"THE WORLD IN 2050: RISKS AND CHALLENGES"

Jacques de Larosière
(November 2013)

Introduction

The subject I have been asked to deal with is so vast, that I have no other choice but to focus on some of its aspects.

I will limit my presentation to economic considerations and will not enter into geopolitical, social and environmental issues.

I will try to give you an overview of the Economics of our world in 2050, raising three main questions:

1. Firstly, what are the major trends in terms of economic growth that can be expected over the coming four decades?

2. Secondly, what are the fundamental factors at play: demographic and technological changes as well as the balance between savings and investment?

3. Lastly, what are the policy prerequisites that might allow a relatively harmonious unfolding of the assumed trends?

I. The world in 2050: how could the main different regions develop in terms of their relative growth?

Before we get into the subject, let me express a word of caution.

Beyond a five year horizon, it is extremely difficult to make reasonably accurate projections.

The long term economic projections by international organizations like the World Bank, the O.E.C.D. or research think tanks, are always based on uncertain and therefore questionable assumptions. They have all in common a certain "extrapolation bias" that could well entail an exaggeration of the speed of catching up of emerging countries versus mature economies.

Be it as it may, these long term projections provide interesting insights in what could be the shaping of our future. They can also help policy makers to prepare for long term probable trends.

I will make three points:

1. GDP evolution: economic power rapidly shifts to the emerging economies

We will compare the major emerging economies. The –so called- “E7” [(1)] (comprising China, India, Brazil, Russia, Mexico, Indonesia and Turkey) with the current “G7” (US, Japan, Germany, UK, France, Italy and Canada)

Slide 1

- We see that the Emerging Economies currently represent 72% of the size of the G7 on a PPP basis;
- On the same terms, **the E7 economies could be twice as large as the current G7 group into 2050** (at market exchange rates, the trend, albeit less spectacular, would be in the same order of magnitude);
- According to most calculations, the E7 could overtake the G7 by 2020 in PPP terms (or in 2030 at market exchange rates). **(See Slide 2)**

- While mature economies could grow around 1.8%-2%., the key drivers of the emerging countries rise would be China and India. India would grow on average by 5.5% yearly over the 40 year period, while China, because of its demographic drag (result of its one child policy), would decelerate somewhat after 2020 (moving from 6.7% to 4% in 2040-50);
  Latin America would grow annually on average around 3.5% over the period, while Africa would accelerate from 2% (2010/2020) to 4% (2040/2050);

- China could overtake the US by 2032 (at market exchange rates) **(see Slide3)**;

- India (**see Slide 4**) would represent 80% of the US economy in 2050.

But we should also have in mind that the size of a country’s GDP is not a sufficient measure of its global influence: GDP per capita, living standards, quality of life, economic resilience, innovation, market flexibility, institutional settings, political stability should also be taken into account.
In this respect, GDP per capita figures are perhaps more significant.

(1) *See Price Waterhouse: “The accelerating shift of global economic power: challenges and opportunities” - January 2011. My presentation draws heavily on this PWC analysis.*

2. GDP per capita levels will continue to be significantly higher in the mature world, but the catching up process for emerging countries is striking

Slide 5: shows the catching up process with Chinese average income levels, being just under half of those of the US by 2050 while those of India would be around a quarter. If one notes that the respective percentages were around 15% and 10% in 2009, one can only be struck by the speed of the projected increase in living standards.(1)

3. A new world is shaping where power will have shifted from G7 to E7

By 2050, the share of the G7 economies would have considerably declined.

The dominant powers in the world would be in the group of emerging countries.

Slide 6 and Slide 7
While China, Russia will suffer from demographic trends, other emerging economies (like India, Indonesia, Philippines, Brazil, Turkey, Mexico, Peru, Iran, Vietnam….) will show the highest positive growth during the 2015-2050 period

This process will have inevitable geopolitical implications. It will also oblige the mature economies to adjust further and to specialize in their areas of comparative advantage.

Furthermore, these transformations will exert pressure on natural resources, such as energy and water and have consequences on climate changes.

