The Growth Debate Redux

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The Great Recession significantly affected the world economic environment and cast a long shadow over future economic performance. Currently, output is well below its trend path in advanced economies, and emerging market economies (EMEs) have experienced a noteworthy slowdown in their average pace. Whether the global economy is subject to perpetually slow growth after the recent economic crisis has become a serious concern.

The idea that the Great Recession might be only the beginning of a new, prolonged era of high unemployment and economic stagnation has its roots in 1939. Alvin Hansen, the President of the American Economic Association, expressed this view in his presidential address to the association, in which he also underlined his particular concern regarding suppressed demand. However, increased government spending in industrialized countries driven by World War II reduced concerns about a lack of demand and, following the war, the baby boomers changed the demographics of saving. As was the case in that era, the global economy today seems to be transitioning into a period that cannot yet be characterized with precision. Deconstructing the apparent decline in economic activity into supply side and demand side underperformance is the first step to finding a prescription for economic growth.

Moreover, although the recent crisis originated in advanced countries, through trade and financial linkages, the developing world has also been adversely affected. The speed of convergence between EMEs and advanced economies has slowed, although with some exceptions.

In this essay, I will first explore the possible factors dragging down economic growth and some available policy responses to avoid stagnation. I will then turn to the EMEs and discuss the importance of external and internal factors in explaining the change in the pace of growth. In line with the *raison d'être* of this chapter, I will pay particular attention to the growth performance of Turkey.

Challenges During the Great Transition

First, it should be underlined that technological change is at the heart of economic growth. From the days of the Roman Empire to the dawn of the Industrial Revolution in Europe, including the age of exploration and opening up of the world, as well as the age of intellectual achievements in disciplines like mathematics, the standard of living of an average person changed little. Modern growth began in the mid-1700s with the invention of the steam engine and other technologies of the Industrial Revolution, which substantially multiplied human power. In the long run, the pace of technological progress is far and above the main determinant of growth performance. On this front, Northwestern University's distinguished economist Robert Gordon has argued that humanity has reached the end of truly great technological advancement, as there is nothing on the horizon comparable to electricity, indoor plumbing, or the internal combustion engine. His argument is thought-provoking, and it should be considered carefully.

Taking the United States as the bellwether country, the recent data reveal that the fall in U.S. total factor productivity (TFP) growth during the Great

Recession is responsible for more than 26 percent of the total plunge in its trend growth.[1] However, indicators show that the slowdown in productivity predated the Great Recession: the annual average TFP growth rate between 1990 and 2004 was approximately 0.7 percent, while only 0.3 percent between 2004 and 2013.[2] Moreover, the TFP upsurge in the 1990s and subsequent decline after 2004 was driven by IT-intensive industries.[3] Today, we might even find ourselves in another tech bubble, with a recent Federal Reserve report[4] raising legitimate concerns regarding the unjustified valuations of several technology companies. Hence, it seems fair to ask whether the impact of the IT revolution has been as profound as the inventions of the early 20th century in transforming human life.

Thus far, every pessimistic view on the future long-term performance of economic progress has been wrong. In the opening 30 years of the Second Industrial Revolution,[5] productivity did not increase considerably for those factories that began to electrify their operations;[6] it took several generations of managers to redesign these factories to take full advantage of electricity's benefits. Furthermore, the geographical diffusion of new technologies tends to widen the lag between innovations and the upsurge of average worldwide growth: average annual worldwide per capita growth was 1.1 percent between 1913 and 1940, whereas it was 3 percent between 1950 and 1970.[7] Conclusions on the effects of the information technology (IT) revolution can be deceptive if learning and adjustment lags are not taken into consideration.

