman, and the population was growing at a rate of over 2% per year. The implications of this were that the population was doubling approximately every 28 years (Karadayi et al., 1974, p. 21). However, beginning in the early 1960s, the total fertility rate (Figure 1) began a rapid decline that only began to flatten in the mid-1980s. Changes in the total fertility rate are the result of a number of factors, but the primary driver of declines in desired family size is declines in infant mortality. By 1960, Turkey was already in the second half of the demographic transition; that is to say that death rates had already declined and birth rates were just beginning to follow suit (Goff & Forney, n.d., p. 4). Current theories posit that a trade-off occurs during the demographic transition, when declining child mortality prompts parents to favor a smaller quantity of children, in whom they can invest more resources (Guinnane, 2010, p. 10).

In Turkey, rapid growth in the first part of the century prompted the government to adopt population growth limiting policies after 1965 by building networks of reproductive centers throughout the country, promoted small family size and offered contraceptives (D’Addato, Vignoli, & Yavuz, 2008; Goff & Forney, n.d., p. 5). As a result of these efforts and other processes of modernization, such as increasing educational levels for women and increasing levels of income across society, by the 1990s the total Turkish fertility rate was approaching a replacement rate of 2.1 children per woman. Other indicators have improved as well; Turkish life expectancy was 73 in 2009 up from 48 in 1960. Likewise the infant mortality rate had dropped from 166 in 1960 to 15 in 2009 (International Futures 6.63, 2012).

As a result of these changes, Turkish society is entering the last phases of a youth bulge, caused when mortality rates dropped before fertility rates. As the population distribution...
graph shows (Figure 2), the bulk of the Turkish population is less than 35 years of age. Because of the rapid growth in past decades, the large number of individuals who are in or just entering their childbearing years will mean that the population will continue to grow, even if the overall birth rate continue to decline. The current population distribution also has important potential implications for the labor market. In Turkey’s case, 40% of the population in 2010 was between the ages of 15 and 29 and that Figure will remain over 20% over the course of the forecast period (International Futures 6.63, 2012).

Urbanization has also played a crucial role in shaping Turkey’s current social, economic and political structures. Between 1960 and 2010, Turkey’s population went from 31% urban in 1960 to 66% urban in 2009. The especially rapid increase in urbanization between 1980 and 1990 was due to industrialization, as economic liberalization began to create demand in urban centers for workers, people left their agricultural holdings for the cities. This shift benefitted different groups disproportionately. While Turkish productivity may have gained overall due to increases in human and social capital, women, who were disproportionately employed in agriculture, lost ground in labor force participation (“Turkey - Turkey Female Labor Force Participation Report,” n.d., p. x). Another effect of urbanization, which occurred in waves, was the growth of industrial cities away from the coasts, in the rural interior of Turkey. As manufacturing grew in these cities, and drew people away from agriculture, it created an urban class of Turks with very conservative social values. Over the coming decades this population gained wealth from the processes of industrialization and became politicized, until they eventually came to demand a government that better reflected their values (Yavuz, 2003).

Health

Turkey has made great strides in addressing the burden of communicable disease, which
is a major cause of death among children under five, and as a result, life expectancy estimates have increased rapidly in recent decades. In 2001, Turkish life expectancy estimates reached 74 years well above the average for Europe and Central Asia and just better than average for upper middle income nations (International Futures 6.63, 2012). Child mortality rates have come into line with developed country averages as well, and the prevalence of HIV is extremely low within the country (WHO, 2012). The vast majority of deaths are now attributable to non-communicable causes (International Futures 6.63, 2012). As shown in the distribution above (Figure 4), the primary mortality burden in Turkey today to non-communicable diseases is largely due to three causes: heart disease, respiratory diseases and diabetes, which are primarily diseases of lifestyle. Smoking and obesity rates are high, 53% of men and 20% of women smoked in 2010, and 56% of the adult population was overweight or obese in 2008 (International Futures 6.63, 2012). These two risk factors alone explain a significant portion of the morbidity and mortality burden of non-communicable disease in Turkey. Unfortunately, due to the fact that these diseases overwhelmingly affect people who have completed the majority of their productive years, initiatives to reduce the burden of such diseases are not likely to provide the same kinds of productivity gains that reducing the burden of communicable disease does, although it may significantly reduce a source of stress on the healthcare system in the future.

At a population level, on average Turkish men complete approximately 6 years of school, while women complete only 3 years (International Futures 6.63, 2012). However, these numbers hide the gains that have been made in educational attainment in Turkey during the past few decades. A student entering primary school in 2000 could expect to achieve just over ten years of school before they reached adulthood, significantly better than his or her parents. This change is the result of the establishment of universal primary education in Turkey, and intensified efforts to increase rates of secondary and tertiary schooling which began following the constitutional reforms of the 1980s (Mizikaci, 2006, p. 17).
Even as the general level of education in the population has increased, women have disproportionately benefited from state policies to support universal education. In 1960, approximately seven girls were enrolled in primary school for every ten boys, but by 2010, men and women were enrolled at almost the same rate as their male counterparts. Secondary and tertiary education is making gains at a similar rate and will achieve parity with men in the near future, although this lags more fully developed countries like the United States and Germany.