To sum up, while **in 2010 E7 total GDP was only 2/3 that of that of the G7 (see Slide 2), in 2045, the G7 would account for barely half of the total GDP of the largest group of Emerging countries.**

Slide 7 shows how emerging economies would move from one third of world GDP to roughly two thirds. **Slide 8** provides more details on 3 different categories of growth patterns ("fast growth", "growth", "stable").

II. What are the fundamental factors at play behind this major shift?

---

(1) According to the World Bank, 13% of the population of China in 2010 – i.e 170 millions – receives a daily income of less than 1.25 US $

We will examine in succession two major drivers: **demography** and **technology (see Slide 9).**

1. Demographics is the main determinant

According to the central United Nations assumptions **(see Slide 10)**, world population would grow from 6.1 billion in 2000 (7 billion today) to 9.3 billion in 2050.

Where will those additional 3.2 billion additional people over 50 years come from? Asia will account for almost half of the total increase (1.4) mainly from the Indian sub-continent (+0.8).

Because of the "one child" policy, Chinese fertility is low (1.6 children per woman against 2.7 in India today). Its **working population** will decline (like in Singapore and South Korea). In Africa, the growth of population (1.3 billion) will be concentrated in the sub Saharan part of the continent, favored by a high rate of birth (more than 5 children per woman). In Latin America, the growth of population will be limited (0.2 billion additional) and even less in North America (0.1). In Europe, the population will be stagnant (-8 million).

The following graphs show how these trends, including a general tendency to aging, will impact working populations. **Slides 11-12** illustrate the large positive changes in north of Asia (except for China, Singapore and South Korea) as well as in Africa.[1]
In sum, the main obstacle to growth in the developed world comes from demographics. **(see Slide 13).**

Europe and Japan are aging because of declining birth rates and higher life expectancy and are facing a fall in working population. This is not a problem with Austral-Asia, North America and Ireland. But for most of Europe and for Japan, the challenges are daunting:

- debt levels are high and will rise while
- the number of tax payers is falling
- their median age would reach 44 year in 2030 and more than 20% of their population would exceed 65 years old

Interestingly, Germany, which has no problem in its funding today, is facing the most severe demographical impasse among European countries **(see Slide 13)** in terms of losses of working population (-40% decline between now and 2050) .

---

[1] *See the very interesting analysis by HSBC: "The world in 2050" - HSBC Global Research, Global Economy - January 2012.*

I would add a word on the notion of "demographic window of opportunity".[(2)]

According to UN demographers **(see Slide 14)**, a demographic window of opportunity can be estimated by identifying those countries in which the proportion of children (0 to 14 years of age) in the total population is less than 30 percent and the proportion of seniors (65 and older) is less than 15 percent.
In a general environment of shrinking of youthful countries and of higher median age, we see how Japan, Germany, China, Russia and the UK are aging rapidly while India, Brazil, Iran and the US fare much better. Those are the countries that have the higher potential growth.[(2)]

Slide 15 shows the evolution of young people (below 30) in different parts of the world until 2020. To no surprise the "big battalions" will come from Asia and Africa :today, more than 80 countries have populations with a median age of 25 years old or less. By 2030 this demographic "arc of political instability" will have contracted with about 50 countries on the list.[(2)]

Of course, demography is not the sole driver of economic growth. What is even more important than population figures, is the way people are educated and integrated in society. I will come to this now.

[(2)] "Alternative world: Global trends 2030" - US National Intelligence Council - December 2012

(2)

2. Human capital and technological changes are main factors to boost productivity gains.

The GDP growth rate projections presented in the first part of this paper are not only based on the growth of population but more specifically on the evolution of the working age segment.

They are also influenced by the evolution of the physical capital stock, by increases in human capital and technological progress. I will touch on physical capital growth a little later when I come to policy prerequisites. Let's have a look at human capital and technological changes:

A) Human capital is in fact determined by the degree and quality of education .While average years of schooling for males reaches 10.8 years in developed countries. the figures are 8.4 years for Asia, 8.6 for Latin America and only 6.4 in Africa.
These figures are improving as shown **on Slide 16** and we can witness, in particular in Asia and Latin America, a catching up process which is essential for productivity improvement and for the future potential growth of these countries.
Education, and particularly female education, is a must, if one wants to increase skilled labor and, in turn, develop income per capita which is a major engine – as well as a consequence - of the growth process **(see slide 17).**
In this respect it is worth recalling that there has been an explosion of Asian students in American universities[1], and that China is graduating at least three times as many science and engineering students as the United States, and India twice as many.

