

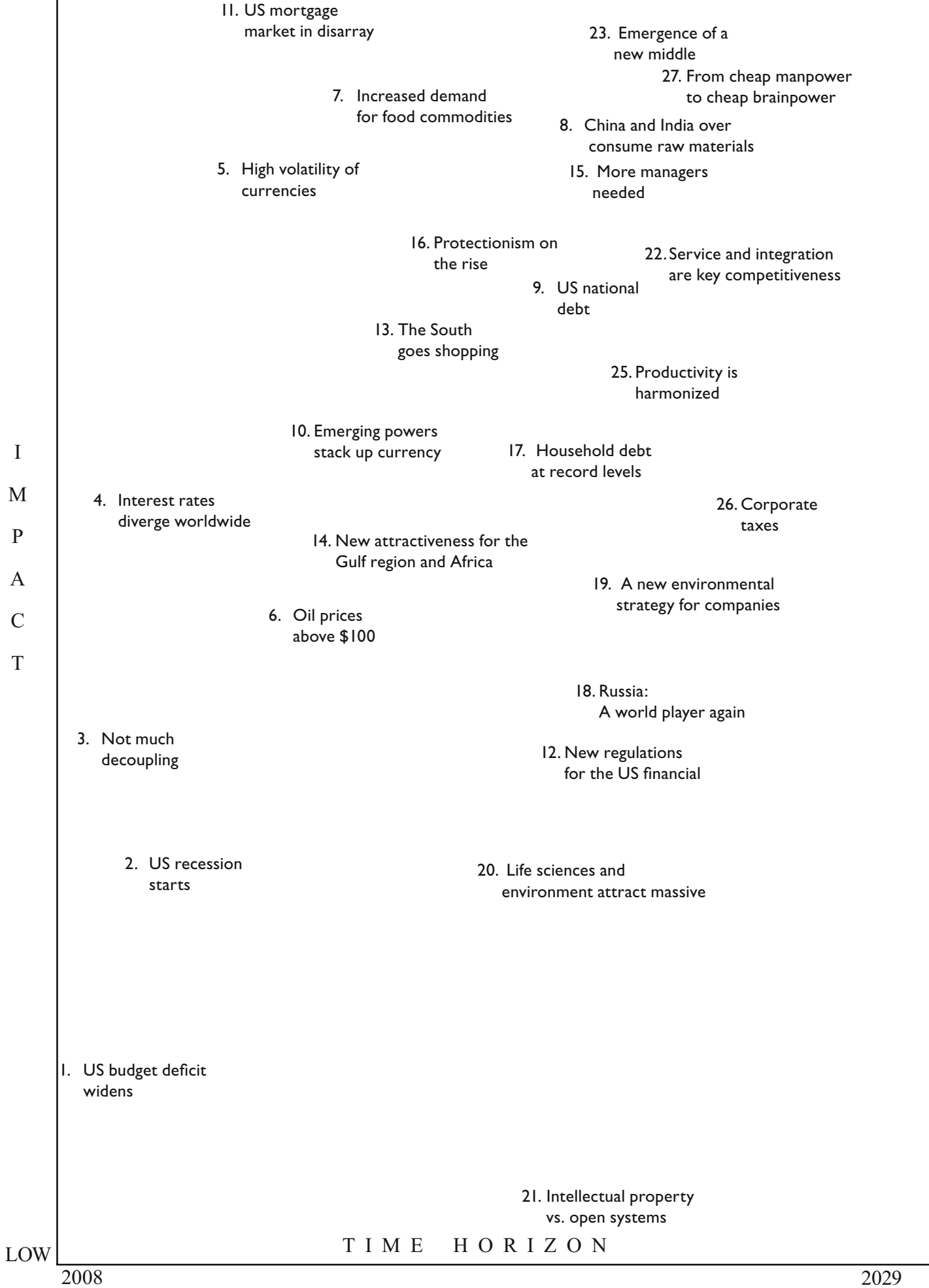
THE COMPETITIVENESS ROADMAP: 2008 - 2050

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The “Competitiveness Roadmap” is an attempt to describe and assess the main issues that will affect the world competitiveness landscape over the next four decades. Issues are shown along two axes - degree of impact and timescale - to provide a clear “mental map” of the environment in which nations and companies will operate.

