



The astonishing pace of the knowledge era

Knowledge is transforming the economy of the world at a dramatic rate. And Asia, right now, is streaking ahead.

_____ by José Luis Cordeiro

While Europe has become rather stagnant compared to world growth, and the USA is growing only at medium speed, Asia is in the lead. Asia has shown the world unprecedented models of rapid economic development.

The templates are there for the world to enter a new era of economic development. A recent World

Bank Economic Development Conference held in South Africa has revealed a growing consensus towards achieving growth for the whole of humanity. This is unique in the history of the world. Many eyes are on South Africa as an important player for accelerating growth in the southern hemisphere and in Africa. Interesting times lie ahead, certainly

also for people living in South Africa.

Such economic growth visions are strengthened by the fact that the world has reached a stage where its population is stabilising. And population projections may be even more optimistic than those which were forecast before. Whereas forecasts in 2007 still estimated the world population

Movement of the centre of economic activity from the Mediterranean to the Pacific



to stabilise at 11 billion, more recent studies have put this figure at 1,5 billion lower. There are already examples of developed nations with decreasing populations, such as Japan.

Creating the future

The world has seen rapid changes – in politics, economic systems and all branches of technology – the pace of which will only accelerate. But together with the positive elements, negative forces are also present and becoming equally sophisticated. What does the future hold in store for humankind?

There are different ways of approaching the uncertainty the future brings:

- Some people are *passive* and hide their heads like an ostrich; they simply suffer the future.
- Others are *reactive* and respond to changes like a fire-fighter.
- Then, there are those that are *preactive* and prepare for the future, almost like an insurer.
- But one can be *proactive* and create the future, acting like a builder.

It is indeed possible to create the future one wants. The key is to visualise different scenarios, positive as well as negative, and study them closely. Choose and build upon the things that will create the desired scenarios, and avoid those that will bring about the negative scenarios.

A wealth of information

With globalisation, information and experiences from all parts of the world have become freely available. This makes it possible to analyse situations from different perspectives and bring opposing considerations into play.

The Economist Intelligence Unit, for instance, publishes forecasts of the most important economic indicators of all countries on the internet.

The five-year forecasts are free; for longer periods one has to pay. Economic information is but one type of information that is important. Scenario analyses should look at much more, and more information is available.

Incredible examples of open knowledge sources are exploding on the internet, such as Google Earth, which is only two years old, and Wikipedia, just more than six years old. Already, Wikipedia contains more than two million articles in English – twenty times more than the *Encyclopedia Britannica* – and it is growing by the day in many languages. Wikipedia, along with the expanding range of products hosted by the Wikimedia Foundation (e.g. Wikispecies, Wikibooks, Wikiversity), is evidence of the new economy of open systems, free software, collaboration, and collective intelligence. Together these form a matrix of knowledge repositories that will make

next 500 years. But now, with rapid globalisation, the centre is moving to Asia, as illustrated in the picture above.

The period of globalisation will last approximately 50 years. As markets and technology connect the world, it will be truly flat after this period; it will not matter where one lives.

A knowledge revolution

The futurist Alvin Toffler explained the new world economy as the third of three waves. About 10 000 years ago, the **agricultural revolution** shaped the world. Control of natural resources was the means to wealth. The next wave was the **industrial revolution**, which took place about 300 years ago. Money was the new target. Whoever had money could control wealth. But the world is now transformed by a new wave, the **knowledge or intelligence revolution**. Knowledge is the new wealth of nations.

Unlike natural or financial resources, which shrink when they are shared, knowledge multiplies through sharing

scientific information on any topic available to anybody in real time.

A flat world yet again

For many centuries the world was believed to be flat, until the discovery of the Americas. Today, figuratively speaking, it is becoming flat again.

Take, for example, the history of how the centre of economic activity has moved. For 5 000 years the world's economy revolved around the Mediterranean and the Silk Route to India and China. With the discovery of the Americas, the centre of economic activity moved to the Atlantic for the

Japan – which has almost no natural resources – is a good example of an economy that depends largely on its human resources.

A knowledge economy introduces an entirely new way of thinking and differs radically from the economies of the past. Unlike natural or financial resources, which shrink when they are shared, knowledge multiplies through sharing. Moreover, knowledge does not depreciate with time as money does, it appreciates.

Language will soon cease to be a barrier. Right now, scientists in Japan are developing a telephone that can translate one language to another as one

speaks. An experimental version is expected in 2009, and the technology should be freely available on the market in about ten years.

Challenges for the world

One of the prime challenges of the future is **education**. Studies have shown that the economic rate of return on education is very high, especially in developing economies. Education has therefore become a number-one priority for underdeveloped nations.

Political systems are another major challenge. Research has shown that economic prosperity goes hand in hand with political freedom. Studies that compared the economic growth of similar countries for the period 1950 to 1990 – the heyday of Communism – clearly show that Communist countries ended up much poorer. Many comparative examples exist: West and East Germany; Austria and Hungary; Taiwan and China; South and North Korea; Puerto

Once scientists learn how to capture the sun’s energy effectively, the world will have all the energy it wants

Rico and Cuba; and Kenya and Tanzania. Cuba was richer than Puerto Rico in the 1950s, as was Tanzania in comparison to Kenya, but their political systems made them much poorer than their counterparts by 1990. It is therefore important to convince developing countries to opt for free-market rather than socialist systems.

The evolution of **economic systems** also presents an interesting challenge. In 1993 the World Bank published the famous study on the East Asian Miracle. At the time, the bank’s economic view was still based mainly on Western models. Japan, however, insisted that it had grown in different ways and that other models existed. This fascinating study proved that countries can grow much faster than in previously believed ways.

Further studies have shown significantly reduced times for countries to double their per capita income. During the industrial revolution, the United Kingdom took 58 years to achieve this. In more recent times, South Korea took only nine years, and China seven.

The Three Laws of Sir Arthur C Clarke

First Law:	When a distinguished but elderly scientist states that something is possible, he is almost certainly right. When he states that something is impossible, he is very probably wrong.
Second Law:	The only way of discovering the limits of the possible is to venture a little way past them into the impossible.
Third Law:	Any sufficiently advanced technology is indistinguishable from magic.

Asia’s powerful lessons for rapid economic development give reason for optimism about the world’s economic future. Countries no longer need centuries to develop, provided they have proper policies in place.

Energy is a vital future resource to power the much-needed economic growth. Notwithstanding the threats of declining oil reserves and the environmental

now is that of technology.

Be prepared for astonishment

But the pace of technological change is spectacular. Thirty years ago there were no personal computers; twenty years ago there were no mobile telephones; ten years ago there was no Google. It can be assumed that astonishing things will happen in the next ten years.


Moore’s law once stated that every two years computers double their power and halve their price. But in the 1990s he discovered he was wrong, and that this happened every one and a half years. Today, change is accelerating faster, and it happens in many fields: in biology, in nanotechnology, and also in energy. Once scientists learn how to capture the sun’s energy effectively, the world will have all the energy it wants.

It may now seem beyond the realms of possibility, but in the words of the late Sir Arthur C Clarke (**see box**), any sufficiently advanced technology is indistinguishable from magic.



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This article is based on a talk presented at a Leader’s Angle event at the University of Stellenbosch Business School by José Luis Cordeiro, an independent consultant and visiting research fellow from the Institute of Developing Economies in Japan.



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