B) Technological changes
The spread of IT use will give individuals and groups unprecedented capabilities to organize and collaborate in new ways.[2]

The exponential increase in data, combined with a massive decrease in computer memory costs, a huge reduction in data storage costs, as well as a significant increase in network efficiency, will give unprecedented capabilities to individuals and connected networks in nearly every part of the world well before 2030.

---

[1] *From 2000 to 2012, the number of Chinese students has grown from 59000 to 194000 and Indian students from 54600 to over 100000. See "International Economy" summer 2013 article by Kishore Mahbubani, page 31*

[2] *See "Alternative worlds". National Intelligence Council December 2012, page 55*

This expansion of IT networks can enhance economic efficiency as well as new business and market opportunities.
While difficult to quantify, the IT technological progress can have a significant positive impact on potential growth.

But it can also –as we are observing - contribute to political disruption and attract global attention to the need for social and political changes.

3. A sufficient pool of global savings to finance the investment required by the projected growth rates is of the essence

Growth and job creation requires long term investment in assets that expand the productive capacity of a modern economy such as infrastructure, factories and equipment, new housing and commercial buildings, education and research and development (R&D)

An ideal market for long term finance (see slides 18-19) would adhere to four key principles (as stated in the recent G30 report on long-term financing):

1. the financial system should channel savings from households and corporations into an adequate supply of financing with long maturities to meet the growing investment needs of the real economy;
2. long term finance should be supplied by entities with committed long-term horizons;
3. a broad spectrum of financial investments should be available ;
4. and efficient global financial system should promote economic growth through stable cross border flows of long term finance supported by appropriate global regulation.

Unfortunately the G30 study concludes that, because of existing regulatory and market design, the system is far from abiding completely to the listed principles.
For regulatory reasons, long-term investors, as insurance companies, are constrained in their ability to provide financing. Long term financial investments are insufficiently developed in many countries.

a) More worryingly, several trends are at play that could constrain the supply of long term finance:

- Bank deleveraging is intensified by the new financial regulation. Basel III, which imposes higher capital requirements, raises the cost of issuing long term

corporate and project finance loans well above the cost of issuing mortgage and short term loans or holding sovereign instruments.

- The consequences of such disincentives are particularly acute in Europe where the financing of the economy is predominantly dependent on bank intermediation.

- Aging populations (including in China) is changing the structure of savings: Older investors are, and will continue to, reduce their savings and shift their portfolios towards lower risk and shorter assets.

  While equity is a crucial source of long-term finance, its cost may increase significantly in the face of declining demand.

- Furthermore, governments of mature economies are engaged in fiscal consolidation programs because of their high debt.

  Therefore, although they will be "dissaving" less, their ability to contribute to investment in infrastructure and education will be limited. Going forward, the private sector will need to be mobilized.

b) The 2020 US 7 trillion annual additional need for long term finance

Due to their high savings, emerging markets share of financial assets is projected to almost double by 2020 **(see Slide 19).**

The G30 report has calculated that annual spending on long term investment by a group of countries accounting for 60% of total GDP (Brazil, China, France, Germany, India, Japan, Mexico, the UK and the US) amounted to US 11,7 trillion in 2010.

Drawing on consensus forecasts mentioned above, these needs will rise significantly in the coming years.
By 2020, annual long term investments of these countries will need to increase to US 18,8 trillion in real terms to achieve the projected levels of economic growth of the central scenarios.

This would represent 34% of these nations GDP (compared with 20 % currently). Thus, **an additional 7 trillion in US dollars will be needed by 2020** (in real terms).

Where would the 7 trillion additional needs be channeled? (**See Slide 20)**

- China accounts for roughly half of the increase;

- The US accounts for 23% of the increase which is consistent with a GDP long-term growth of 2.5% annually;
- The other emerging markets of the sample (Brazil, India, Mexico) would account for 18% of the increase;
- European investment is projected to remain largely stagnant reflecting the low growth rates assumed. (1.5 % average).