Past Economic Success and Current Challenges

Crisis and Reform

Until the 1980s, the Turkish economy had a high level of state involvement in the economy including significant investment in infrastructure. Following the coup of 1981, the administration of Turgut Ozal began privatizing and liberalizing major sectors of the economy in order to get government expenditures under control and to help address the balance of payments problems that had plagued the economy (Ekinci & Alp Erturk, 2007, pp. 30–31). Turkey, like many developing countries of the time, had used import substitution industrialization to provide protection to their infant manufacturing sectors in the 1970s, but was forced to abandon these policies when skyrocketing interest rates left them unable to service their loan debt. Figure 8 on the following page demonstrates the increasing burden of interest payments between 1974 and 1984, during a period when Turkey was a major recipient of official

![Figure 6: Ratio of Women to Men in Enrollment by School Level, Turkey (1960-2050)](image)

![Figure 7: Debt Interest Payments, Official Development Assistance (ODA), and Foreign Direct Investment (FDI), Turkey (1960-2010)](image)
development assistance. It also shows the increase in FDI within Turkey, following the reforms of the mid 1980s, which made Turkey a more attractive prospect for foreign investment, as well as provided increased opportunity for private investment.¹

In Turkey, the shift away from ISI was buffered to some extent by the efforts of President Turgut Ozal, a former World Bank employee, who successfully negotiated favorable terms for IMF adjustment assistance (Onis, 2003, p. 123). However, these reforms didn’t immediately solve the macroeconomic instability that Turkey experienced following its transition to a market economy. During the following decade, the Turkish economy experienced a number of crises that forced further reforms at critical moments. These rounds of reform eventually helped control Turkey’s high inflation rates and may have aided the Turkish economy’s rapid recovery from the 2008-2009 global financial crisis. Nevertheless, macroeconomic weaknesses remain and will need to be addressed if Turkey is to finally transition to a more stable economy (Rodrick, 2009).

Figure 8

Value Added in % GDP by Sector, Turkey (1962-2010)

Market Structure and Exports

In many ways the Turkish economy can be described as suffering from the middle income trap. Although GDP per capita has grown rapidly in the past decade, Turkey has yet to acquire the kinds of innovative industries and skilled workforce that would allow it to compete with more advanced industrial nations. Although the Turkish economy is becoming rapidly more competitive, it still lags high income nations. This should not obscure the importance of the gains that have been made in recent decades. In the decades prior to Turgut Ozal’s market reforms, the Turkish economy underwent a tremendous shift from a primarily agriculturally based economy, to one led by manufacturing and service provision. This shift is demonstrated in Figure 10, which shows the relative decline in the importance of the agricultural sector and the rise of manufacturing from under 30% of GDP in 1962 to over 60% of GDP in 2010 (International Futures 6.63, 2012). This transition was aided by the market reforms of the 1980s, which opened Turkey to global trade, giving it new markets to supply with its newly developed manufacturing capability.

¹ Note that it is not possible to directly compare the decline in ODA to the increase in FDI since the former uses GNI as the denominator, and the latter uses GDP. Thus it is not possible to say on the basis of this diagram alone, that FDI in fact exceeds ODA (although it in fact does by a considerable margin).
Because Turkey is a relatively resource poor country, it relied on agriculture and heavy industry to fuel the economy in the first decades of the 20th century. In the 1970s and 1980s the economy began to diversify, with textiles, transport equipment metal goods, and electronic machinery enjoying especially significant growth (Altug & Filiztekin, 2006). The service sector is dominated by transport, communications, tourism and finance activities. Although the agricultural sector has declined as a share of value added to GDP, it remains an important sector for employment (23% of the work force works in agriculture). Turkey remains a major exporter of foodstuffs and is among the world’s largest producers of a variety of nuts, fruits, and legumes ("Background Notes," n.d.).

Figure 11 demonstrates the tremendous growth in the importance of trade to the Turkish economy. Aside from the significant increase in the importance of exports to the Turkish Economy, the graph also points out some of the volatility that occurred when trade and capital markets were liberalized in the 1980s and 1990s. Of particular note is the steep rise in trade in the lead up to the 2001 crisis, which crashed when the Turkish currency was unable to maintain a peg against the dollar (Akyüz & Boratav, 2002).2

Debt, Government Capacity and Credibility

The middle income trap is not only a phenomenon of low competitiveness in highly skill intensive goods, it is also characterized by low levels of domestic investment, and a large informal economy, both of which are characteristics of the Turkish economy. Nevertheless gains have been made in past decades in making the Turkish economy less dependent upon aid an more reliant upon foreign investment, even if domestic spending rates remain extremely low. The government debt to GDP ratio is about .5, which is not considered concerning among economic observers. A bigger challenge is the debt to GDP ratio is 2.3 in 2009, higher but not near the level at which observers become concerned (debt to revenue ratios of 3-4 are more concerning). The greatest challenge to Turkish economic stability is the current account deficit, which although it shrunk in 2012 to US$ 1.08 billion from a high a year earlier of $4.08 billion, still remains a source of concern for observers because it indicates that domestic investment is not keeping up with financing needs (Candemir & Peker, 2012). This may lead to a situation in which economy is unable to cope with a sudden withdrawal of international financing. It remains to be seen whether the current draw down in the current account is sustainable. The government has undertaken a number of actions designed to rebalance the economy, including threatening to cut interest rates to reign in inflation and promoting exports to help the current account rebalance ("UPDATE 2-Turkey c.bank chief threatens rate cut to bring down lira," 2012).

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2 The Turkish lira was pegged against the dollar as part of an IMF backed plan to reign in Turkish inflation rates, which while not high enough to constitute hyperinflation, ranged between 60 and 120% over the previous two decades (World Bank, 2012).
Although Turkey has made strides in the area of financial management, clearing its last IMF loan in 2008 and working to rehabilitate the image of the government as a responsible actor, international observers remain skeptical of Turkey’s commitment to fiscal responsibility (Demir, 2009, p. 12). In 2002, the OECD identified increasing regulatory capacity, government effectiveness and reducing corruption as key reforms needed to ensure future economic growth in Turkey (OECD, 2002, p. 6). Although Turkish macroeconomic management has improved vastly in the last decade, the legacy of poor government economic policies, weak institutional capacity, and government corruption that arose during the 1990s, have helped to retard the growth of domestic savings and investment, leading to an over reliance on foreign FDI. Addressing this issue requires not only programs to boost domestic financing, but also continuing efforts to improve government capacity and efficiency in a variety of economic spheres outside the financial sector.