Another explanation for the productivity paradox is mismeasurement. The conventional measure of TFP growth as a residual—the difference between the output growth and the growth of all inputs—can be misleading. For instance, innovations that reduce the depreciation rate of inputs are not seen in productivity numbers. Today, we are witnessing the invention of reusable rockets[8] through the use of computer chips which are to navigate returning rockets to a retrievable place, but these effects are not reflected in the data we use. Moreover, computerization is accompanied by large and protracted complementary investments, such as organizational capital, that are not included in conventional measurements.[9]

Technology is evolving by natural selection. Society directs technological change to the sectors, products, and inputs that will best take advantage of innovations. An example is the impact of the American Civil War on the British cotton textile industry. The shift in the supply of cotton from the southern United States to Indian cotton induced the expansion of new technologies to process the lower-quality Indian cotton.[10] A more recent example can be found in the U.S. pharmaceutical industry, as there is substantial evidence of more new drugs being introduced for diseases with bigger markets, linking innovation with profit incentives.[11] Society's seemingly infinite needs and wants will continue to drive the advancement of new ideas.

Second, another important phenomenon that deters a global recovery is the steady decrease in labor participation rates in advanced countries. A major fear is that long-term unemployed people are losing their productivity through the atrophy of skills, becoming essentially unemployable. Possible reasons for this include mismatches between the supply of and demand for labor caused by the recent shocks to the non-tradable and financial sectors, as well as low aggregate demand. In any case, economic growth has decreased with reduced consumer spending, and demographic disruption is underway.

A significant rise in youth unemployment implies an increase in the number of people who live with their parents and in the proportion of those who do not marry. This will further contribute to an aging population and low birth rates, which will increase pressure on economic growth.[12] In addition, cases of lower educational attainment among non-student adults from that of their parents[13] have increased, raising concerns about the skill distribution of the future labor force in an age of computerization.

A policy mix of boosting labor demand through fiscal stimulus, and introducing structural reforms

to achieve sustainably high levels of labor force participation must be part of an effective remedy.

The computerization of production and services contributes to the changing structure of the labor force. Although labor's share in GDP fell in advanced countries in the last 20 years, not every type of labor lost out. Those who were able to adapt their skills to new techniques continued to obtain higher wages. From this point of view, it is possible to identify additional reforms to enable the workforce to evolve with the technological structure of the economy. Derviş (2013) argues that a new social contract that incorporates lifelong development of the workforce through on-the-job training and periods of new education in mid-life, is critical for the future.

Third, in a relatively shorter-term context, there may be a structural disequilibrium between desired savings and investments due to low investment demand, associated with a negative natural rate of interest[14]—the rate that prevails when production is at full capacity of the economy. In this situation, the required nominal interest rate for a higher employment level is negative, which is not possible because of the existence of currency. This is the backdrop against which Lawrence Summers updated Hansen's secular stagnation theory.[15] This environment might have already come into being prior to the financial crisis of 2008 but had been veiled by successive price bubbles. The big question here is whether we are in a situation in which the natural rate of interest is *permanently* negative. Professor Summers emphasizes reductions in debt-financed investment and increasing relative wages[16] in the last three decades to highlight the increasing ratio of the price of labor to the price of durable goods as one of the reasons for the low natural rate of interest. But, the issues discussed above, such as a slowdown in productivity and in population growth, can be causes of the reduction in the natural rate of interest as well.

The primary method to ameliorate the problem caused by the above mechanism should be to boost investment-driven demand, which can be done in various ways. Introducing regulatory and tax reforms that would amplify the supply of credit through a healthy financial sector is one approach. Another is to incentivize trade to promote exports to EMEs.[17] Increasing public investments to restore or create public goods can also play a substantial role in stimulating growth.

The prominent economist Kenneth Rogoff proposed the elimination of paper currency to destroy the zero lower bound interest constraint.[18] The absence of paper currency would remove the risk of cash hoarding by banks and households, enabling central banks to decrease nominal interest rates below zero.[19] If anything, this shows how seriously some economists take the secular stagnation risk!

A little elaboration is needed on how to promote a healthy financial sector to ease investment conditions. Currently, there seems to be a consensus on raising banks' equity capital as a means to building a shock-resistant financial sector. However, the method of bank capital funding is also important because it affects the level of bank investment. Recent research shows that internally raised equity is more effective at incentivizing bank investment than funding through outside equity.[20] However, independent of the capital structure of banks, efforts to "fine-tune" the economy by setting very high capital requirements can backfire by decreasing the banking sector's incentives to provide credit. Thus, the capital requirement ratio should be set very carefully.

