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If there are any questions, comments, or concerns, please do not hesitate to contact Cenfri by visiting www.cenfri.org. This document is available in PDF format on the website.



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Cenfri is an independent, non-profit think tank whose mission is to promote financial inclusion in Africa. It does this by supporting the development of financial systems that allow consumers, particularly low-income consumers, to access and use appropriate financial services.

Cenfri works at the policy and regulatory level as well as the market development level. Its work complements the efforts of government and the private sector, with the aim of facilitating better regulation to enable the market provision of financial services. The centre does this by conducting research, providing advice, developing capacity-building programmes for regulators, market players and other parties operating in the low-income market, and supporting market innovation.

### Introduction

In our increasingly globalised world, the accelerating rate of change, the systemic relationship between factors and growing complexity are making it difficult to make informed decisions. At the same time, it makes little sense to formulate strategy based on analysis of minute details in isolation. However, most of us lack the time required to thoroughly scan the horizon for emerging trends—other than those directly entering our line-of-sight or otherwise regarding our particular specialisations. While we may be able to stay on top of the news and grasp the gist of the major issues, it is often helpful to take a step back and scan the larger, interlocking environments from which trends and issues emerge.

Finance Forward is primarily concerned with inclusive financial services in Africa. However, since the driving forces in one region are bound to affect other areas of interest in geographically disparate locations, this document will be of interest to anyone with an eye toward trends which will be shaping the world in the years to come. Finance Forward synthesizes disparate ideas and information from the business, economic, social, technological, political, and physical environments, which are constantly at work behind the scenes, co-producing the drivers of change which eventually make their way into our consciousness.

The Centre for Financial Regulation and Inclusion (Cenfri) is working actively with stakeholders in the realms of financial inclusion and financial sector development to establish common understanding and to coordinate appropriate and informed action going forward. By 'widening our gaze', even if just for a defined period (this document roughly covers information published in the second quarter of 2010), we can begin to recognize areas of strategic importance, coordinate research efforts with one another, and spot further developments as they take shape.

While it is impossible to thoroughly scan every periodical released, *Finance Forward* is the product of a balanced and robust stream of information coming from journals, newspapers, blogs, magazines, quarterlies, special reports, and other periodicals. (A list of the periodicals scanned is included at the end of this document.) The main section of the document consists of articles which have been reduced in length—with the most relevant information retained. In most cases, the articles have been shortened to less than 50 percent of their original length. Rather than summarising the articles, they have been directly quoted, with the exception of a few longer journal articles. The only interpretation provided is in the form of an editorial, which follows this introduction.

In the editorial, Cenfri speaks to four of the biggest themes that emerge from the articles selected. Each theme

has been coded with a colour, which indicates the content related to that theme throughout the remainder of the document

A typical entry contains the title of the article, its author, the publication, the date published, and where the article can be found. In the case of online sources, homepage linking is used rather than deep-linking directly to articles. Each paragraph of text is printed in single quotation marks intended to denote that the text does not represent original work by the editor or Cenfri.

In the selection of articles, every effort has been made to select only those with an outlook toward the future or that carry implications for how the future will develop. The intention is not to review breaking news, although some news stories may be included due to their implications for the future. The intention of *Finance Forward* is rather to collect and present information for the purpose of synthesising an understanding of recent trends, driving forces, and issues. This helps each of us to interpret the contents based on the context of our own institutions, projects and aims and, finally, to create appropriate institutional strategy.

-Joel D. Carlman: Editor, Finance Forward



### **Editorial**

The analysis contained in this document focuses on recent developments in the economic, business, social, technological, physical, and political environments influencing the development of inclusive financial services in Africa and beyond. Some trends have been emerging for years, while others have newly arrived on the scene. We have identified four major themes emerging in the first half of 2010.

Two of these themes are directly shaping the landscape of financial inclusion: 1) developments in mobile money, and 2) the increasing connectivity of Africans through computing and telecommunications technology. The other two major themes involve broader, contextual challenges and opportunities: 1) Africa's struggle to balance the need for development and the escalating challenge of managing a changing climate; and 2) Africa's rise as a strategic region for investment, resource exploitation, innovation, and opportunity by major business and government players in both the East and West.

In the articles that follow, these themes are highlighted. At Cenfri, we believe that by keeping an eye on the various environments at work in the background of our interests — financial sector development and financial inclusion — we are better poised to take advantage of opportunities, identify trends, make research decisions, allocate funds, and work strategically with our partners. The material provided may illuminate trends other than those included in our themes; or they may inspire ideas we have not clearly delineated. It is our hope that this snapshot of recent developments can be synthesised uniquely by each reader and that this analysis proves both insightful and useful in the context of your organisation.

The four themes identified below are highlighted with a distinct colour, which can be followed throughout the entire selection of articles. Therefore, the document can be approached in a variety of ways: linearly, by theme, by environment, by scanning the titles and keywords at the beginning of each article, or by consulting the keyword index at the end of the document.

### **Theme 1: Money Goes Mobile**

The transaction environments of both poor and rich, once dominated by cash, are increasingly shifting to mobile devices and cards. In a reversal of traditional roles, developing countries, rather than rich ones, are taking the lead in this trend through innovative mobile money models and technologies—with African companies setting the standard. The traditional understanding of microfinance institutions as 'lenders to the poor' is changing as innovative savings and insurance options are pioneered. On a global scale, foreign investment is pouring into the telecommunication industry in Africa—largely in pursuit of mobile banking market share. Various players are experimenting with models that will

allow them to profitably provide financial services to the poor.

Although mobile money is not exactly a new idea, it is taking on a new level of significance. Industry participants are making big bets on the continued growth of mobile money transfers and mobile banking. As a result, the nexus of mobile network operator (MNO) and bank interests is the site of both innovation and tension. Mergers are expected to increase amongst big telecom players, and—in uncertain or strict regulatory spheres—MNOs are even buying banks to shore up their mobile banking operations.

The changing face of mobile money is raising questions in the social sphere. For example, how do the concepts of identity and community take on new meaning in the unfolding transaction environment? Increased connectivity through communications technology improvements is changing the way people interact and handle their money. The innovative implementation of these technologies along with inexpensive, feature-rich mobile hardware is leading to new ways of offering inclusive financial services.

#### Theme 2: Africa Is Coming Online

In an increasingly connected world, Africa's prospects for the future are tied to its ability to nurture what some describe as its 'booming tech space.' Fibre-optic cables are connecting the continent to the high-speed data-processing centres of Europe and Asia, and Africans are gaining access to cutting-edge information and communication. They are using computers and mobile phones to 'leapfrog' the years of innovation that originally led to the technology's production in the developed world. Many say that Africa is entering a 'new era' as a result of cheaper and faster broadband access.

The devices used to access broadband internet are also getting cheaper and faster—and they are increasingly mobile. Developments in 'learning computers,' location-based technology, and cloud computing will soon be influencing the way Africans innovate. Through breakthroughs in nanotechnology, hardware improvements for computers and mobile phones are accelerating while costs are falling. Though not every African will have an iPhone in the next few years, mobile technology and creative power solutions—such as portable, localised solar power—will provide even the most remote Africans with the opportunity to get connected.

Being more connected to the world does not only bring benefits. Employing networked technology also increases vulnerability to security risk as well as the unforeseen consequences of networked behaviour. African financial sector development is occurring in the midst of these progressively more networked environments. At the same time, there is a marked increase in global concern regarding cyber crime,



warfare, and terrorism. The more Africa plugs in—to local or global networks—the more securing the technology becomes a concern. Around the world, corporations, governments, and individuals alike are gearing up to guard against such cyber threats.

### Theme 3: The Balancing Act – Climate & Growth

In the coming years, Africa will encounter the challenge of managing its own development and resources in the face of a changing climate. African countries need growth, which requires cheap (often dirty) power. At the same time, they are facing pressure to explore renewable energy sources, manage water resources, and develop sustainably. The balancing act between climate and growth can be a tradeoff (in the case of choosing cheap coal over more expensive renewables), but in the end, both concerns must be addressed. Water shortages and other environmental stresses, if not managed properly, can lead to instability and conflict.

Advances in technology are seen as an important part of the solution — especially in agriculture and energy. Many are hoping for an 'African Green Revolution.' With food prices projected to linger at high levels, agriculture takes on even more importance for the overall economic growth — and human development — of the continent.

More and more, local solutions are being developed and local action deployed. Increased education and understanding about the impacts of climate change are contributing to localised solutions to African challenges. Many experts have called for an increased focus on African research to confront the unique challenges faced over the coming decades. African governments are also collaborating with other developing countries, learning from the experiences of developed countries, and looking to the private sector for partnerships.

#### Theme 4: Africa In The Middle

Africa has emerged from the financial crisis of 2007-2009 less battered than the developed economies of Europe and North America. International investors are realising that Africa now offers the highest prospects for growth of any region. The continent is finding itself the centre of attention in several ways.

Asian investment is pouring in. China has largely been criticised for exploiting African resources, but that picture is changing as China invests in African infrastructure, provides aid, and supports African initiatives. Indian companies are investing as well, especially in telecommunications. They are also importing valuable skills. Meanwhile, the West has been criticised for taking a paternalistic view of Africa. They are being challenged to see Africa not as a charity case, but as an opportunity—a breeding ground for innovation and investment opportunities.

South Africa, as the largest economy in Africa, is also staking claims in the 'new Africa.' South African firms are

moving strongly into the continent seeking markets for their goods and services, and learning a lot about the 'African consumer' in the process.

Several recent developments in Africa complicate the mix. Oil production will come online in several African countries over the next few years (even as it recedes in importance in other African countries like Angola), creating an opportunity for rapid growth. It is also gaining the attention of foreign governments anxious to meet their own citizens' demands for oil. But oil runs the risk of fuelling corruption, stifling diversification and even funding conflict.

Foreign involvement and local action are both rapidly developing African infrastructure, which is changing the landscape of business on the continent. Africa is now catching the eye of businesses and governments in both the East and West for its hundreds of millions of consumers — with hundreds of millions more on the way over the next several decades."

Africa will grow ever more connected as the world globalises further, tying its fate more closely to that of the global economy—with all the inherent risks and benefits.

As businesses move into Africa, the need for African talent, skills, and innovation will grow. The myriad opportunities will come into conflict with stubborn African challenges such as devastating disease and low levels of education. The intersection of these issues will greatly influence government policy and private sector action around the provision of and innovation in inclusive financial services.

Beyond the themes included above, several other articles of interest have been included. Some of them feature more general trends in social development or look at changes in management learning that can be applied to supplying inclusive financial services. The topics range from using gaming to solve social problems to guidelines around crafting adaptive policies in an uncertain world.

The articles that follow are sorted into 'environments'—business, economic, social, technological, physical, and political. It is important to note that there is significant overlap in the themes and ideas contained in this document. The picture of financial inclusion is constantly changing, and it is important to develop a flexible, learning approach to the complex interaction of forces at work. Please enjoy.



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### **Business Environment**

2010-001

### Uncaging the Lions: Business is Transforming Africa for the Better.

Anonymous. *The Economist*. Vol 395(8686), 10 June 2010: 78.

**Keywords:** Business, Entrepreneurs, Foreign Direct Investment

'In 2000-08 Africa's annual output grew by 4.9% (adjusted for purchasing-power parity), twice as fast as in the 1980s and 1990s and faster than the global average of 3.8%. Foreign direct investment increased from \$10 billion to \$88 billion—more than India (\$42 billion) and, even more remarkably, catching up with China (\$108 billion). The Boston Consulting Group notes that, since 1998, the revenues of Africa's 500 largest companies (excluding banks) have grown at an average of 8.3% a year.'

'[...] [P]essimists have always had three strong arguments. One is that African politics is dysfunctional. Warring strongmen can undo the progress of decades in weeks. A second is that the African economy is unduly dependent on the resource sector. A third is that Africa's growth does too little to benefit the poor. But over the past decade, all these objections have weakened.'

'The continent's inflation rate has been reduced from 22% in the 1990s to 8% since 2000. The World Bank's annual "Doing Business" report ranked Rwanda as the world's top reformer this year, based on the number and impact of steps to promote entrepreneurship there. Mauritius was ranked 17th of the 183 economies covered by the report, ahead of lots of richer places.'

'It is true that Africa has depended on its abundant natural resources; and they will be a growing advantage in years to come. The hectic pace of growth in the emerging world is not only pushing up commodity prices but also intensifying competition for the right to drill the continent's oil and mine its minerals. Chinese companies in particular are wooing African governments with lavish expenditure on infrastructure.'

'As to the poor, McKinsey points out that, thanks to rising living standards, some 200m Africans will enter the market for consumer goods in the next five years. The consultancy also notes that the continent's working-age population will double from 500m today to 1.1 billion in 2040. Foreign firms are likely to start using Africa as a base for manufacturing as well, as Europe's population shrinks and labour costs in India and China rise.'

'Nakumatt, a Kenyan retailer, allows people living abroad to buy vouchers for its stores and then transfer them to their African friends and relatives, making remittance payments smoother. Other bottom-of-the-pyramid innovations include the Jiko, a portable charcoal stove that can reduce fuel consumption by 30%; the Q-drum, a doughnut-shaped plastic container that can be used to transport water by rolling it along the ground; the Weza, a foot-powered generator that can be used to charge cell phones and radios; and a \$20 washing machine made from discarded motors and iron.'

#### 'Lions and bulls'

'[...] [S]uccessful entrepreneurs can point to countless examples of how business can improve people's lives. In Kenya, where the government has removed its dead hand from the telecoms market, mobile phones are ubiquitous; in next-door Ethiopia, where the government's grip is as tight as ever, only 2% of the population has phones. A few African lions are beginning to take their place next to the dragons and tigers.'

2010-002

# **Ongoing Boom Makes Africa Investors' Dream.** Anonymous. *Afrol News.* 24 June 2010. Online: Available at www.afrol.com

**Keywords:** Economic Diversification, GDP Growth, Foreign Direct Investment, African Business

'Many global investors still shy away from Africa, falling victim to the continent's outdated image of war, corruption, political instability, financial chaos and universal poverty and suffering. Investors opening their eyes to the African reality however are making the business of their lives on the continent, real numbers demonstrate.'

'A new report by Boston Consulting Group (BCG) shows that investors putting their trust in Africa already in 2003 made far larger profits than those investing in more conventional markets. Between 2003 and 2008, investments in Africa's leading companies yielded more than double profits compared to investments in US, East Asian or European companies.'

'BCG had identified 40 fast-growing African companies with global aspirations as an example of the continent's vibrant economy, terming them "the African challengers."'

'The BCG report explains the "keys to success" for the African challengers. "First they benefit from doing business in a place with many native advantages, including natural resources, cheap labour, and a fast-growing population that is unencumbered with legacy technology and systems."

'Second, the report says, "they enjoy a beneficial



business environment that includes market deregulation, national economic-development policies, and commodity prices that, for most of the past decade have been rising."

"Finally, they share the challenger mindset – a willingness to be bold and to recognise that a challenging economic environment is an opportunity to be creative and expand globally," the BCG analysis holds. A long-term business vision "not looking for quick profits" and an outstanding creativity in African firms are also emphasised.'

"While the Great Recession shrank most economies, Africa's was able to grow. In 2009, the continent's GDP expanded by 2 percent, while GDP dropped 4 percent in the United States, 2.8 percent in the European Union, and 1.5 percent in Latin America," the BCG report sums up.'

"The Lions comprise Algeria, Botswana, Egypt, Libya, Mauritius, South Africa and Tunisia, and their GDP per capita exceeds that of the so-called BRIC nations of Brazil, Russia, and China. In 2008, the GDP per capita of these two groups was US\$ 10,000 and US\$ 8,800, respectively."

'Indeed, for the first time in history Africa has by now already become an economy of importance. Africa's collective GDP, at US\$ 1.6 trillion in 2008, is now roughly equal to Brazil's or Russia's. Even the African consumer market is now of global importance: While Africa still has fewer inhabitants than India, it by now has a higher number of middle class and middle income households than India.'

'The statistical annex to the McKinsey report provides impressive facts about the emerging rise of Africa, begun in the 2000-08 period. During that time, only five African countries lived up to the cliché of chaos and stagnation, with average GDP growth close to zero or even negative: the Central African Republic, Côte d'Ivoire, Guinea-Bissau, Liberia and Zimbabwe.'

'The remaining 48 African countries showed annual average growth rates between 2 and 21 percent. 38 out of the continent's 53 countries had annual GDP growth rates of 4 percent or more during the entire period, mostly by far exceeding their population growth and as such also rapidly increasing their GDP per capita. A sizable middle class therefore is about to emerge in most of Africa.'

'Several African economies are already seen as "diversified", with the GDP share of manufacturing and services exceeding 70 percent. These include Cape Verde, Egypt, Lesotho, Mauritius, Morocco, Namibia, South Africa and Tunisia. All these diversified economies grew by 4-6 percent annually in the period.'

"While the McKinsey report documents the successes already achieved in Africa, it is even more optimistic about the future and potentials. The analysts project that at least four groups of industries in Africa - consumer-facing industries, agriculture, resources, and infrastructure - "together could generate as much as US\$ 2.6 trillion in revenue annually by 2020, or US\$ 1 trillion more than today.""

'With urbanisation rates similar to China and the world's fastest growing cities, the middle class is steadily growing

and Africa's construction sector is living its greatest ever boom, for the first time becoming a major industry on the continent.'

'Direct foreign investments into Africa only totalled US\$ 9 billion in 2000, but increased sevenfold to US\$ 62 billion in 2009. And while investors earlier only focused on Africa's natural resources, new investments focus on Africa's booming construction, tourism, banking and telecommunication sectors, the McKinsey analysts found.'