Energy, Water and the Environment

As nations begin to industrialize and develop, their energy needs and pollution levels tend to increase. Turkey is no exception. Turkey’s energy needs and resource usage have increased rapidly since 1960, which has resulted in some subsequent environmental degradation which will be discussed below. Unfortunately the data on Turkish energy resources and environmental data are lacking because environmental issues have simply not been a priority for the government until recently. As a result, it is difficult to analyze the energy market in the International Futures model. Thus this section on the paper focuses primarily on current energy usage and environmental concerns, and less on past trends.

The vast majority of Turkey’s energy supply, over 89%, comes from fossil fuels. Coal and natural gas contribute relatively equally to this supply, with each contributing approximately 31% of the total and oil another 27%. Renewable natural resources contributed 11% to Turkey’s energy supply, and the majority of this was generated from hydropower, as Turkey is relatively well endowed with renewable water resources in the form of the Tigris and Euphrates and their associated headwaters. Coal is the only fossil fuel resource that Turkey possesses in any abundance; over 90% of Turkey’s oil and gas are imported (Department Of State. The Office of Website Management, 2012). Energy production by type is illustrated in Figure 10 (International Futures 6.63, 2012). While coal was historically the fuel of choice for electricity generation, that began to change in the 1980s and 1990s when the government began to actively seek out opportunities to switch to cleaner burning natural gas (Robins, 2003). Recently Turkey has also begun prospecting for oil along the Northern Black Sea coastline, in the South East, and along the Mediterranean coast. Nevertheless, the lack of natural fossil fuel resources means that Turkey
is highly dependent upon Russia, Azerbaijan and to a lesser extent on Middle East nations to meet its domestic demand.

As a result, Turkey has been active in soliciting and promoting pipelines from major oil and gas producing nations, which have helped turn the country into a significant transit hub for these resources, both through the Bosphorus Strait and overland (See Appendix A: Maps of Turkey for a visual of the major pipeline routes). Three major pipelines run through Turkey and the country is becoming a major transit route for oil and natural gas resources from Russia and Azerbaijan into Europe (Robins, 2003). The routes of these pipelines is yet another concern of Turkish policy makers, as they pass through or near the Central Anatolian parts of the country that have been most heavily by PKK violence. Although the three existing pipelines and planned fourth pipeline from Russia will increase the importance of Turkey as an oil transit country, much of this output still passes through the increasingly congested and polluted Bosphorus Straights on its way from Russia to the Mediterranean Basin and the wider world.

Another resource that needs discussion, both as an energy source as well as for its environmental and developmental implications, is water. Although access to clean water is almost universal, and urban areas have good access to sanitation services, the system of wastewater treatment lags the needs of the population, and investment in this area remains lower than needed to address the issue. The World Bank and the EU have provided some funding to help bridge the gap, but more needs to be done to make the system more comprehensive and efficient. Efficiency is a major challenge to the water system in Turkey, loss rates (unbilled water) in some cities can run above 50%, due to poor infrastructure quality and maintenance of seasonal flows of water (Ozturk, Uyak, Cakmaci, & Akca, 2007, p. 2). Turkey is already using over 17% of its renewable hydrologic resources, placing it near to entering a state of water stress (International Futures V. 6.63) The Turkish government has invested heavily in hydroelectric power, the Southeastern Anatolia Project, which was over 76% complete in 2009, consists of a series of 22 dams, 19 power plants and an increase in 1.82 million hectares of land (Republic Of Turkey, Ministry Of Development, 2011). This major infrastructure project will primarily benefit the underdeveloped and significantly agricultural southeastern quarter of Turkey, and if effective will not only increase Turkey’s hydroelectric capacity, increase the agricultural productivity of the Kurdish regions and may even contribute to reducing the incentives for continuing Kurdish rebellion.

The environmental impact of the use of these resources is significant. Air and water pollution due to increased fossil fuel use and industrialization are significant problems in some places like Bursa and Istanbul. Overuse of water resources, especially in the agricultural areas of the southeast is increasing and may become a significant problem, both for future water availability, and for trans-border relationships, as the Tigris and Euphrates are also major sources of water for Syria and Iraq. Carbon emissions in 2010 were .073 billion tons, which is below the OECD average (International Futures 6.63, 2012). Although the increasing importation of cleaner-burning natural gas, recently passed regulations requiring the use of cleaner gas in vehicles, more needs to be done in the coming years to meet the EU’s environmental standards (U.S. Energy Information Administration, 2000). As Turkey continues to develop, increases in GDP should allow it to cross the threshold of developmental progress after which investments in cleaner technologies leads to a decline in continued pollution, although it is hard to predict when
this switch will occur. Increased interest on the part of Turkey in renewable energy technologies may be an early indicator of this shift, although it remains to be seen whether this development will gain momentum. Both to reduce its dependence on energy imports and to reduce the pressure on Turkey’s own natural energy resources, the Turkish government is considering investing in nuclear power, and is currently soliciting plans to build 3 nuclear reactors by 2023 and the government has invested money in a number of large wind power projects as well (Coretchi, 2012; Resneck, 2012). Although the wisdom of building nuclear power plants in an earthquake prone country may be debated, the investment is representative of a commitment by the Turkish government to increasing energy production with an emphasis on renewables.

As Turkey continues its developmental progress, increasing the quality of the infrastructure for water and energy is going to be key, both to promote economic growth and to minimize the environmental impact of Turkey’s growth. This paper recognizes the increasing commitment of the Turkish government to protecting the environment, but identifies infrastructure quality as a more pressing need for intervention if Turkey is going to continue to make economic gains. A future paper may look at the role that renewable energy may play in both future economic growth and environmental sustainability in Turkey.