Fourth, the importance of political rights and the strength of international order to long-term prosperity is difficult to overstate. The 20th century witnessed an upsurge in the political rights of the less privileged, which enabled a more equitable distribution of resources across the population in many nations, although it should be noted that the expansion of liberal thought did not follow the same pattern in every country, and its evolution is still incomplete. This upsurge in political rights is strongly correlated with overall economic performance in the 20th century, although the trend towards greater equity seems to have reversed in

the 1980s. Pluralistic and inclusive political institutions work to ensure a secure environment for economic activity and promote new ideas, but technological change can also contribute to the growth of personal liberties. It is not surprising that the founder of Twitter, Jack Dorsey, was inspired by the anarchist thinker Hakim Bey and his book *T.A.Z.: The Temporary Autonomous Zone*[21] in developing Twitter.

Prescient policymakers should do "whatever it takes" to lay the groundwork for the development of political rights for future progress. Today, rising inequality and the growing influence of the rich on political decisions represent significant challenges to the evolution of political rights in advanced countries. Policies should focus on the redistribution of resources between different income groups through fiscal rules and through social reforms that encourage social mobility and equal opportunity, such as improvements in the quality of public schools. Promotion of free thought and peace in international relations are vital to better economic performance and will be important to overcoming current difficulties.

Finally, the centennial this year of the beginning of World War I offers a timely reminder of how global instability can cause significant damage to the global economic environment. For this reason, increasing tensions around the globe today should be cause for concern: Russia's intervention in Ukraine, rising territorial disputes in the South China Sea, and the emergence of violent extremist groups such as the so-called Islamic State in the Middle East are all causing a great deal of political stress and uncertainty throughout the world. Any deterioration in these crises could further slow economic growth worldwide.[22]

Slowdown in Emerging Markets

It is not just the advanced world that is being affected by the economic slowdown. EMEs are experiencing a substantially reduced average pace of growth from what they achieved in the early 2000s, and some observers see a halt to the great catch-up of the last two decades, despite the low performance of advanced countries. The data show that the average annual per capita GDP growth in emerging economies decreased from above 6 percent to about 4 percent during the Great Recession, and IMF forecasts indicate a further reduction to below 4 percent in the next three years.[23] If realized, this would constitute a significant slowdown in convergence. It is natural to ask whether the factors that contributed to the great catch-up are now being exhausted, but it would be premature to declare the complete end of aggregate convergence.

The *potential* income of EMEs grew annually by 4.5 percent more than that of advanced countries between 2001 and 2012. However, with a correlation coefficient of over 0.9 for the relationship of cyclical components of incomes suggests strong interdependence between the two country groups.[24] The fact remains that the slowdown in recent years has occurred mainly in the *potential* growth rates, raising the question of whether the gains from productivity growth are coming to an end. But tapering by the U.S. Federal Reserve, as well as more volatile commodity prices, also contributed significantly to the low performance of recent years.

A closer look at country-specific TFP data reveals that only emerging Asia benefited from a rise in productivity in the era of the great catch-up. Between 2001 and 2012, China's TFP grew by 50 percent and South Korea's TFP grew by 30 percent. However, other important emerging economies, such as Brazil, South Africa, Mexico, and Turkey, have experienced slowdowns in productivity growth in the last decade. TFP Growth in Brazil, South Africa and Mexico between 2001 and 2012 decreased by 5 percent, 9 percent, and 12 percent, respectively. While Turkey experienced a substantial jump in productivity—by almost 12 percent—between 2001 and 2005, later developments exhausted the gains of this era and pulled the 2012 productivity level down to 2 percent below its 2001 level.[25] More recently, emerging Asia's annual average TFP growth from 2011 to the present is less than 1.5 percent, contributing significantly to the recent slowdown.