'[...] McKinsey finds that productivity in African transition economies already is as high as in India and China, while labour costs are far lower. Only remaining red tape and poorer infrastructure makes production costs in Africa somewhat higher than in Asia's giant economies.'

'The McKinsey and BCG reports agree that Africa still has some major challenges to overcome to secure its exit from poverty. This includes the need to remove inter-African trade barriers; invest massively in infrastructure and communication; strongly improving the education sector; and improving public health throughout the continent.'

"By 2040, Africa will be home to one in five of the planet's young people and will have the world's largest working-age population," surpassing China, the report emphasises.'

'This not only will have to influence Africa's future key place in global production, it will also make Africa a major market of the future. The number of African households with discretionary income is projected to rise by 50 percent over the next 10 years, reaching 128 million. "By 2030, the continents' top 18 cities could have a combined spending power of US\$ 1.3 trillion," the McKinsey report projects.'

[49%]

#### 2010-003

# A Seismic Shift in South Africa's Consumer Landscape by Bronwen Chase, Thabiso Legoete & Arend van Wamelen. *McKinsey Quarterly.*June 2010. Online: Available at www.mckinseyquarterly.com

Keywords: South Africa, Race, Consumer Preferences

'Already, there is a stark difference between the shopping experiences of black and white consumers, a recent McKinsey survey found—a difference that was even more marked among the most affluent respondents.'

'For starters, simply getting to the shops is a much greater effort for black consumers: 44 percent of black respondents traveled more than 15 minutes on their most recent food-shopping trip, while just 10 percent of white South Africans did. The figure for black South Africans is also much higher than anything we saw when surveying shoppers in other emerging markets, such as Brazil (22 percent) and India (26 percent).'

# Business Environment

'The number of upper-income black households is growing at more than 20 percent annually; within the next few years black households will dominate the living-standards measure (LSM) 9–10 band, which accounts for about a third of South Africa's grocery and apparel spending. Black households are already by far the largest group in the middle-income (LSM 5–8) market, where their numbers continue to grow steadily.'

'[...] 49 percent of middle-income black consumers agree with the statement "I purchase branded food products because they make me feel good." Only 26 percent of middle-income whites say the same. Among upper-income blacks, the number jumps to 65 percent, while for whites in the same category it falls to 22 percent.'

'[...] 57 percent of both middle- and upper-income blacks believe that brands are important when buying [jeans], against just 18 percent and 27 percent for middle- and upper-income whites, respectively. The divergence is even starker in electronic goods: 71 percent of upper-income blacks—but only 18 percent of comparable whites—agree with the statement [...]. Among middle-income groups, 50 percent of blacks but only 10 percent of whites agree.'

'The importance of brands to black consumers may be related to their low level of trust in retailers and consumer goods. An astonishing 71 percent of black consumers agree with the statement "I have to pay careful attention so stores do not cheat me." In electronic goods, more than 60 percent of black consumers agree that "products with no brands or less-known brands might be unsafe to use." In both cases, far fewer whites concurred.'

'Among South African grocery shoppers [...] we found no fewer than six distinctive segments. These range from "Thrifty," the core discount shopper unwilling to pay more for convenience, brand, or quality (22 percent of middle-income and 23 percent of higher-income shoppers), to "Flaunty," the with-it, brand-conscious shopping enthusiast who is willing to pay more for quality (22 percent and 15 percent, respectively)—a surprising segment to encounter in the food aisle.'

'[...] 57 percent of black consumers (including 54 percent of those categorized as high income) agree that "my main concern when I shop for food is to save as much money as possible"—a higher percentage than we found in almost every other country we surveyed. At first glance, this would suggest that price conquers all, but a closer look at the segments supports a more nuanced approach.'

'People in the "Hasty" segment, for example, will pay more for fast, easy, quality shopping. They make up 10 percent of middle-income South Africans and a sizable 31 percent of their high-income counterparts.'

[50%]

2010-004

Massive Profits Follow S Africa's Northern 'Invasion' by Sarah Rundell. *African Business*. Issue 365 (June 2010): 40-42.

**Keywords:** South Africa, Foreign Direct Investment, African Business, Market-Seeking

'Following swiftly on the heels of its successful Nigerian launch in Lagos's first ever shopping mall The Palms in 2007, ShopRite is now taking centre stage in a new \$100m mall planned for the sprawling middle-income neighbourhood of Ikeja. The group says it is planning 70 new shops in Nigeria in the next decade with at least 20 of those located in Lagos.'

'Companies like brewing giant SABMiller, Standard Bank and telecoms group MTN have made expansion up the continent central to their growth strategies and a big factor in their phenomenal success.'

'It is just that more South African groups embracing finance, retailing, telecoms, consumer goods and services, galvanised by the saturated domestic market, are looking to the wider region than ever before.'

'Relatively unscathed by the financial crisis thanks to exchange controls and tight regulation, South Africa's financial services groups are leading the charge north. Standard Bank has made expanding into emerging markets its hall-mark with operations now in 18 African countries, most recently obtaining a licence to operate in Angola. The bank's continent-wide presence gives it the opportunity to participate in project finance and mining deals and trade finance facilities in a capacity vastly boosted in 2007 after selling a 20% stake to the Industrial and Commercial Bank of China.'

'Now the group can take on much bigger deals like its recent financing of the expansion of a coal power station in Botswana for \$825m over 20 years. In the first major transaction between the two banks, the deal was backed by a guarantee from Botswana's Ministry of Finance.'

'Johannesburg-based FirstRand has adopted a similar strategy, recently announcing plans to refocus activities on Africa and the region's growing trade and investment links with India and China.'

'In a cooperation pact with China Construction Bank—one of China's four biggest banks—First Rand says it is looking to establish a retail banking presence in Nigeria and Angola in the short term, seeking opportunities in the wake of Nigeria's banking crisis particularly.'

'First Rand has also said it is considering expansion in Tanzania, Uganda and Ghana.'

'Insurance companies are doing the same. Old Mutual is building its presence in countries like Malawi, Kenya and Zimbabwe, and Standard Bank subsidiary and South Africa's third-biggest insurance company Liberty Life has just moved into Kenya after acquiring a stake in the newly created CfC Insurance Holdings. SANLAM Developing



Markets, part of South Africa's second biggest life insurance group Sanlam, recently said it plans to adopt a more aggressive approach to expansion in Africa, having put its growth plans in the wider continent on hold last year to focus on protecting existing business against further shocks in the wake of the global financial crisis.'

#### 'Attacking the consumer market'

'Consumer businesses and telecoms companies have also expanded north—none better renowned than telecoms company MTN, which since 2002 has expanded from its South African home to become the continent's biggest mobile telephone operator with operations in 10 African countries in which it commands an average 38% market share.'

'Other companies on the expansion trail include South African consumer goods producer Tiger Brands, which has bought a 51% stake in local businessman Chris Kirubi's Kenyan beauty products manufacturer Haco Industries.'

'South African media giant Naspers' pay television provider MultiChoice has expanded into Kenya with offerings that include the English Premier League and Channel O music. Retailers like ShopRite and Massmart are tapping unmet demand for the 'one-stop shop' experience.'

'ShopRite, which owns the ShopRite and Checkers supermarket chains, is now Africa's biggest grocer with supermarkets in more than 10 African countries, and the group links its recent profits to recession-hit consumers flocking to its discount stores.'

"The best format is to aim for the lower end with good value offerings," says retail analyst Zaheer Joosub at Citigroup in Johannesburg. "That said, retailers are building up a strong presence hinged to the growth of these economies as the middle class expands and shoppers become more sophisticated."

#### 'Successful second wave'

'Commentators believe South African companies now have a less prickly reception in the wider region compared to the past because Black Economic Empowerment (BEE) has made South African companies more acceptable.'

"Some companies have not always gone in successfully, often with inappropriate models, or in too South African a style that has been perceived as flashy," says Investec's Michael Power. "The more straightforward offerings work best."

'Unlike rivals in other African emerging markets, South African companies can access the long-term finance needed to fund expansion thanks to the relatively deep local capital markets.'

#### 'Getting it wrong'

'Power believes it is easier for South African companies to establish in southern Africa and English speaking countries. "The further north they go, they get pushed back," he says. South Africa's smaller mining companies have also

faced stiff competition in the wider region from Chinese and Indian competitors.'

'Retailer ShopRite's foray into Egypt went wrong because of poor understanding of local culture, says Citigroup's Joosub, who notes companies do much better if they work with local management rather than fly in executives. [...] [A]s Africa's economies grow, expansion through the region is a natural and obvious strategy for South African companies seeking growth.'

#### 2010-005

Mergers of Wireless Companies are Expected to Rebound by Kevin J. O'Brien. *The New York Times*. 29 March 2010: B3.

**Keywords:** Mergers, Acquisitions, Wireless Companies

'With global markets on the upswing and governments around the world looking to blanket populations with mobile broadband service, industry experts say the wireless companies are poised for a wave of mergers and deals.'

'While the growth in demand for mobile data helped operators weather the economic downturn, the global financial crisis slowed the pace of mergers and acquisitions.'

'The value of global transactions in telecommunications companies fell to \$80.4 billion last year from a peak of \$284.7 billion in 2005, according to Mergermarket, an analysis firm. But already this year, deal-making has picked up and the market is on track to grow 50 percent.'

'[0]ther large transactions, like the \$10.7 billion bid from Bharti Airtel of India for African businesses owned by Zain, a Kuwaiti operator with networks in the Middle East, are [...] under way.'

'Most European mobile markets are mature and static, with a handful of operators typically competing for one another's customers. With cellphone market penetration rates around 100 percent, there is little room to grow and slim prospects of overtaking entrenched leaders.'

'[...] Gervais Pellissier, France Télécom's chief financial officer, said [...] "Also, growth in the future will come from mobile broadband, not voice, and for that you need the biggest possible network."

"When you look at the way telcos are approaching investments, they are looking for the business case to be nailed down, quantifiable," [Clare McCarthy, an analyst at Ovum in London] said.'

'[E]xpectations of greater merger activity this year are rising with global stock markets, which may give tele-communications executives more confidence that investors will not penalize their companies for pursuing large and ambitious transactions.'

"Right now, barring a reversal of the market repair through, for example, governmental intervention, I would expect mergers and acquisitions activity to increase," said

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Paulo C. Pereira, a partner in London at Perella Weinberg Partners, a financial services firm that advises telecommunications operators. While industry executives are in a cautious mood, he said, "the critical factor is that the market recovery holds." [49%]

#### 2010-006

**Bharti's Zain Deal Signals Swing to Asian Investment.** Anonymous. *African Business*. Issue 364(May 2010): 18.

Keywords: Telecoms, India, Asia, Mergers

'[...] [M]ajor investments in [Africa's] telecom sector have been pushed through and the promise is of more to follow.'

'[...] India's Bharti Airtel, a privately owned telecom giant, agreed a \$10.7bn deal to acquire the African assets (excluding Sudan and Morocco) of Kuwaiti company Zain. The new entity will be the fifth-largest of its kind in the world. It will boast operations in 18 countries, 15 in Africa added to those in India, Sri Lanka and Bangladesh, and a customer base of 42m in Africa alone.'

'MTN [...] acquired Verizon South Africa from Verizon Communications in the US and South Africa's J&J Group, marking a move into the provision of Internet access for the mobile communications company, indicating that they realise the importance of converging technologies for offering value added services to its customers in a saturated market.'

#### 'India leads Africa charge'

'It seems the investment trend is toward Asian companies who are less risk averse than their Western counterparts. Indeed, Asian companies are well experienced at growing markets in poorer regions and dealing with incomplete or inadequate infrastructure.'

'India's Tata Communications already has a significant presence in South Africa through Neotel, in which it holds a majority shareholding. Tata is also exploring opportunities in Kenya and Tanzania — markets which have been opened by the Seacom submarine cable. Tata, through its subsidiaries, will host Seacom's South African landing site and handle Seacom's administration, operations and maintenance.'

'Vodafone, the world's largest mobile phone company, successfully raised its stake in South Africa's Vodacom to 65% from 50% in 2008 for \$22.6bn from Telkom South Africa Ltd.'

'Vodafone also has a 40% stake in Kenya's Safaricom. With approximately 12m subscribers, Safaricom is a leading player in Kenya's mobile telecommunication network.'

'Etisalat, the Emirates-based telecommunications service provider, recently increased its stake in Ivorian company Atlantic Telecom to 100% with the purchase of the remaining 18% of shares for \$75m.'

'Atlantic Telecom holds majority shares in telecoms companies in Cote d'Ivoire, Benin, Togo, Burkina Faso, Central Africa Republic, Gabon and Niger, giving Etisalat, which reported net profits of \$2.4bn for 2009, a substantial presence in West Africa.'

'A restructuring of China's telecoms landscape has seen China Telecom's profits squeezed by competition. The company has publicly stated its intention to develop its presence overseas, with Africa being an obvious target. However, it has scrupulously denied any specific interest, and its rival, China Unicom, denied rumours it was part of a consortium that bid for Nigerian Telecommunications Limited (NITEL).'

[49%]

#### 2010-007

Four Keys to Reach the Unbanked with Mobile Money: Dispatch from the Mobile Money Summit by Mark Pickens. *CGAP Technology Blog.* 1 June 2010. Online: Available at technology.cgap.org

Keywords: Mobile Banking, Innovation, Unbanked

'[...] [M]obile money providers in many markets will need a more sophisticated suite of products to attract (a) an attractively large number of customers who (b) will be active and do a number of transactions per month. To do this, providers need fresh thinking about mobile money products that will work with the mass market.'

'[...] I was thrilled to have a chance to talk to [Olga Morawczynski] and [Daryl Collins]. Here are the four main highlights:

- 'The poor are active money managers. That comes through loud and clear in the financial diaries work Daryl and her colleagues did tracking every penny spent by 300 poor families in Bangladesh, India, and South Africa. The average family used eight financial instruments and passed more than US\$1,000 through them over the course of the year.'
- 'The poor will also pay for financial instruments, often in ways better off customers would not. In a 2008 survey of M-PESA customers, 21% said their mobile wallet was "the most important way" they save.'
- 3. 'There is some exciting product innovation already happening. At CGAP, we are particularly excited about the Safaricom-Equity Bank product partnership around M-Kesho, an interest-bearing saving account at Equity Bank with no fee to deposit money electronically from the M-PESA wallet. Equity also wants to offer a personal accident insurance policy and instant loans over the phone to M-Kesho customers.'
- 4. 'Designing new mobile money products need not be expensive, but it will take a different approach than many providers are accustomed to. Financial diaries and



other deeper ethnographic work can reveal deep insights about how low-income people manage their money, and where their pain points are (i.e. where they may be willing to pay for something better).'

[Link to Daryl Collins' Portfolios of the Poor presentation: http://www.cgap.org/gm/document-1.9.43994/Collins\_%20Portfolios\_of\_the\_Poor\_MMS\_May\_2010.pdf]

[Link to Olga Morawczynski's Mobile Savings Presentation: http://www.cgap.org/gm/document-1.9.43993/Morawczynski\_Saving\_via\_Mobile\_%20MMS\_May\_2010.pdf]

[48%]

#### 2010-008

**Mobile Operators and Banks: If You Can't Beat Them...Buy Them!** by Chris Bold. *CGAP Technology Blog.* 15 March 2010. Online: Available at technology.cgap.org

**Keywords:** Mobile Network Operators, Banks, Mobile Banking, Regulation

'Industry attention has often focused on the successes of M-PESA in Kenya and G-CCASH in the Philippines which have been permitted under progressive regulation in these two countries which allow nonbank actors like MNOs to offer mobile banking services. But regulators in other countries have been less willing to allow non-prudentially regulated actors to enter the market for branchless banking.'

'So does the recent spate of acquisitions mean that MNOs are changing their tactics and looking to acquire banks to ensure that they maintain control over services that they want to launch and to allow them to offer their customers a broader range of services?'

'Some operators have said that they are considering the acquisition of banking licenses as a possible strategy to get access to Africa's most populous market.'

'Even in countries like the Philippines where a non-bank based model is allowed, network operators seem to be coming round to the idea that they can offer a far broader range of financial services, such as savings or insurance products, if they have a banking license.'

'If this trend continues, what will the implications be for branchless banking? Firstly, it may be that M-PESA is shown to be the exception rather than the rule in the way that MNOs offer enter [sic] the market for mobile financial services. Secondly, it will put even more pressure on the large banks to form partnerships with MNOs or risk losing out to smaller banks who may be more willing to give up some level of control to, or even be acquired by, cash-rich MNOs.'

'Thirdly, it may increase the barriers to entry for smaller MNOs that do not have the cash to acquire a bank. And fourthly, and to the chagrin of those who think that the banks have failed in their efforts to reach large parts of the

population, it may reduce the pressure on financial regulators to allow a non-bank led model in the future.' [48%]

#### 2010-009

MTN Uganda Sees Explosive Growth in Mobile Money. Anonymous. *Engineering News*. 24 May 2010. Online: Available at www.engineeringnews.co.za

Keywords: MTN Uganda, Mobile Banking, Unbanked

'MTN Uganda, a subsidiary of South Africa's MTN, expects users of mobile money services to grow by three-quarters by 2012 giving people in rural areas the chance to build businesses and safely transfer money.'

'MTN Uganda expects more than two-million users of its mobile money services by the end of the year and 3,5-million users by 2012.'

'MTN Uganda has a market share of 60%. Kuwait mobile operator Zain and Orange also operate in east Africa's third largest economy.'