This leads us to simple recommendations:

- Household savings which are the predominant provider of savings (more than 80 % of the euro zone investment needs. **See Slide 21)** must be enhanced and encouraged especially into long term investments;
- Equity holdings should be encouraged or at least not penalized (as it is the case in terms of taxation compared with debt investments as well in terms of Solvency II regulation) ;
- Although banks will probably pursue their deleveraging trends, one has to be careful not to accelerate such a process, especially in Europe where banks continue to play a leading role in providing long- term financing to enterprises.
- Policy makers should consider the systemic impact of regulatory changes on long-term investments;
- Increase surveillance on shadow banking;
- Promote the development of corporate bond markets and securitization of long term debt particularly in Europe;
- pursue fiscal consolidation that will, eventually, free resources for investment purposes.

III. The policy prerequisites

The kind of economic growth picture described in part I of this paper will not unfold spontaneously. Important policy prerequisites will be needed (**see slide 9**).

Let me list a few:

1. Maintaining open markets

The emerging markets growth that has already changed the world over the last thirty years or so, is largely due to the opening of trade and capital markets.

Thus the shift in economic power and the pattern of growth associated to the scenario just presented is very much dependent on the continuation of "globalization".

Any move towards protectionism would derail the process here described;

In this regard, it is essential to avoid any form of "beggar thy neighbour" policies or competitive devaluations or "exchange rate wars" that could be encouraged by inordinately lax monetary policies engaged by large financial centres. Countries like Brazil or India or Turkey, that face inflationary pressures, hare suffering from the exchange rate and monetary consequences (carry trades ant hot money flows) stemming from "quantitative ease" policies. Now, they are affected by the "tapering off" announcements (outflows od capital, exchange rate depreciations…). Such trends, if they were prolonged, could contribute to jeopardise free trade, open the way to protectionism and reduce growth.

It is therefore important to engage in an effective "multilateral surveillance" process that would encompass all the main players of the world.

2. Fiscal consolidation by over indebted countries is a condition for future growth.

This is particularly the case of those mature economies that have left their public debt grow unsustainably over the past four decades or so **(see Slide 22).**

Excessive public debt is an obstacle to a long lasting satisfactory growth:

- because of the interest rate cost on public expenditure; (we should not assume that present very low rates are there forever);
- because of the crowding out effects on private investors;
- because of the loss of competitiveness related to excessive tax burdens;
- because beyond a certain level of public debt – around 90% of GDP- debt sustainability becomes a serious issue and economic growth tends to dwindle.

Let us not forget the Domar Theorem: "any country whose rate of interest paid on its public debt exceeds its nominal rate of growth, gets into a process of unlimited increase of its public debt".

Therefore, such countries have no other choice but to stabilise, and later, reduce their debt.,

The OECD has calculated the fiscal adjustment needed to stabilise general government debt over the medium term.

Slide 23 shows the average improvement required in the underlying primary balance (without interest costs) between 2011 and 2030 (2040 in the case of Japan) to stabilise government debt ratios at their current levels.

One can observe that the adjustments required, in particular for Japan, Greece, Portugal and the US, are substantial. Aside from this group, average adjustments in primary balances for most countries would only amount to 2% to 4 % of GDP, over the medium term. At the assumed pace of 0,5% a year, a number of countries would achieve this stabilisation objective in 5 to 6 years.(France, for example, would have to improve its primary balance(-2% in 2011) by 2.7% of GDP i:e, it would have to reach a surplus of 0,7% in six years' time and maintain it thereafter).

But such an objective is not enough if we want to restore sustainable growth in the long run.

Slide 24 shows the magnitude of the immediate improvements in the primary balances that would be necessary to bring public debt down to 60 % of GDP in 2030.

If the Western world were not able to carry out reforms and to reduce significantly their public debt (let us say at levels around 60 % of GDP in 2050), we would see substantially less growth potential in mature countries and a bleaker picture for world growth and global external imbalances.

The more mature countries can normalize their public deficit and, therefore, channel more savings into investments, the more countries like China would be able to reduce their precautionary savings and increase their welfare and social protection expenditure.