This is a subjective assessment which aims to bring some coherence to the multitude of issues that are said to be having an impact – sooner or later – on the competitiveness landscape. These issues are succinctly described on the fold-out pages.

HIGH COMPETITIVENESS ISSUES SCOREBOARD



HIGH

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42. Low demography in Europe, Japan and Russia

41. Pension system in China at risk

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45. Climate change affects economic resources

28. Urbanization means congestion

39. The technological divide disappears

24. Labor cost differences shrink

44. Atomization of the value system in the West

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43. Life expectancy increases, expenses also

LOW

TIME HORIZON

2029

2050

1. US budget deficit widens - The US budget deficit in 2008 is expected to reach a record \$460bn, a deterioration of some \$200bn in 2007 mainly due to the economic slowdown, and a long way from President Clinton's surplus of \$236bn. The past five Republican presidents have always increased budget deficits.

2. US recession starts - Recessions come in four shapes: V- a steep but short slowdown, W - or so called double-dip, U - a longer weakening of the economy and L - a prolonged decline. The fear of an L-shape recession or economic slump that persists is an economist's nightmare.

3. Not much decoupling - Exports to the US only represent 8% of the Chinese GDP and 4% for India, 3% for Brazil and 1% for Russia. 50% of Chinese investments are now directed to infrastructure and property. Although the world economy today is more diverse, a US economic slump will still impact every nation.

4. Interest rates diverge worldwide - While in the US, rates may be approaching zero, those in Europe and other nations will remain at higher levels while their central banks focus on inflation.

5. High volatility of currencies - Differences in interest rates and economic growth exacerbate currency fluctuations, especially between the dollar and the euro. Today, some countries in the dollar zone are contemplating linking their currency to a basket of currencies, including the euro. The euro stays in the \$1.50 band.

6. Oil prices above \$100 - Oil prices remain under pressure at over \$100 a barrel. Oil consumption will double to 130 million barrels/day in 2030; China and India will account for 45% of this growth. On the up side, at \$100 a barrel, new production fields become profitable, such as tar sands, deep sea, or in the Arctic.

7. Increased demand for food commodities - As a consequence of the growth of emerging markets and changes in consumption patterns, prices for basic commodities such as rice, wheat or fish more than double. Shortages appear. World stocks of wheat are down from 18 to 12 weeks in one year.

8. China and India over consume raw materials - China and India continue to over consume raw materials. China, for example, is now responsible for 19% of the world's aluminum consumption, 20% of copper, 27% of steel, 31% of coal, 47% of cement (but only 8.5% of oil...). The economic slowdown has a minor impact on the raw materials' demand of emerging markets.

9. US national debt explodes - The US national debt explodes, exceeding \$9.5 trillion and growing by \$1.3bn a day. To finance this debt, the US has sold some \$2,200bn of Treasury Bonds to foreigners, more than \$450bn worth of which is now in Chinese hands. Will the world continue to lend money to the US if the dollar declines and interest rates approach 0%?

10. Emerging powers stack up currency reserves - Emerging powers are accumulating foreign currency reserves at impressive rates: Number one now is China with \$1,647bn, followed by Japan \$1,008bn, then Russia \$502bn, India \$304bn, Taiwan \$278bn and Korea \$262bn. Shouldn't the presidents of the central banks of these nations be more associated with world monetary affairs? They have the money!

11. US mortgage market in disarray - Two million homes will be repossessed this year by banks. Mortgage-backed assets (MBAs) have become a bad name in finance. The Fed may have to buy back some of them directly.

12. New regulations for the US financial market - A major overhaul of regulatory and supervisory bodies takes place in the US, consolidating competences among various institutions and laying down new rules for asset valuation.

13. The South goes shopping - Sovereign funds now manage some \$3,300bn and seek to invest directly in financial and industrial companies. CITI, UBS, Merrill Lynch, Dow, GE plastics, etc. have made

deals with new players in the South. New companies and global brands from China, India, the Gulf region or Russia are hitting international markets - it is not a cozy world anymore!

14. New attractiveness for the Gulf region and Africa - There are \$800bn of infrastructure projects under completion in the Gulf region while Africa is becoming attractive again thanks to energy and commodities investments. More than 800 Chinese companies operate in Africa. The population of Africa will hit 1.9bn people in 2050!