Poverty and Inequality

One economic and developmental area where Turkey has done well over the past several decades is in poverty reduction. Just as literacy rates and life expectancy have made rapid gains in the past 30 years, so too has poverty reduction, which fell sharply in the late 1980s and early 1990s (World Bank, 2000). Over the next 30 years of so, Turkey will be passing through the window of opportunity in which the dependency ratio within a country falls and the productive capacity of the population (measured by the percentage of the population between 15 and 64) is maximized (Turkish Statistical Institute, 2012). This development has significant implications not only for the total output of the Turkish economy, but also for the distribution of the benefits and costs of development within and across different sectors of society. Assuming, as the base case does, that the Turkish population is more or less able to accommodate the increased availability of young, relatively educated labor, the picture for development is rosy. The poverty rate, already falling, will continue to do so. Driven by the greater production of higher value added goods, detailed below, the number of people who can be considered middle class will rise from just under 20% in 2010 to over 50% by 2050.

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3 One contract has already been signed with a Russian company, and Turkey is attempting to find a partner for the second nuclear plant on the Black Sea Coast.
(Figure 11). It is worth noting that Turkey has already reduced the number of people living on less than a $1.25 a day to negligible levels, thereby achieving one of the Millennium Development Goals. Nevertheless income across disparities remain significant, especially those between different regions of the country. The southeast lags other regions in almost all measures of development, from unemployment and income, to literacy. Although this is beginning to change, as increased government investment has allowed the Southeast to grow rapidly in the last decade, fully closing the gap will require a comprehensive resolution to the persistent conflict with the PKK and better integration of the Kurds into Turkish society and politics. Turkey’s statistical body constructs its regional measures of poverty in a way that disguises the regional variation in the poverty rate. Once corrected for this, poverty rates in the Southeast range between 34 and 47%, far above a national average of 16%. For comparison the poverty rate in Istanbul is only 3% (Collins, 2010)\(^4\). These numbers reveal a much more sober picture of income disparity in Turkey, and emphasize the importance of continuing to stress regional development in future developmental programs.

**Past Events and Current Trends in Governance**

**Internal Conflict and Security**

One area in which Turkey has been consistently criticized is in relation to the inclusiveness of its governance. From its creation until the end of the cold war, the Turkish State defined its priorities in terms of security and capacity. From the beginning there was a gap between the multiethnic character of the population that inhabited the state of Turkey, and the narrative the Turkish state expressed about a unified and homogenous culture. In the push to develop a strong, capable state, efforts at inclusion and democratization have often taken a back seat to concerns about real and perceived internal threats. Some of these threats have included increased religiosity among the population and the ever present concern about Kurdish ethno-nationalism. The diagram above illustrates some of the major internal conflicts that have occurred in Turkey over the past decades. The spikes in violence in 1971 and 1980 correlate closely with two coups orchestrated by the military to restore order in an era of political and economic instability. However, because of the specification of the model, which does not generally track coups in the absence of widespread violence, these spikes may be more reflective of the overall level of violence in those years.

\(^{4}\) The author of this analysis, Aengus Collins, is an Istanbul-based contributor to the Economist Intelligence Unit. This particular analysis is not formally published, but explains the curious absence of regional income disparities in TurkStat official Figures, which runs counter to other literature on poverty and inequality in Turkey.
which were marked by widespread instances of rioting and political assassinations carried out by ultranationalist youth movements (Mardin, 2006, pp. 206–207). If this is the case it suggests that the model is in fact missing some of the widespread violence that occurred throughout the 70s and 80s. Although the Kurdish regions were a site of strife, the real conflict between the Turkish military and the PKK did not begin until the mid-1980s. The Kurdistan Workers Party (PKK) began a violent separatist movement in the early 1980s, and the conflict continues to the present day, barring a three year cease fire between 2001 and 2003, just after the Turkish military captured and jailed the leader of the PKK. The PKK is not the only political manifestation of Kurdish nationalism. In the past decade, Kurdish political parties have gained followers, calling for increased rights for Kurds within the framework of the Turkish state (Gunes, 2011). Accommodating such calls will be essential for the Turkish EU accession process, which has already spurred some reform, and the full establishment of inclusive democracy within Turkey.

Cementing Democracy

At the same time that Turkey’s ethnic groups have become more politically active in recent years, so too has the religious character of the country become increasingly apparent. While the state remains officially secular, the most successful political party of the past decade has a distinctly conservative ethos designed to appeal to a largely pious electorate. This is unusual because Turkey has maintained a strongly secular political establishment for the past 50 years, and the military has a long history of stepping in when this secularism seemed to be under threat (Karakas, 2007, p. 13). Some developments over the past decade suggest that the entrenchment of the military in civilian politics is weakening. The rise of the Justice and Development Party (JDP) in the early 2000s and increased efforts at meeting EU membership criteria, democratic governance is evidence of the transformation of Turkey from an illiberal “thin” democracy to a richer more inclusive democratic state. Most representative of this shift has been the rebalancing of the internal power balance between politically elected leaders,

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5 In several cases this intervention was direct (most notably in 1997), but more frequently indirect. Political parties in Turkey have historically been cautious of adopting a religious persona even if their members and voters were religiously conservative. This changed with the rise of JDP, which has been open about its Islamic roots, but has been clear about its support for democratic practices and principles. What is notable about this situation is that despite the repression of religion in political life, religious parties and groups never splintered in the way they did in other Muslim states, but remained an active, albeit cautious, part of the political process.
and the secular-military ‘deep state’ which has acted as the guarantor of Turkish secularism for the last 50 years. Figure 13 shows measures of governance from the early 1970s to present and then forecasts their convergence in the future.