'Aletha Ling, executive director of Fundamo, the world's leading provider of software and services for mobile money to network operators such as MTN Uganda and banks, said the use of mobile financial services "changes the entire ecosystem of a village.'

'Juniper Research has estimated that more than 500 million people around the world will use mobile money transfer services by 2014, principally in developing countries.'

'The telecom trade body GSMA has predicted that operators could make \$5-billion from financial services by "banking" 364-million unbanked people by 2012.' [36%]

#### 2010-010

**M-Pesa Meets Microsavings With Equity Bank Deal in Kenya** by Jim Rosenberg. *CGAP Technology Blog.* 18 May 2010. Online: Available at technology.cgap.org

**Keywords:** Microsavings, M-Kesho, Kenya, Mobile Money

'[...] Safaricom and Equity Bank were joined by Kenyan President Mwai Kibaki as they announced a new product called M-Kesho, an interest-bearing savings account. Kenya's 9.4 million M-PESA users will have access to mobile microsavings, microinsurance, and other banking services with Equity Bank, a CGAP project partner.'

'M-Kesho, will give millions of Kenyans a safe, cheap alternative to keeping cash under the mattress.'

"Now, Kenyans will have self-service savings accounts on cell phones. When these accounts are linked though M-PESA, we will be the most-banked country in Africa and the

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developing world," said James Mwangi, CEO of Equity Bank.'

'Speaking in Nairobi, CGAP acting CEO Alexia Latortue said, "Today, Kenya is sending a message to the world: poor people want savings accounts. Mobile banking is a powerful way to deliver savings services to the billion people world-wide who have a cell phone but not a bank account."

[48%]

#### 2010-011

### MMS 2010: Standard Bank - Questions Remain Over Mobile Money. Anonymous.

*Mobile Business Briefing.* 25 May 2010. Online: Available at mobilebusinessbriefing.com

**Keywords:** Standard Bank, Mobile Money, Mobile Network Operators (MNOs)

'Coenraad Jonker, director of community banking with South Africa's Standard Bank, says he has three big questions about mobile money: what will drive its large-scale adoption?; what are mobile operators' motives?; and does the operator want to control its new customers?'

'Jonker was part of a panel during [May 25th's] conference session. He argued that so far the industry has not determined a single common factor behind the successful take-up of mobile money services in different markets.'

'The banker's second question regarded operator motives. If they are interested in improving margins on their airtime sales, that's fine with the banks, Jonker claimed. [...] "If they want to extend into financial services, that is uncomfortable and looks like competition."

'Finally, he asked whether operators wanted to tie mobile banking customers to their own SIM cards or whether they were prepared to work with other operators to ensure wide-scale deployment. Banks want to see as much interoperability between operators as possible, concluded Jonker.'

#### 2010-012

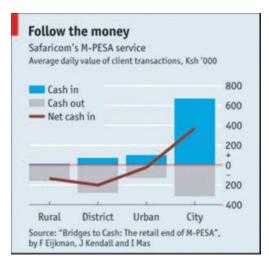
#### Out of Thin Air: The Behind-the-Scenes Logistics of Kenya's Mobile-Money

**Miracle.** Anonymous. *The Economist*. Vol 395 (8686), 12 June 2010: 87.

**Keywords:** Mobile Banking, M-pesa, E-float, Intermediaries

'[...] [D]espite the apparently frictionless transfer of money through the air, making a money-transfer system work smoothly requires a great deal of backstage effort. Jake Kendall and Ignacio Mas of the Bill & Melinda Gates Foundation, and Frederik Eijkman of PEP Intermedius, a financial-services firm, explain how it all works in a paper presented in late May.'

'When a customer is registered with the system, paying in cash involves exchanging physical money for the virtual sort, called "e-float", which is credited to his mobile-money account. E-float can then be transferred to other users by mobile phone, and exchanged for cash by the recipient, who visits another agent.'



'It is simple enough for customers. But agents in cities, where most transactions are deposits (see chart), accumulate cash and risk running out of e-float, at which point they cannot take any more deposits. Agents in rural areas, where most transactions are withdrawals, accumulate e-float and risk running out of cash. Keeping the system running requires the agents to manage their liquidity, by regularly swapping cash for e-float, or vice versa.'

'Exchanging cash for e-float means visiting a bank affiliated with Safaricom, and the whole point of systems like M-PESA is to reach where banks cannot. Accordingly, M-PESA relies on a system of intermediaries (including Mr Eijkman's firm, PEP Intermedius) between agents and banks. These middlemen have their own distribution networks, and take on much of the work of ferrying cash around the country.'

'Rather than many individuals moving money around by carrying it physically, as they had to in the days before M-PESA, the movement of money can [...] be handled in larger quantities by a smaller number of individuals, which is much more efficient.'

'Operators in other countries have been doing their best to imitate Safaricom. The most ambitious is Africa's biggest operator, MTN, which is rolling out mobile-money schemes in several African countries. Its scheme in Uganda has signed up 890,000 users since its launch in March 2009, and is expected to reach 2m by year-end.'



#### 2010-013

# The Incidental Video Screen is Seen by More Viewers than Prime Time by Stephanie Clifford. *The New York Times*. 12 April 2010: B3.

Keywords: Advertising, Video Screens, Television

'A new report from the measurement company Nielsen shows that ads on outside-the-house video screens — in places like health clubs, gas stations and elevators — can reach many more people than ads on prime-time television.'

'The report, called the "Fourth Screen Network Audience Report" (Nielsen is calling it the "fourth screen" after television, the computer and mobile) [...] researched 10 screen networks, from companies like NCM Media Networks and Screenvision, which run ads in movie theaters, to Gas Station TV, which places screens on gas pumps.'

'The screens are part of a phenomenon of place-based advertising that has gained popularity as consumers move away from traditional media. The networks try to capture people as they are about to buy something, or when they are bored and undistracted — waiting for a movie to start, for instance.'

'To get the ratings, Nielsen looked at variables like how long people spent in front of the screens, and the proximity to the screen [...].'

'It then interviewed viewers to get demographic information. The number of people interviewed per screen network was as low as 298, for the bar/restaurant TV network Zoom Media & Marketing's Social Network, and as high as 26,052 for NCM and Screenvision.'

'Nielsen found that the screen networks reached a broad audience. For example, ads on Screenvision and NCM's networks in October had 61.7 million exposures. That compared with an average of three million viewers 18 years and older for a typical prime-time commercial on broadcast TV in the same period. So an advertiser could either buy a monthlong series of ads on the theater networks, or about 20 primetime commercials, to reach the same audience size.'

'By measuring out-of-home screens with the same tools it uses to measure television, Nielsen lets these networks try to be included among the big broadcast ad purchases.'

[46%]

#### 2010-014

#### Harness the Power of a Default Option by

N Welch. McKinsey Quarterly, Issue 2(2010): 106-109.

Keywords: Behavioral Economics, Marketing

#### 'Make a product's cost less painful'

'According to economic principle, the pain of payment should be identical for every dollar we spend. In marketing

practice, however, many factors influence the way consumers value a dollar and how much pain they feel upon spending it.'

'Payments, like all losses, are viscerally unpleasant. But emotions experienced in the present—now—are especially important. Even small delays in payment can soften the immediate sting of parting with your money and remove an important barrier to purchase.'

'Another way to minimize the pain of payment is to understand the ways "mental accounting" affects decision making. Consumers use different mental accounts for money they obtain from different sources rather than treating every dollar they own equally, as economists believe they do, or should. Commonly observed mental accounts include windfall gains, pocket money, income, and savings. Windfall gains and pocket money are usually the easiest for consumers to spend. Income is less easy to relinquish, and savings the most difficult of all.'

#### 'Harness the power of a default option'

'The evidence is overwhelming that presenting one option as a default increases the chance it will be chosen. When we're "given" something by default, it becomes more valued than it would have been otherwise—and we are more loath to part with it.'

'Defaults work best when decision makers are too indifferent, confused, or conflicted to consider their options. That principle is particularly relevant in a world that's increasingly awash with choices—a default eliminates the need to make a decision. The default, however, must also be a good choice for most people. Attempting to mislead customers will ultimately backfire by breeding distrust.'

#### 'Don't overwhelm consumers with choice'

'Large in-store assortments work against marketers in at least two ways. First, these choices make consumers work harder to find their preferred option, a potential barrier to purchase. Second, large assortments increase the likelihood that each choice will become imbued with a "negative halo"—a heightened awareness that every option requires you to forgo desirable features available in some other product. Reducing the number of options makes people likelier not only to reach a decision but also to feel more satisfied with their choice'

#### 'Position your preferred option carefully'

'The power of [...] relative positioning explains why marketers sometimes benefit from offering a few clearly inferior options. Even if they don't sell, they may increase sales of slightly better products the store really wants to move. Similarly, many restaurants find that the second-most-expensive bottle of wine is very popular—and so is the second cheapest. Customers who buy the former feel they are getting something special but not going over the top. Those who buy the latter feel they are getting a bargain but

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not being cheap. Sony found the same thing with headphones: consumers buy them at a given price if there is a more expensive option—but not if they are the most expensive option on offer.'

'Marketers have long been aware that irrationality helps shape consumer behavior. Behavioral economics can make that irrationality more predictable. Understanding exactly how small changes to the details of an offer can influence the way people react to it is crucial to unlocking significant value—often at very low cost.'

[43%]

#### 2010-015

**The Case for Behavioral Strategy** by Dan Lovallo and Oliver Sibony. *McKinsey Quarterly*. March 2010. Online: Available at www.mckinseyquarterly.com

Keywords: Behavioural Strategy, Biases, Decision-Making

Behavioural strategy takes into account aspects of psychology and behavioural economics to overcome the biases which undermine strategic decision-making. Currently, very few corporate strategists take cognitive biases into account when making important decisions. Behavioural economics reveal some of these "systematic tendencies to deviate from rational calculations." Many times leaders need to recognize their own biases, and other times they must help a larger group work through the *process* of overcoming biases to make good decisions.

According to McKinsey, "In a recent McKinsey Quarterly survey of 2,207 executives, only 28 percent said that the quality of strategic decisions in their companies was generally good, 60 percent thought that bad decisions were about as frequent as good ones, and the remaining 12 percent thought good decisions were altogether infrequent." New norms are needed to manage activities such as meetings, data gathering, and stimulating debate.

Large decisions usually involve fact gathering and analysis, judgment, and a process for making a decision. The study covered by this article asked managers to report on the extent to which they used 17 practices which have been shown to reduce biases. Eight of these practices had to do with the quality of the analysis, and the others covered the decision-making process. The authors found that process matters much more than analysis. In fact, those decisions which were made with good process supporting them rarely let faulty analysis through. McKinsey states: "The analysis revealed that raising a company's game from the bottom to the top quartile on the decision-making process improved its ROI by 6.9 percentage points. The ROI advantage for top-quartile versus bottom-quartile analytics was 5.3 percentage points [...]."

There are five main categories of biases which need to be overcome. **Pattern-recognition biases** overweight recent experience and are characterized by the desire to

confirm hypotheses we have already formed. To avoid this type of bias, you need to look at the facts in a different light and explore alternative hypotheses. You also have to work to get the salient experiences influencing a point-of-view out into the open. It is easier to move forward once such perspectives are brought into the light. It is also helpful to look at a minimum of six similar endeavours and investigate how they turned out.

Action-oriented biases. In most organizations, confidence is rewarded with approval whereas as laying out all the risks and uncertainties is frowned upon. Managers need to learn to see an abundance of confidence as a warning sign—a "hint that overconfidence, over-optimism, and other action-oriented biases may be at work." To avoid this class of biases, organizations have to promote the recognition of uncertainty. It is helpful to make a distinction between decision meetings—where opposing viewpoints and vigorous debate is encouraged—and implementation meetings where unified action is sought. Activities such as scenario planning which forces the consideration of other potential outcomes should be utilized.

**Stability biases** make us less likely to depart from the status quo than we should be. If year after year, resources are allocated in the same way, there may be something wrong. The solution to stability biases is to shake things up and facilitate the redeployment of resources to more valuable opportunities.

In situations where people try to protect their business unit, their own career, or particular background interests, **interest biases** are often at work. The solution is to make interest biases explicit. It helps to lay out the criteria by which a decision will be judged before the decision process begins. Teams should be populated with people whose interests clash. This keeps one group's interests from dominating the process.

**Social biases** are related to the tendency to conform to the dominant view of the group we belong to. The authors state, "Genuine debate requires diversity in the backgrounds and personalities of the decision makers, a climate of trust, and a culture in which discussions are depersonalized."

To begin, organizations should 1) decide which decisions warrant the effort, 2) identify the biases most likely to affect critical decisions, 3) select practical tools to counter the most relevant biases, and 4) embed practices in formal processes.

#### **Typology of biases:**

- Action-oriented biases: Excessive optimism, overconfidence, and competitor neglect
- Interest biases: Misaligned individual incentives, inappropriate attachments, misaligned perception of corporate goals
- Pattern-recognition biases: Confirmation bias, management by example, false analogies (especially, misleading experiences), power of storytelling, and champion bias

- Stability bias: Anchoring and insufficient adjustment, loss aversion, sunk-cost fallacy, and status quo bias
- Social biases: Groupthink and "sunflower management"
   [Summary]

2010-016

**Five Forces Reshaping the Global Economy: Mckinsey Global Survey Results** by Renée Dye & Elizabeth Stephenson. *McKinsey Quarterly.* May 2010. Online: Available at www.mckinseyquarterly.com

**Keywords:** Globalisation, Emerging Markets, Economic Trends, Strategic Management

'An ongoing shift in global economic activity from developed to developing economies, accompanied by growth in the number of consumers in emerging markets, are the global developments that executives around the world view as the most important for business and the most positive for their own companies' profits over the next five years. Executives also identify two other critical positive aspects of globalization: technologies that enable a free flow of information worldwide and, increasingly, global labor markets. These four trends, of the ten we asked about, also are the ones that the biggest share of respondents—around half—say their companies have taken active steps to address.'

'In addition to our annual questions on individual global trends, this year's survey explores for the first time five interconnected themes that highlight the opportunities and challenges faced by global economic integration itself and by companies seeking to profit from it: growth in emerging markets; labor productivity and talent management; the global flow of goods, information, and capital; natural-resource management; and the increasing role of governments.'

'The findings show that the global economy faces significant challenges as it continues to integrate. For example, most respondents—63 percent—expect increased overall volatility to become a permanent feature of the global economy, and another 23 percent see sharply higher levels of volatility that will undermine the economy's robustness. In addition, high levels of public debt are a headache in Europe and North America, where most executives fear the debt will have a negative impact on GDP growth.'

#### 'Growth and risk management in emerging markets'

'Emerging markets, with populations that are young and growing, will increasingly become not only the focus of rising consumption and production but also major providers of capital, talent, and innovation. This will make it imperative for most companies to succeed in emerging markets.'

'Executives representing Chinese and Indian companies report they are developing new business models at a significantly higher rate than companies from any other region. Perhaps more surprising, respondents at companies head-

quartered in North America report significantly lower rates of actions to capture emerging-market growth than those from any other region, with fully 20 percent reporting no actions at all taken to capture emerging-market growth. In addition, large and public companies significantly outpace small and private ones in pursuing actions to capture emerging-market growth.'

'On risks faced by their companies in emerging markets, executives cite breach of intellectual property (40 percent), volatility of currency or exchange rates (38 percent), geopolitical instability (26 percent), and lower safety and quality standards (26 percent) as the top four. Executives at North American, high-tech, and telecom companies are most concerned about IP, while companies in the financial sector worry most about currency volatility and energy companies about geopolitical instability.'

#### 'Global flows of goods, information, and capital'

'Sixty-two percent of respondents expect moderate increases in global trade flows, but just 20 percent see a significant increase. As for the integration of capital markets, a majority—59 percent—expect capital flows of the major developed economies to be integrated while many other countries continue to restrict capital flows. Another 18 percent predict that capital markets will be mostly integrated, with only a few countries restricting flows. Respondents in North America and Europe are least optimistic, with only 1 and 2 percent, respectively, expecting fully integrated, seamless capital markets; in contrast, 5 percent of executives in China and Latin America think this will be the case.'

'The free global flow of information has already resulted in radical pricing transparency and new networks of engaged consumers, and this probably is only the beginning. Disruptive changes in consumer behavior could have great impact on business over the next five years. Executives expect that the most powerful effects on their companies will be increased innovation, greater consumer awareness and knowledge, and increased product and service customization [...].'

#### **'Labor productivity and talent management'**

'Low birth rates and graying workforces in most developed economies will make it hard for them to achieve steady growth unless they continue to make sizable gains in labor productivity. A majority of all respondents, 62 percent, do expect moderate gains in the next five to ten years in developed economies, and another 13 percent expect the gains to be significant.'

'The greatest projected talent shortfalls are in three functions—management, R&D, and strategy—with significant variations between executives in different regions [...].



Interestingly, executives in China are much more concerned about a shortage of management talent than they are about R&D specialists. For India, it is the reverse.'

#### 'Natural-resource management'

'Executives' concerns about the impact that increasing constraints on the supply or usage of natural resources will have on their companies' profits appear to be subsiding despite the prominence of these issues in the public debate today. Twenty-five percent of respondents now expect this trend to have a negative effect on their company's profits, down from 28 percent in last year's survey and 33 percent two years ago.'

#### 'The increasing role of governments'

'Executives in Europe and North America are haunted by the perception of crippling public-debt levels: 54 and 61 percent, respectively, think that public-debt levels will have a "significant" or "severely negative" impact on GDP growth in their home markets. In contrast, 45 percent of respondents in China and 24 percent in India expect that the level of public debt will have a "positive" impact or "no impact" in their home markets.'

