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Global Trends of Technology and Business

Technological Entrepreneurs – The New Breed of Business Engineers

Advertorial

Dr. Ogembo Kachienga¹ is a Professor of Technological Entrepreneurship and Consulting Business Engineer at the Graduate School of Technology Management, University of Pretoria. He holds degrees in both engineering and finance from the University of Cape Town. He is an expert in technology-business interface with focus on emerging nations; and frequent contributor to popular engineering and financial magazines and journals.



Intellectually, “technological entrepreneurship” means making business sense of technology. It is viewed as the process of creating economic value through technological innovations or applications of technology using sound business principles. The competitive convergence of technological, financial and human capital forms the basis of business success. Businesses want to innovate and create value in the marketplace.

Technological innovations create new values in business, and by extension create economic and social change. Business is a mechanism of social change. Technological entrepreneurs are the visionaries of the modern technology business. They consistently challenge society to re-invent itself. They combine their intellectual knowledge of new and old technologies and sound business principles to create new values in the market place. The industrial empire builders like Henry Ford –Automobile, Andrew Carnegie – Steel, Bill Gates- Software, Steve Jobs – Computers and others, were practical people with a business sense. Finding profitable and competitive solutions to business problems is the mainstay of technological entrepreneurship.

Trends of wealth creation

In the latest research in the fields of technology and business, it is becoming more evident that future global businesses will drive innovations in technology, entrepreneurial financing and the market. Investigating

social, technological and economic trends normally leads to the identification of important emerging needs in the market place. The business of wealth creation is the act of solving economic and social problems. The mainstay of technological entrepreneurship is to find solutions to problems by using business principles through appropriate allocation of resources (technological, financial and human) and entrepreneurial management.

It is important to note that the highest growth areas in global economy are manufacturing and technology-intensive services. More wealth creation is likely to be generated in technology-intensive industries than in any other sector. Engineers are the highest generators of intellectual capital per capita in any economically competitive country. It's becoming evident that technology and human intellectual capital are increasingly becoming the most empowering and democratic instruments for wealth creation and distribution. Money moves around the world looking for the best business ideas, the most innovative technologies, the most knowledgeable and productive labour and the cheapest prices. Intellectually stated: capital flows towards competitive research. Competitive research attracts the best brains. The best brains innovate and create new products and services. The road to industrialisation is paved with technological entrepreneurship. The world attention is on technological entrepreneurship as the linchpin of industrialization and economic development.

Technological entrepreneurship in the wealth creation processes

In the continuum of professional endeavours, technological entrepreneurship is at the forefront in the creation of the global wealth.

Innovative disciplines such as financial engineering is helping investors evaluate transient risks in the financial markets. Techno-financial models are the latest tools used in analysing viability of new technology intensive ventures. New branches of bio-engineering such as tissue engineering, genetics engineering, body engineering and applications of nanotechnology in medicine, will not only determine the health of nations, but also the wealth of nations. For example, in the near future, nanotechnology drug particles could be designed to release therapeutic molecules in the body only after reaching their targeted diseased tissue. It makes business sense for medicine to employ directed nanostructures systems to improve the tissue compatibility of implants, or to create scaffolds for tissue regeneration or perhaps even to build artificial organs. According to Scientific American of July 2006, it is estimated that by 2015, products incorporating nanotech will contribute approximately \$1 trillion to the global economy. About two million workers will be employed in nanotech industries and three or four times that many will be doing supporting jobs in the peripheral industries. The new breeding ground for future billionaires is nanotechnology and biotechnological industries.

There is a professional endeavour which is instrumental in the economic development of an era, and for the 21st century it is technological entrepreneurship. The world's wealth landscape is changing pretty fast – from inherited and regal wealth to earned wealth - backed by scientific knowledge and technological entrepreneurship.

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freshinsights

Romancing financial engineering

Financial engineering, sometimes called financial calculus, can be notoriously intimidating and precise.

For those with mathematical engineering brains, the calculations can be comprehensibly sexy. Both preciseness and comprehensibility are needed in risk markets, such as insurance, stock and derivatives. For most market practitioners, what is mathematically precise is rarely comprehensible, and what is comprehensible is rarely precise. On the academic side, effort is too often expended on finding precise solutions to the wrong questions. Markets need practical answers. Most market players have neither time nor brains for precision mathematics. Much of market practice is based on soft understanding of the market processes, rather than on mathematical calculations.

The majority of stock market practitioners base their activities on semi-correct information from financial newspapers. Some fund managers take chances in market actions and, more often than not, get burnt because newspapers rarely analyse long-term economic fundamentals of individual stocks. Also, the majority of brokers have no professional motivation to go through financial calculus, because their incomes are based by the quantity and velocity of transactions, rather than precise mathematical calculations of transient risks.

Unfortunately, the market needs precision, because the 'stakes are too high'. For example, the derivatives market has grown into a business of more than \$20 trillion (\$160 trillion). Precision is needed to tame the madness and greed associated with modern capitalism. Stock market instruments can be divided into two distinct species: there are the so-called 'underlying stocks', which include shares, bonds, commodities, foreign currencies, and their



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A

'derivatives', claims that promise some payments or delivery in the future, contingent on underlying stock's behaviour. Derivatives can reduce risk by enabling a player to fix a price for a future transaction now. A costless contract agreeing to pay the difference between a stock price and some agreed future price lets both sides ride the risk inherent in owning stock, without needing the capital to buy it outright.

ECONOMIC FUNDAMENTALS

In the stock market, the problem is not how to make money, but how to spot the misalignment of prices in relation to economic fundamentals. For many years, applied mathematics has lubricated the stock market operations in search of the intrinsic value of stocks. The price of stock depends on its presumed or estimated intrinsic value. Financial engineering approaches the determination of stock prices through the evaluation of transient risks associated with a particular stock or portfolio of stocks. The beauty of financial engineering is that it marries the precision of mathematical calculations with the engineering logic of market transactions.

That is why engineers have become essential players in the stock markets and financial institutions. Spotting risks and evaluating them requires engineering process logic and mathematical excellence. The purpose of financial calculus is to provide mathematical tools for spotting transient risks and to develop compensating mechanisms for cancelling or minimising risks. Investment banks and brokerage

SECRETS OF THE STOCK MARKET

In the stock market, the problem is not how to make money, but how to spot the misalignment of prices in relation to economic fundamentals.

The market needs precision, because the 'stakes are too high. Precision is needed to tame the madness and greed associated with modern capitalism.

The greatest unknown in the stock market is the emotional side of the market. Understanding the emotional side of the market means appreciating human motivation in market activities.

Genius investors like Warren Buffet treat stock price fluctuations as an indicator to do the opposite - they profit from the market folly rather than participate in it.

houses employ many engineering graduates just to do that. But one of capitalism's powerful economic strengths is its appetite for risk. Regulating risk implies regulating capitalism.

In the last three decades, financial calculus has progressively gained a foothold in the evaluation of transient risks in stock transactions. It originates from the fundamental policy conflict of modern capitalism — stability versus growth.

The world is in a financial mess because stock markets and financial institutions took risks that they should not have taken. Financial engineering facilitates the quantification of risks, which, therefore, provides the basis of management and regulation of risk markets — insurance, derivatives, credit default swaps or restricted risks that financial institutions can take. The role of financial engineering is to inject mathematical common sense into the behaviour of risk markets. The greatest unknown in the

stock market is its emotional side. Understanding the emotional side of the market means appreciating human motivation in all activities. All the technical charts and trend indicators are statistical attempts to describe the emotional state of the market. For market addicted stockbrokers, there is no safer investment in the world than in the stock exchange. Fund managers are basically slaves of the quarterly and annual financial reports. If they have a bad quarter, they lose clients, and if they have a bad year, they lose lots of clients.

SAME MISTAKES

What we learn from the history of the stock market is that market participants do not learn from history. People make the same mistakes over and over again in the stock market — they overpay for a business in the hope of making a profit on the short-term price movements of the company's shares. This mistake drives the entire market and is perpetuated by fund managers focusing on short-

term marginal profits. The history lesson that people never seem to learn is that, when companies are priced far in excess of their long-term economic value, as often happens during a bull-market, any sudden change in the wind of expectation can cause stock prices to drop dramatically, thus wiping out those investors who paid the high bull-market prices.

Genius investors like Warren Buffet treat stock price fluctuations as an indicator to do the opposite — they profit from the market folly rather than participate in it. Uncertainty in the stock market creates fear, and fear creates panic selling, which forces prices downward — regardless of a business' long-term economic prospects.

This chain reaction creates a buying opportunity if the long-term economic value of the business is in excess of its selling price. It is the long-term economics of the business that will eventually pull the stock price back up in line with the realities of the business.

The stock market is merely a platform where shares of companies are valued on their short-term economic prospects, which creates lots of price gyrations over the short-term, which means prices often get out of line with the long-term economic realities of the business.

The power of financial engineering resides in making business sense of short-term stock prices in relation to the long-term business economics of the company. The mathematical logic of stock prices is pretty simple: At the beginning, prices are driven by the economic fundamentals, and at some point, speculation drives them.

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Public pawnbroker keeps Parisians' secrets safe

By SOPHIE HARDACH

credit

From Napoleon III's mistress to cash-strapped modern-day bankers, Parisians have for centuries stored their jewels and secrets in a discreet building not far from the Seine: the public pawnbroker.

Set up in the 17th century in response to usurious moneylenders, the non-profit Credit Municipal has a new task — helping Parisians weather the economic crisis with traditional loans and cutting-edge financial services.