3. Financing long-term projects and infrastructure.

The needs are staggering in fields like energy, transportation, environment.

The objective is to foster an appropriate channelling of financial resources to long term investments.
The G30 Report has suggested a few possible avenues:

- Establish new and workable methods public private partnership;
- Government and multilateral agencies should lower the higher risks involved during the early phases of long term projects through the use of risk mitigation mechanism;
- Create dedicated long term financing institutions;

- Develop domestic debt and equity capital markets in order to promote a broad spectrum of financing instruments;

- Relative to the US, long term capital markets in Europe and in emerging economies are underdeveloped. This restricts the range of instruments available to borrowers and savers. While it will take time to shift from overreliance on banking intermediation to a new market related system, it is important to foster securitization instruments that could attract savers because of their intrinsic characteristics (low risk of infrastructure projects, corporate banks etc);

- Regulators should create incentives and a regulatory framework for the development of transparent securitization for long term debt. These methods (which have been overly used and abused in particular for real estate lending) should be deployed towards expanding small and medium size enterprises access to capital markets.

4. Ensuring financial stability

While significant progress has been achieved on some segments of finance (capital requirements of Basel III on banks for example), **more has to be done to strengthen the resilience of the system.**

Let me just mention a few avenues:

- Reinforcing macro financial oversight. Experience has taught us that surveillance of individual financial institutions will never replace an adequate understanding of macro-systemic risks (like asset price bubbles or the international consequences of quantitative easing in the US) ;

- Covering the potential risks of the shadow banking system. Although the non-banking system is a major part of the financial system and often performs like the regulated banks, it is still poorly supervised although it can carry systemic risks.

- Taking into account the cumulative effects on the economy of different pieces of regulation. In this regard, is it healthy to provide regulatory incentives to real estate or "risk free" sovereign instruments while penalizing long term financing of investments?

****

Conclusion

The long term growth picture projected by multilateral institutions that I have summarized in the first section of my presentation is, on the whole, an encouraging one.

It shows the strong development of the world economy, a shift in economic power towards the emerging countries and a significant rise in income as well as less inequalities. Asia in particular has been regaining historical lost ground since the 18th century and is on its way of recapturing its previous share at 50% of world GDP.

Hopefully, this could also be a picture of a more balanced international financial system. Indeed, a country like China should normally shift from a low labor cost export driven economy to a more consumer focused society where the expanding middle class would be able to access higher wages and modern living standards. This trend, that is already visible, would entail a major reduction of the present abnormal current account surpluses and excess savings of emerging countries, a development of their domestic demand and output, and a more balanced setting of the international monetary system. World's inequalities and imbalances would be gradually corrected. Mature countries – under less pressure from cheap emerging countries exports – could also regain some competitive advantage in terms of their own industry and their export capabilities.

Furthermore, the fast growth of shale oil production in the US (+50% since 2008) and the self-reliance of this country on its oil output projected in 2030 will strengthen the American position on the economic scene over the coming decades.

In sum, this is a picture of higher participation of the world population in the benefits of an open global economy.

But this optimistic outcome is in no way "guaranteed" .

Aside geopolitical or catastrophic upheavals **(see Slide 25),** that could upset the development process here described, there are fundamental conditions to achieve.

I have listed a few of significant importance:

- Maintaining an open trade policy;
- Fostering education, human capital and physical infrastructure (notably in energy, water, transportation, environment…);
- Adjusting, when needed, fiscal positions in order to "free" savings for private investments;
- Co-operating towards a more harmonized global macro-economic balance.

Among the major uncertainties that affect the central scenario that I have referred to is, again, the situation in China.

This country is, indeed, facing the ongoing challenges of completing its shift of population from the countryside to urban areas,[(1)] of mastering the development of huge megapolies, fighting against massive pollution and introducing some political freedom in the system. These challenges are daunting. The urgency to address the problems of urban residents and in particular the needs of recent immigrants (there have been some 350 million additional urban residents over the last twelve years) is one of the most difficult political issues to be tackled by the authorities.

Furthermore stimulating consumption in a country that has never been consumer oriented is a difficult task. It is not only a question of increasing the purchasing power of the lower income groups. It is also the challenge to change the saving behavior of the population. This calls for building social health care and pension systems. As Alexis de Tocqueville stated: "the most dangerous moment for a government is usually the one when it starts reforming".