'Finally, only between 20 and 30 percent of executives say multilateral cooperation (governmental and nongovernmental) will be "very" or "extremely effective" in addressing the following big global issues: climate change, financial crises, free trade, nuclear proliferation, and terrorism. Respondents in North America hold out the dimmest hopes for success. Executives in emerging markets are much more optimistic about multilateral institutions' ability to achieve progress on each of these issues.'

#### 'Looking ahead'

- 'Capturing the opportunities offered by growth in emerging markets—the trend executives say is the most important—will require retooling existing business models and reconfiguring companies' price/value equations.'
- 'Managing the risks of that trend also will be crucial: respondents express a great deal of trepidation about geopolitical instability and market volatility in emerging markets, so strategies to assess the likelihood of these conditions and manage their risk will be vital.'
- Technology will continue to materially reshape consumer awareness, choice, and interactivity models, and companies should be striving to tap the power of technology to improve their competitive advantage.'
   [50%]

#### 2010-017

#### **Fulfilling the Promise of Sub-Saharan**

**Africa** by Ngozi Okonjo-Iweala. *McKinsey Quarterly*. June 2010. Online: Available at www.mckinseyquarterly.com

**Keywords:** Demographics, Climate Change, Economic Growth, Natural Resources

'Future global economic growth will increasingly come from emerging markets. Following more than 20 years of hard-won political and economic reform, sub-Saharan Africa will be an important part of this story. Africa is often associated with poor governance, weak institutions, civil unrest, a lack of infrastructure, and other difficulties. The extent of these problems cannot be minimized, and African governments and civil society must continue to work against them. But there is an emerging side of the African story that speaks of successes often achieved below the radar screen.'

'Sub-Saharan Africa's recent sustained growth has been made possible largely by improved political and macroeconomic stability, a strengthened political commitment to private-sector growth, and increased investment in infrastructure and education. Many sub-Saharan African countries have liberalized trade since the early 1980s, and throughout the continent fiscal soundness and monetary discipline are increasing. Debt as a share of exports has declined dramatically, to levels comparable to those of other regions, and sovereign credit ratings in parts of the continent enjoy a positive outlook.'

'Most encouraging of all is the fact that the region is continuing to reform through difficult times. There is a broadly shared conviction among sub-Saharan Africa's leaders that sustained growth will come only from the private sector and increased integration with the global economy.'

'These reform efforts have been complemented by increased investments in infrastructure and human development. The figures for average years of schooling are catching up fast with those of the rest of the world, after having increased more than fivefold since 1960. Infrastructure spending amounts to \$45 billion a year and absorbs more than 5 percent of total GDP. A recent \$600 million private investment in high-capacity fiber-optic cable connects southern and eastern Africa to the global Internet backbone, widening the continent's horizons of connectivity.'

#### 'Resource rush'

'Since 1990, sub-Saharan Africa has almost tripled its level of exports and diversified its trade and investment partners. The combined share of its exports to the European Union and the United States fell to 49 percent, from 73 percent. During this time, Chinese imports alone from sub-Saharan Africa increased to over \$13 billion, from \$64 million.'

'Natural resources will continue to be a key source of export revenue for sub-Saharan Africa as global demand,

albeit decelerating when the economic contraction began, continues to grow. Today sub-Saharan Africa is not only a major supplier of natural resources but also the region with the greatest potential for new discoveries. As global growth resumes, the region should benefit from higher prices, in addition to higher volumes. The World Bank predicts that both energy and food prices, driven predominantly by the emerging economies' resource needs, will remain high over the next 20 years.'

'The resource rush will also increasingly target renewable sources of energy. Sub-Saharan Africa is particularly well positioned for developing solar and hydro energy, as well as the production of biofuels. But the 2008 food crisis highlighted what could go wrong if food production is substituted for biofuels production. Africa can and must feed itself first while engaging in the development of a biofuels market that does not compete with food production.'

'Rising commodity revenues will ultimately allow sub-Saharan Africa to increase its investment in infrastructure and education, especially as it continues to improve its business governance. Some 28 sub-Saharan African governments have adopted the Extractive Industries Transparency Initiative (EITI), with the aim of improving governance through the verification and full publication of company payments for and government revenues from oil, gas, and mining. In addition, 37 oil, gas, and mining companies, with assets amounting to more than \$14 trillion before the financial crisis, have agreed to support the initiative.'

'In sub-Saharan Africa, demand for food is expected to reach \$100 billion by 2015, double the levels in 2000. Moving forward, appropriate investments in agricultural skills and infrastructure—for example, irrigation—could prompt a green revolution in sub-Saharan Africa. Both nontraditional and traditional exports are important, as are regional export markets for food staples and livestock. Global markets for nontraditional exports such as horticulture are expanding rapidly.'

#### 'Climate change'

'Access to resources and agricultural development will increasingly require new methods of engagement with nature, such as the use of innovative technologies in energy consumption. Climate change makes the challenge of sustainable growth more complex. Developing countries, whose average per capita emissions are a third those of high-income countries, need major expansions in energy, transport, urban systems, and agricultural production. With rain-fed agriculture helping to generate 30 percent of sub-Saharan Africa's GDP and 70 percent of its employment, the region is particularly vulnerable. Yet many adaptation and mitigation activities have significant benefits not only for environmental sustainability but also for public health, energy security, and financial savings.'

'Africa has great potential for sustainable, intensive farming through investments in new technologies and the

conservation of vegetation, soil, and water. These approaches provide a "triple dividend" supporting adaptation to climate variability and change, mitigating carbon emissions, and promoting food security. The financial resources generated through mitigation could be very substantial. In sub-Saharan Africa, the economic potential from agricultural soil carbon sequestration is estimated to be 150 million tons of greenhouse gases a year. If agreement is reached at the 2010 UN climate change conference, in Cancún, Mexico, on the price per ton of carbon dioxide, Africa stands to benefit substantially from this new revenue stream. There is also great potential for reducing emissions from deforestation and forest degradation.'

#### 'Demographics'

'In the coming decades, one of sub-Saharan Africa's most powerful offerings may be its growing population of young people, who serve as a source of competitive labor and a growing consumer market. It is estimated that by 2050, almost 20 percent of the world's population will live in Africa, up from 7 percent in 1950. Developing countries will be home not just to a larger share of the world's population but also to a younger population. By 2050, young people 15 to 25 years of age will account for one person in five in sub-Saharan Africa.'

'By the same token, the region is rapidly urbanizing. Between 2000 and 2008, the rate of urbanization in sub-Saharan Africa was more than twice the world average. The region leads even the rest of the developing world. The United Nations projects that the proportion of sub-Saharan Africa's people living in urban areas will nearly double between 2005 and 2050, from 35 percent (300 million) to more than 67 percent (1 billion).'

'Sub-Saharan Africa has the potential to become an increasingly important resource for labor-intensive industries if it continues to invest in skills and infrastructure and to reform its business environment—especially as wages are expected to rise in Asia. Even if real wages in China rise by only some 7 percent a year, which is modest given the country's GDP growth, they are likely to double over the next decade. The rising cost of manufacturing there will translate into an opportunity for sub-Saharan Africa.' [50%]

#### 2010-018

**South Africa, the 2010 Legacy: Tangible and Intangible Benefits** by Neil Ford. *African Business*. Vol 365(June 2010): 34-38.

**Keywords:** World Cup, Infrastructure, GDP Growth, Race

'The 2010 Fifa World Cup will [...] provide [South Africa] with a showcase to demonstrate just how much it has changed since the end of Apartheid and an opportunity to prove that events of global importance can be hosted on



the African continent. Perhaps most importantly, the festival of football will make a real impact on South Africa's economy at a time when it is most needed. It could also be the missing glue that brings the nation's many ethnicities together.'

'After 17 years of sustained economic growth, the South African economy was severely affected by the global economic downturn. GDP contracted by 1.8% in 2009 as international demand for the mining commodities that underpin the South African economy receded and investors shied away from emerging markets. Yet buoyed by recovering Asian demand, the South African recession has proved shorter and shallower than many had feared and a tentative recovery is now under way.'

#### **'Boost to GDP'**

'[...] [T]he national and provincial governments have invested a total of \$5.2bn in preparations for the World Cup. A total of \$1.3bn has been spent on modernising and building stadia, including \$366m alone on the construction of Green-point Stadium in Cape Town. A recent report by accountants Grant Thornton calculated that the World Cup would boost South African GDP by 0.5% to 3.5% this year. It based this figure on a projection of 373,000 foreign fans coming to the country, down from an estimate of 483,000 in a report by the same consultants two years ago, before the global economic crisis. The number of fans visiting from other African countries is estimated at between a low of 11,000 to a high of 85,000.'

'The global economic slump and South Africa's continued high crime rate are the most likely reasons for the lower than anticipated visitor numbers. The impact has been greatest at the top end of the market, with the number of tickets sold to corporate hospitality about 50% lower than expected. However, Grant Thornton predicts that the fans will stay for an average of 18 days, attending five matches and spending an average of R30,200 (\$3,974) each, 30% more than it estimated in its previous report, perhaps because of the appreciation of the rand.'

'Grant Thornton expects that the World Cup will result in total expenditure of R93bn (\$12.4bn) in South Africa, although just a sixth of this figure will be spent by visitors. Most of the remainder is the result of government spending on infrastructural projects, including new stadia and transport infrastructure. Such projects have created jobs and provided a short-term, Keynesian boost to the economy but their real worth can only be judged in the long term.'

'The new stadia could attract other sporting events to South Africa and provide a real boost to domestic sport. The many new hotels that have been developed should also contribute to South Africa's growing importance as a tourist and conference destination.'

'The report indicated that two thirds of the benefit of the World Cup to GDP has already been felt, because the investment in infrastructure has been made over many years. Grant Thornton estimates that preparations for the event were equivalent to 1.72% of South African GDP. It is the raft of new transport projects that could have most impact in the long term.'

'At least \$1.5bn has been invested in the Gautrain rail system that will connect different parts of Johannesburg, OR Tambo International Airport and Pretoria, with each railway station to act as a hub for bus and taxi services. In addition, seven of the country's main airports have been expanded or upgraded, while King Shaka International Airport has been constructed from scratch in Durban [...].'

'[...] [M]ost projects have taken longer than planned and many have gone over budget, including Cape Town's Bus Rapid Transit (BRT) scheme, which has cost more than \$600m, far more than the \$171m predicted in 2008. Indeed, parts of the Johannesburg Rea Vaya bus rapid transit system and the BRT schemes in Durban and Tshwane will not be ready before the World Cup.'

#### 'Intangible benefits'

'A more positive view of South Africa would certainly attract more overseas tourists but a common national interest in the event could also encourage different strands of South African society to work together in the future. This is vital if the empowerment strategy is to eventually enable all South Africans to be judged on their abilities rather than on their ethnicity.'

'Another form of social investment that may have intangible economic benefits is the creation of new parks in South African cities where public spaces are currently few and far between. Most have been created to provide open air arenas for both foreign and domestic fans without tickets to watch matches on big screens.'

#### **'Outlook'**

'In reality, the infrastructural investment that has been made in South Africa in preparation for the 2010 Fifa World Cup is a mere drop in the ocean in relation to the country's pressing needs, particularly in the transport sector. Yet the public transport projects that are now approaching completion have the potential to change the national mind-set and indeed the Department of Transport has already drawn up plans for \$100bn of investment in rapid transit schemes that will be spread over many years.'

'Bringing all South Africans from whatever background together to cheer on a united football team and providing parks where black and white, foreign and South African fans can come together will certainly help to promote good relations, but it is the potential for the normalisation of racial integration through transport and workplace interaction that could provide the greatest legacy of the World Cup. The economic dividend of a more united society is incalculable but it is certainly worth striving for.' [45%]

2010-019

**Greek Debt Woes Ripple Outward, from Asia to U.S.** by Nelson D. Schwartz & Eric Dash. *The New York Times.* 9 May 2010: A1.

**Keywords:** Economic Growth, Recession, European Debt

'The fear that began in Athens, raced through Europe and finally shook the stock market in the United States is now affecting the broader global economy, from the ability of Asian corporations to raise money to the outlook for money-market funds where American savers park their cash.'

"It's not just a European problem, it's the U.S., Japan and the U.K. right now," said Ian Kelson, a bond fund manager in London with T. Rowe Price. "It's across the board."

'Beyond Europe, the crisis has sent waves of fear through global stock exchanges.'

'While the immediate causes for worry are Greece's ballooning budget deficit and the risk that other fragile countries like Spain and Portugal might default, the turmoil also exposed deeper fears that government borrowing in bigger nations like Britain, Germany and even the United States is unsustainable.'

"Greece may just be an early warning signal," said Byron Wien, a prominent Wall Street strategist who is vice chairman of Blackstone Advisory Partners. "The U.S. is a long way from being where Greece is, but the developed world has been living beyond its means and is now being called to account."

'To be sure, not all of the consequences are negative. Though the situation is perilous for Europe, the United States economy does still enjoy some favorable tailwinds. Interest rates have dropped, benefiting homebuyers seeking mortgages and other borrowers. New data released Friday showed the economy added 290,000 jobs in April, the best monthly showing in four years.'

'Further, crude oil prices fell last week on fears of a slowdown, which should bring lower prices at the pump within weeks. Meanwhile, the dollar gained ground against the euro, reaching its highest level in 14 months.'

'Uncertainty about the stability of assets in money market funds signaled a tipping point that accelerated the downward spiral of the credit crisis in 2008, and ultimately prompted banks to briefly halt lending to one other.'

'Now, as Europe teeters, the dangers to the American economy — and the broader financial system — are becoming increasingly evident. "It seems like only yesterday that European policy makers were gleefully watching the U.S. get its economic comeuppance, not appreciating the massive tidal wave coming at them across the Atlantic," said Kenneth Rogoff, a Harvard professor of international finance who also served as the chief economist of the International Monetary Fund. "We should not make the same mistake."

2010-020

**Africa: An Economic Giant that's Ready to Wake Up** by Geoffrey York. *The Globe and Mail*. 17
May 2010. Online: Available at
www.theglobeandmail.com

**Keywords:** GDP Growth, Foreign Direct Investment, Technology

'After a year hobbled by the global slowdown, Africa is quietly preparing for a growth trajectory that could astonish the world.'

'Beyond the stereotypes, Africa's potential is explosive. Its human talents, its vast natural resources, its rising democracies and new technologies – all are reaching a tipping point that could send it surging dramatically upward.'

'The economy of sub-Saharan Africa is projected to grow by 4.75 per cent this year, faster than the world average, and will accelerate to an impressive 6 per cent in 2011, according to the International Monetary Fund. It will be the strongest recovery that Africa has ever managed to achieve after a global downturn, and it is testament to its greater resilience, smarter policies and growing popularity among foreign investors.'

'Little noticed by the world, the African economy had grown at 6 per cent annually for five years before the global slowdown. Its inflation rates and budget deficits have declined, its foreign exchange reserves have grown 30 per cent since the 1990s, and its external debt has sharply decreased. And so, when the global economy contracted last year, Africa succeeded in avoiding a decline, maintaining 2-per-cent growth even at the depths of the slowdown.'

'For the first time, Africa is becoming a bigger lure for investors than for aid donors. Africa's poverty rate has been declining by 1 per cent annually since the 1990s, and investment is growing dramatically. A decade ago, Africa was receiving less than \$5-billion (U.S.) in foreign investment annually. By 2008, it was attracting nearly \$40-billion in direct foreign investment – more than it received in foreign aid. One survey found that 40 per cent of emerging-market equity investors are putting money into Africa today, compared with 4 per cent in 2006.'

'Across Africa, pro-business policies are much more common. A survey by the World Bank found that 28 African countries had adopted 58 business-friendly measures last year – more than in any previous year. African stock exchanges are bustling, from Johannesburg to Nairobi to Accra. The continent has more than 1,000 banks and other financial institutions, including the hugely successful Ecobank, based in Togo, which has been consistently profitable and has 11,000 employees in more than 750 branches across 29 African countries.'

'Some of Africa's economic advantages are obvious. It contains 30 per cent of the world's mineral reserves, including 40 per cent of the world's gold, and is one of the



biggest sources of the oil that fuels the U.S. and Chinese economies. Lured by these resources, many foreign investors are abandoning their hesitations about the region. Canadian mining companies, which had invested less than \$1-billion (U.S.) in Africa in the 1990s, have now poured \$21-billion into the continent.'

'China is the most ardent of the new suitors. By 2008 its official investment in Africa had reached almost \$8-billion (U.S.), but some estimates say its investment is closer to \$50-billion if loans and other contributions are included. Its annual trade with Africa has soared from a mere \$2-billion in 1999 to a stunning \$107-billion by 2008, putting it in close competition with the United States as Africa's biggest trading partner, and offering a strong alternative to the usual sources of funds for African business.'

'Even the continent's fast-growing population may be an advantage, rather than a burden. Africa's population has recently surpassed one billion. By 2050, it could reach two billion people, a fifth of humanity, thanks to a rapid decline in mortality rates. But its birth rates are also dropping fast, so its working-age population over the next two decades will have fewer dependants for which to care. This is the kind of "demographic dividend" that helped fuel the economic miracle in the Asian Tigers of the past 20 years.'

'What's equally significant about Africa's renaissance is the growing importance of new technologies, including cellphones, Internet businesses and mobile banking. Since 2003, Africa's use of cellphones and the Internet has been growing at twice the global average. A decade ago, there were only 3 million Internet users and 11 million cellphone subscriptions in the whole continent. By 2009, the number of Internet users had increased to 86 million, and there were 400 million cellphone subscriptions. By 2012, there are expected to be more than 500 million cellphone subscriptions – more than half of Africa's entire population, compared with 2 per cent a decade ago.'