The enormous growth in the productivity of emerging Asia that began in the late 1990s is probably due to the efficient reallocation of resources from low- to high-productivity sectors—especially to manufacturing—and to more efficient individual firms within sectors. The recent slowdown indicates that the potential of this reallocation may have been exhausted. In addition, it is possible that allocating only the factors of production was not sufficient to encourage the development of infrastructure in the sectors, which would enable the design of new products. In other emerging economies, the share of employment in manufacturing has not risen significantly, which leads a greater share of labor to be employed in lower-productivity sectors.[26]

As the manufacturing sector becomes less important around the globe, it might be worthwhile to incentivize the mobilization of resources from low-productivity agricultural activities to urban service occupations. Through global agreements on the international trade of services, EMEs can achieve high growth rates by expanding their service sectors.

Larger gains from the IT sector may also be imminent. Given the increasingly fast geographical diffusion of IT, it should be possible to achieve high-productivity growth by allocating more factors to the IT sector. As technology-oriented firms seek an educated labor force, reforms that incentivize educational attainment and mobility will also provide greater benefits than before. Successful policies on this front can revive the great catch-up.

Low interest rates also contributed to the great catch-up of the early 21st century, playing a major role in the expansion of investment through increased trade and financial linkages. This period was an opportunity for EMEs to attract long-term investment through good policy to continue to expand beyond the cycle. However, the United States is now completing its asset purchase program and is signaling an interest rate hike in 2015. Despite the loose monetary policy in the eurozone, the tightening of U.S. policy is destabilizing EME growth. Even a small interest rate increase in the U.S. will cause capital to flow back from EMEs because of high-risk premiums in EME bond yields, and will eventually cause EME policymakers to tighten their own monetary policy. Countries that are more prone to external shocks pay higher risk premiums and are more likely to be adversely affected by these decisions. The size of negative current account balances and their composition are very important in this regard. The underlying causes of external imbalances should be identified as a first step before an attempt to tackle the problem. Combined with investor trading sentiment, the effects of advanced economic policy decisions will affect those running huge external deficits adversely.

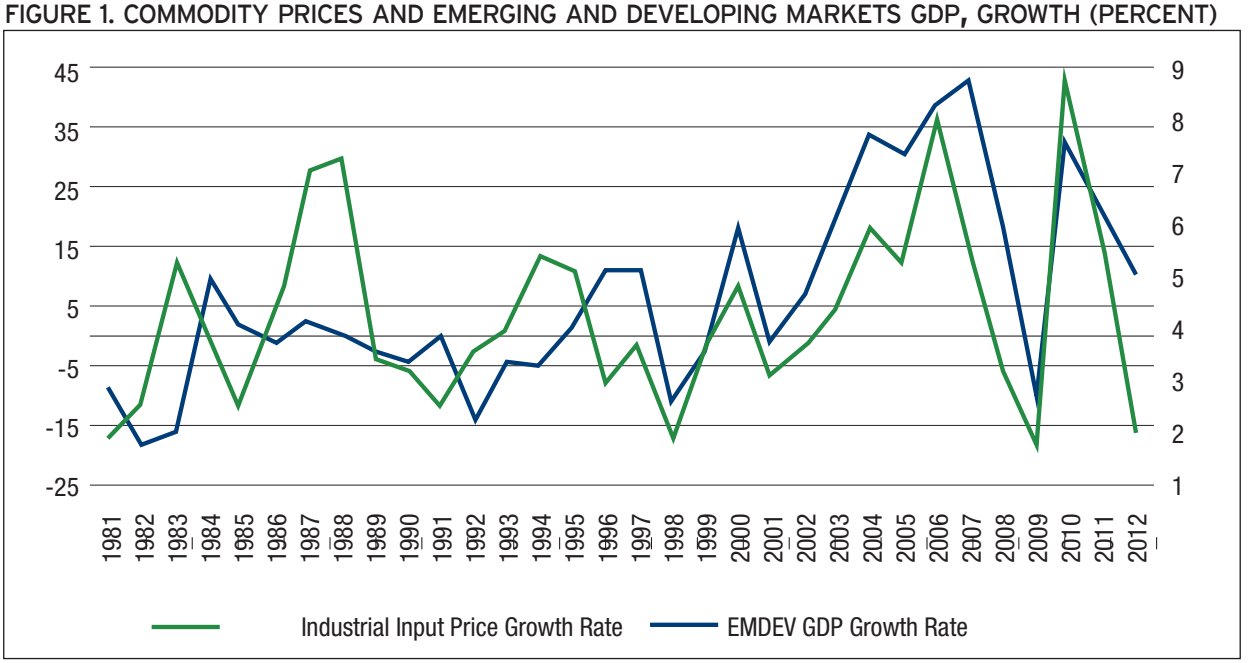
Rising commodity prices are another significant factor to consider, as many emerging and developing economies (EMDEV) are dependent on natural resource exports. As Figure 1 demonstrates, there is a strong correlation between EMDEV GDP growth and changes in commodity prices, especially after 1999. It is striking that the correlation coefficient rises as EMDEV grows faster, indicating mutual causality between these two indicators. An internationally cooperative policy on commodity prices might help in off-setting the adverse effects of this relationship.