Generally, Emerging countries will have to undertake profound strategic changes shifting from investing in quick export-led growth to more balanced objectives including dealing with social inequalities[(2)] and environmental problems. They will thus need to implement decisive structural reforms to promote market efficiency and flexibility. Those like Brazil will have to remove barriers to investment.

Emerging countries will have to adapt to somewhat lower growth trends: those with large fiscal deficits will have to consolidate; those with inflation remaining persistently above target should tighten monetary policies.

The present difficulties and vulnerabilities faced by a number of emerging economies are compounded by capital markets volatility associated to the Fed's policies, they give an idea of the magnitude of the challenges that such countries will have to live up to in order to regain better and more productivity gains.

[(1)] *Urban population was 20% in 1980, 50% in 2010. It would reach 70% (1 billion) by 2030.*

[(2)] *According to Mc Kinsey, the Chinese middle class (earning more than 15000 $ a year) could grow from 30% of total urban population (190 millions) to 75% by 2025 (372 millions).*

Let me mention a few points that are highlighted by the recent slow-down in emerging countries growth.

Besides the cyclical aspects of this slowdown, it is clear that structural factors are at play. As an IIF report has recently stated: "Potential growth seems to have fallen significantly over the past years due to combination of income convergence, aging of populations, declining investment and lagging structural reforms [(1)]. The following issues could be stressed:

- The marked acceleration in Emerging Markets borrowing has led to rising indebtedness, especially in the private sector. In this respect, China is an extreme case: at 145% of EDP, Chinese corporate sector debt is significantly higher than in other E.M.s. But other countries have also witnessed sharp increases in business and household debt: deleveraging always tends to become a drag on further growth.

- The catching up process (in terms of GDP per capita) is likely to slow because increase in productivity becomes harder to achieve with the passage of time when machinery and equipment become state of the art and offer less margins for productivity improvements.

- The combination of weakening investment efficiency and falling investment implies a slowing rate of convergence. Some countries could be caught in a "middle income trap" at levels well below those achieved by advanced economies.

The above mentioned elements underline the need for emerging countries to "adapt their growth model as development proceeds if they are to maintain a dynamic growth trajectory" (IIF). This implies "being able to shift resources across sectors, in response to changing demand, and a capacity to innovate and apply more knowledge and skill intensive production techniques, particularly as the economy shifts to rely less on manufacturing and natural resources and more on services where capital deepening is less relevant to a source of growth" (IIF).

The present difficulties and vulnerabilities faced by a number of emerging economies are compounded by capital markets volatility associated to the Fed's policies, they give an idea of the magnitude of the challenges that such countries will have to live up to in order to regain better and more productivity gains.

Downside risks are obviously there and there will no doubt be "ups and downs" on the road.

The challenges mentioned in this presentation are difficult but in no way impossible to achieve. It will be up to the political leadership and the young generations in the world to correct past mistakes, and to pave the way towards a truly better world in 40 years' time.

(1) *Structural challenges to Emerging Market Growth – Institute for International Finance (IIF) – Oct.7.2013*

Bibliography

- OECD: “Looking to 2060: A global vision of long-term growth”. 2012 Economic Department Policy, Note N 15.

- PWC: “The world in 2050” January 2011

- HSBC: “The world in 2050” - HSBC Global Research, Global Economy January 2012

- National Intelligence Council: “Global trends 2030, Alternative Worlds” December 2012

- G30: “Long-term Finance and Economic Growth” 2013

- Frost and Sullivan, “World‘s top Global Megatrends to 2020 and implications to businesses, society and culture.”

- Bulletin de l’Académie des Sciences Morales et Politiques, Janvier-Juillet 2012 « Comment évolue la population mondiale ? »

- «L’avenir à long terme des pays avancés » J. de Larosière, Séminaire Banque Pictet à Genève 18 nov. 2012

- « International Economy » summer 2013 « Asian Century? or Nobody’s Century »

- PWC – World in 2050. January 2013

- Institute for International Finance (IIF) “Structural challenges to Emerging Markets Growth” . October 7, 2013