Key to understanding the shifts that have occurred in Turkey over the past three decades is the rapid rise in all measures (economic freedom, gender empowerment, perceptions of corruption, and governance effectiveness) in the early 2000s, when the Justice and Development Party took power. In part this rise is due to the simple fact the JDP is the first religiously affiliated party to be able to maintain their hold on power for more than a year or two and has immense popularity among the populace. It is also the result of the fact that JDP is the political expression of the demographic and economic shifts that had taken place in the previous decade. The Turkish middle class emerged in the latter half of the 20th century as a result of industrialization and the demographic changes that reduced birth and death rates in the population. The political success of the JDP, which has survived at least one coup attempt and succeeded in pushing back the influence of the military in Turkish politics, is testament to the economic and demographic changes that have occurred in past decades, which led to the rise of a socially conservative class of educated industrial workers.

**Future Development Challenges**

**Economic: Labor Force Participation**

Turkey will have reached the end of this demographic dividend by 2030 so the policy decisions during the next several years are essential to ensure continued prosperity in the face of a smaller working age population as shown in Figure 15 above. This process will raise concerns about government and private spending on healthcare, and upon the continued momentum of the economy, as younger generations bear the economic costs of elder generations aging.

Despite the overall good forecast for Turkish development in the upcoming period, there are a number of areas in which Turkey can still improve its performance. One of the most significant of these is the gender empowerment measure put out by the UNDP. Female labor force participation rates have either remained flat or dropped slightly in the last several decades represents a decline from over 30 percent in the late 1980s (International Futures 6.63, 2012). For demographic reasons, this situation is not sustainable. Although the relative underrepresentation of women in the labor force during the next decade may help buffer the impact of the youth bulge, the picture changes after approximately 2030, when the
dependency ratio begins to increase and the Turkish population begins to age. In order for GDP growth to be sustainable, more women need to enter the workforce.

A number of reasons for the absence of women in public and political life can be identified. First, official state secularism automatically excludes large numbers of women who wear the headscarf or veil from serving in political office without violating their religious beliefs, although women remain politically active behind the scenes, especially in Islamic parties like JDP (Narli, 2007). A second, similar reason has to do with the fact that large and increasingly conservative sectors of Turkish society place high value on women’s roles as caretakers of the family. Other drivers for the declines in female labor force participation include the increasing urbanization of the population and the decline of agriculture, which has disproportionately stripped women of jobs they held at one time (“Turkey - Turkey Female Labor Force Participation Report,” n.d.).

Economic: Sustainable Growth

Another key economic change that will occur in the next fifty years is the shift from the manufacture of relatively low skill manufactured goods to the provision of skill intensive, manufactured and knowledge goods. Of significant concern is the need for Turkey to continue both accumulating capital and increasing the total factor productivity of its workforce, especially through investment in infrastructure and higher education. These investments are crucial to enabling Turkey to the advantage of the macroeconomic stability it has recently enjoyed (Altug & Filiztekin, 2006). This adjustment will help to raise Turkish per person productivity, thereby increasing the economy’s capacity to support its aging population, but may need institutional support to speed the process and promote high value added manufacturing.

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6 Women face a similar problem in the education system, where the headscarf is a major political concern, especially in lower grade levels.

7 Although increasing women’s labor force participation rates is vital to promoting sustainable economic growth in Turkey, I did not target this indicator with a direct modifier. In part this is because the IFs forecast already represents an optimistic forecast and second because the links between female labor force participation and other indicators is weak. Instead I chose to focus on gender empowerment, both as a driver of the optimistic IFs forecast and as a social goal in its own right.
Services are the major contributor to Turkish GDP, and they will increase their dominance in the coming decades, although manufacturing will increase as percent of GDP as well (International Futures 6.63, 2012). The graph below shows the predicted trend in Turkish outputs by sector until 2050. Note that energy and raw materials are not included since they contribute negligibly to GDP value added, and are not predicted to become more important over the forecast horizon, in the absence of some intervention. The drivers for these trends in production are largely the growth in knowledge capital (a result of the increasing level of education in the Turkish population) and the advantage that Turkey has acquired by investing relatively heavily in physical capital in recent decades.

Finally, another key challenge identified by international observers including the IMF and USAID, is to reduce the country’s exposure to international capital flows by increasing domestic savings and investment. Turkey currently has an extremely low domestic savings rate, in part driven by past reliance on export promotion. This savings rate has been declining over the past two decades, leaving Turkey increasingly reliant upon international financing for economic growth. Should investor confidence in Turkey waver, capital flight could easily occur, which would have a significant negative effect on the Turkish economy (World Bank, 2011).

Social: Internal Conflict and Participation

A final challenge that Turkey faces to future development is the resolution of the conflict with armed separatists in the South East. Turkey has already made some investments in trying to resolve the conflict, by permitting the expression of some Kurdish cultural rights, but more is needed. Not only is economic development in the Kurdish regions essential, better legal protection for Kurdish cultural rights needs to be enshrined at a political level. Some steps have already been taken in this direction, by allowing Kurds to use their native language, and permitting limited television broadcasts in Kurdish, but future reform is necessary(Gunes, 2011). Key variables affecting the outcome of this conflict are both internal and external. External factors include: Turkish accession to the EU, continued instability in Syria, a potential break up of Iraq and the establishment of an independent Kurdish state. Some of these scenarios are more likely than others, and all are outside the scope of this forecast. Internal factors that may also influence the course of this conflict include: a resurgent military apparatus in Turkey, increased economic hardship due to financial mismanagement, the continued political dominance of the JDP, strengthening Kurdish political representation, and promoting economic development in the South East. This last variable is essential, as the southeastern provinces of Turkey lag most of the other regions in the country across a wide variety of indicators such as, health, education, and GDP per capita. One study analyzed the level of socioeconomic development across 81 indicators, and concluded that not only were there significant disparities between regions, with the severest gaps in development in the Kurdish dominated southeastern province, but disparities were high even in some of the developed metropolises like Istanbul (Ozaslan, Dinger, & Ozgur, 2006). Key to addressing the Kurdish challenge is not only promoting economic development in

Summary of Primary Challenges:

Promote sustainable economic growth

Create a cohesive society
underprivileged regions, but also increasing the degree to which Kurds feel represented by the central government in Ankara, by improving governance and government accountability in these regions, as well as more explicitly allowing for the practice of Kurdish cultural and linguistic rights and integration into the electoral process.