Finally, expansion in the volume of world trade has also contributed significantly to convergence. It is important to note that global trade has grown much faster than global GDP in the last three decades. However, as discussed above, further agreements to promote the international trade of services will have more significant effects on the future of convergence.

Obstacles to Growth in the Turkish Economy

Where does Turkey fit into this picture? The risks that apply to EMEs are intrinsically applicable to Turkey as well. However, a comparison of Turkey

FIGURE 1. COMMODITY PRICES AND EMERGING AND DEVELOPING MARKETS GDP, GROWTH (PERCENT)



Notes: The left axis shows the commodity price growth rates, whereas the right axis shows the GDP growth rates.
Source: IMF WEO

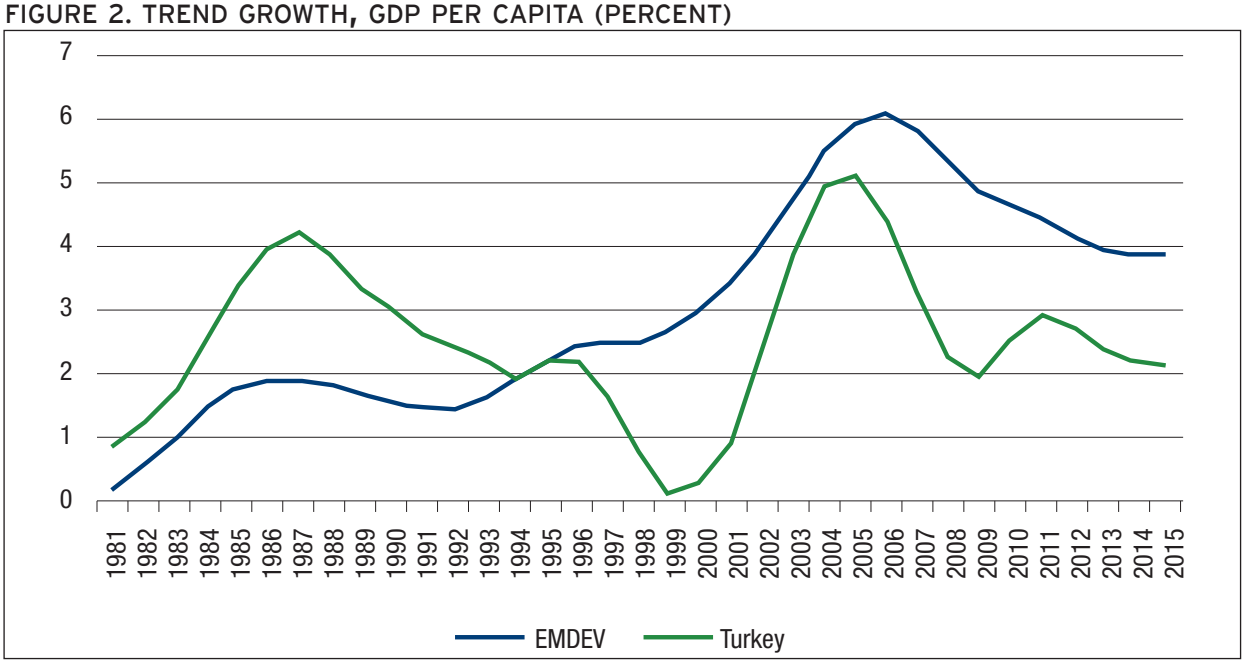
with other EMEs reveals that Turkey is outperformed by most of the other EMEs. Figure 2 plots the per capita *trend* growth rates of EMDEV and Turkey. It shows that from the 1980s to the mid-1990s, Turkey performed above the EMDEV average. From the mid-1990s to the present, potential per capita growth rates consistently fell behind EMDEV average growth. The gap between trend growth rates did narrow between 2001 and 2005, owing to a strong stabilization and reform program introduced during the 2001 crisis. However, after 2005, the gap widened until 2010, when Turkey began to recover from the global economic crisis of 2009. It is particularly interesting that the differential between the growth rates of Turkey and EMDEV in 2009 was larger than the differential in 2001, the year that the economy was hit by a severe crisis. Since 2010, the gap has continued to widen again. Turkey is not only performing worse than the EMDEV average; its performance has progressively worsened since 2005.