In the ornate rooms where Auguste Roulin once pawned a hand

from one of his sculptures to raise cash, immigrant mothers with toddlers queue to pledge their dowry gold or secure a low-cost loan.

Not all clients are poor. Aristocrats from the elegant 16th arrondissement regularly turn up with heirlooms.

"We are a bit like the emergency room in a hospital," Director Bernard Candiaud told *Reuters* in the labyrinthine headquarters in the medieval Marais district.

"Most of our clients are from a modest background, but there are also ladies in fur coats who are tightening the purse strings a bit."

Last year, client numbers rose by 30 per cent to more than 500 a day. This year, several bankers quietly pawned some paintings, using the loans to pay their taxes.

Credit Municipal last year also started accepting more unusual collateral, such as fine wine and photographic art. Clients can borrow between 50 and 70 per cent

of the value. "We told ourselves, in the end it's easier for someone to go into his cellar and bring us some good bottles of wine than to take down the paintings in the dining room, or remove his wife's necklace," Candiaud said.

ONLINE SPECULATION

In an age of Internet banking and online currency speculation, Credit Municipal feels quaintly and reassuringly old-fashioned.

Its storage vaults are stuffed with close to a million objects, mainly jewellery but also art works, books, stamps, fur coats,

and an umbrella that has been there for about 50 years.

A former aristocratic client, seafarer and bon vivant Prince de Joinville, peers from a 19th-century portrait outside Candiaud's office. He pawned his watch to pay gambling debts, and told friends he had left it at his aunt's — "*chez ma tante*" is now a French euphemism for pawning.

Few other countries have institutions like Credit Municipal, founded as in 1637 in response to usurers demanding interest rates of between 100 and 300 per cent.

— *Reuters*

freshinsights

Mystery behind the global economic crisis

Deciding how to re-engineer Capitalism to achieve growth and socially balanced development is a source of major confusion for most governments. Issues such as global warming and the energy crisis have made us sensitive to our survival as a people, causing us to strive for global social justice in both markets and in sustainable development.

But history over years of development teaches us that an economic crisis slows growth, and when countries need growth, they turn to the markets ie the capitalist system.

The Capitalism system is prone to market crashes and economic fluctuations, which create dysfunctional societal systems along the way.

In the last decade, Capitalism has lubricated the global prosperity despite its shortcomings.

Trade protection will impede commerce and stall economic recovery. Every economic system has inherent faults. We tend to criticise Capitalism only when it is associated with failure. To ask for a 'Perfect Capitalism' is to ask for failure.

For nearly a century, most western countries have been trying to regulate the Capitalist systems to stabilise them, while preserving developmental energies and benefits.

FINANCIAL REGULATIONS

After the recent recession, the same governments have applied the same remedies again — tightening financial regulations while policing financial markets. The problem is that more regulations and the polishing of the financial industry will not make Capitalism function better, as long as we do not diagnose what exactly has gone wrong with Capitalism.

With deeper insight, it is becoming evident that what we are



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A

experiencing is not a crisis within Capitalism. It is a crisis within the financial industry, within the political democracy of globalisation and ultimately of societal ethics.

Fundamentally, it seems society has a vast problem with greedy capitalists rather than with the Capitalist system. The financial industry distorted the global economy — or to be more precise — the financiers and the bankers have done so.

HISTORICAL TRENDS

The financial industry has a history of making global economy dysfunctional — from the Dutch tulip bubble in 1637 to the present global recession.

The historical trends behind these financial bursts have been varied, yet follow a strikingly similar series circuit: good times lead to political stability, technological innovations and economic growth; all encourage an atmosphere of easy money and readily available cheap credit.

Cheap credit motivates greed, unwarranted consumption, miscalculation of investments and eventually — economic ruin. Put it plainly, in the good times, people consume more than they produce, and make up the difference by borrowing.

One of the common rules governing leverage is to borrow to invest. Borrowing to consume is a fatal mistake because it normally leads to bankruptcy. The economic crisis repeats itself because people have refused to listen the first time.

Industrialised countries should borrow a leaf from emerging economies — in particular

ECONOMIC DISASTERS CAN BE AVOIDED

The deeper the global economic crisis digs, especially in the developing nations — and the longer recovery is delayed, the greater the danger of an economic disaster. The best solution is to fix the global financial system with a sense of urgency.

A proactive financial industry is one that does not only talk to itself, but also to its clients in real time language, not financial jargon. Today's world economic and social problems ignore national boundaries. The world needs smart politicians who can do the same, because international politics precede international business. It is difficult to trade with enemies except at the battle front.

What we need are disciplined applications of technological innovations to generate new values in the financial industry business value chain, rather than using these innovations as tools for hiding risks.

China and India — to stabilise their economies.

In 2007 boom times, China and India raised the interest rates and forced banks to hold higher capital bases.

In other words, the government actions should be 'countercyclical.' They should work to slow growth through stabilisation of money velocity.

In addition, the use of technological innovations, especially the internet, has stabilised global money movements. Global money velocity has been fairly stable and predictable.

ECONOMIC BOOM

In the past 25 years, the global economy has doubled every 10 years, going from \$31 trillion in 1999 to \$62 trillion last year. In 2006 to 2007 — the peak years of the global economic boom — 124 countries around the world grew at four per cent a year or more, about four times as many as in the previous 25 years.

In reality, the global economic dilemma goes well beyond the financial industry, poor regulations of markets and pandering politicians. The global financial system has been crashing more frequently over the past 30 years than in the course of any comparable period in history.

The real problem is more complex. Since the late 1980s, the world has been moving towards a comparative degree of political stability. The end of the Cold War ushered in a period with no major military competition among the world's great powers — something virtually unprecedented in modern history.

As a result, the global transient inflation and financial market fluctuations somehow became manageable in most countries except in Somalia and Zimbabwe.

The real problem with the global economy is that it remains complex, interconnected and unbalanced. More broadly speaking, the fundamental problem is globalisation. The economies of nations have been globally networked and financially interconnected.

GLOBAL POLITICS

Technological innovations in world enterprises have created worldwide supply chains, companies and customers. But global politics remain regional at best and national at worst.

The tension at the heart of the present global economic crisis is the mismatch between interconnected global economics that are producing global problems, but with no matching political processes that should be providing solutions.

Without a co-ordinated global effort to update global politics in line with the global economy, we are bound to see more periodic global economic crises in the future.

The true aim of a global economy is to produce goods and services for the population. By means of globalisation of trade and commerce, we seem to understand the economics of globalisation better than we do with global politics.

What is missing in the world today is 'The Universal Politics of Globalisation'. The politicians cannot regulate global economy, especially the complex operations of the financial industry, which they hardly comprehend.

The writer is a Biomedical Engineering Scientist, Consulting Entrepreneur and Professor of Technological Entrepreneurship at the Graduate School of Technology Management, University of Pretoria, South Africa.

Stubborn political crisis hangs over Thai economy

BANGKOK,

globalrecession

Foreign investors are wading back into Thailand despite a three-year political crisis, stoking stock and currency gains, but economists say political unrest will limit how fast and how far Thailand pulls out of recession.

The extent of damage to the broader economy depends on how long fugitive former Thai Prime Minister Thaksin Shinawatra challenges Prime Minister Abhisit Vejjajiva, and whether his campaign backed by thousands of red-shirted street protesters undermines the confidence of investors and consumers.

"It can be a source of concern ahead," said Euben Paracuelles, an economist at the Royal Bank of Scotland.

"Our clients are starting to ask again about politics."

So far this year, the market toll from political unrest is minimal. The baht has gained 2.32 per cent against the dollar, the second-best performer among Asian currencies after Indonesia's rupiah.

The benchmark stock index is up 42.3 per cent, turning around from a 47.6 per cent fall last year. Foreign investors, net sellers of

Thai stocks in January and February, turned net buyers between March and July.

And in what some see as a vote of foreign confidence, Thailand received net foreign direct investment of \$25.2 billion in three years to 2008, lower only than Singapore's \$35.3 billion and far more than Indonesia's \$6.5 billion and the Philippines' \$3.5 billion, according to data compiled by HSBC.

But political uncertainty has hurt Thailand's \$260 billion economy in other ways since Thaksin

was ousted in a military coup in September 2006 — from bond market investments to tourism.

Despite investing in Thai stocks, foreign investors have largely abandoned the small Thai bond market.

BOND TRADE

An army-appointed government imposed capital controls in late 2006 to try to curb a rise in the baht. Even though they were lifted in early last year, foreigners account for only one per cent of bond trade.

And while stock markets in emerging Southeast Asia, includ-

ing Thailand, are once again on the boil, Thailand is the region's second-worst performer this year — extending a trend that dates to 2006.

Thailand's SET Index has lost 10.5 per cent since early 2006, during which time indices in Indonesia, the Philippines, Malaysia and Singapore rose between 11.7 per cent and 100.1 per cent.

Hardest-hit has been tourism, an industry that employs about 1.8 million people out of a population of 67 million and has also suffered from swine flu scares and the global financial crisis.

—Reuters

freshinsights

Health markets beyond 2020

The Health Industry is one of the most technologically intensive in the world. A visit to any modern health facility reveals the convergence of a work culture immersed in high-tech tools, complex clinical processes, medically skilled human capital and patients.