**Policy Levers for Developmental Progress**

**Promoting Sustainable Economic Growth**

The above challenges can be simplified further as the labor market and macroeconomic challenges reinforce one another. As Turkey reaches the end of the demographic dividend, it will need to have based its growth on increases in total factor productivity, so that the production capacity of each worker in Turkey is improved even though the total number of workers has shrunk. This increase can be accomplished in a variety of different ways. In its most recent developmental plan released by the Turkish government, five key priorities for continued development were identified. These were: increasing competitiveness, increasing employment, strengthening human development and social solidarity, ensuring regional development and increasing the quality and effectiveness of public services (Republic of Turkey, 2006, p. 14). Each of these developmental goals includes a number of subcomponents, which stress the need to improve the regulatory and business climate in the country, increase participation in civil and political life, and develop a strong internal financing mechanism to drive future growth. Many of these goals are additionally designed to aid Turkey in meeting the requirements of the EU.

These identified priorities are in line with the conclusions of the above analysis and offer a number of policy recommendations aimed at addressing these challenges. Other international agencies, such as the World Bank, have also weighed in regarding what policies Turkey needs to prioritize in the coming years, identifying the need for Turkey to increase its domestic savings as a key policy priority (World Bank, 2011). In a similar fashion, the IMF’s Christine Lagarde identified two particular areas of concern to them: the country’s dependence upon foreign financing as a result of the low domestic savings and investment rates (IMF, 2012). This analysis builds on these assessments of development in Turkey and focuses on forecasting the impact of five major recommended policy reforms targeting two development challenges: increasing government effectiveness, gender empowerment, increasing higher education, domestic private investment, and infrastructure.
quality. The goal of these interventions is to raise factor productivity and promote a stable macroeconomic climate in Turkey so that economic growth will continue even once the population begins to age, as well as to develop a more inclusive society that generates participation from underrepresented groups like women and minorities both economically and policy, thus addressing the labor market, economic productivity, and political inclusiveness problems that present a challenge to sustained developmental progress in Turkey.

**Increasing Domestic Private Investment**

The motivations for promoting this set of reforms are to remedy Turkey’s problems with a fluctuating current account balance, which although it has stabilized in recent years, has been a concern in the past. The goal is to make this stabilization permanent by increasing domestic savings and investment to reduce Turkey’s reliance on foreign flows of financing to fund investment development goals. Achieving this goal will also help capital accumulation within Turkey, promoting improvements in factor productivity that will enable Turkey to successfully maintain growth as it completes the demographic transition and its labor force begins to age.

Achieving this policy change will not be easy, and the predicted shift in the model for this factor is relatively modest. Nevertheless a couple of sources of domestic investment funds can be identified that make changing this parameter reasonable. First, Turkey is currently a net exporter of FDI, and over $9 billion dollars of FDI flowed out of Turkey in 2010 (World Bank, 2012). Changing the tax structure to incentivize domestic investment of these funds would be an easy way to promote domestic investment and savings rates. Furthermore, the government can take a more active role in promoting private domestic investment by corporations by reducing the risks for corporations to invest within Turkey. Some efforts to promote this are already underway, and this paper builds on those, arguing that creating regional government level investment promotion partnerships to would yield returns not only in terms of promoting regional investment, and increase clustering of productive activities, but would also help to address the regional disparity problems that plague Turkey’s Kurd dominated provinces yielding additional benefits in reducing poverty.

**Increased Public Spending on Infrastructure**

In addition to promoting private domestic infrastructure spending, this analysis supports using public government spending in infrastructure as a lever to further increase private investment. Public-private partnerships or build-operate-transfer agreements offer a way for the government to reduce the costs of investment in infrastructure by private firms. Furthermore, increasing infrastructure investment, will disproportionately benefit the poor, who are usually have less access to public services like water treatment and waste collection. These policy changes will therefore not only help to spur investment in areas where private investment may be lacking because of high costs or perceptions of disproportionate risk, but will also help to increase government effectiveness and the quality of public service provision. Because there were multiple areas where infrastructure needed improvement, this analysis considers a variety of different improvements to infrastructure quality in addition to increasing public spending, but none are included in the final model.

**Increasing Tertiary Education**

Increasing education at the tertiary level is a key component of this package of interventions, both for reasons of future economic competitiveness, and to promote increased
domestic individual savings. Literature has shown that more educated individuals, especially those with a four-year degree, save more than their less educated counterparts. In a young, consumption oriented society, increasing education may serve as another policy wedge to promote domestic savings and thereby promote macroeconomic stability over the medium term by reducing the country’s vulnerability to capital flight. This may or may not be the most successfully modeled impact in the Ifs system, but even so, the impact that education has on multifactor productivity will at minimum help to buffer against the reductions in human capital induced by some of the other policy choices being made.