What are the reasons for Turkey's underperformance and how can it be improved? Akkaya and Gurkaynak (2012) highlighted the paradox of the Turkish Central Bank (CBRT) "owning" a range of key economic problems which it has no capacity to address,[27] suggesting that Turkey's post-2005 performance may have been due to a lack of policy and institutional frameworks capable of responding to post-stabilization challenges.

Turkey faces difficulties in three key areas in addition to those that affect EMDEV as a whole, which further undermine inclusive growth. First, Turkey is running a huge import-driven external deficit, the second-worst among EMEs after Ukraine.[28] This makes the country more prone to both external and internal shocks, and it has become a structural problem. Second, low educational attainment and a low level of labor force participation among women are significant obstacles to the realization of Turkey's potential. Third, what is perceived as an increasingly partisan approach by the administration is eroding the power of public policy and private sector confidence, undermining long-term commitments. A move towards crony capitalism would negate inclusive growth and lead to serious problems of both efficiency and equity.

First, regarding Turkey's external imbalances, there are two salient trends that accompany the

FIGURE 2. TREND GROWTH, GDP PER CAPITA (PERCENT)



Notes: Author's calculations using the Hodrick-Prescott filter based on data from International Monetary Fund World Economic Outlook. Projections after 2014.

rise in its import-driven current account deficit: a significant rise in house prices[29] and the extensive expansion of credit.[30] The former indicates a hike in the ratio of non-tradable to tradable good prices, while the latter highlights the leveraged demand on non-tradable goods (e.g., construction projects). These dynamics shed light on the relationship between housing booms and external balances. An inefficient allocation of resources[31] between tradable and non-tradable sectors due to high rents in the non-tradable sector (particularly in the construction industry) leads to a temporary rise in income and higher consumption of tradable goods through a wealth effect. When the tradable sector experiences a slowdown due to the incentive of firms to operate heavily in the non-tradable sector, internal demand starts to exceed internal supply, and the overflow in internal demand leads to a current account deficit.[32]

On this point, Deputy Prime Minister Ali Babacan's recent remarks to the media regarding his concerns about the adverse effects of the construction boom on the overall Turkish economy are encouraging. As a short-term fix, supporting industrial production while introducing additional taxes in the construction sector can enable the economy to rebalance through an internal devaluation, without causing the nominal exchange rate to fluctuate significantly. For a more permanent solution, fiscal policy should be accompanied by labor market and education reforms to increase labor mobility and labor efficiency.

Second, the lack of labor market restructuring is exerting a huge drag on economic growth. Recent data on the ratio of the economically active population to the overall population indicate that Turkey has prematurely ended its demographic golden age. The most severe problem is the enormous share of inactive working-age females in the overall female working-age population, at about 75 percent.[33] Hence, educating women and encouraging them to participate in the labor force should be a priority, as it is much more important than policies to increasing female fertility. From an education perspective, matters are worse. Data for 2012 reveal that only 14 percent of the population in the 25–64 age group has a college or graduate degree, and the ratio of illiterate men to illiterate women is 1:5.[34] There is no single solution to this problem, but training better teachers is crucial.