'The lure of Africa is boosted by new African-based technologies that are beating the world. Mobile banking, for example, is increasingly popular in many African countries, even as the technology has yet to arrive in Canada in any significant way. By using their cellphones to transfer money and pay bills, Africans are making a big dent in their transportation costs, a major cost savings for rural people and the urban poor.'

'Another of Africa's technological innovations is Ushahidi (a Swahili word meaning "testimony"), an Internet mapping tool with global applications, created in Kenya in 2008 in the aftermath of election violence there. Its crowd-sourcing technology allows people to report anonymously on any phenomenon, creating instantaneous maps that are invaluable to the search for solutions. Ushahidi has helped create maps of election fraud in Sudan, medical shortages in several African countries, and the location of trapped earthquake victims in Haiti and Chile, allowing a faster response by rescue workers.'

'Corrupt leaders and autocratic regimes are still commonplace in Africa. Yet multiparty elections are increasingly frequent. By some measurements, there are nearly 30 democracies in Africa today, compared with five at the end of the Cold War, and the number of civil wars has sharply declined. One index of African governance – measuring everything from transparency and human rights to wealth creation and education – found that 38 countries had improved their score over the past decade, while only 10 had declined.'

'Some of the most dramatic gains are in health and education. Africa's child-mortality rate is declining by 1.8 per cent annually – twice the rate of decline in the 1990s – due to expanded vaccination campaigns, improved nutrition and greater access to clean water. Malaria rates are sharply falling as millions of insecticide-treated bed nets are distributed across Africa. Adult death rates have improved steadily since 2005, partly because of much better access to AIDS medicine.'

'Literacy has expanded enormously in Africa since the 1970s. A decade ago, only 58 per cent of African children went to primary school; today it's nearly 75 per cent. Many African countries have eliminated school fees and other barriers, allowing an extra 42 million children to go to school.'

#### 2010-021

#### Illicit Financial Flows from Africa: Hidden Resources for Development by Dev

Kar & Devon Cartwright-Smith. *Global Financial Integrity*. March 2010. Online: Available at www.gfip.org

**Keywords:** Illicit Financial Flows, Capital Flight, Millennium Development Goals, Shadow Financial System

This paper estimates the illicit financial flows from Africa and its various regions and economic groupings between 1979 and 2008. The findings show that illicit financial flows have not only grown on a decennial basis, but have come to exceed the continent's outstanding external debt at the end of 2008. The authors estimate the total volume of illicit flows over the 39-year period could be as high as \$1.8 trillion.

Gathering data on African countries represents a greater challenge than in other developing regions. Countries with inadequate data represent nearly 37 percent of African GDP. Nonetheless, the authors attempt to analyze the long-term evolution of illicit flows and show how such flows have affected African countries.

The paper states: "Illicit money is money that is illegally earned, transferred, or utilized. If it breaks laws in its origin, movement, or use it merits the label."

Estimates indicate that Africa lost around US\$29 billion per year between 1970 and 2008. Sub-Saharan Africa

accounted for \$22 billion of that number. Fuel exporters, on average, lost capital at the rate of nearly \$10 billion per year, whereas non-fuel primary commodity exporters lost \$2.5 billion dollars per year. The rates of illicit outflows from Sub-Saharan Africa sharply increased in the 2000s relative to the earlier decades. A large part of this sharp increase in illicit flows is thought to relate to rising income levels. The increase was most evident in outflows from the West and Central Africa and Southern regions.

GDP growth, driven largely by capacity increases in oil-producing countries has been accompanied by higher illicit financial flows (IFF)/GDP ratios. The authors state that "faster economic expansion with rising income levels can actually drive capital flight if growth is not accompanied by genuine economic reform and better governance."

The massive outflows of illicit capital coming from Africa are not solely attributable to bad policy in African countries. Rather, bad policies in Africa fit with deep flaws within the global financial system with illicit funds being absorbed by the world's shadow financial system. Without credible reform, increasing incomes would simply finance the accumulation of foreign assets as a result of more, not less, capital flight. The authors point out that if the problem of illicit financial flows is not addressed, Africa will fall well short of meeting the United Nations' Millennium Development Goals (MDGs) by 2015. They say, "The time is right for African countries to not only implement strong economic and governance measures to curtail illicit flows but to impress upon the G-20 the need to correct their failures in oversight and regulation that have facilitated the absorption of illicit flows and contributed to the current economic crisis."

As large as the \$1.8 trillion amount is, this estimate does not include the illicit flows generated due to some illegal activities including trade in narcotics and contraband, smuggling, human trafficking, violations of intellectual property rights, and sex trade. [Summary]

#### 2010-022

Africa's Path to Growth: Sector by Sector by K. Jayram, J. Riese, S. Sanghvi, H. De

Grandis, G. Pinshaw, R. Fiorini, B. Russo, R. Cloete, F. Faulhaber, M. Zils, P. Bardouille, A. Hamblin, H. Pley, O. Roelofsen, P. Sheng, Z. Gaibi, A. Maske & S. Moraje. *McKinsey Quarterly*. May 2010. Online: Available at www.mckinseyquarterly.com

**Keywords:** GDP Growth, Agriculture, Banking, Consumer Goods, Infrastructure, Mining, Oil and Gas, Telecommunications

This article looks at seven African industries and their growth prospects: agriculture, banking, consumer goods, infrastructure, mining, oil and gas, and telecommunications.

Africa is more than just extractive industries as over 200 million Africans will enter the consumer goods market by 2015.

#### **Agriculture**

The top ten agricultural countries in Africa represent about 75 percent of the output. Currently, the rate of expansion is only two to five percent per year. However, there is significant room for growth in African agriculture. The barriers include: the high proportion of small farms, interdependence and complexity, underinvestment in the industry, and insufficient infrastructure and other enabling conditions. New investments in African agriculture are generally flowing to three main opportunities: developing technological breakthroughs, new value chain approaches to improve access to markets, and the development of large tracts of land with high agricultural potential.

#### **Banking**

In most of Africa's main markets, the financial sector is outpacing GDP growth. Financial reforms have helped with this as many countries have passed laws encouraging the strengthening of banks through consolidation. South African banks have been particularly active in moving beyond their home market. Further opportunities exist in "expanding current product offerings, increasing product penetration, bringing the unbanked into the financial system, and capitalizing on the rise of a new consumer class by developing innovative service and channel offerings."

#### **Consumer Goods**

"From 2005 to 2008 consumer spending across the continent increased at a compound annual rate of 16 percent, more than twice the GDP growth rate." Many Africans have moved from the destitute level of income (less than \$1,000) and are now in the basic-needs (\$1,000 to \$5,000) or middle income levels. Most consumer categories exhibit an S-curve growth pattern with growth excellerating rapidly when a large enough proportion of the population reaches a basic level of income. Strong population growth and continued urbanization leads to an estimate of 221 million new basic-needs consumers entering the market by 2015. Some of the challenges facing participants in Africa's consumer goods market are: the heterogeneous markets of various African countries, low affordability levels for most Africans, underdeveloped distribution channels, nascent and untried categories of goods, and talent shortages.

#### **Infrastructure**

"Between 1998 and 2007, spending on African infrastructure rose at a compound annual rate of 17 percent—up from \$3 billion in 1998 to \$12 billion in 2008, significantly outstripping the growth of global infrastructure investment." Many African countries—including Nigeria, South Africa, Angola, Kenya, Mozambique, and Senegal—have



announced new infrastructure spending. McKinsey lists its five keys to success as: 1) arrive early and take a long-term view, 2) build relationship, 3) be vigilant about risk, 4) manage actively, and 5) diversify your project portfolio.

#### **Mining**

African mining has not attracted a share of global investment commensurate with its share of minerals. Since minerals are traded globally, African mines compete with those elsewhere for markets and development funding. The question is whether Africa can secure its place as a supplier for the world's growing need for mineral resources. "Eleven [African] countries, especially in southern and western Africa, rank among the top ten sources for at least one major mineral." The financial and economic crises have hit African mining hard. Commodity prices dropped by 60 to 70 percent in late 2008, although they have largely recovered. Investors have little tolerance for the relatively high risk that generally accompanies mining in many African countries.

#### Oil and Gas

"By 2015, 13 percent of global oil production will take place in Africa, compared with 9 percent in 1998—a 5 percent compound annual growth rate." 19 African countries are significant producers of oil or gas. New kinds of competitors have entered the African oil and gas industry—including smaller independent oil companies as well as national oil companies from outside Africa such as China, Malaysia, and Russia.

#### Telecommunications

Telecom revenues have increased at a compound annual growth rate of 40 percent over the past five years. Investment in the industry has also increased year after year. Data and rural voice services are seen as the pockets of future growth. "About 50 percent of the growth in voice will come from rural areas." The growth of data service is also important. "Experience in other countries suggests that a 10 percent increase in broadband penetration translates into additional GDP growth of some 0.5 to 1.5 percent." The article concludes by saying, "To capture this opportunity fully, operators must adapt their operating models—for instance, by developing low-cost off-peak packages, scaling up compelling applications, and making data-enabled hand-sets available more cheaply."

#### 2010-023

### Ghana Expects Strong Economic Growth as Oil Sector Expands by Loni Prinsloo.

Engineering News. 30 March 2010. Online: Available at engineeringnews.co.za

**Keywords:** Ghana, Oil, Foreign Direct Investment, GDP Growth

'Ghana's economic growth rate is likely to expand to 12% by 2012, underpinned by growth in the country's oil and gas sector, a government official said [...].'

'He estimated that the oil and gas service industry would open up investment opportunities of up to \$5-billion within the first year of commercial production.'

'However, Anum stressed that even though the energy sector would constitute about from 15% to 20% of Ghana's gross domestic product (GDP) by 2012, the country would remain a diversified economy.'

'Ghana showed GDP growth of 4,7% in 2009 and expected growth of 6,5% in 2010.'

'Ghana's growing economy also presents significant opportunity for investment into its infrastructure and energy sectors'

'Ghana is currently producing around 40 000 housing units a year, but expects this number to climb to about 140 000 units a year, creating a \$7,5-billion opportunity for investment into the sector.'

'Further, Ghana would need around 5 000 MW of electricity by 2015, resulting in a 3 000-MW gap that has to be filled in a five-year period.' [48%]

#### 2010-024

# Africa Expands Oil Production Capacity, Demand from China Strong by Jade Davenport. *Engineering News.* 17 March 2010. Online: Available at www.engineeringnews.co.za

#### Keywords: Oil, China

'African oil production capacity will continue to grow at a significant rate in the medium-term and production capacity is anticipated to reach 7,4-million barrels a day by 2014 [...].'

'International Energy Agency senior oil demand analyst Eduardo Lopez told delegates attending the Oil and Gas Africa conference in Cape Town that African production capacity was expected to rise by almost 70% from the 4,4-million barrels a day produced in 2000.'

'[...] Lopez believed that Angola would account for 54% of Africa's total oil production by 2014, followed by Algeria and Egypt at 11% and 10%, respectively.'

'The total African oil product demand was estimated at

3,2-million barrels a day in 2008, which was only 3,7% of global demand.'

'[...] African oil demand was expected to increase by 2,3% on a year-on-year average to 3,77-million barrels a day by 2014.'

'South Africa and Egypt were the largest oil consumers in Africa, accounting for 40% of the total demand. They were followed by Algeria, Libya, Morocco and Nigeria, which collectively accounted for 32% of total demand.'

'It was noted that Africa's oil demand per capita was the lowest in the world [...] because Africa, as a whole, did not have a thriving manufacturing sector to boost energy demand [...].'

'[Frontier Advisory CEO Dr Martyn Davies] added that China was becoming increasingly dependent on Africa for natural commodities. This was particularly evident by the fact that one-million barrels of crude oil was exported by African producers to China every day.'

'China was expected to account for roughly one-third of global demand growth by 2014.'

'In 2014, for the first time in history the demand from emerging countries would surpass the OECD, said Lopez.'

**[50%]** 



A Bonanza Beckons: Hope and Peril for the Great Lakes. Anonymous. *The Economist*. Vol 394(8676), 31 March 2010: 49-50.

Keywords: Uganda, Oil, China

'A DETERMINED push by Western wildcatters and big oil companies from fast-growing Asian economies such as those of China and Malaysia may change the fortunes of several countries in remoter and trickier bits of Africa once largely ignored by foreign investors. One of the most spectacular recent finds has been in Uganda. The reserves of the Albertine rift, which takes in the Ugandan and Congolese shores of Lake Albert (see map), are said to need \$10 billion for development. All being well, Uganda will soon become a mid-sized producer, alongside countries such as Mexico. Foreign investment in Uganda may nearly double this year to \$3 billion. The country expects to earn \$2 billion a year from oil by 2015.'

'The windfall may well change the country's politics. But oil can be a curse. It is far from certain that all of the country's 30m people will benefit. Oil executives and loyalists of Uganda's president, Yoweri Museveni, say the bonanza offers a chance to overhaul the country's rickety infrastructure and to train a professional workforce.'

'Foreign aid-giving governments already tend to look the other way when Uganda's democracy falters, its environment is fouled up, or aid money is stolen. Yet foreign leaders have already begun to fawn.'



'But China is likely to be the biggest winner. Mr Museveni seems dazzled by Chinese promises to help build an oil refinery and to help turn oil into Ugandan-produced plastics and fertiliser. That may be bad news for Uganda's opposition, which wants to oust Mr Museveni in next year's election. And several jealous Western governments and companies want to stall China's advance into the Congo basin, with its vast reserves of minerals and timber.' [50%]

#### 2010-026

**Angola Oil Boom is Over.** Anonymous. *Afrol News*. 24 May 2010. Online: Available at www.afrol.com

Keywords: Angola, Oil, GDP Growth

'In an outlook for the Angolan economy in the next five years, the oil sector that created booming growth rates during the last decade is expected to take a very minor role. Only Angola's non-oil sector assures growth until 2015.'

'The Angolan economy last year grew by only 0.7 percent, meaning that GDP per capita shrunk from around US\$ 5,000 to US\$ 4,000 in just one year due to population growth among other factors. Last year, the oil sector had a negative growth of -5.1 percent, while the non-oil sector grew by a positive 8.2 percent.'

'In 2010, GDP growth is forecast at the comfortable level of 6.7 percent. But the oil sector only is expected to grow by 5.0 percent while the non-oil sector will grow by 7.8 percent.'

'Interestingly, it is almost exclusively the non-oil sector driving Angola's economic growth in the years to come. Especially from 2012, Angolan oil revenues will remain more or less stable or even sink. The non-oil sector provides growth rates between 8.4 and 10.1 percent annually in the 2011-15 period.'

'The main non-oil sectors now driving the growth in Angola's economy are related to agriculture, where recent

large investments now are starting to pay off. Angola is experiencing a rapid rise in agricultural output, including cereal and cash crops, and is starting to generate revenues from an expanding biofuel production.' [40%]

2010-027

### Africa Jobs Recovery Lags Economic Rebound - UN. Anonymous. Reuters. 30 March

2010. Online: Available at http://www.engineeringnews.co.za

Keywords: Africa, GDP Growth, Unemployment

'Africa is likely to grow by an average 4,3% this year from just 1,6% in 2009, but poverty could still rise as there may not be an similar increase in employment, a UN report said [...].'

'The United Nations' Economic Commission for Africa report predicted that oil-exporters in the sub-Saharan region [...] would grow by 5,1% in 2010 while oil-importers would expand by 4,9%.'

'The projections are well short of the 7% needed to achieve the UN's Millennium Development Goals of halving poverty by 2015, it said, adding that the growth rates were not enough to create large numbers of jobs.'

"This means that unemployment and vulnerable employment as well as working poverty in Africa are likely to increase in 2010," the report [...] said.'

"[...] [Of] the four countries studied, economic growth was accompanied by increasing unemployment in three of them, while the fourth showed a drastic rise in informal sector employment," the report said.

"The current global economic crisis has demonstrated the vulnerability of Africa to the fortunes of the global economy. It has also demonstrated that Africa cannot rely on external sources to finance its development in a sustainable way.'

2010-028

#### **Are We Heading for Another Food Crisis?**

Anonymous. *IRIN*. 2 March 2010. Online: Available at www.irinnews.org

**Keywords:** Agriculture, Food Prices, Food Crisis

'Long dry spells in parts of Africa and erratic rainfall in Asia have cast uncertain clouds over crop yields for 2010 in the world's poorest countries. Food prices in most developing countries are down from their 2008 crisis levels, but still higher than they were in 2007.'

'It would take "two consecutive bad years" for a repeat of the 2008 food and fuel crisis to arise, said Abdolreza Abbassian, economist and secretary of the Intergovernmental Group on Grains at the UN Food and Agriculture Organization (FAO). Unlike the situation in 2008, global cereal stocks are at comfortable levels.'

'But there were "many factors at play" in food prices. "In fact, we're projecting prices to stay firm, even in the medium term (the next 10 years), although they may not exceed the highs witnessed in 2008," Abbassian commented.'

"On the other hand, population growth and economic prosperity fuel demand - as in Asia, especially in China and India - therefore, we are moving into a situation whereby supply expansion could decelerate, while demand will continue to grow - sometimes even faster than in the past," said Abbassian.'

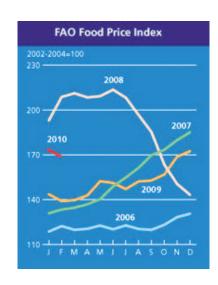
'A paper by the OECD suggested that food prices would start rising again, "(albeit not to 2008 peaks) once economies come out of the recession, as the basic structural demand and supply-side determinants are still very much present ... [with] demand growing faster than supply. Food prices should therefore no longer be seen as a 'shock' or short-term 'crisis', but rather as a longer-term structural issue."