Medical practice requires a willingness to engage the patient, showing considerable sensitivity that may have as much of an effect on the perceived quality of health as does the arsenal of technology used to diagnose and treat his/her disease. The Health Industry continues to be an incredibly rich target for technological tools that have emerged from computers now employed in the biomedical, genetic and consumer electronics industries.

Technological innovations are regarded by many as the primary guarantor of quality healthcare and the only pathway to finding new solutions to old and new clinical problems.

Such innovations include development of medical devices which have been identified by many analysts as a major factor driving the relentless increase of national expenditures for healthcare services.

There is deeply-rooted societal ambivalence toward technological innovations in medicine—the wish to control healthcare cost, but not at the expense of innovation, quality of care or clinical progress. It is these two conflicting needs, coupled with the societal consequences of certain technologies such as artificial hearts, stem cells and genetic screening that have stimulated the need for technology assessment in healthcare.

The design, development and deployment of technologically enhanced medical tools, products and services for health markets, offers vast opportunities to address quality, access, cost and risk-management in the delivery



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A

of healthcare services.

Technological tools in medicine are normally designed to extend the professional abilities of health workers with the aim of increasing access and reducing cost through technological innovations. In business terms, the aim of technological innovations in medicine is to add value to the healthcare business value chain.

Nations with half sick-populations are on the path to self-destruction because the healthy half will spend their resources taking care of the sick half. Therefore national health issues must be addressed comprehensively.

TECHNOLOGICAL CONCEPTS

It is not a public sector versus a private sector issue or an insured population versus an uninsured population.

A sick population results in a sick economy. Such socio-economic development outcomes are common knowledge in many African countries like Kenya.

Technology proliferates exponentially, so how dare we presume to predict technologically driven health markets beyond 2020? Our hubris lies in a basic understanding of human nature—people just do not change that quickly. The most simple technological concepts take about five to ten years to be adopted and absorbed into health markets.

The more radical ones may take several decades. Once the ideas have resulted in tangible form of applications, they need another five years before they are working correctly for the early adopters who then bring others into the movement of adoption of these new technologies into

PERVASIVE COMPUTING IN HEALTHCARE

Pervasive computing involves increasingly omnipresent, interconnected computing devices used in the health environment.

Pervasive healthcare services include making healthcare services more “pervasively” available across chronological, organizational and geographical boundaries.

The convergence of advanced electronic systems—particularly wireless technologies and the internet—is making this possible, adding more value to the health business value-chain.

Unlike personal computers, pervasive computing devices are tiny, sometimes invisible.

They can be either mobile or embedded in almost any type of object imaginable, all communicating by means of interconnected networks.

Pervasive computing could be used to facilitate task-based or activity-based computing within the healthcare environment.

health industry.

Thereafter, over a 10 to 15 year period, the new technological directions in medicine dominate the health markets.

So, looking at technology today, understanding that humans are the users, we discover that projecting the possibilities for technological applications in the health markets isn't at all that presumptuous.

The historical analysis of technological applications in medicine make us reasonably sure that technology follows the supply and demand curves of care-givers.

The needs of care-givers are much more easily predictable—we simply look at what they will have to respond to in the course of the next 10 years until 2020:

- *The World Health Organization wants to reduce child mortality, improve maternal health and combat such disease as HIV/AIDS and malaria.*
- *Disparities in the health status that exists between developed and developing countries—with particular focus on the least developed countries—will persist and widen.*
- *In developed countries non-infectious diseases will pose greater challenges to health and health markets than will infectious diseases.*
- *There is a global shortage of registered nurses because health care is becoming personal, segmented and complex. What the global knowledge of health statistics and trends tell us is that caregivers and health-planners will increasingly need better information and techno-medical tools to address four strategically important challenges:*

- *Patient care on a global scale (the world is a global village in economic and health terms).*
- *Staffing and recruiting to ensure quality care despite medical personnel shortages.*
- *Training and education to match the best healthcare practice requirements.*
- *Recruitments and retention to build and maintain a viable workforce of healthcare professionals.*

STRATEGIC PARTNERS

In certain healthcare services and health market landscapes, some of the enabling technologies already exist. The emerging challenge is their viability in the healthcare business value chain.

Unlike the computer industry where engineers have been playing a leading role in the process of technology adoption, in health industry nurses are the strategic partners in the technology adoption; they are the advocates of the cutting-edge technology applications in the health industry.

Why nurses? Why not? Who are more suitable? Nursing is the largest constituency in the health industry.

Nurses are the workshop-floor managers in the health markets. Nurses have the capacity to balance both sides of any healthcare equation—cost versus access—embedded in the quality of care.

And nurses are the ones who can best benefit from these improvements such as better workplace conditions and higher structural efficiencies driven by technological innovations.

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Study: Rainwater is safe for your health

SYDNEY,

health research

Drinking untreated rainwater is safe for your health, according to an Australian study.

Researchers from Melbourne's Monash University looked at 300 homes that used rainwater collected in water tanks as their primary drinking source in what they described as a “world first” study that comes amid growing criticism of bottled water. All of the homes were given a bench top

filter and told it would remove any potential gastroenteritis-causing organisms from their water, but half of the devices did not contain filters.

Families recorded their health over a year and the researchers found that the rate of gastro cases recorded by these two groups were very similar and also matched the broader community who drank

treated tap water. “People who drank untreated rainwater displayed no measurable increase in illness compared to those that consumed the filtered rainwater,” researcher Karin Leder, head of the infectious diseases unit at Monash University's department of epidemiology, said in a statement.

“This study confirms there is a

low risk of illness... Expanded use of rainwater for many household purposes can be considered and in current times of drought, we want to encourage people to use rainwater as a resource.”

SAFETY CONCERNS

Leder said some health authorities had doubts about drinking rainwater due to safety concerns, particularly in cities where good quality mainstream water was available. Australia's prolonged

drought has prompted a rise in water tank installations.

But Leder did caution that the families involved in the study were routine rainwater drinkers and may already have built up defenses against possible infections.

The study came amid growing concern about the environmental impact of bottled water products, which are often transported long distances and packaged in plastic which clogs landfills.

— Reuters

Industrialisation agenda: The Case Study of India

India's economic reform began in the 1990's and was as a result of severe political instability that caused internal and external economic difficulties.

As a result, the country initiated radical reforms aiming at changing India's economic landscape to attract foreign investments and gain access to global markets. The key objectives were geared to facilitate transformation of the Indian economy into a 'market-based economy synchronised with the global economic system.

The strategy was focused on maximisation of foreign direct investment by means of favourable industrial policy offered to foreign investors and Indian companies seeking joint ventures operations. As a result of economic policy changes, India has made its mark on the global entrepreneurial scene, playing a significant role in global software development.

Strategic technological entrepreneurship

After Independence in 1947, India heavily depended on imported technology to stimulate trade and industrialisation.

Between 1948 and 1958, the Indian Government formulated many industrial policies to drive industrialisation and economic independence — with little success.

In the 1990s, the import-substitution policy led to awakening India's industrial revolution, whereby Indians were forced to start their own manufacturing facilities to remain sustainable.

In 1968, India established the India Institute of Technology, which was based on the model of the Massachusetts Institute of Technology. Thereafter, many re-



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A AND
ROBERT JALANG'O AKELLO



search and engineering institutes were established to support industrialisation in various regions of the country.

Furthermore, the technology policy of 1993 developed a better system of interaction between the government and the private industrial sector.

After the technology policy, India recorded significant growth in the information technology and communication industries.

TECHNOLOGICAL INNOVATIONS

From 2000, India has progressively gained footholds in technological innovations and providing outsourcing software solutions to the global markets, especially to US companies. Bangalore, also known as the Silicon Valley of India, has become the centre of high-tech business and industrialisation.

To diversify industrialisation strategy and to address poverty and food production and energy issues, India has started investing in research of biotechnology applications in medicine and agriculture and research of renewable energy sources.

It is the eighth largest investor in Research and Development activities, according to the Organisation for Economic Cooperation and Development in its working report of 2008 entitled, India's National System: Key Elements and Cooperate Perspectives.

Lately, India is researching the convergence of bio-informat-

SUCCESS FACTORS IN INDUSTRIALISATION TRENDS

Competitive higher education with a focus on technological and scientific specialities, which has given India the competitive edge in knowledge-driven service industries such as the outsourcing of software processing;

The establishment of a Ministry of Science and Technology in the late 1980s; a change in the of industrialisation policies of the 1990s; and government led economic reforms afterwards, which stimulated FDI and joint-ventures engagements;

Exploitation of competitive dynamics of the Information and communication technology sector and the software industries which led to the offering of competitive outsourcing services globally and boosting national foreign currency reserves;

The competitive application of technology and innovation as drivers of national industrialisation and economic growth.

ics and nanotechnologies as applications in the pharmaceutical industry.

To use industrialisation as the platform for economic growth, India is shifting its economy from services to manufacturing, accelerating growth rate.

With a technological balance between services and manufacturing; and intensive R&D activities, India will not only remain competitive in global markets, but also address its domestic issues like poverty and food production.

ENTREPRENEURSHIP

Financing technological entrepreneurship Although India's national savings are low compared to other emerging economies like China, it compensates for lack of savings with its natural affinity for entrepreneurship in the population.

India is second among all nations in Total Entrepreneurship Activity as per Global Entrepreneurship Monitor Report 2002.

Also after economic reforms in 1990s, Foreign Direct Investments started significantly trickling into the economy.

In addition, outsourcing contracts became another source of financing industrialisation especially in the information and communication industries.