Among the many other important policy options, the government should focus on the quality of public transportation, increase public security and law enforcement, and support female education and female labor.

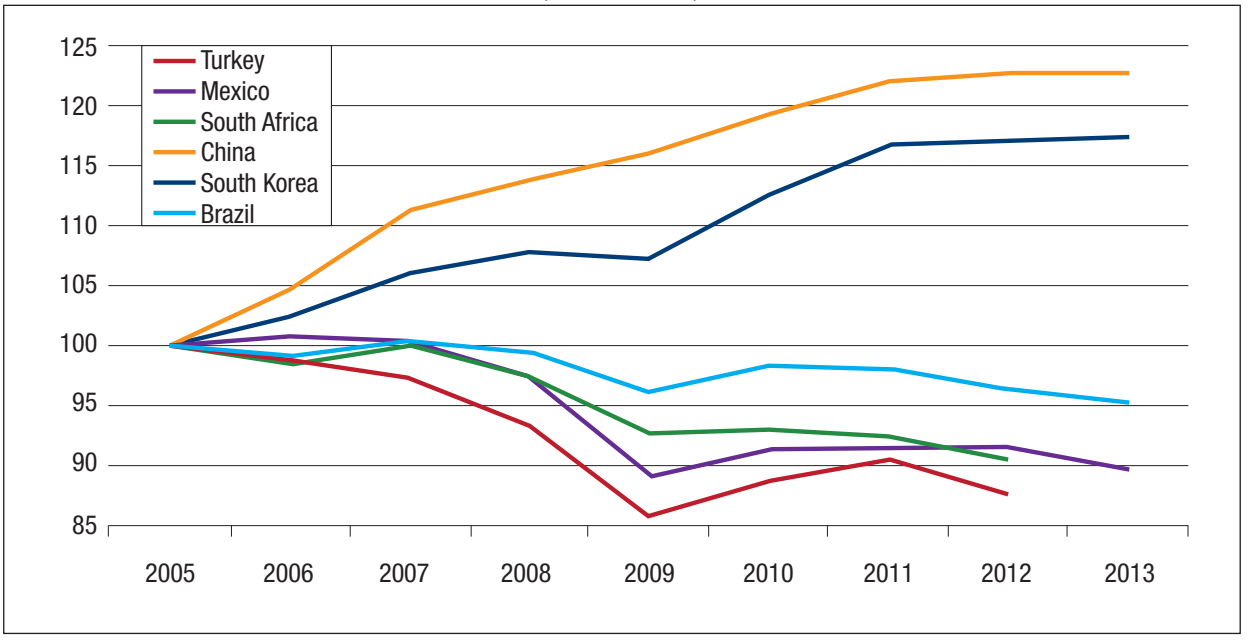
Finally, the increasing partisanship permeating administration policy needs to be addressed. Good governance facilitates the deployment of people's skills in inclusive activities such as production, job creation, and innovation, and key institutions in an economy should be able to pursue policies with the aim of improving overall standards. Appointees who run these institutions naturally work towards reaching the goals set by the political authority, but they should be selected based on their capabilities instead of their political orientations. When economic factors are distributed based on pure short-term political goals, governance becomes destructive.

The recent poor performance of Turkish productivity growth shown in Figure 3 is partly due to Turkey's deteriorating governance environment. Of course, the factors impacting EME TFP growth in general also play an important role, but it is certain that political partisanship and great uncertainties in governance affect the Turkish economy to a greater extent than expectations of an interest rate increase might in the U.S.

When decisions regarding the use of public resources and contracts are taken based on purely short-term political goals, equality of opportunity suffers and income and wealth distributions become skewed. Recently released OECD data ranks Turkey in the top three among OECD countries based on Gini coefficient of inequality.[35] In the long run, inclusive politics are essential in a global environment where confidence, long-term commitment to investment projects and social stability hold the key to lasting success.