15. More managers needed everywhere - More managers are required in emerging powers. India, China, Russia, Brazil and the Gulf region increasingly focus on management and the creation of business schools, beyond science and engineering education. Strategy, finance and marketing skills are now priorities for ensuring the continuous expansion of local enterprises in a global environment.

16. Protectionism on the rise - Protectionist retaliation will increasingly confront acquisitions pursued by emerging powers. Public opinion and governments are increasingly sensitive to a potential loss of economic power and national prestige. Sovereign funds will be the first targets. Such protectionist measures will rely on issues such as environment protection, corporate governance, social protection or intellectual property.

17. Household debt at record levels - Household debt in the US and the UK is reaching record levels, exacerbated by private consumption and excessive mortgages. Personal bankruptcies will proliferate and more restrictive lending practices will be introduced. Household debt will also appear in Asia, although a long standing culture of saving will moderate this trend.

18. Russia: A world player again - Russia regains its status as a world player. This Russian comeback thrives on oil, gas and commodity prices to re-establish a stronger international presence. Politics and economics remain totally interwoven in this new approach to power.

19. A new environmental strategy for companies - Climate change is so clearly an issue for public opinion (the past ten years are the hottest ones on record since 1850) that companies must enhance their visibility on environmental issues and integrate an environmental dimension into their strategy. Those companies that fail to do so will not attract the best talents in the younger generation, who are very sensitive to this issue.

20. Life sciences and environment attract massive investments - Life sciences, as the population becomes older (40,000 centenarians in Britain in 2030), and environmental technology, as the world becomes hotter (+ 0.6°C in 20 years), will attract massive investments. Innovation proliferates in these two areas of knowledge.

21. Intellectual property vs. open systems - The intellectual property debate opposes two conceptions of world business: On the one hand the respect for innovation and invention and on the other hand the thrust for a more open and collaborative society where information is widely shared. Social network systems flourish and challenge government controlled information in some parts of the world.

22. Service and integration are key competitiveness factors - Service competitiveness (banking, financial transactions, customer relationships, brand management, etc.) remains the core of the competitiveness of Europe and the US. The ability to integrate and manage a global business model is the other.

23. Emergence of a new middle class - The emergence of a middle class in Asia, Central Europe and Latin America changes the nature of the world economy. 600 million people have reached this status over the past 6 years, spending on average \$4,000bn a year on infrastructure and consumer goods (even luxury goods). In India, 50 million people are middle class today: they will be 580 million in 2025.

24. Labor cost differences shrink - The difference in labor costs around the world is drastically reduced as nations develop. A range

from 1 to 20 today is reduced to 1 to 5 as purchasing power around the world converges.

25. Productivity is harmonized worldwide - Productivity is harmonized around world operations as companies become truly global and widely diffuse the same technology and processes throughout the markets where their assets are located. The value chain is managed at the global level. The nationality of companies matters less and less.

26. Corporate taxes converge - Nations, which have competed fiercely in lowering their tax rates to attract enterprises, are developing an international consensus that establishes common and agreed-upon practices for the taxation of companies, no matter where they operate. The bandwidth of corporate tax rates is significantly reduced. Tax heavens however are increasingly questioned.

27. From cheap manpower to cheap brainpower - The world moves from a competitiveness model based on cheap manpower to one based on cheap brainpower. In total, India, China and Russia “produce” 14 million university students each year, as many as the US. These students quickly become young professionals eager for success, who are relatively affordable and highly motivated. Through technology, these brains can be accessed from all over the world.

28. Urbanization means congestion - The urbanization of the world economy increases pressure on economic and social infrastructure (roads, water, hospitals, etc.), the environment and also increases social problems (rural migration to cities). Between 1900 and 2000, the world population living in cities exploded from 150 million to 2.9 billion! As a consequence, congestion becomes a major issue in several large cities - nobody can move anymore!

29. Intense competition between value systems - The competition between value systems is exacerbated by the success of emerging powers. In Asia and Central Europe a “work hard, get rich” attitude competes with a “work-life balance” attitude in industrialized nations.