Even though in outsourcing arrangement the intellectual property of the contractual work belongs to the foreign companies, the innovation and ability in

the execution skills of contracts spread and penetrate into other local industries, broadening the base of industrialisation.

According to the Goldman Sachs report 2008 'Dreaming the BRICS' (Brazil, Russia, India, and China), India could be one of the world's most dominant economies by 2050.

The comparatively soaring Indian stock market has demonstrated an extraordinary level of confidence in the country's economic potential.

Development of human capital for industrialisation Education in India at all levels is overseen by the Ministry of Human Resource Development.

It is a highly subsidised system. Universal compulsory primary education has strived to keep poor children in school, but it has not been able to maintain a high quality of education at primary school level.

The Indian education system is essentially suffering from basic problems of 'outreach' and 'quality' at the primary school level.

There is a deliberate focus on high school education, where there is an opportunity for specialisation geared towards science and technology education and skills.

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Akello is a Professor of Electrical & Communication Engineering and Director of Industrial Science Park at Masinde Muliro University of Science and Technology, Kakamega, Kenya.

Bharti & MTN work on finalising deal, issues linger

MUMBAI

dealtalk

India's Bharti Airtel and South Africa's MTN hope to finalise by mid this month a deal that could lead to a full merger, with the Indian firm adding another adviser and getting closer to lining up loans, three sources said.

The telecoms firms have extended exclusive talks until the end of September, and the sources said a proposal could be ready to be placed before shareholders and regulators before then.

Unresolved differences over valuation and management rights

are still a risk, even as a broad consensus on the need for a sweetener from Bharti and other structures has emerged.

In a sign that the talks, announced in late May and extended twice, may be gathering momentum, Bharti has shortlisted eight banks for a five-year offshore loan of up to \$4 billion (\$304 billion), Reuters Basis Point reported.

Standard Chartered, ANZ, Barclays Capital, Bank of Tokyo-Mitsubishi UFJ, BNP Paribas,

Citigroup, DBS, and State Bank of India are the lenders on the short list, Basis Point said. Bharti has also hired Barclays recently as a co-adviser on the deal, alongside Standard Chartered, banking sources said. Deutsche Bank and Bank of America Merrill Lynch are advising MTN on the deal.

PROGRESS SO FAR

In another possible sign of progress, Bharti Chairman Sunil Mittal and MTN Group Chief Ex-

ecutive Phuthuma Nhleko met the Indian finance minister earlier this week, officials said. "Things are falling into place. Broad consensus is emerging on valuation and management sharing. Now we need to clear up the finer points," one source with direct knowledge of the deal said. A Bharti spokesman said the firm would not comment on anything beyond the statements it has issued.

Under the deal, MTN and its shareholders would take a 36 percent economic interest in Bharti by paying cash and stock, and the

Indian firm would pay cash and issue global depositary receipts (GDRs) to end up with 49 percent of MTN. "A sweetener is most likely but it is not going to be big," one source said.

Earlier, a source familiar with the negotiations had told Reuters that Bharti might increase its offer by between five and 10 per cent.

The room to drastically alter the terms of the deal was weakening, the source said, as the South African rand has appreciated against the dollar since the transactions was announced, making the deal costlier for Bharti. —Reuters

Lessons from China in building a strong economy

In preparation to a tougher and more competitive economic future, China is investing heavily in science and technology education.

It is sending its best students abroad to the world's leading universities.

The world leading scientific and technological conferences are crowded with very competitive Chinese scholars.

Chinese universities are producing slightly more than 500,000 engineering graduates per year.

The engineering human capital base is adequately ready to service future political and industrial development leadership.

China for some unknown cultural reasons tends to get the best of the best through their leadership pyramid.

China has faith in education and knowledge as the drivers of wealth creation. It is upgrading its economy through high investments in research and an uptake of advance technology.

The Chinese believe that one cannot innovate if your understanding of social, economic and technological change is misinformed, incomplete or outdated.

Success in the new global arena is highly dependent upon innovation, creativity and solving problems for which there are no precedents.

SCIENTIFIC DISCOVERIES

While new innovations are the facilitators of social, economic and industrial change, the real opportunities are created by nations, corporations and individuals who apply scientific discoveries, inventions and technological innovations in new ways.

China is comprehensively prepared to face the future with calculated hope based on education and scientific knowledge. Aristotle



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A

said, "Hope is a wakening dream". For China the hope is real, and the dream is 'a work in progress'.

Historians will probably look back on the economic meltdown of last year and this year and check if the crisis originated from optimisation of global economic success or from the madness of capitalism driven greed and business frauds in the markets.

Although history has its own validity, what matters now is the roadmap into the future. Somehow somewhat recession has to be managed.

Humanity is more important than recession. The governments and markets have the capacity to tame the madness of capitalism.

Capitalism is the common denominator in the global economy. It's being powered and empowered by the actions of companies, governments and individuals engaged in economic activities all over the world.

In pursuit of growth and higher standard of living, countries will continue to use free markets and free trade to power their economic growth.

To jumpstart growth, many governments will be forced to open their economies, rather than nationalise parts of the economy to stimulate growth.

The history of the past economic crises shows that in their wake countries have conducted more-aggressive economic reforms to bring greater credibility to the economic system, attract new capital and jump-start

CHINA'S GLOBAL POSITIONING

China's political place in the global political landscape is rather ambiguous. China is still a Communist country in name, and its ideals counter to those of many other Western countries.

As a nation it is not comfortable with democratic freedoms in almost of its forms. China controls the media and censors those who speak out against the government. It repeatedly tells the rest of the world to mind its business when it comes to domestic politics. Historically, China hates showbiz global politics. It participates in global politics because of necessity, not by choice.

China watchers regularly cite potential for national unrest as its citizens demand more of the freedom enjoyed by the West.

China's significant wealth is allowing it to buy resources and commodities challenging the West's status in global trade. China is neither a friend nor foe in global trade or politics. It goes for strategic alliances in both global politics and trade.

economic growth. As the global economy stand today, it is evident that the economic forces of both governments and markets must converge to bring new economic order.

The question is how to balance the two to achieve growth, innovation, stability and social equity. The critical need is that the convergence of these forces must work for the broad welfare of the global society.

ECONOMIC BOOM

To those who do not understand China's history and culture, its economic boom appears to be an overnight story. Nothing could be further from the truth.

The fact is that China has a long and successful history as an economic powerhouse. It is only now, however, after spending much of the twentieth century in isolation,

that China is in a position to join the ranks of the world's pre-eminent modern economies.

Many economic experts generally think that China is simply reclaiming its rightful place in the global economic landscape, but astute observers note that China's commitment to growth makes its economic might an inevitability.

China's economic growth resides in its economic history. Industrial spirit of its citizens and influence of traditional values are held in high esteem by the Chinese people. When combined with capitalism and modern business practices these values have helped the Chinese excel in free-enterprise societies.

The economic history of China is that of enterprising citizens. The golden thread in China's economic miracle resides in Chinese traditional values. Other Chinese values, known as traditional virtues, include thriftiness, hard work, and personal honour.

The Chinese government has endorsed Confucianism as a philosophical stimulus for economic development, because many aspects of Confucianism correlate to success in modern capitalist societies.

A strong work ethic, acceptance of hierarchy, emphasis on education and moral integrity are all conducive to developing large-scale modern business in the knowledge economy.

The Chinese people hope seems to be driven by unbridled optimism for the future. Nothing stops a nation with positive attitude towards the future.

The writer is a Biomedical Engineering Scientist, Consulting Entrepreneur and Professor of Technological Entrepreneurship at the Graduate School of Technology Management, University of Pretoria, South Africa

Retailers seek to rein in optimism over recovery

By MARK POTTER
and SARAH MORRIS

Retailers sought to dampen hopes of a quick recovery from recession at an industry summit last week, warning a legacy of over-expansion, changing consumer habits and online competition could curb growth for years.

The good news was that the worst of a brutal downturn in consumer spending appears to be over and companies able to differentiate themselves from competitors and offer value for money — not just the lowest prices — are still thriving.

"One fact remains the same: Strong brands that resonate with the consumer can still grow regardless of today's economic cli-

mate," Mr Gilbert Harrison, chairman of retail-focused investment bank Financo, told the World Retail Congress.

He pointed to the success of Apple Inc — voted the conference's retailer of the year — with its iPhone.

A straw poll of some of the 800-plus delegates at the start of the three-day gathering found a majority thought the economic downturn was the worst in living memory.

However, big cuts in interest rates and multi-billion dollar stimulus packages from governments around the world have

lifted consumer confidence from its lows and retail stocks have rallied strongly in anticipation of a recovery.

"There is now a pervasive, persistent and pronounced improvement in the leading economic indicators in the US and also in China, so I'm reasonably confident that the US economy will bottom out in the next few months and the Chinese economy likewise," said Ajay Kapur, chief global and Asia strategist at Mirae Asset, the world's top equity investor in emerging markets.

Many retailers were notably

more cautious, though, particularly those selling discretionary items.

"I don't think it's going to get worse, but this is going to be a lengthy process," Bob Willet, the head of US electricals retailer Best Buy's international arm, told Reuters, saying battered banks were still reluctant to lend to consumers.

INFLATIONARY PRESSURES

Babygoods retailer Mothercare also warned that any short-term recovery might be snuffed out as governments seek to restore their finances and if inflationary pressures re-emerge.

"There's a real risk that inflation will recover over the next

year, two years, and governments then have to take action to look after that and then we get a second leg of the recession later on," said Mothercare Chairman Ian Peacock.