Creating a Cohesive Society

Increasing Government Effectiveness

The second policy priority is for Turkey to increase governmental institutions in terms of service provision and accountability and accessibility to tax payers. In part this reform is designed to decrease the incentives to free ride on the Turkish economy, dodging taxes or simply avoiding the formal sector completely, as is a frequent occurrence in Turkey (Oviedo, 2009, p. 7). This reform is also designed to counter the perception that the government is corrupt and serves only a small set of non-representative interests, a perception that arose in the 1990s. However, it is a little tougher to define the kinds of reforms that could cause an increase in government effectiveness. Many have to do with improving regulatory quality and simplifying the bureaucratic structure. In our model we tried improving regulatory quality, but found it had little impact on the performance of the Turkish Economy or on perceptions of the government (Annex A). Therefore, we choose to emphasize the kinds of reforms that the Turkish development plan does: simplifying the bureaucracy and tax code, and making government institutions more transparent and responsive to citizen needs (such as by working down bureaucratic backlogs). An essential component of this is enhancing regulatory enforcement and focusing tax reform on changes that will improve the business climate and shift the tax burden away from the rigid labor market that disproportionately falls on employers, creating incentives to operate outside the formal economy, as well as distorting investment incentives. This reform is also essential to signaling to corporations that the government is committed to promoting business interests and that the decades of economic instability and high inflation are over. Successfully achieving this policy reform will not only benefit those sectors of society that are excluded from full political and economic participation, but will also support private investment by increasing firm confidence in the quality of Turkish governance, although
the literature is mixed on the degree to which decreasing informality will bring rapid gains in economic growth, although there is an empirical relationship. However, given the forecast period, it is entirely possible that increased growth due to reductions in informality will begin to accrue by the end of the forecast period although these may or may not be the direct result of increased formalization, but may be the result of some other third factor such as decreased corruption or increased education (Oviedo, 2009, p. 26). Irregardless of the growth implications, reducing social exclusion represents an important means by which to promote social cohesion in Turkey.

**Increasing Gender Empowerment**

While increases in government effectiveness will have strong impacts on economic growth when coupled with the proposed economic policy initiatives targeted at underrepresented groups, it will not be enough to create a truly cohesive society. Two primary groups stand out as being in need of support: women and ethnic minorities. Although both will benefit from greater economic efficiency, we chose to introduce a further set of policy reforms targeted specifically at women in Turkish society. Some of these are economic: we recommend changing the tax law to promote part time and full time work equally, a reform that has had good impacts in the OECD countries on raising rates of female labor force participation (OECD Economic Department, 2004, p. 4). Although direct observation of the shadow economy is difficult, it is likely that women are employed in the informal sector at a higher rate than men are. Reducing the size of this sector will benefit women disproportionately. Additional gender empowerment reforms are targeted at participation in public life by relaxing the restrictions that prevent women from serving in parliament or teaching at public schools while wearing a headscarf. These kinds of restrictions, while they protect the secularism of the Turkish state, not only prevent many women from becoming as educated as their male counterparts, but also risk deepening a point of contention in society. This is not to say that restrictions need to be removed everywhere immediately, (primary and secondary schools for instance may need to remain free of religious symbols for a while so as to avert backlash against what will a controversial change) but restrictions on head covering in parliament and tertiary education only hurt women’s ability to participate fully in public life and should be removed.

**Impacts on the Forecast**

<table>
<thead>
<tr>
<th>Target</th>
<th>IFS Modifier</th>
<th>Change</th>
<th>Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium investment</td>
<td>invm</td>
<td>+.1</td>
<td>IMF and World Bank Identify as a priority</td>
</tr>
<tr>
<td>Gov. effectiveness</td>
<td>goveffect setar</td>
<td>+ 1 SD</td>
<td>SPO identifies as a priority</td>
</tr>
<tr>
<td>Regulatory quality</td>
<td>govrequalsetar</td>
<td>+ 1 SD</td>
<td>SPO identifies as a priority</td>
</tr>
<tr>
<td>Democracy</td>
<td>democpolitysetar</td>
<td>+1 SD</td>
<td>Intl agencies identify gender gap, lack of inclusivity</td>
</tr>
<tr>
<td>Gender empowerment</td>
<td>gemsetar</td>
<td>+1 SD</td>
<td>IMF identifies as a priority</td>
</tr>
<tr>
<td>Tertiary education spending</td>
<td>gdsedm</td>
<td>+ .2</td>
<td>SPO believes that higher priority for gov. spending is needed</td>
</tr>
<tr>
<td>Wastewater treatment</td>
<td>watewatertreatsetar</td>
<td>+ 1 SD</td>
<td>One of the major infrastructure needs identified by Intl Agencies</td>
</tr>
<tr>
<td>Electricity transmission loss</td>
<td>infraelecttran loss</td>
<td>-.5</td>
<td>One of the major infrastructure weaknesses noted by US</td>
</tr>
<tr>
<td>Gov. spending on infrastructure</td>
<td>gdsm</td>
<td>+.2</td>
<td>SPO believes that higher priority for gov. spending is needed</td>
</tr>
</tbody>
</table>

**Individual Intervention Impacts**
Based on the above discussion of Turkish development policy priorities, I chose a number of potential interventions that targeted the areas discussed above in a variety of ways.\(^8\) Table 2 on the previous page summarizes the individual modifications to the International Futures model that were tested and the logic behind their selection on the basis of what agencies identify them as policy priorities. Table 3 then illustrates the relative impacts of potential policy levers across a number of categories ranging from economic indicators, to human development indicators, to governance indicators. The results are presented as a ratio of the percent change in the intervention over the forecast horizon to the percent change in the base case over the forecast horizon, providing a rough estimate of the relative impact of different interventions that is comparable across dimensions. The ratios are then color coded so that interventions in the top 10% are blue and the bottom 10% are green. It is important to realize that in the area of physical capital, the purpose was to minimize losses, and so the best performing interventions have the smallest ratios. In all other areas the goal was to maximize gains by selecting the interventions in the top 10%. The final decision criterion was that interventions had to maximize gains in at least one area. In the case of infrastructure investment variables, the decision criterion was reversed so as to minimize losses to physical infrastructure. The final model specification includes a moderate increase in invm,\(^9\) and significant increases in govteffectsetar, gemsetar, gdsm (inv), and gdsem (ter). This model was then run against the base case and the results are presented below.

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\(^8\)This is not a complete list. Many more were tested and shown to have no marginal impact even on their direct indicator; these have been excluded from the table below but are available upon request. In the table above, SPO indicates the State Planning Organization, an entity within the Prime Minister’s Office of the Republic of Turkey.