#### 'Biofuels still a threat'

'Some of the structural changes that brought about the 2008 food price crisis, such as diverting agricultural land from producing food cereals to grains for biofuel, had yet to be addressed, Abbassian said.'

"Biofuels are conservatively estimated to have been responsible for at least 30 percent of the global food price spike in 2008," said ActionAid, which warned that a repeat of crisis could be in the offing, with the supply of food cereals likely to be compromised by a demand for biofuels in the EU.'

'In a scenario that takes into account a planned and predictable biofuel expansion in some countries, the US-based International Food Policy Research Institute (IFPRI), projected maize prices rising by more than 20 percent by 2020, and by more than 71 percent in a drastic expansion scenario.'



'ActionAid noted that "If all global biofuel targets are met, it is predicted that food prices could rise by up to an additional 76 percent by 2020." The NGO said it found that EU companies had already acquired, or were negotiating for, at least five million hectares in developing countries, which could threaten food supplies of some of the most vulnerable populations.'

'According to FAO, one in six people in the world are now hungry, with the 2008 crisis having pushed another 100 million into poverty and food insecurity.'

'Weaker international prices for sugar, dairy and cereals have caused FAO's Food Price Index, released on 2 March, to register a decline: "The index is down 21 percent from its peak in June 2008, but up 22 percent from the corresponding period a year ago," said Abbassian.'

#### 'Prices don't come down fast'

'The percentage hike in food prices varies between countries, as do the causes.'

'The ActionAid report found that "each 10 percent increase in the prices of cereals (including rice) adds nearly US\$4.5 billion to the aggregate cereals import cost of those developing nations that are net importers." [50%]

#### 2010-029

# **Trying to Make Food Cheaper.** Anonymous. *IRIN*. 16 March 2010. Online: Available at www.irinnews.org

Keywords: Agriculture, Food Prices, Food Crisis

'The price of maize, sorghum, wheat and other staple grains is likely to climb again in many food-importing east African countries, agricultural economists warn.'

'Globally, the price of most staples like maize and wheat have been falling, but people in east Africa are still paying up to double the 2007 price, said the new food security update by the UN Food and Agriculture Organization (FAO).'

'A complexity of factors influences food prices in most of the region's countries: inadequate rainfall and poor harvests, dysfunctional markets, civil conflicts, poor infrastructure and high transport costs. In some instances a combination of all these factors, as in Somalia, could see prices shoot up again, the FAO update said.'

'Analysts offer a range of viewpoints on why food continues to be expensive, but everyone concurs that the long-term solution of investing in agricultural infrastructure and improving crop yields is eastern Africa's only way out of expensive food.'

#### **'Bottlenecks'**

'Christopher Barrett, a leading food aid expert who teaches development economics at Cornell University, in the US, pointed out that "[Lack of] supporting infrastructure

[such as roads and water supply for irrigation] and institutions (such as contract enforcement, seasonal credit availability) drive up costs enormously in more remote areas where the poorest and hungriest continue to live."

'Thom Jayne, who teaches agricultural economics at the US-based Michigan State University (MSU), noted in a new study he co-authored that food prices in many countries in eastern and southern Africa "routinely soar above import parity", meaning that local food cost more than the "price in world markets, plus the cost of importing it to the domestic market".'

'The MSU study, led by Jayne and David Tschirley, who is also an agricultural economist, found that ad hoc policy decisions meant to stabilize prices instead created uncertainty and put stress on often weak agricultural infrastructure, all of which contributed to pushing up the price tag on cereals above global prices.'

'Kenya was a good example. The government imposed a 50 percent import tariff to help a small number of farmers who had surplus maize to sell, but hurt the vast majority of the population who bought maize from the market [...]. In the 2007/08 food price crisis the price of maize in Kenya was the highest in the region.'

'Jayne warned that Kenya could see a repeat of the 2008/09 crisis in 2010 because the country does not have enough food to carry it to the next harvest, and the government has re-imposed the 50 percent tariff on imported maize.'

#### 'Bringing costs down'

'Barrett suggested that bringing down the cost of getting produce to markets through better infrastructure was "a real food security strategy", and noted that "We continue to feel the effects of decades of insufficient investment by governments and donors in agricultural research capacity (scientists and laboratories) for development and adaptation of seed varieties, and small-scale field equipment appropriate to local agro-ecologies."

"Agricultural productivity research won't bring prices down immediately, but it's the only way to keep prices down for an extended period - by ensuring supply growth at least keeps pace with demand expansion."

#### 'Conflicts'

'FAO economists Luca Alinovi, Günter Hemrich and Luca Russo suggested in their new book, Beyond Relief: Food Security in Protracted Crisis, that countries in a state of protracted crisis brought on by conflict - such as Somalia, Sudan and the Democratic Republic of Congo - should strengthen their infrastructure and institutions, particularly at local council level, with the help of the humanitarian system.'

'The authors noted that in some countries suffering a conflict situation or recovering from one, "the humanitarian response framework continues to be virtually the only inter-



vention mechanism, which often undermines those initiatives that require longer-term perspectives."

"In 2006, 25 of the 39 serious food emergencies [worldwide] were due to conflict and its aftermath, or a combination of conflict and natural hazards," they said.'

[30%]

#### 2010-030

**The New Era Begins** by Richard Seymour. *African Business*, Issue 364(May 2010): 12-14.

**Keywords:** Telecommunications, Mobile Phones, Broadband Access

'Africa's telecoms sector is the most rapidly growing of any in the world. With many markets globally at saturation point, the opportunities for expansion in the continent are plentiful. With three submarine cables now installed, the availability of cheaper broadband connections and the Internet could transform communications in Africa. Mobile banking is already doing so in the financial sphere.'

'A report by the auditing firm Ernst & Young revealed that while Libya reached 100% mobile communication penetration in 2008, with South Africa at 98% in the same year, they are two of only six African countries to achieve penetration beyond the 80% mark. Twenty-four countries have penetration levels of less than 20% while 17 have yet to crack 10%.'

'Further context can be provided by the fact that while much of Africa's mobile communications market is underdeveloped, it is growing fast. Since 2002, the market in Africa has grown by almost 50%. During the same period, Brazil's market grew at half that pace.'

'Where market penetration is almost complete, there is still room for further growth. Particularly with the laying of three new submarine fibre-optic cables and a continent-wide programme of fibre-optic infrastructure enabling connectivity, there is much scope for value-added services using convergent technologies to provide such utilities as mobile banking, media and Internet in addition to voice calls and SMS.'

'Some markets have simply just been ignored by investors who wish to concentrate on those with more immediate potential for big gains. But as favoured markets become crowded, so less lucrative ones such as those in Mozambique and Mali start to look more attractive.'

'Higher penetration and therefore slower growth countries are mostly concentrated in the south and north, with Gabon being the exception. Lower penetration, higher growth markets tend to be found in the east and west of the continent. Markets that are both grossly underdeveloped and stagnant tend to be politically unstable or highly regulated.'

'West Africa is now the fastest-growing region in Africa,

with Nigeria and Ghana leading the way. East Africa is also reporting rapid growth, while the smaller central African markets are turning to telecommunications to drive their economies.'

#### 'High taxes stifle growth'

'Mobile telephony is, of course, only one part of the broader telecommunications sector; but it is an increasingly important one all over the world. It will be some time before smart phones such as Apple's iPhone and RIM's BlackBerry dominate the African market the way they are beginning to elsewhere.'

'However, with the television, music, publishing and film industries, as well as the financial sector, seeking to harness convergent technologies that make use of just the sort of high-speed broadband access coming to Africa now, the mobile market will play a central role in all investors' future plans.'

'On average, mobile operators on the continent pay a 30% levy on profits. Passing on this charge to customers would impede growth and this has led many operators to absorb the tax at a time of recession.'

'Indeed, a tax being levied on inbound international calls has seen costs rise from anywhere between 50% in Gabon and 100% in Ghana. This flies in the face of global trends which see average call costs falling.'

'In its report, Ernst & Young called for an end to technology-specific licences and a move toward a unified system. This, they say, will allow operators to converge technologies more easily, and free up regulators to concentrate more on consumer protection.'

'Broadening coverage to the most disparate rural communities may never be cost effective, but as more people move to urban centres, a genuine low-cost operator would find itself not only with a vast, untapped market at its fingertips, but also driving down the costs of its more expensive competitors.'

'The potential is indeed huge, not just for the telecoms market but for the disparate people of Africa who are slowly, but surely, being connected to each other and the world. There is a direct correlation between this and increased GDP, making telecommunications a vital driver of African economic growth.'

2010-031

#### For the Unbanked, is Mobile Money Cheap Enough? CGAP Releases Pricing Study Across 16 Providers in 10 Countries by Jim Rosenberg. *CGAP Technology Blog.* 24 May 2010. Online: Available at technology.cgap.org

**Keywords:** CGAP, Branchless Banking, Global Pricing Study, Unbanked

'[...] Claudia McKay and Mark Pickens have pulled together a comprehensive global pricing study\* on banking services targeting poor, unbanked and underbanked people in Africa, Asia and Brazil [...].'

'The conclusion: mobile banking and other forms of branchless banking are cheaper than traditional banking, but the gap between the two may not be as wide as some may think.'

'On average, branchless banking is 19% cheaper than banks. Why isn't the pricing gap wider?'

'It is possible that establishing a successful, scaled branchless banking service could be more expensive than expected. Some branchless banking providers want to leave room to come down on prices as more competitors enter the market.'

'Other highlights:

- The lower the transaction value, the cheaper branchless banking is in comparison with banks. For example, at a transactional value of \$23, branchless banking is on average 38% cheaper than commercial banks the study looked at.
- Branchless banking is 54% cheaper than informal options for money transfer.
- Customer usage is influenced not only by absolute prices but by the way a service is priced. For example, in order to encourage trial of money transfers, some services offer free deposits, which make branchless banking an affordable way to save.
- Average branchless banking price is \$3.90 per month.
- Informal providers charge double the price for a money transfer than a branchless banking provider.'

[\*A PDF presentation of the study is available at: http://www.cgap.org/gm/document-1.9.43876/ Branch-less\_Banking\_Pricing\_Analysis\_May\_2010.pdf] [50%]

2010-032

**A Better Mattress.** Anonymous. *The Economist*. Vol 394(8673), 13 Mar 2010: 75-76.

**Keywords:** Microfinance, Savings

'It is hard for people in the rich world to imagine what it is like to live on \$2 a day. But for those who do, the problem is often not just a low income, but an unpredictable one.

Living on \$2 a day frequently means living for ten days on \$20 earned on a single day. The task of smoothing consumption is made more complicated if there is nowhere to store money safely. In an emergency, richer people might choose between dipping into their savings and borrowing. The choice for the great mass of the unbanked in the developing world is limited to whom to borrow from, often at great cost.'

'[T]he [microfinance] industry remains dominated by credit, and the ability to save through an MFI is often linked to customers' willingness to borrow from it.'

'More MFIs are becoming interested in the potential of savings, thanks partly to the global financial crisis.'

'The Bill & Melinda Gates Foundation has thrown its weight behind microsavings. In January it announced grants worth \$38m to 18 MFIs in South Asia, Latin America and Africa to encourage them to expand their savings offerings.'

'It is hard to make a profit from customers who make lots of tiny deposits without massively trimming transaction costs.'

'The widespread use of mobile phones by poor people in developing countries may provide one answer.'

'If better technology and more flexible regulation are necessary for microsavings to work, they are still not sufficient. The final step is designing products that work for poor people. Several MFIs that are getting Gates Foundation money are experimenting with savings accounts that feature commitments to make regular deposits, something many people find attractive.'

'Marcia Brown of ACCION International, one of the Gates grantees, says that accounts designated as being for a particular purpose, such as children's school fees, are likely to be part of the product mix.'

'One product [being tested] in India involves collaborating with banking agents to sell "savings cards" in shops, so that saving becomes an active purchase and can compete with other impulse buys. With luck these kinds of innovations can help the poor use their own savings to make life just a little more predictable.'

2010-033

**Security for Shillings.** Anonymous. *The Economist*. Vol 394(8673), 13 Mar 2010: 76.

**Keywords:** Agriculture, Mobile Phones, Insurance, Safaricom

'One of the things holding back agriculture in developing countries is the unwillingness of farmers with small plots of land to invest in better seed and fertiliser.'

'Kilimo Salama, which in Kiswahili means "safe farming", uses a combination of mobile phones and 30 automated solar-powered weather stations to provide crop insurance. It has been set up by UAP Insurance of Kenya, Safaricom,

Kenya's biggest mobile-network operator, and the Syngenta Foundation for Sustainable Agriculture, part of a big Swiss agribusiness group.

'Farmers pay an extra 5% to insure a bag of seed, fertiliser or other things like herbicide against crop failure.'

'Local agents register a policy with UAP by using a camera-phone to scan a bar code on each bag sold. A text message confirming the policy is then sent to the farmer's handset. Farmers are registered at their nearest weather station, which transmits data over the mobile network. If weather conditions deteriorate, a panel of experts uses an index system to determine if crops will no longer be viable. At that point payouts are made directly to the handsets of farmers in the affected areas using Safaricom's M-PESA mobile-money service.'

### **Social Environment**

2010-034

**Capitalism 4.0** by Anatole Kaletsky. *OECD Observer*. No. 279: May 2010. Online: Available at www.oecdobserver.com

**Keywords:** Capitalism, Financial Crisis, Political Economy

'Rumours of capitalism's demise may be premature. The question now is: what kind of capitalist system will emerge from the current crisis?'

'Capitalism is an adaptive system that evolves in response to a changing environment. Once we recognise that capitalism is not a static set of institutions, but an evolutionary system that reinvents itself through crises, we can see the events of 2007-09 in a new light: as the fourth systemic transformation of capitalism, comparable to the transformations that followed the inflationary crisis of the 1970s, the Great Depression of the 1930s, and the Napoleonic Wars of 1803–15. The emerging politico-economic system can therefore be described as "Capitalism 4.0".'

'Viewing the crisis in this historical perspective we can also see that the global boom was not just an episode of mass hysteria, but in part a logical response to four great politico-economic trends that began in the late 1980s: the breakdown of communism, the re-emergence of Asia, the revolution in electronic technology and the creation of a global financial system based on pure fiat money. These benign trends inspired speculation and produced a boombust cycle, in a pattern typical of previous periods of productivity-enhancing structural change. What turned a severe but manageable boom-bust cycle into an unprecedented financial disaster was the fundamentalist interpretation of the economic theory of efficient markets [...].'

'The clearest consequence of the crisis is therefore a transformed relationship between public policy and markets. Such shifts in the boundary between economics and politics have been the defining feature of each successive version of the capitalism system.'

'If the world is too complex and unpredictable for either markets or governments to be perfect mechanisms for achieving social objectives, then systems of checks and balances reflecting both private incentives and public interests will have to be devised. Experimentation and pragmatism must therefore become the watchwords in public policy, economics and business strategy, even if this means a loss of consistency and coherence. The ability to operate by trial and error, to correct mistakes before they do too much social harm, is the greatest virtue of the market system. A similar pragmatism will have to be extended in the years ahead to political decisions and to the interaction of govern-

ment with the economy.'

'Political and business leaders are acknowledging the shift from a world of rationalist predictability to one characterised by ambiguity, unpredictability and fuzzy logic, and economists will have to follow suit. Mainstream economic assumptions of rational expectations, neutrality of money and efficient markets left only one important role for macroeconomic policy, which is to keep inflation under control. But if financial cycles, banking crises and self-reinforcing economic slumps are recognised as natural features of the capitalist system—then governments and central banks must again accept the broad responsibilities they abandoned in the 1980s for managing growth and employment, as well as maintaining financial stability and keeping inflation under control.'

'The size of government will have to shrink, even as its responsibilities expand, because deficits and tax burdens have reached the limits of public acceptance—and also because the complex demands of advanced societies, ranging from healthcare and higher education to energy independence and stable mortgage financing, can only be satisfied by profit enterprise acting through competitive capitalist markets. The expanding role of the government will not be in replacing markets, but in changing incentives, so that profit-seeking businesses pursue politically-desired objectives, whether in financial markets, healthcare, education or energy investment.'

'If America and Europe fail to show the ideological flexibility required to make the new model of capitalism more successful than the old one, the political economy of the coming decades will be shaped more by China's state-led capitalism than Western democracy. If, however, the rising generation of American, European and Asian politicians and business leaders recognise that changes are inevitable in both market and state fundamentalist thinking, then a mutually beneficial balance should soon be re-established in the politico-economic dynamics of emerging economies and advanced capitalist nations.'

#### 2010-035

#### **Mobile Money's Reversal of Fortune** by

Simon Rockman. *Mobile Business Briefing*. 23 April 2010. Online: Available at www.mobilebusinessbriefing.com

**Keywords:** International Transfers, Immigration, Mobile Money

'It's traditional to think of technology spreading from the developed world to the developing world, but mobile

money is different. We've seen that the developing world has taken to schemes like mPesa, GCash and Zap far faster than the West has fallen in love with Beem, Mondex and SimPav.'

'There is certainly change afoot; both 02 with 02 Money and Belgacom with its Ping Ping service have been astonishingly successful but it's obvious that the compelling need for mobile money in places where there is no alternative is the biggest driver making it work, while the banked can't always see the advantages. It's part of the innovators dilemma that something new has to be ten times better to change habits.'