Vittorio Radice, head of Italian department store chain La Rinascente was among the most pessimistic.

"In my opinion, the rate of growth, the rate of opportunity (for retailers), putting us back to where we were in 2007, won't happen up until 2012," he told Reuters.

Executives also warned that the industry, which emerges from the recession will be very different from the one which entered it.

—Reuters

freshinsights

Mastering the mechanics of business leadership

It is extremely difficult to develop a mathematical formula for business leadership or a precise definition of leadership style.

Trying to formulate template for leadership only leads one down a path of frustrations. Previous attempts to develop a standardised model of leadership for high-tech industries have failed. It is like studying Michelangelo or Napoleon: you can imitate, emulate and simulate, but there is simply no generic formula to become like them.

In short, people are leaders because they choose to be leaders. Leadership is a matter of choice and determination and no two leaders are exactly the same or alike.

Take, for example, Bill Gates of Microsoft and Warren Buffett of Berkshire Hathaway: although great friends socially, and great business leaders, the two have big differences in their leadership characteristics.

AGILITY AND ABILITY

Bill Gates' leadership style is driven by combativeness and relentless competitive drive that helped propel Microsoft to dominance in the global software industry.

It assured increasing revenues and profits for Microsoft and made Gates one of the world's richest men.

However, success sometimes undermines itself. Microsoft's success created the greatest challenge for Bill Gates: how to retain the company's grip on the software market while fending off anti-trust regulators in the USA and Europe.

Though the threat has subsided, regulators still impose big legal and administrative costs on the company, which could affect its operations in the future.



Letter from Pretoria/

WITH MICHAEL OGBEMBO KACHIENG'A
AND DR YAN ZHAO



Bill Gates' leadership style is based on professional agility and ability to perform. During his career, Gates has repeatedly shown that he responds to emerging technological innovations with combative drive and enthusiasm.

Tenacity, principles and calculated risks

On the other hand, Warren Buffett's leadership strategy, whether buying a block of shares or an entire company, has been simple: don't pursue the high fliers, look for beaten-down companies with lots of value that other investors don't see. See the invisible.

Buffet has always favoured straight-forward traditional business, and Berkshire holds big stakes in American Express, Coca-Cola, Gillette and others. But the heart of Berkshire investment is in the insurance companies.

The insurance 'float' — cash collected in premiums and invested until it is paid out in claims — is what has been used to fund many of Berkshire's investments.

CALCULATED RISKS

Warren Buffet, arguably the most successful investor of our times, believes in taking risks — calculated risks. An important aspect of Buffet's leadership lies in his ability to think about risk differently than most investors do.

For example, when a company is slammed by the media, most investors might think it is time to head for the exits. Not Buffet. He never jumps on the bandwagon of the crowd. He bases his investment leadership on four principles:

TIPS ON POSITIVE LEADERSHIPS

Good business leaders and managers are those whose management and leadership styles find expression in high employee productivity, business success and high profits.

Whether one is already a seasoned boss, a prospective business leader or a newly promoted corporate manager, acquiring some fundamental skills on how to become a good manager is not an option but a necessity. Having such skills is the only way one can get employees to deliver at their maximum.

One way of becoming a good manager is creating an atmosphere that facilitates effective internal organisational communication. When such an atmosphere prevails, employees are able to communicate openly with their bosses

Source: <http://businessmanagement.suite101.com>

understand the business in which you are investing; look for firms with sound business economics fundamentals and competent leadership; and buy at the right price. Leaders must observe and study others to nurture their own styles.

This way, they discover attributes that resonate with their style or personality. In the real world, everyone's job is the same; the only difference is your intensity and leadership skill.

TELLING THE TRUTH

In these times of global economic meltdown, corporate scandals and banks bailing out, telling the truth is as critical as the vision of the organisation when it comes to lasting business leadership.

Leaders should communicate their vision in a way that wins the trust of their constituents — the Board of Directors and employees. Integrity builds trust; dishonesty — while it may succeed temporarily — ultimately undermines leadership.

Only when the Board and employees believe the leader is a straight-shooter, expressing a complete and credible view of reality, will they accept him as their leader.

Once that happens, constituents often become followers, which is the litmus test of leadership. The ability to speak the unalloyed truth calls for courage.

Truth lies at the heart of all true leadership. Truth is a force that works silently but reaches its destination with painful finality.

To be a great leader, you need to know everything about your business, the services or products you sell, and the clients who buy your products or services.

Continuing to learn about your business is critical to remaining competitive in the marketplace.

As Jim Rohn, a leading business philosopher, advises, "formal education gives you a job; self-education makes you a fortune."

Self-education is the best response to leadership development. You must also teach others the secrets to your achievements so that they can duplicate your success. Great leaders need 'enlightened followers'.

Lastly, you need to leave your comfort zone. Being a leader means you need to explore new possibilities, new frontiers, and take calculated risks.

Finally, you need to develop good working habits, and perform your duties with total honesty.

You need to be fair to everyone you work with. A bad attitude will get you nowhere — so remain professional.

Make leadership function within your personality. Work very hard and smart, but also guide, mentor, motivate and lead others.

Unlike management, which means controlling people and resources, leadership means leading by example.

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Deal reached to cut US Medicare drug costs

By JEREMY PELOFSKY

healthcare

Drug manufacturers will offer some \$80 billion (\$6.2 trillion) in prescription discounts for Medicare recipients under a deal unveiled on Saturday, which could boost President Barack Obama as he pushes to overhaul the \$2.5 trillion US healthcare system.

"The agreement reached today to lower prescription drug costs for seniors will be an important part of the legislation I expect to sign into law in October," Obama said in formally announcing the

pact. The companies have agreed to provide for the next decade a 50 per cent discount for those elderly and disabled Americans in the Medicare health insurance programme who face a gap in coverage after their drug costs reach a certain level, known as the "doughnut hole".

"The existence of this gap in coverage has been a continuing injustice that has placed a great burden on many seniors," Obama

said in a statement. Medicare coverage does not apply to payments between \$2,700 (\$210,600) and \$6,154 (\$480,000).

The deal was negotiated between the Pharmaceutical Research and Manufacturers of America industry association and Senate Finance Committee Chairman Max Baucus who is leading one of many congressional panels drafting healthcare legislation.

"This commitment to support

legislation that will help close the coverage gap reflects our ongoing work with Congress and the Administration to make comprehensive health care reform a reality this year," the industry group said in a statement.

UNINSURED AMERICANS

Costs for healthcare have soared faster than the inflation rate and the Democratic president has pledged to work to curb those costs as well as find a way to provide coverage to the 46 million uninsured Americans.

Americans strongly support fundamental changes to the healthcare system and a move to create a government-run insurance plan to compete with private insurers, according to a New York Times/CBS News poll published on Saturday.

The White House has said some \$950 billion in cuts have been found to cover its reform efforts but there are reports that the costs could reach as much as \$1.6 trillion and still not cover everyone, setting off a fierce debate on how to close the gap. —Reuters

freshinsights

Mystery behind the global economic crisis

Deciding how to re-engineer Capitalism to achieve growth and socially balanced development is a source of major confusion for most governments. Issues such as global warming and the energy crisis have made us sensitive to our survival as a people, causing us to strive for global social justice in both markets and in sustainable development.

But history over years of development teaches us that an economic crisis slows growth, and when countries need growth, they turn to the markets ie the capitalist system.

The Capitalism system is prone to market crashes and economic fluctuations, which create dysfunctional societal systems along the way.

In the last decade, Capitalism has lubricated the global prosperity despite its shortcomings.

Trade protection will impede commerce and stall economic recovery. Every economic system has inherent faults. We tend to criticise Capitalism only when it is associated with failure. To ask for a 'Perfect Capitalism' is to ask for failure.

For nearly a century, most western countries have been trying to regulate the Capitalist systems to stabilise them, while preserving developmental energies and benefits.

FINANCIAL REGULATIONS

After the recent recession, the same governments have applied the same remedies again — tightening financial regulations while policing financial markets. The problem is that more regulations and the polishing of the financial industry will not make Capitalism function better, as long as we do not diagnose what exactly has gone wrong with Capitalism.

With deeper insight, it is becoming evident that what we are



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A

experiencing is not a crisis within Capitalism. It is a crisis within the financial industry, within the political democracy of globalisation and ultimately of societal ethics.

Fundamentally, it seems society has a vast problem with greedy capitalists rather than with the Capitalist system. The financial industry distorted the global economy — or to be more precise — the financiers and the bankers have done so.

HISTORICAL TRENDS

The financial industry has a history of making global economy dysfunctional — from the Dutch tulip bubble in 1637 to the present global recession.

The historical trends behind these financial bursts have been varied, yet follow a strikingly similar series circuit: good times lead to political stability, technological innovations and economic growth; all encourage an atmosphere of easy money and readily available cheap credit.

Cheap credit motivates greed, unwarranted consumption, miscalculation of investments and eventually — economic ruin. Put it plainly, in the good times, people consume more than they produce, and make up the difference by borrowing.

One of the common rules governing leverage is to borrow to invest. Borrowing to consume is a fatal mistake because it normally leads to bankruptcy. The economic crisis repeats itself because people have refused to listen the first time.

Industrialised countries should borrow a leaf from emerging economies — in particular

ECONOMIC DISASTERS CAN BE AVOIDED

The deeper the global economic crisis digs, especially in the developing nations — and the longer recovery is delayed, the greater the danger of an economic disaster. The best solution is to fix the global financial system with a sense of urgency.