30. From collective to individual value systems - The value system of society in Asia gradually evolves from one based on collective values (such as hard work and national pride) to one based on individual values (such as work-life balance), much closer to the US and European value systems.

31. A new business model for the poor - A new business model emerges for the very poor of the world (such as in Africa or the Indian subcontinent). Products are manufactured and sold at a fraction of the price charged elsewhere, and with minimal functionalities. Examples: the \$10 phone, \$100 PC or \$2,500 motor vehicle (e.g. Tata in India) and of course micro-credit.

32. China, India and Russia as technological powers - China, India and Russia regain their age-old status as technological powers. Foreign companies no longer hesitate to transfer research centers to these countries that have a long tradition of excellence in science and innovation.

33. Pension systems in Europe and Japan at risk - The pension systems in Europe and Japan are increasingly at risk. One-third of the population is now over 60 years old; 10% is older than 80! Retirement gets closer to 70 and fluctuates depending on the industry sector and the hardship of work. Some white-collar pension systems have to deal now with an increasing number of centenarians.

34. National governments at bay? - National governments are struggling to preserve specific areas of competence while most responsibilities are transferred at regional levels (such as the EU) or at multilateral levels (such as the UN, WTO, etc.).

35. Manufacturing jobs shrink – During the past decade, world production of manufactured goods has grown by some 50% while manufacturing jobs have declined by 10%. This trend also is evident in emerging industrial powers such as China. Higher productivity

worldwide – in part due to the internationalization of technology and manufacturing processes – is the explanation.

36. In Western industrial nations, some people reject mobility - Although communications and travel are more pervasive, a part of the population rejects excessive mobility and rediscovers the attractiveness of a local environment. Younger professionals reject promotions or relocation of responsibilities when they are too disruptive to their private lives. Congestion in cities, airports and most transportation systems takes away the attractiveness of mobility.

37. Emerging powers raise their voices in international institutions - Emerging powers significantly increase pressure to gain access to decision making in international institutions by emphasizing their predominant economic weight and their financial capabilities to fund such institutions.

38. Remoteness becomes irrelevant - The disappearance of most trade and investment barriers, the efficiency of the international logistics system (roads, shipping, trains, and air freight) and the pervasiveness of communications technology give every single nation and enterprise instant access to world markets and unlimited opportunities.

39. The technological divide disappears - The technological divide disappears because of the development of a worldwide communications infrastructure and the proliferation of cheap technological products for the poor.

40. Absolute poverty regresses - The absolute level of poverty (\$1 a day at 1996 prices) is being drastically reduced. It has decreased from 15.4% to 5.7% of the world population between 1970 and 2006. However, inequalities of revenues among the world population increase. The richest become even richer. Social tensions do not disappear.

41. Pension system in China at risk - The pension system in China is in jeopardy. The transition from a Confucian society where children took care of their parents in their home during their old age to a society where elderly people retire in a social and health system of their own costs money. However, the pension scheme may not have been properly funded over time. Compulsory savings (deducted from wages as in Singapore) could be the answer, or diverting part of the sovereign fund wealth to finance the national pension scheme, such as in Russia.

42. Low demography in Europe, Japan and Russia - The low demography in Europe, Japan and Russia takes its toll on the dynamism of the economy. In 2050, Europe will count 628 million people, having shrunk by more than 100 million in 50 years. Could more lenient immigration policies compensate for this decline, especially for skilled labor?

43. Life expectancy increases, expenses also - Life expectancy increases dramatically to well over 85 years old in many industrialized nations. The burden on the health system becomes greater, also due to the early systematic screening of the population for illnesses.

44. Atomization of the value system in the West - The value system in Western societies becomes “atomized”. A common purpose in the population is replaced by a multilayer society where many different value systems cohabit, each of them appealing to a specific part of the population.

45. Climate change affects economic resources - Climate change forces the reallocation of economic resources. Food and water become scarcer in some regions, while new crops become available in more northerly regions. The prices of basic commodities are totally altered. The “environment cost” becomes part of the economic scenario, and is thus included in statistics such as the GDP.

46. Pandemic risks occur more frequently - As the world becomes more open, transports more pervasive and logistics more efficient, epidemics spill more easily from one continent to another. Pandemics are permanently monitored by international organizations, and companies tighten up their health and safety procedures