'The next stage is just evolving: International Money Transfer, where users can send money home from cities outside their own country. Emigrants who travel abroad will want to use the same way of transferring money as they are used to at home.'

'This conforms well with GSMA research which shows that the four most important factors in a mobile money transfer are the convenience of sending money, the convenience of getting to somewhere to receive the money, security and cost.'

'As immigrants in the developed world start using mobiles to send money home they will start wanting to use mobile money between themselves. This will mean a demand for 'cash out' as well as 'cash in' for the countries which were originally seen as 'sending' territories. It will create a market for mobile money in the developed world.'

'We've seen that mobile money in emerging markets has increased financial literacy and has significantly increased the number of bank accounts. It wouldn't be unreasonable to think that the international effect will be similar.' [50%]

#### 2010-036

#### Soaring Mobile Payments Uptake in 2010

**- Gartner.** Anonymous. *FinExtra*. 22 June 2010. Online: Available at www.finextra.com

**Keywords:** Mobile Banking, Uptake, Mobile Payment Systems

'The number of people using their mobile phones to make payments is set to grow from 70.2 million in 2009 to 108.6 million this year, a 54.5% rise, according to research house Gartner.'

'This represents 2.1% of all mobile users, with the fastest take-up of the technology witnessed in developing markets such as Asia, Eastern Europe, the Middle East and Africa, driven by the unbanked and underbanked.'

'In Asia Pacific, m-payment users will surpass 62.8 million in 2010 and represent 2.6% of all mobile owners. In Europe, the Middle East and Africa there will be 27.1 million while in North America the figure is expected to be just 3.5 million, or 1.1% of all mobile users in the region.'

'Meanwhile, a separate report from Juniper Research suggests that the number of mobile subscribers who use their phones for mobile banking will exceed 400 million globally by 2013.'

#### 2010-037

**Mobile Banking: Mediated Use** by Jan Chipchase. *CGAP Technology Blog.* 26 May 2010. Online: Available at http://technology.cgap.org

**Keywords:** Mediated Use, Technology, Agent, Technical Literacy

'Textual and technical illiteracy is often cited as a barrier to the adoption of services and by default the benchmark for success is often set at 'understanding and completing the task by oneself'. However if there are 'literate' people nearby to what extent does it matter that the user is illiterate?'

'Mediated use' is simply recognising that part or all of a task or process is mediated through others. The mediator may be other family members, friends, peers, kiosk operators, agents or other dedicated service providers - with a range of benefits and costs associated with involving others. Common examples include telephone kiosk operators; mobile phone content providers; topping up pre-paid phones; and providing the authentification to sign up new customers.'

'From the user's perspective mediation is driven by a desire to: complete a task without having the necessary skills to do it oneself; convenience - asking someone else takes less time and effort than the consequences of going it alone; reduce error rates; generate opportunities for social interaction; reciprocate; show off - the lack of transparency is a useful way to project one's status or aspiration; and that asking re-enforces or challenges the power relationship between mediator and mediated. Mediation can also be considered as a first step to independent use by either party – the simplest way to learn.'

'For the user the primary costs of completing a task through a mediator are lack of privacy, inconvenience and the cost of social investment.'

'Turning to friends, peers or indeed agents for help in completing a transaction requires different levels of social investment, for example spending time being sympathetic to the mediators long list of current ailments or in the context of an agent the implied promise of being a more loyal customer.'

'For any given service - to what extent should we assume that the user will complete the entire task process?' [49%]

# Social Environment

### 2010-038

### Mobile Banking: Identity as Collateral by

Jan Chipchase. *CGAP Technology Blog.* 19 May 2010. Online: Available at http://technology.cgap.org

**Keywords:** Identification, Migrant Workers, Collateral, Financial and Mobile Services

'Simply proving who you are can present a problem for migrant workers. In many factory and manual laboring jobs the employer takes the worker's identity card as a form of collateral to be returned at the end of the contract and/or when a replacement is found.'

'Without an identity card it can be difficult to sign up for a pre-paid mobile phone account – just how difficult varies from market to market, and the extent to which know your customer (KYC) requirements are enforced or indeed are enforceable.'

'In cultures with a high level of graft the police are more likely to use physical ownership of an identity card as a leverage point to exhort fines/bribes [...]. For many migrants obtaining a locally recognized identity card, either through formal or illegal means is a job in itself.'

'How do the services we offer differ in a world where personal identity is collateral?' [63%]

### 2010-039

## Be There or Be Square: The Rise of Location-Based Social Networking.

Anonymous. *Knowledge@Wharton*. April 14, 2010. Online: Available at knowledge.wharton.upenn.edu

Keywords: Foursquare, Social Networking, Location-Based

'To find the hottest restaurant, bar or concert venue in town, many young adults are no longer checking in with their friends. They're "checking in" virtually via Foursquare, a location-based social networking site. Participants log onto the site and "check in" via smartphone to let contacts who are fellow users know where they are. At the same time, they learn what those users are doing — whether a coworker is eating at the restaurant next door, or if friends are gathering at a nightclub across town.'

'Web traffic to Foursquare has increased by 400% since October 2009, according to the research firm Hitwise — and that doesn't even count users who access the service via third party mobile applications.'

'The site currently has more than 800,000 members "checking in" at locations around the globe. In addition to sharing their location with contacts, check-ins earn users points and digital merit badges through Foursquare's built-in game.' The most coveted title is that of "mayor" — rewarded to the most frequent visitor to any given location.'

"Positioning a product as the new cool, hip thing is great

for getting people to flood in, but it's also going to make people flood out quickly as people move onto the next hot thing," Wharton marketing professor Jonah Berger says. "For a product to persist, at some point it has to transition from a hip new thing to something that has functional value."

'[...] [E]xperts say the true potential lies in companies knowing exactly where customers are and pitching offers or offering services based on the spots these customers frequent. As smartphones become more common and social networking gains a broader audience, consumers are consciously sharing more information than ever about their daily routines. That information makes it easier for businesses to advertise, or offer special discounts, that fit what someone is doing at a given moment. The challenge for Foursquare and other companies, observers suggest, is transitioning beyond buzz and finding uses for geo-targeting that are both profitable and practical.'

### **'iPhone's Inflection Point'**

"The iPhone was the first big device that got into the hands of a lot of consumers and added really easy-to-use location elements. They integrated mapping software into the device. Not only that, they made it easy for developers and publishers to integrate our applications."

'The usage of phones that allow Internet access, and participation in social networking sites, grew significantly in recent years. In a 2009 survey by the Pew Research Center's Internet & American Life Project, 32% of adults reported using their mobile devices to surf the web, up from 24% in 2007. Only 8% of adults told Pew in 2005 that they had a profile on a social networking site; that number was 47% for all adults in 2009 and 72% for men and women ages 18-29. According to Hitwise, U.S. web traffic to location-based social networking sites has increased by 350% in the past year.'

'Gowalla, which has 175,000 users in more than 165 countries, reports that its number-one check-in location in Philadelphia is the airport. Foursquare recently partnered with San Francisco's BART train service to offer discounts on monthly passes to users who frequently traveled via public transportation, as evidenced by repeated check-ins on the social networking site.'

### 'Annoyance vs. Gain'

'Widespread efforts by businesses to tap into locationbased social networking are what will cause many consumers to tire of the trend, warns Wharton marketing professor Peter Fader.'

'He suggests that many businesses expect too much out of social media efforts and that those who use Foursquare — or Twitter or Facebook — as part of an integrated marketing strategy and in a way that makes sense for the brand, will gain the most bang for their buck.' [29%]



### 2010-040

### Are the Youth Really Totally Replacing Traditional Media with New Media? By Isa

van Aardt & Nnono Shai. *Bureau of Market Research, University of South Africa*. 11 March 2010. Online: Available at www.unisa.ac.za

**Keywords:** New Media, Internet, Social Networking, High-Schoolers, Mobile Phones

A recent report conducted by the Bureau of Market Research, with the Film Publication Board (FPB) and Vodacom, looked at media usage and behaviour of adolescents in Gauteng province in South Africa.

The study showed that high school students in South Africa who have access to and use so-called "new media"—cell phones, social networking, and the internet—adopt and adapt to new developments at a faster pace than adults. "Increasing access to and enthusiastic usage of the new media by high school learners proves that, not only are they the innovators in this area, but they are changing their life styles to adapt to the new media and to use them for their own benefit."

The study also showed that high-schoolers view new media as much more than communication tools. They also see new media as aiding in their psychological growth through adolescence, thus confirming the international trend. "Although cellphones, in particular, have enhanced the capacity of the youth to communicate, they are used in combination with other tools, such as social networking sites [...]."

75.4% of high-schoolers responding to the survey indicated that they accessed the Internet via their cellphones. According to the study's author, Dr. Isa van Aardt, "friends and family and the traditional media seem to play a more important role in influencing their buying decisions than new media."

### 2010-041

**Slums in Crisis.** Anonymous. *IRIN*. 23 March 2010. Online: Available at www.irinnews.org

Keywords: Slums, Water, Disease, Scenarios

'A lack of clean water and sanitation in burgeoning slums could trigger a complex set of humanitarian crises says a new paper, Urban Catastrophes: The Wat/San Dimension, by the Humanitarian Futures Programme (HFP) of King's College London, which keeps an eye on possible crises that could emerge in the not too distant future.'

'Using plausible but fictitious scenarios set in the slums of Dhaka, capital of Bangladesh, and the city of Sao Paulo, Brazil, the paper shows how water scarcity brought on by climate change and large numbers of people in urban areas could lead to water stress, especially in slums, where shortages can stoke conflicts and an outbreak of a new and virulent influenza.'

'Simultaneously, the new biennial report by UN-HABITAT, the State of the World Cities 2010/2011: Bridging the Urban Divide, notes that around 3.49 billion people - more than half the world's population - now live in urban areas, of which 827.6 million are slum-dwellers. The global slum population will probably grow by six million each year, pushing the total number to 889 million in another 10 years.'

'Water shortages in slums could open the door to corruption, conflict and an increased risk of disease, setting off a range of complex humanitarian crises.'

"As with any valuable good, the provision of clean water and sanitation facilities in slums is an attractive target for corruption, greed, collusion and exploitation," the HFP researchers pointed out.'

'There is also evidence that water shortages threaten increased violence and conflict, especially in "high-density, multi-ethnic, politically unequal environments of concentrated poverty, as is often found in many slums," the HFP report said, citing reports of water-related protests and conflicts in Bolivia. Pakistan and India.'

'In slums located in tropical climates, the chances of new forms of diseases evolving are high.'

'Randolph Kent, who heads HFP, pointed out that the projections were for 20 to 30 years in the future, "but the idea is to provide enough time to countries to plan ahead".'

'He suggested setting up low-tech, cheap service delivery systems - for instance, to provide water, use segmented flexible rubber hoses that can be easily connected and disconnected. The hoses are produced by several independent companies, can be serviced and maintained by unskilled technicians, and offer plenty of design options.'

'For waste removal, the report suggested an improvement on the traditional chamber pot - use antibacterial plastic buckets that can be fitted with mechanically sealing covers, as on commercial compost bins. The bucket can be carried either by hand or taken by cart to a dumping point like a municipal sewer, then cleaned by hand or at a semi-automatic hot water and bleach station, and delivered to the family for re-use.'

### 2010-042

**Solar Power to the People!** by David Dickson.

*SciDev.* 24 March 2010. Online: Available at www.scidev.net

**Keywords:** Solar Power, Developing Countries

'As technological obstacles to the efficient use of solar energy diminish, economic and political challenges remain to its widespread adoption by the poor.'

'In principle, solar energy is a near-perfect solution for

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the energy needs of developing countries. It is universally and freely available, particularly near the equator, where many developing countries are found.'

'As conversion and storage costs fall, solar technology's potential for serving poor communities will inevitably rise. In India, the long-term costs of using solar-powered lamps are already considerably cheaper than traditional lighting fuelled by kerosene.'

'The capital costs of solar devices remain considerable, particularly to the poor. And government subsidies for energy produced from non-renewable sources — intended ostensibly to keep prices affordable — have too often also distorted the market in the interests of conventional energy suppliers.'

### 'Politics of power'

'One of the frequently-overlooked achievements of last December's climate conference in Copenhagen was the agreement on a Green Climate Fund. This is intended to raise and distribute about US\$30 billion a year for the next three years to help developing countries expand their use of renewable technologies and integrate these into development plans [...].'

'The fund reflects growing acceptance that developing renewable energy sources — particularly solar— is crucial to raising the world's poor out of poverty in a way that is environmentally sustainable.'

'If solar energy is to contribute effectively to sustainable development, it must be an integral part of community-based innovation strategies. And these must simultaneously promote local needs and contest conflicting external forces.'

### 2010-043

### Toward an Aid Quality Index. Anonymous.

*IRIN.* 6 April 2010. Online: Available at www.irinnews.org

**Keywords:** Aid Effectiveness, Donor Accountability, Monitoring & Evaluation

'Donors regularly make grandiose claims and promises, but measuring whether or not they live up to them requires clear aid quality measurement indicators.'

'A number of academics and institutions are working to create such indicators now that more development aid data is being made public.'

""We're at the start of the attempt to figure out what aspects of aid quality we can metricate and what makes sense depending on what we can get data on," Karin Christiansen, director of Publish What You Fund (PWYF), told IRIN.'

'Indices measuring different aspects of development aid already exist but are not yet purely focused on analyzing

accountability, say analysts.'

'The commitment of the Center for Global Development (CGD) to a development index created by mathematician David Roodman is a good start, rating 22 countries on how much they help recipients build wealth, good government and security.'

### 'Independent index'

'The initial step in creating a comprehensive, independent index, said analysts at a recent aid transparency conference in Oxford, is to pin the analysis on promises donors have already made - in this case, the 2003 Paris Declaration and 2008 Ghana aid effectiveness statements. In these promises, donors agreed: To ensure developing countries exercised effective leadership of development policies; to base support on countries' national development strategies; to harmonize their aid to reduce transaction costs, and to make it more transparent.'

'World Bank economist Stephen Knack, the Brookings Institution's Homi Kharas, University of Birmingham's Pranay Kumar Sinha, and New York University's Claudia Williamson used these promises as a starting point in indices they are working on.'

'Kharas measures donors against four indices: maximizing aid impact; reducing the burden of aid on recipients; fostering [local] institutions; and transparency, with indicators including how much of a budget goes to administrative costs, how much aid is tied or untied, or how well reported aid is.'

### 'Stumbling blocks'

[24%]

'Evaluating donors may become easier as more information becomes available, but the weighting given to each variable can skew the statistics, points out Sinha in his preliminary study entitled Can a Useful Aid Effectiveness Index be Developed Using the Paris Declaration Framework?'

'Furthermore, the lack of standardized definitions for many aspects of aid including "effective aid" and "transparency" continue to make it difficult to come up with accurate measurements of quality aid.'

'In the end, to work for these indices to have the most impact, analysts should be given the biggest say in evaluating aid quality on the ground, Christiansen stresses.'

"When it comes to measuring aid quality and transparency, donors respond when it is close to their experience, so the best impact we can have is when we measure it at the country level - then we will see donor behaviour start to change based on the results." [50%]



### 2010-044

### **How Private Healthcare Can Help Africa**

by Arnab Ghatak, Judith G. Hazlewood, & Tony M. Lee. *McKinsey Quarterly*. March 2008. Online: Available at www.mckinseyquarterly.com

Keywords: Healthcare, Private Sector, Investment

'Although much of the attention on health care in sub-Saharan Africa centers on government activity, the private sector plays a surprisingly significant and growing role in meeting the region's health care needs. Indeed, our research [...] found that the increasing demand for health care due to improved economic growth across much of the region could translate into \$20 billion of additional investment in the region's private-sector health care infrastructure in the coming decade.'

'Sub-Saharan Africa's private health sector is already large and diverse. Of the \$16.7 billion in total health expenditures in 2005, about 60 percent was privately financed and about half of the spending went to private providers [...]. Perhaps surprisingly, our study confirms that the private sector doesn't primarily serve the wealthy. In Ethiopia, Nigeria, Kenya, and Uganda, for example, the World Bank found that more than 40 percent of people in the lowest economic quintile received health care from private, for-private providers. Still, the private sector's role in individual countries varies widely because of political, historical, and economic factors. In Ghana and Uganda, for example, private-sector usage exceeds 60 percent; in Namibia it's less than 10 percent.'

'In the coming decade, sub-Saharan Africa's health care market will grow briskly, and the private sector's share of it will increase as improved macroeconomic conditions in much of the region fuel rising demand for health care. Our research suggest that sub-Saharan Africa's health care expenditures will more than double by 2016, to \$35 billion a year. The private sector will likely garner 60 percent of this amount.'

'The largest individual investments will likely focus on capacity expansion (for example, adding hospital beds), while significant investment will also go to refurbishing existing assets, increasing working capital, expanding services, and pursuing new ventures. While most projects will be small (under \$3 million), many will be financially viable [...].'

'Addressing the challenges and ensuring the responsible mobilization of the region's private health sector will require action from public and private stakeholders alike. Governments should modify local regulations that impede the development of the private health sector (say, trade barriers that limit access to health supplies or laws that restrict the private sector's role in medical training or its participation in risk-pooling plans) and also strengthen regulatory bodies that can work with reputable businesses to better develop and enforce quality standards. Private donors and govern-

ments should consider earmarking aid to directly support private-sector entities, and also expand risk-pooling arrangements.' [50%]

### 2010-045

### At Front Lines, Aids War is Falling Apart

by Tyler Hicks. The New York Times. 10 May 2010: A1.