A proactive financial industry is one that does not only talk to itself, but also to its clients in real time language, not financial jargon. Today's world economic and social problems ignore national boundaries. The world needs smart politicians who can do the same, because international politics precede international business. It is difficult to trade with enemies except at the battle front.

What we need are disciplined applications of technological innovations to generate new values in the financial industry business value chain, rather than using these innovations as tools for hiding risks.

China and India — to stabilise their economies.

In 2007 boom times, China and India raised the interest rates and forced banks to hold higher capital bases.

In other words, the government actions should be 'countercyclical.' They should work to slow growth through stabilisation of money velocity.

In addition, the use of technological innovations, especially the internet, has stabilised global money movements. Global money velocity has been fairly stable and predictable.

ECONOMIC BOOM

In the past 25 years, the global economy has doubled every 10 years, going from \$31 trillion in 1999 to \$62 trillion last year. In 2006 to 2007 — the peak years of the global economic boom — 124 countries around the world grew at four per cent a year or more, about four times as many as in the previous 25 years.

In reality, the global economic dilemma goes well beyond the financial industry, poor regulations of markets and pandering politicians. The global financial system has been crashing more frequently over the past 30 years than in the course of any comparable period in history.

The real problem is more complex. Since the late 1980s, the world has been moving towards a comparative degree of political stability. The end of the Cold War ushered in a period with no major military competition among the world's great powers — something virtually unprecedented in modern history.

As a result, the global transient inflation and financial market fluctuations somehow became manageable in most countries except in Somalia and Zimbabwe.

The real problem with the global economy is that it remains complex, interconnected and unbalanced. More broadly speaking, the fundamental problem is globalisation. The economics of nations have been globally networked and financially interconnected.

GLOBAL POLITICS

Technological innovations in world enterprises have created worldwide supply chains, companies and customers. But global politics remain regional at best and national at worst.

The tension at the heart of the present global economic crisis is the mismatch between interconnected global economies that are producing global problems, but with no matching political processes that should be providing solutions.

Without a co-ordinated global effort to update global politics in line with the global economy, we are bound to see more periodic global economic crises in the future.

The true aim of a global economy is to produce goods and services for the population. By means of globalisation of trade and commerce, we seem to understand the economics of globalisation better than we do with global politics.

What is missing in the world today is 'The Universal Politics of Globalisation'. The politicians cannot regulate global economy, especially the complex operations of the financial industry, which they hardly comprehend.

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Stubborn political crisis hangs over Thai economy
globalrecession

BANGKOK,

Foreign investors are wading back into Thailand despite a three-year political crisis, stoking stock and currency gains, but economists say political unrest will limit how fast and how far Thailand pulls out of recession.

The extent of damage to the broader economy depends on how long fugitive former Thai Prime Minister Thaksin Shinawatra challenges Prime Minister Abhisit Vejjajiva, and whether his campaign backed by thousands of red-shirted street protesters undermines the confidence of investors and consumers.

"It can be a source of concern ahead," said Euben Paracuelles, an economist at the Royal Bank of Scotland.

"Our clients are starting to ask again about politics."

So far this year, the market toll from political unrest is minimal. The baht has gained 2.32 per cent against the dollar, the second-best performer among Asian currencies after Indonesia's rupiah.

The benchmark stock index is up 42.3 per cent, turning around from a 47.6 per cent fall last year.

Foreign investors, net sellers of

Thai stocks in January and February, turned net buyers between March and July.

And in what some see as a vote of foreign confidence, Thailand received net foreign direct investment of \$25.2 billion in three years to 2008, lower only than Singapore's \$35.3 billion and far more than Indonesia's \$6.5 billion and the Philippines' \$3.5 billion, according to data compiled by HSBC.

But political uncertainty has hurt Thailand's \$260 billion economy in other ways since Thaksin

was ousted in a military coup in September 2006 — from bond market investments to tourism.

Despite investing in Thai stocks, foreign investors have largely abandoned the small Thai bond market.

BOND TRADE

An army-appointed government imposed capital controls in late 2006 to try to curb a rise in the baht. Even though they were lifted in early last year, foreigners account for only one per cent of bond trade.

And while stock markets in emerging Southeast Asia, includ-

ing Thailand, are once again on the boil, Thailand is the region's second-worst performer this year — extending a trend that dates to 2006.

Thailand's SET Index has lost 10.5 per cent since early 2006, during which time indices in Indonesia, the Philippines, Malaysia and Singapore rose between 11.7 per cent and 100.1 per cent.

Hardest-hit has been tourism, an industry that employs about 1.8 million people out of a population of 67 million and has also suffered from swine flu scares and the global financial crisis.

—Reuters

freshinsights

Socialism's dead, Capitalism in the ICU, so what's next?

Globally, we are all determined to come out of the recession closet. The question is who should pull us out of the markets or governments?

When the question is ideologically rephrased, it becomes: Who should take care of us, capitalism or socialism?

Socialism died a slow death between 1980 and 1990. Capitalism crashed radically in 2007-2008, a comparatively painful demise.

At present, capitalism resides in the Intensive Care Unit, awaiting medication and resuscitation. After recovery, capitalism will never be the same again.

In the recent global financial crisis and economic meltdown, we saw both markets and governments join hands to save the world from economic catastrophe.

Are such market-government partnerships economically sustainable and viable in the long-term? In an economic crisis, we seem to either embrace capitalism with a socialist face or socialism with a capitalist face.

The bailing out of banks might be a socially good activity compared to bankruptcy, but it is economically an imperfect activity because it interferes with the equilibrium of supply and demand in the market place.

Likewise, the manipulating of corporate accounts could improve share prices of a firm in the stock markets of a capitalist system where greed is acceptable, but the act is a socially unfair practice and fundamentally criminal in democratic societies.

In recent years of capitalist rule, greed and injustice in markets have become the acceptable norm of business practice.



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A

The bailouts of the banks saved them from bankruptcy, but the process never saved either the savings or jobs of their customers.

They were socially just to some and unjust to others. The social calculus of the bailout philosophy is fundamentally a zero sum game. This amounts to giving the banks the fish, rather than teaching them how to fish.

FILE FOR BANKRUPTCY

Whenever there is a crisis in the financial industry, the customers lose not the banks.

In free capitalism, a firm that is insolvent should be encouraged to file for bankruptcy and rid the market of an institution that is using resources which could be better utilised by productive firms.

In our heart of hearts, we have a puritan belief that the bankers should have been left alone to face a painful death for abusing our collective social trust.

For years, the banks have been telling the world that they are the masters of the financial universe. We have only discovered their inadequate knowledge of financial mechanics when they clandestinely started negotiating with governments for bailouts.

Bankers are suffering from osmotic intellectualism of thinking that they are experts in the financial industry because they have made millions from poor clients. The problem with the bailout strat-

CREDIBILITY OF ECONOMIC SYSTEMS

The history of the past economic crises shows that in their wake, countries have conducted aggressive economic reforms to bring greater credibility to their economic systems to attract new capital to jump-start growth.

For the moment, owing to practical reasons such as globalisation, we seem to be stuck with capitalism as the preferred system for global development and poverty reduction.

The western governments, especially the US and UK, contaminated the purity of capitalism with dosages of socialist medicine. Sick capitalism should be treated with capitalist medicine or be left to die a natural death.

Like true dinosaurs, these financial dinosaurs should have been left to a trek into extinction. Banks took risks they should not have taken.

egy is the assumption that the banking system is fundamentally sound and that bankers know what they are doing.

That is far from the truth. If the bankers were the experts of global financial operations, we should not have had a global financial crisis in the first place.

The bailout theory can be likened to romancing the beauty of pushing a button to solve problems in science fiction books. It does not create viable businesses to bail out insolvent enterprises. There is no incentive for banks to be prudent in managing other people's money.

FINANCIAL TERMS

The truth is bankers and other moneylenders have never conceptually understood financial terms like toxic assets, credit swaps, collateralised debt obligation (CDO), derivatives or balloon payments.

But to look intellectually good and sophisticated at global politico-financial conferences like G8 or G20 or global economic forums, the moneylenders have pretended to know the dynamics of the financial industry at our peril.

They have failed to master the intricacies of the global monetary system as well as that of the banking world. When you are good you tell people, but when you are great people tell you. One of the greatest problems facing the banks right now is how to dispose

the toxic assets in their books on the aftermath of the global credit crunch.

In addition, the recent history of the banking industry has shown us that incentives for bank executives were skewed toward reckless risk-taking with other people's money. Too much trust shown by financial regulators and governments made banks behave like money bazaars or casinos rather than prudent lending financial institutions. Banking executives are free to visit casinos gambling their own money, not that of other people.

Capitalism is the common denominator in the global economy today. In pursuit of growth and higher standards of living, countries will continue using free markets and free trade to power their economic growth.

In order to jumpstart growth after the present economic recession, many governments will be forced to open up their economies, rather than nationalise these in part to stimulate growth.

The worst crime the bankers have committed within the global economy was to be educated in banking, but remain ignorant of the mechanics of financial industry.

It is the ignorance of bankers concerning the mechanics of the money industry that has caused the financial crises which have subsequently graduated into the present economic predicament. Bailing out banks is no solution to global financial crisis.

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Germany, Russia talk economy and human rights

SOCHI, Russia,

global crisis

Germany and Russia should work closer together to beat the downturn, Russia's president told his German counterpart on Friday at the start of talks, which will focus on the economy and human rights.