\(^9\)Both a high investment and medium investment intervention were run. Although the high investment intervention showed the biggest impact of any intervention run, it was rejected from the final model for two reasons. First, the medium investment impact provides Turkey a gain in savings rate of 2% that brings it into line with the OECD average. Second, because the invm multiplier is such a brute force multiplier and requires many
Combined Intervention Impacts

The combined impacts of this policy bundle are significant, and seem represent the results of a positive feedback loop between increases in government effectiveness and investment. GDP at market exchange rates increased significantly, indicating a rise in the capacity of the economy to cope with an aging population (Figure 17). The total increase in GDP due to the program over the forecast period is US$ 5,613 billion, and adds significantly to Turkish per capita GDP, bringing it closer to the OECD average. Turkish GDP per capita reaches $27,000 in 2050 ($30,000 at PPP), compared with $49,000 for the OECD ($50,000 at PPP). This change compares favorably to the ratio of Turkish to OECD GDP per capita seen in 2010 and signals that Turkey has made gains in catching up to more developed economies (see Table 1 for 2010 data). The change in GDP is reflected in the increase in value added, but more importantly, it also results in a gain in the knowledge society index and the amount of productivity that comes from knowledge (MFPKN) (International Futures 6.63, 2012). This is good evidence that the program interventions were correctly targeted and resulted in an increase in the total factor productivity in Turkey due to increased knowledge. This is important exogenous assumptions for justification, it seemed wiser to use a conservative estimate for change. Using the lower increase of +.1 made the change in invm a significant, but not the most significant determinant of the impact of the proposed policy bundle. A similar sensitivity analysis might have been warranted on government efficacy, but here the government seems to have made a credible commitment to addressing the problem, highlighting it in their most recent development plan as a primary target, and the pressures of EU harmonization should provide enough additional impetus for change that the higher impact estimate seems justified.
impact on the current account deficit, another source of macroeconomic instability in Turkey. The intervention also had a significant increase in infrastructure quality in the area of water treatment and sanitation. Access to wastewater collection and treatment increased by 14 percentage points over the base case, from 58% to 72% of the population (International Futures 6.63, 2012). Although the impact on ICT was relatively minimal, it is encouraging that although public spending in this infrastructure area decreased, access to mobile and mobile broadband did increase slightly over the base case, indicating that although not directly targeted, some private spending on infrastructure is spilling over into ICT (International Futures 6.63, 2012). A future paper may investigate these levers more precisely.

In terms of governance, the intervention package had a significant effect on the inclusiveness of the governance system, while imposing relatively few costs on the level of security and capacity within the state. Unfortunately this is not brought forward into the internal instability and conflict indicators. Increasing the inclusiveness of the Turkish State however, does theoretically offer some hope for reducing the popularity of the PKK by creating new legitimate political representation to air Kurdish demands for autonomy and increased rights. This in turn might reduce the level of violence or lead to the end of the conflict. Again, because events in Syria are having such an uncertain impact on the PKK, little attempt was made to directly address the level of violence in the country directly since it does not represent an existential threat to the survival of the country. Although gender empowerment did increase in this model, it is unfortunately not possible to estimate the impact that this shift had on women’s labor force participation rates, since they are not linked. Some more distal impacts were felt in other areas of human development, primarily in the area of health and education. As a result of the program, average years of education in Turkey increased by .5 years over the base case. The health of the population also increased with the death rate declining, especially deaths due to cardiovascular disease, the major cause of death in Turkey (International Futures 6.63, 2012). Figure 19 to the left shows the year by number of deaths prevented as a result of the program. This impact was surprising because in many of the scenarios I ran, increases in GDP led to greater obesity and lower health indicators for non-communicable disease. However, this particular package of interventions appears to lead to not only economic growth, but improved health as well.

Any policy package has costs, and this one has is no exception. The major cost of this package of interventions is unfortunately environmental. Carbon emissions increased cumulatively by 39 million parts per million and water usage as a percentage of renewable resources increased .5% to 23% of renewable resources (International Futures 6.63, 2012). Overall however, the program seems to represent an efficacious means to improve a wide variety of indicators of Turkish development.
Conclusions

Although the model specified above does not explicitly set out to earn Turkey entry to the EU, or to resolve the long running Kurdish issue, it does address some of the underlying concerns that have delayed EU entry and exacerbated this internal conflict. The purpose of this paper was not to try and focus on issues that have a significant external component (such as EU accession, or developments in Kurdish nationalism) but rather to create conditions under which, should a favorable external development occur, Turkey would be in a position to capitalize upon it, and in the reverse case, if an unfavorable external shock occurred, Turkey would be buffered from it. Such a goal requires strengthening the basic fundamentals of the regime, economic growth capacity, and governance because a growing economy can weather many problems and a credible regime can respond effectively to both internal and external challenges to legitimacy.

The previous analysis has shown that while Turkey has improved many of its basic indicators, and is the beneficiary of both industrialization, and demographic changes that has enabled economic growth and development, Turkey still lags in governance indicators. While Turkey is currently enjoying the benefits of the demographic transition, failure to address capacity and inclusivity lags will hamper the country’s ability to benefit from this dividend. As Turkey reaches the end of the demographic transition, it is essential for Turkish policymakers to look at the 2025-2050 period to guide their policymaking as the economy becomes more specialized in knowledge goods and the labor market begins to shrink. The country must rebalance the relationship between security and inclusion if it is to improve the representation of women in public life and resolve the conflict in the south east. Our model of the impact of potential policy reforms to target infrastructure, education, private investment, gender empowerment and government effectiveness in order to increase both the potential for economic growth and enhance the inclusiveness of Turkish society. The effectiveness of our interventions show that there is a significant positive feedback loop that develops between these indicators, prompting improvement in a wide variety of indicators over the forecast period.

Bibliography