Turkey may be her own special case in many respects, but the country's progress has to take place in an increasingly interconnected global economy.

FIGURE 3. TOTAL FACTOR PRODUCTIVITY (2005 = 100)



Note: 2013 data are not available for Turkey and South Africa.
Source: The Conference Board Total Economy Database, January 2014, http://www.conference-board.org/data/economydatabase

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Endnotes

1. Author's own calculations based on Hall (2014). The trend is measured from 1990 through 2007; and the shortfall of output from trend is calculated after 2007, until 2013. See Hall (2014) for a detailed discussion.

2. Author's own calculations based on The Conference Board Total Economy database. Source: The Conference Board Total Economy Database™, January 2014, http://www.conference-board.org/data/economydatabase

3. Fernald (2014).

4. Monetary Policy Report (2014).

5. In line with Gordon (2012), one can argue that we have had three industrial revolutions to present: i) the invention of the steam engine and railroads from 1750s to early 1800s, ii) the advent of electrification, and the invention of the internal combustion engine, indoor plumbing, and the telephone from late 1800s to early 1900s, and iii) the invention of the computer, the internet and the mobile phone from 1960s to present.

6. Brynjolfsson and McAfee (2014).

7. Derviş and Ozhan (2013).

8. Rocket technology was fully expendable until 21st century. SpaceX's Elon Musk argues that the cost of fuel is about 0.3 percent of the cost of a rocket, and effectively reusing a rocket provides a 100-fold improvement in the cost of spaceflight.

9. Brynjolfsson and Hitt (2003).

10. Hanlon (2014).

11. Acemoglu (2012).

12. Additionally, unlike many EMEs, including Turkey, the trend which saw an increasing share of women in the labor force is coming to an end in advanced countries.

13. A recent OECD publication highlights that in Austria, Denmark, Germany, Norway, Sweden and the U.S., more than 15 percent of non-student adults have lower educational attainment than that of their parents.

14. So called Wicksellian rate of interest.

15. Summers (2014).

16. Although median wages are stagnant over the last 30 years, due to decreases in the price of capital equipment, wages in terms of capital equipment have almost doubled in the same period.

17. This option will work as long as there is a sufficient increase in the income of EMEs. IMF estimates show that a 2 percent decrease in the growth of EMEs is associated with a 0.5 percent reduction in the growth of advanced countries due to a reduction in trade.

18. Rogoff (2014).

19. Although both the Danish Central Bank and the European Central Bank introduced slight negative rates in some of their instruments, elimination of paper currency can enable them to substantially pull their main policy rate down into negative territory.

20. Saracgil (2014).

21. According to Bey, T.A.Z. is about creating ephemeral freedom in the immediate present whilst avoiding confrontation with the state.

22. Derviş (2014b).

23. To be precise, EMEs' annual average per capita GDP growth rate was 6.2 percent between 2003 and 2008, and 4.2 percent between 2010 and 2013. Calculations are based on IMF WEO, April 2014.

24. Numbers indicated are author's update of Derviş (2012).

25. Author's own calculations based on The Conference Board Total Economy database. Source: The Conference Board Total Economy Database, January 2014, http://www.conference-board.org/data/economydatabase

26. Rodrik (2011).

27. This also goes against Tinbergen's famous principle that "number of independent objectives must be equal to number of independent policy instruments."

28. IMF estimates for Turkish current account to GDP in 2013 is -7.9 percent.

29. The increase from 2010 to present is about 60 percent. Source: CBRT, data start from 2010.

30. Average annual growth in banking sector credit volume is about 25 percent from 2006 to present. Source: CBRT.

31. Inefficient allocation of capital and labor fall into this category. In Turkey, employment in the construction sector has doubled since 2004. See Gurkaynak and Sayek-Boke (2012).

32. In a rigorous setting, Ozhan (2014) lays out a similar mechanism under incomplete international financial markets and rigid labor mobility between sectors.

33. OECD.

34. Author's own calculations based on TUIK data.

35. http://www.oecd-ilibrary.org/sites/factbook-2013-en/03/02/01/index.html?itemId=/content/chapter/factbook-2013-25-en