President Dmitry Medvedev welcomed German Chancellor Angela Merkel to his official vacation residence at the Black Sea resort of Sochi for their third meeting this year, in a gesture that showed close ties between Berlin and Moscow.

"We shall think how by strengthening our bilateral eco-

nomic strategic ties we could help our economies and people overcome the consequences of this heavy crisis and come out of it even stronger," Medvedev told Merkel.

A senior Russian official told reporters ahead of the talks that the leaders would discuss a bid by Canadian carmaker Magna and Russia's Sberbank to buy a stake in Opel, the European unit of General Motors, and a number of other investment projects.

Trade between Russia and Germany, Russia's biggest trad-

ing partner in Europe, reached a record \$67.2 billion last year. That figure has been cut by more than half in the first five months of this year, the official said, without giving a precise number.

Merkel has backed the Magna-Sberbank bid over a competing offer from Belgian private equity firm RHJ International and Russia hopes she will reiterate that support during the talks, a senior official in the Russian delegation said.

On Thursday, a senior Magna executive said agreement in prin-

ciple had been reached with General Motors to buy the stake. But a GM official later said the race was not over.

"We view (the Magna-Sberbank bid's) chances highly, they have become much stronger."

STRUGGLING FIRMS

Medvedev and Merkel will also discuss finding Russian investors for struggling firms like Dresden chipmaker Qimonda and Germany's fifth biggest shipbuilder, Wadani, he said.

Kommersant daily reported on Friday that Russian services conglomerate Sistema was seeking

to take a stake in Infineon, which holds a 77.5 per cent in insolvent Qimonda.

Wadani is owned by Russian investor Andrey Burlakov, who is looking for ways to save the insolvent shipyard.

"Given proper social and economic reasons and commercial guarantees, such projects can become springboards for strategic alliances between Russian and German hi-tech companies in car making, shipbuilding and electronics," the Kremlin official said.

"This will complement the existing and emerging alliances in the energy sector." —Reuters

freshinsights



Letter from Pretoria/

WITH MICHAEL OGEMBO KACHIENG'A

Technology, and its increasing relevance in the future of healthcare

The Health Industry is probably the most technologically intensive in the world. A visit to any modern health facility will reveal a work culture immersed in high-tech tools, complex clinical processes, medically skilled human capital, and patients. Medical practice requires a willingness to engage the patient, showing sensitivity that probably has as much effect on a patient's health as does the arsenal of technology used to treat their disease.

Technological innovations are regarded by many as the primary guarantor of quality healthcare, and the only pathway to finding new solutions to both old and new clinical problems. Such innovations include development of medical devices, which have been identified by many analysts as a major healthcare expense factor.

DYNAMICS OF HEALTH MARKETS

The design, development, and deployment of technologically enhanced medical tools, products and services for health markets offers vast opportunities to address quality, access, cost and risk-management in the delivery of services, since they extend the doctors abilities. In business terms, the aim of technological innovations in medicine is to add value to the healthcare business value chain.

Technology tend to grow exponentially. How, then, can we predict technologically driven health markets beyond 2020? Our confidence stems from our basic understanding of human nature; that people just do not change that quickly. The most simple techno-medical concepts take about five-10 years to be adopted into health markets, while more radical ones take several decades. Once the ideas have resulted in solid results, they require need another five years before they are working correctly for the early adopters who then bring others into the movement of adoption

"The most simple techno-medical concepts take about five-10 years to be adopted, while more radical ones take several decades."

{ MICHAEL OGEMBO KACHIENG'A,

of these new technologies into health industry. Thereafter, over a 10 to 15 year period, the new technological directions in medicine dominate the health markets. So, looking at technology today, understanding that humans are the users, we find that projecting the possibilities for technological applications in the health markets isn't all that presumptuous after all.

The historical analysis of technological applications in medicine make us reasonably sure that technology follows the supply and demand curves of care-givers.

The needs of care-givers are easily predictable. We simply look at what their goals are for the next 10 years until 2020:

- The World Health Organization wants to reduce child mortality, improve maternal health, and combat such disease as HIV/AIDS and malaria.

- They want to reduce disparities in the health status that exists between developed and developing countries - with particular focus on the least developed countries.

- They want to deal with non-infectious diseases, which will pose greater challenges to health, and health markets, in developed markets.

- They also want to cut the global shortage of registered nurses, as health care becomes more personal, segmented and complex.

In order to achieve their goals, care-givers will have to address four strategically important challenges:

- Patient care on a global scale (the world is a global village in economic, and health terms).

- Staffing and recruiting to ensure quality care despite medical personnel shortages.

- Training and education to match the best healthcare practice requirements.

- Recruitments and retention to build and maintain a viable workforce of healthcare professionals.

SUPPLY AND DEMAND

In certain healthcare services and health market landscapes, some of the enabling technologies already exist. The emerging challenge is their practicality in the healthcare business value chain.

Unlike the computer industry

WORLD HEALTH FORECAST

Infectious diseases will still dominate in developing countries. As the economies of these countries grow, non-communicable diseases will become more prevalent. This will be due largely to the adoption of "western" lifestyles and their accompanying risk factors.

In developed countries, non-communicable diseases will remain dominant. Heart disease and stroke have declined as causes of death in recent decades, while death rates from some cancers have risen.

Diabetes cases in adults will more than double globally from 143 million in 1997, to 300 million by 2025 largely because of dietary and other lifestyle factors.

Cancer will remain one of the leading causes of death worldwide. By 2025 the risk of cancer will continue to increase in developing countries, with stable if not declining rates in industrialized countries.

where engineers have been playing a leading role in the process of technology adoption, in health industry, nurses are the strategic partners in the technology adoption. They are the advocates of the cutting-edge technology applications in the health industry.

GLOBAL HEALTH GOALS

Why nurses, you ask? Why not? Who are more suitable? Nurses are the workshop-floor managers in the health markets. Nurses have the capacity to balance both sides of any healthcare equation: cost versus access-embedded in the quality of care. Nurses are the ones responsible for care, and are affected by both global health goals and trends. And nurses are the ones who can best benefit from improvements like better workplace conditions, and higher structural efficiencies driven by technological innovations in the health industry.

Emerging technologies which offer competitive promise include: Pervasive computing: Pervasive computing involves using universal, inter-connected computing devices in the health environment.

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Creativity has made Hong Kong epicentre of financial capitalism

We landed in Hong Kong on the morning of December 8, 2009, from Johannesburg, South Africa.

The purpose of my visit was two fold. First to attend an international conference on Engineering Management and chair the Technological Entrepreneurship Session. Secondly, to serve as an international evaluator for Hong Kong's Research Grant Council applications for 2010 and beyond. An evaluator provides intellectual and investment views on the strategic positioning of Hong Kong in technology and business education in promoting long-term economic competitiveness.

According to all major economic indicators, Hong Kong is comparatively successful and prosperous. The future is a real business in Hong Kong: the average life expectancy is 81.6 years.

The goal of the Hong Kong Government is to be a creative society underpinned by a creative knowledge-based economy with the key economic drivers being innovation and technology. In this knowledge-based economy, creativity and innovation must be imbedded in all tertiary education, industrial business research and economic development engagements.

The strategy is to couple financial resources with educational needs and professional services to upgrade the entrepreneurial skills of their society so as to stimulate economic competitiveness.

Hong Kong is a society driven to achieve super economic efficiency and competitiveness.

Hong Kong is thinking boldly and broadly with a purity of faith in a better future. The territory is successful in both standard-of-living and quality of life. There is a vast difference between a standard of living and quality-of-life.

A standard of living is based on income earned. The quality of life is the economic enjoyment of thousands of minutes between accomplishments. Having money is just one aspect of wealth. To a sick person wealth is health. Hong Kong society seems to have achieved a balanced-wealth-health equation.

African countries wanting to

"Economic excellence is not wished for; it is designed, developed and nurtured. Nature has abundance, but each country must figure out how to use and exploit that abundance."

(Professor Michael Ogembo Kachieng'a)



Letter from Hong Kong/

Writing from Johannesburg, South Africa, Michael Ogembo Kachieng'a

REGIONAL FINANCIAL HUB

In the latter part of the 20th century Hong Kong's economy progressively moved from textile and manufacturing to financial services and logistics as the major Asian business interface to the world.

In 1999 there were already 100 banks operating in Hong Kong.

By 2000 Hong Kong, after Tokyo, was the second largest international financial centre in the Asian-Pacific Region.

Although Hong Kong was rather unimpressive with few money centres in the Mainland China economy.

Many manufacturing firms

be economically competitive must emulate the laissez-faire thinking of Hong Kong. Economic excellence is not wished for; it is designed, developed and nurtured. Nature has abundance, but each country must figure out how to use and exploit that abundance. That is where the genius of development resides.

Compared to other cities on Mainland China, the quality of roads and buildings is of a higher standard. One thing that is evident in Hong Kong is the optimisation of space utilization. Space is expensive in Hong Kong. Even owning a flat is beyond the reach of most workers. Despite Hong Kong's reputation of being intensely urbanised, the territory has initiated several projects for environment protection. Public

in Hong Kong moved their operations to Mainland China for cheap labour and broader domestic markets.

Applied from Hong Kong, market facilities for many firms from the Mainland, Hong Kong is deeply involved in the underpinnings of global financial engineering transactions for China.

Although Shanghai is becoming a major player in international investments for China, it is Hong Kong which has superior expertise in the international financial markets.

For many years Hong Kong and Singapore have been the main financial hubs of the region.

The Hong Kong Territory, which is about 1104 km squared, consists of Hong Kong.

Island, Lantau, Kowloon Peninsula and The New Territories as well as some 260 other small islands. In 2007 Hong Kong's population was about seven million. Hong Kong has a fertility rate of 0.95 children per woman, one of the lowest in the world. However, the population continues to grow due to the influx of immigrants from Mainland China, approximately 15600 per year. Hong Kong's population enjoys a high degree of freedom guaranteed by the

Basic Law. About 90 per cent of the population practices a mix of local religions most prominently Buddhism, Confucianism and Taoism.

The name Hong Kong did not appear in written record until the Treaty of Nanking in 1842.

In 1860 after China's defeat in the Second Opium war, Kowloon Peninsula South of Boundary Street and Stonecutters Islands were ceded to Britain under the Peking Convention. In 1898 Britain obtained a 99 year lease to a collection of islands now commonly known as Hong Kong. The territory has remained unchanged to the present day. As a result of the lease agreement, Hong Kong in the late nineteenth century became a major trading post for the British Empire.

The Sino-British Joint Declaration of 1984 formalised transferring the sovereignty of Hong Kong to the People's Republic of China in 1997. The declaration stipulated that Hong Kong would be gov-

erned as a special administrative region, retaining its laws and high degree of autonomy for at least 50 years after the transfer. The Sino-British declaration clause of one country with two systems gives the territory special political privileges not enjoyed by the southern China provinces.

In over 50 years Hong Kong remained the pinnacle of financial capitalism in the Asian region and amongst the freest capitalist systems in the world. What was outstanding during all those years was that the territory politically belonged to China. It was just a matter of time before Hong Kong would return to China politically and economically.

Hong Kong's political elite are however worried that Mainland China might one day interfere with the region's democracy.

FINANCIAL GEOGRAPHY

Hong Kong is the epicentre of financial capitalism in China. The silent wealth of China is driven by financial dealings in Hong Kong.

In the early part of the Twentieth Century textile and manufacturing industries were the backbone of Hong Kong's economy. When the Chinese Government declared the Shenzhen area a Special Economic Zone in the early 90s and decided to establish Hong Kong as the main intermediary of foreign investment to Mainland China, the export trade in the region simply accelerated, making Hong Kong the gateway for China's exports and the financial hub of the southern China provinces.

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Domestic politics imperil IMF deals in Europe reforms

By PETER APPS

From Ukraine to Iceland, domestic politics and popular discontent are threatening International Monetary Fund (IMF) reform deals, unsettling investors who view them as vital for financial recovery.

At the height of the global crash, many governments promised painful belt tightening in return for IMF loans but selling these economic reforms to their electorates has proved tough.

That leaves countries facing standstill with the fund, which could panic markets and leave governments without the cash for public salaries and sovereign debt payments.

"There were a lot of unrealistic expectations last year about how easily these reform packages would solve crises," said senior research fellow Vanessa Rossi at London-based think tank Chatham House.

"But like any debt reorganisation, it's going to be a difficult, messy process and they are going to get stuck from time to time. It's going to last years. You can't ignore the democratic process."

Iceland's economic and package was thrown into doubt this week when its president rejected a bill to repay Britain and the Netherlands more than \$5 billion lost by savers after its banking sector imploded in 2008.

The "icecave" bill is opposed by 20 per cent of Icelanders who complain it leaves them bearing the cost of the banks' mistakes. But rejecting it could imperil EU membership efforts, financial support from fellow Nordic countries and an IMF lifeline. Ratings agencies downgraded Iceland after the move.

Almost all mainland Europe's most exposed economies, notably Ukraine, Latvia, Hungary hold major elections this year.

—Reuters

SAFARI TO YOUR DESTINY

Words PROFESSOR MICHAEL O. KACHIENG'A



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Life is a journey with a defined destination. You cannot control the length of your life, but you can control other dimensions: its breadth, its depth and its height. It is within these dimensions that one designs the roadmap to his or her quest to obtain destiny. The length of your life is determined by your spiritual purpose. Life is a participation sport, not a spectator sport. Take responsibility in designing your destiny because nobody knows your spiritual roadmap except you.

In the modern global culture we produce huge number of books to assist us organise our business services, production schedules and transport logistics and our careers. We rarely produce books that speak directly about mental or spiritual selves, and it is these factors that guide us to our destiny. The destiny design is guided by innermost personal choices and human sensibility.

Destiny is a quest which draws on desire with spiritual default. Spiritual default is commonly considered as luck. This simple truth is too complex for most of us to comprehend. The world simply cheers you in your marathon to your destiny. The winners of the destiny marathon are deemed successful in material and spiritual wealth.

The road to one's destiny is not an easy one. If you cannot figure out your roadmap to your destiny, then you are 'dead-weight' to yourself. You end up behaving like a robot programmed to live other people's lives.

Life is all about choices. The choices we make determine what we get. Mathematically, your destiny is the sum

total of your choices. Fortunately, for us all, we only have two choices to make – less or more. In the first choice, one has to read less, learn less, think less, know less, produce less, earn less, become less materially or spiritually, and contribute less to the society.

In the second option, you read more, learn more, think more, know more, produce more, earn more, and finally become more and contribute more to the society – materially or spiritually. Our success depends on the degree of our preparation and expectancy. When you expect miracles, you receive miracles. When you expect more, you become more. Mother nature hates a vacuum.

Every life form seems to strive to its maximum – except human beings. How tall will a tree grow? As tall as it can possibly grow! Human beings, on the other hand, have been given the dignity of choice. You can choose to be less or more. Why not stretch up to the full measure of the challenge and see what you can become in business or life.

As James Crook says, "A man who wants to lead the orchestra must turn his back on the crowd."

The above quote is true in mapping your destiny. Those who become winners always start with the crowd, but eventually leave the crowd behind. The crowd never wins. Winning is a lonely process, but you can share the joy of winning with the crowd. The mathematics of life is a balanced

equation. The more you give out, the more you receive. The purpose of science is to study nature. The problem with science is that it reveals more mysteries than it explains. But beyond science there is divine intelligence which is the source of miracles.

One of the startling facts of modern science is that this universe is not a finished product. Creation is all around us – new worlds are being formed, cosmic energy is taking shape in a million different moulds. Above all, your destiny is being moulded as you journey towards it. Success is not so much what you have but the person you become. What you become depends mainly on the people you interact with and books you read. Success is not to be pursued; it is to be attracted by the person you become.

The roads to one's destiny are paved with faith. *Faith is the process of believing in the best of you, hoping for the best of you and expecting the best of you.* Commanding the best of you leads you to the best of the Universe. Nature believes in mathematical balance. The best in you can only be balanced by the best in nature.

You cannot clone the best. You cannot fake or imitate the best. You can only become the best through your personal efforts. Becoming the best is a progressive empowerment effort. The best attitude leads to the best aptitude. You become the best by personal design and attitude. Without focussing on the roadmap of your destiny, you simply stumble through life. Destiny is a personal process based on personal choices. Desire is simply a possibility seeking expression.

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DESTINY IS NOT A MATTER OF CHANCE,
IT IS A MATTER OF CHOICE; IT IS NOT A
THING TO BE WAITED FOR, IT IS A THING
TO BE ACHIEVED.”

William Jennings Bryan

The worst crime you can commit to yourself is to be casual about your life. Casualness in life leads to casualties. Do not run after success; rather become the success you want to be. *With the right attitude, you can transform frustrations into fascinations.*

Devotion to your destiny generates faith. Of all tragedies that could befall a person, none is worse than loss of faith in oneself. Faith is a powerful motivational driver to your destiny. You must remain focussed on your safari to your destiny and leave the world a better place than you found it.

Do not waste time blaming your family or yourself for present conditions; most of the greatest and most successful people started their lives with a handicap. Benjamin Franklin, Abraham Lincoln and Napoleon all started their lives in poor homes. Use your present conditions to jump-start your marathon to your destiny. Destiny comes from within, not from without. All your discordant conditions must be cured in your own thought first. By thought you design your destiny; by action you reach your destiny.

The biggest mistake you can make is to underestimate your power to develop and to accomplish. Destiny is not a thing that awaits you at some far-off shrine. *Your destiny lies in doing well in whatever you are doing now.* It is more a matter of mental attitude than of mental capacity. You don't make yourself successful by remembering the history of your failures, but rather by taking responsibility in mapping-out your future success. Guided focus on your destiny empowers you to resilient. Resiliency is the signature of greatness, be it a person or organization or a nation.

Plant an orange seed in the ground and it will attract to itself from the earth, the water and air it needs for its growth. Plant the seed

of your desire in your mind and it forms a nucleus with power to attract everything from the universe needed for its fulfilment. But just like the orange tree needs sunshine, air and water from which to draw the energies necessary to bring forth a perfect orange tree bearing oranges, so does your seed of desire need the mental sunshine of faith and will power for the marathon to your destiny. *The rule of destiny design: Have great ambition and develop pro-active confidence when faithfully walking towards it.*

Do not let your yesterday haunt you. Do not let your present exhaust you. Do not let your future terrify you. Success in life is about moving towards your imaginations, not your history.



THERE ARE ONLY TWO WAYS TO LIVE YOUR LIFE. ONE IS AS THOUGH NOTHING IS A MIRACLE. THE OTHER IS AS THOUGH EVERYTHING IS A MIRACLE."

Albert Einstein