Keywords: HIV/AIDS, Uganda, Global Health, Donors

'Uganda is the first and most obvious example of how the war on global AIDS is falling apart.'

'The last decade has been what some doctors call a "golden window" for treatment. Drugs that once cost \$12,000 a year fell to less than \$100, and the world was willing to pay.'

'In Uganda, where fewer than 10,000 were on drugs a decade ago, nearly 200,000 now are, largely as a result of American generosity. But the golden window is closing.'

'Uganda is the first country where major clinics routinely turn people away, but it will not be the last. In Kenya next door, grants to keep 200,000 on drugs will expire soon. An American-run program in Mozambique has been told to stop opening clinics. There have been drug shortages in Nigeria and Swaziland. Tanzania and Botswana are trimming treatment slots, according to a report by the medical charity Doctors Without Borders.'

'The collapse was set off by the global recession's effect on donors, and by a growing sense that more lives would be saved by fighting other, cheaper diseases. Even as the number of people infected by AIDS grows by a million a year, money for treatment has stopped growing.'

'For every 100 people put on treatment, 250 are newly infected, according to the United Nations' AIDS-fighting agency, Unaids.'

'Worldwide, even though two million people with the disease die each year, the total keeps growing because nearly three million adults and children become infected.'

'Of the 33 million people infected, 14 million are immunocompromised enough to need drugs now, under the latest World Health Organization guidelines.'

'Instead, despite a superhuman effort by donors, fewer than four million are on treatment. Just to meet the minimal W.H.O. guidelines, donations would have to treble instead of going flat.'

'Uganda is a microcosm of that: 500,000 need treatment, 200,000 are getting it, but each year, an additional 110.000 are infected.'

"You cannot mop the floor when the tap is still running on it," said Dr. David Kihumuro Apuuli, director-general of the Uganda AIDS Commission.'

'Some battles will still be won. Middle-income countries with limited epidemics, like India, Brazil and Russia, can probably treat all their patients without outside help. China

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almost certainly can. South Africa might; it has a raging epidemic but is rich by African standards.'

'Hopes rose from 2001 to 2003 when cheap generic antiretroviral drugs became available, Secretary General Kofi Annan of the United Nations formed the Global Fund and President George W. Bush initiated the President's Emergency Plan for AIDS Relief, or Pepfar.'

'AIDS2031, a panel [Dr. Peter Piot, the former executive director of Unaids] convened to look ahead to the epidemic's 50th anniversary, issued a pessimistic report in November that concluded: "Without a change in approach, a major epidemic will still be with us in 2031." Because of population growth, it said, there may still be two million new infections a year even then.'

'According to the Uganda AIDS Commission, the lifetime bill for treating one Ugandan AIDS patient, counting drugs, tests and medical salaries, is \$11,500.'

'Donors have decided that is too much, that more lives can be saved by concentrating on child-killers like stillbirth, pneumonia, diarrhea, malaria, measles and tetanus. Cures for those killers, like antibiotics, mosquito nets, rehydration salts, water filters, shots and deworming pills, cost \$1 to \$10.'

'For doctors on the front line, the frustration is palpable.' [30%]

### 2010-046

**Tuberculosis: Drug-Resistant Strains Still Spreading at Deadly Rates**, W.H.O. Report Says by Donald G. Mcneil Jr. *New York Times*. 23 March 2010: D6

**Keywords:** Tuberculosis, Drug-Resistant, World Health Organisation

'Drug-resistant tuberculosis killed about 150,000 people in 2008, and half of all the world's cases are thought in be in China and India, the World Health Organization said in a report last week.'

'A few places, like Peru and Hong Kong, have fought the disease effectively [...]. [B]ut in another region of Russia, more than a quarter of all cases are drug-resistant. And in Africa, a vast majority of cases have probably not even been diagnosed, the report said.'

'Even standard tuberculosis takes six months to cure with a four antibiotic cocktail. But the drugs cost only \$20 and are relatively easy to take. Drug-resistant forms can take two years and require dangerously toxic drugs that cost \$5,000 or more per person [...].'

2010-047

Manifesto Calls for Bottom-Up Science in Developing Countries by Linda Nordling & David Dickson. *SciDev.Net*. 16 June 2010. Online: Available at www.scidev.net

**Keywords:** Developing Countries, Science, Innovation

'Science in developing countries ought to be more userdriven and more reliant on democratic innovation processes, according to 'Innovation, Sustainability, Development: A New Manifesto', produced by the Social, Technological and Environmental Pathways to Sustainability (STEPS) Centre based at the University of Sussex, United Kingdom.'

'Although R&D budgets have risen worldwide, the document argues that ordinary people have been locked out of the innovation process because the focus has been on the size of investment — and on increasing the rate of technological innovation — rather than on seeking equitable and sustainable outcomes.'

'The report proposes a "3D" agenda, focussing on improving "direction, distribution and diversity". Countries should set up Strategic Innovation Fora — statutory bodies that would bring together a wide range of stakeholders to review spending decisions, debate controversial technology areas and evaluate the risks of various innovation pathways, says the manifesto.'

'Other proposals include providing businesses with financial incentives to target poverty alleviation and asking research funders to nurture science that meets the needs of the poor rather than aiming for Western-style ideals of excellence.'

[Link to 'Innovation, Sustainability, Development: A New Manifesto': http://www.anewmanifesto.org/manifesto\_2010/] [40%]

### 2010-048

**The Leaders We Need Now** by Tamara J. Erickson. *Harvard Business Review*. 1 May 2010. Online: Available a Harvard Business Review. 1 May 2010. Online: Available at http://hbr.org

**Keywords:** Generation X, Baby Boomers, Leadership, Demographics

'A new cohort of leaders is poised to take senior executive roles and is bringing with it a whole new mind-set. Baby Boomers have been firmly in charge for the past few decades, and as a rule they have been willing to operate by a well-understood set of corporate practices and policies related to compensation, hierarchy, and expectations for the way work "works." Generation Xers, born from 1961 through 1981, have different ideas. They're more apt to reject status-quo



definitions of success and seek their own paths.'

'Although it's impossible to draw neat boundaries along generational lines and unproductive to overgeneralize, we are each, in part, a product of our time. The formative years of Xers looked very different from those of Boomers.'

'The Xers' formative years—the 1980s and early 1990s—were broadly shaped by economic uncertainty and domestic social change. Their teens were a time of major corporate restructuring, as the psychological contracts between employers and employees were ripped apart in then-unprecedented ways.'

'The Gen X manager, by contrast, grew up knowing that her company would ultimately view her as expendable. She didn't want to put all her eggs into one corporate basket and potentially be abandoned in a new city or pushed too deeply into one area of specialization. She is part of a generation that particularly prizes options—one with many members who are profoundly dissatisfied with corporate life as they see it.'

'It's time to acknowledge the legitimacy of both perspectives and to understand the other side. Xers are the future of our business; we need them not just because we'll have to replace Boomers as they eventually head into retirement, but also because they possess skills and attitudes that are especially suited to today's challenges.'

### 'The X Factor in Leadership'

'Do we care? Do we even want these disaffected Gen Xers to take the corporate helm?'

'Today's businesses are facing new, unpredictable challenges. What we've thought of as leadership skills—setting direction, having the answers, controlling performance, running a tight ship—are less relevant in an environment of constant change. Increasingly, leadership is about creating a context for innovation and inclusion in the face of ambiguity and the unexpected. I believe Generation X is up for that challenge. More specifically, I think this generation will engage in five context-creating leadership activities that are well suited for today.

**'1. Increase collaborative capacity.** Networks, in most cases based on strong, trusting relationships, are essential for mobilizing intelligence throughout the business. And in contrast to the Boomers' more competitive posture, creating and maintaining networks are core values for many in Generation X.'

'Xers also grew up in parallel with the expansion of digital technologies. They readily adopt collaborative tools that reshape how we work and live. (Gen Ys share that collaborative mind-set and comfort with technology. As they grow into positions of leadership, we can be confident that they, too, will bring this asset with them.)'

**'2. Ask compelling questions.** A sense of alienation from institutions, adults, and their immediate surroundings as teens conditioned many Xers to look outward. Their skepticism and their ability to isolate practical truths enable

them to provide rich humor and incisive perspective as they redefine issues and question basic assumptions. Xers' distrust of hierarchy inclines them toward establishing and maintaining symmetrical rather than power-based boss-subordinate relationships. They are less likely than Boomers to use statements that rest on positional authority—an essential aspect of asking effective questions and drawing others into the solution.'

**'3. Embrace complexity and welcome disruptive information.** Ignoring or oversimplifying challenges does not work. Leaders need to grapple openly with complex issues and seek perspectives that challenge the established point of view. That means rejecting absolutes—getting comfortable with the idea that there is no "right" analysis of events that tops all other analyses, no dominant rationality, no single morality. Multidimensional problems don't lend themselves to crisp, categorical solutions.'

'Xers grew up buffeted by disruptive events—rising divorce rates, frequent layoffs, the space shuttle Challenger disaster, and others. Rather than ignoring or minimizing risk, most Xers have developed a wariness that anticipates a future full of change. Their well-honed survival skills include a continual consideration of "what if," and they have a strong bias for varied choices.'

**'4. Shape corporate identity.** Today, perhaps more than ever, people want to know what ties them together. They wonder, "What makes being a member of this organization, doing this work, unique?" Addressing this human longing—shaping organizational identity and maintaining consistency between work and personal values—is the key to creating discretionary energy and is therefore a key leadership skill today.'

'[...] Xers' formative experiences left many of them with strong, value-oriented sensibilities. They tend to exhibit a practical commitment to effective stewardship and a fierce dedication to work/life balance, particularly in their approach to parenting.'

**'5. Appreciate diversity.** Today's business world requires a subtle extension of our approach to diversity—one that emphasizes an appreciation of multiple points of view. Future leaders need to recognize the legitimacy of each perspective and acknowledge that there is no reason to grant any one viewpoint special significance or value. This is a difficult philosophical stance for those who were reared in the zero-sum world that characterized many Boomers' early years; it comes more comfortably to many in Generation X.'

'Nearly 90% of the world's top 200 firms are currently led by Boomers or people from an even older generation.

Only 23 of them are headed by members of Generation X.'

[35%]

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2010-049

**D.I.Y. Culture** by Michael Kimmelman. *The New York Times*. 18 April 2010: AR1.

Keywords: Globalisation, Culture

'It's a widening realization, I think, that globalism, beyond banking, climate change and warfare, has always been a dubious concept, a misleading catchall for how the world supposedly works, to which culture, in its increasing complexity, gives the lie.'

'The integration of markets and the Internet have certainly brought billions of people into closer contact. Everybody has access to the same American movies and music now, and not just American, also Indian, Romanian, South African and Chinese. But far from succumbing to some devouring juggernaut, culture — and Europe, with its different communities and nations living cheek by jowl, is a Petri dish to prove the point — has only atomized lately as a consequence of the very same globalizing forces that purportedly threaten to homogenize everything.'

'Nationalism, regionalism and tribalism are all on the rise. Societies are splitting even as they share more common goods and attributes than ever before. Culture is increasingly an instrument to divide and differentiate communities. And the leveling pressures of globalization have at the same time provided more and more people with the technological resources to decide for themselves, culturally speaking, who they are and how they choose to be known, seen, distinguished from others.'

'Culture means many things in this context, but at heart it is a suite of traits we inherit and also choose to disavow or to stress. It consists in part of the arts. It is something made and consumed, in socially revealing ways. Anyone may now pick through the marketplace of global culture.'

'This may sound like the essence of globalization, but the fact that everybody from Yerevan to Brasilia, Jakarta to Jerusalem, knows songs by the Black Eyed Peas or wears New York Yankees caps doesn't mean that culture is the same everywhere.'

'The common denominator of popular culture — which these days encompasses so many things that you could even include all sorts of high culture — seems to have just intensified the need people now feel to distinguish themselves from it. And global technology has made this easier by providing countless individuals, microcultures and larger groups and movements with cheap and convenient means to preserve and disseminate themselves. Years ago a language like Cimbrian, a Bavarian dialect today preserved by just a few hundred speakers in northern Italy, would have been doomed to extinction; now Cimbrian speakers, according to a recent German newspaper article, turn out to be getting their own online newspaper and television show. The language is being sustained by the same global forces that might promise to doom it.'

'What's new is the power available to wide swaths of the populace, thanks above all to cheap travel and the Web, to become actors in the production and dissemination of culture, not simply consumers. A generation or more ago, aside from what people did in their home or from what's roughly called folk or outsider art, culture was generally thought of as something handed down from on high, which the public received.'

'Today it's made and distributed in countless different ways, giving not just governments and institutions but nearly everyone with access to the Web the means to choose and shape his or her own culture, identity, tribal fidelities — and then spread this culture, via Youtube or whatever else, among allies (and enemies) everywhere, a democratizing process. The downside of this democratization is how every political niche and fringe group has found a culture via the Web to reinforce its already narrow views, polarizing parts of society despite the widened horizon. Neo-Nazis across borders now bond around cultural artifacts available over the Internet. Democrats and Republicans move further apart, digesting news from their own cable network shows.'

'[C]ulture (often unconsciously) identifies crucial ruptures, rifts, gaps and shifts in society. It is indispensable for our understanding of the mechanics of the world in this respect, pointing us toward those things around us that are unstable, changing, that shape how we live and how we treat one another. If we're alert to it, it helps reveal who we are to ourselves, often in ways we didn't realize in places we didn't necessarily think to look.'

'Culture is something we propagate but also something naturally there, existing in and around us, which makes us who we are but which may rise to the level of our consciousness only when one of those ruptures or rifts appear — when some little psychic clash happens between it and our more or less unconscious sense of the everyday world.'

'I also went to Gaza before the last Israeli incursion a couple of years ago. [...] The people I spoke with there said that culture was not just an escape for them from the every-day hardships from deprivation and a repressive regime, but that it was essential to survival, a lifeline, their steady connection to an outside world, a glimpse of what was beyond the conflict.'

'It represented normalcy, in other words, a precious commodity in that place.'

'We miss much about how culture works today — including how what might be called local standards of quality vie with the global aesthetic of sensationalism and fashion — if we stick only to seeing it as critics and consumers through our own aesthetic lens.'

'Hollywood and Broadway, the major museums and art fairs and biennials and galleries, buildings designed by celebrity architects and the music business are all the traditional focus of big media, and they tell us a lot about ourselves. They constitute our cultural firmament, the constellation of



our stars. But scientists say most of the universe is composed not of stars but of dark matter. It is the powerful but invisible force that exists everywhere and requires some leap of imagination on our part, some effort, to identify.'

'Most culture is dark matter.'

'Put another way, whether in Berlin or Gaza or New York City, there's a universe of life and death affairs beyond globalism. And culture is our window onto it.' [47%]

### 2010-050

### Saving the World, One Hit Point at A

**Time** by Samantha Murphy. *New Scientist*. 25 May 2010. Online: Available at www.newscientist.com

**Keywords:** Video Games, Alternate Reality Games, Global Issues

'NEXT time you fancy spreading a bit of digital carnage, try doing it with a virus. Not a worm or a trojan horse, but an influenza virus, mutating and spreading across the virtual globe.'

"Welcome to *Killer Flu*, a video game in which you play the role of H1N1. Pushing yourself to pandemic proportions is much harder than you might think, which is precisely the point. *Killer Flu* is a "serious game" - an increasingly popular genre of online games designed to deal with real-world issues.'

'This growing trend isn't just about raising awareness. It also aims to tap into the problem-solving skills of gamers to tackle real challenges, from who should do the dishes to battling global warming. As Jane McGonigal, one of the leading designers of serious games, likes to phrase it: "Reality is broken. Game designers can fix it."

'Video games already serve a multitude of serious purposes, such as training and education. The US military famously uses simulations to train soldiers; some have been turned into a series of commercial shoot-'em-ups such as *America's Army*.'

'Now, though, serious games are being targeted at everyday, recreational gamers [...]. Most are educational - the gaming equivalent of a TV documentary. But others are setting their sights higher, aiming to solve some of the world's problems.'

'Edward Castronova, an economist at Indiana University Bloomington, explores why people play such games. There are several powerful motivators, he says, including immediate positive feedback from completing missions, a sense of empowerment and significance, adventure, the connection to others - and the taste of victory.'

'Douglas Thomas of the Annenberg School for Communication and Journalism at the University of Southern California, San Diego, says gamers tend to have other positive attributes: they relish intellectual challenges, they are independent, they know how to gather resources and informa-

tion, and they can solve problems. With John Seely Brown of the Deloitte Center for the Edge, he has argued that gamers carry these attributes beyond the confines of the game into the real world (*Harvard Business Review*, 14 February 2008).'

'Thomas's colleague Dmitri Williams studies gamers and their behaviour. He reports that the average age is 35 with a gender breakdown of 60/40 male to female. Around 40 per cent of American adults are regular gamers (*Journal of Computer-Mediated Communication*, vol 13, p 993).'

'The answer, says McGonigal, is to make real problems more game-like by providing typical gaming motivators, such as unlockable missions and the promise of power or status in return for success, or "levelling up" in gamer parlance.'

'This approach has already been successfully applied to some real-world problems. The rules of frequent-flyer programmes, for example, are complex, reward-driven and immediately gratifying. Members are motivated not only by the promise of free flights, but also by achieving higher status, a real-world form of levelling up. The website Chore Wars, meanwhile, turns household tasks into a competition, awarding players points and status for completed chores using *Dungeons and Dragons* as inspiration.'

'The latest of McGonigal's attempts to make reality more like a game is called *Evoke*. It is an ARG that blends gaming with real-world actions. Every Wednesday at midnight, *Evoke* players, called agents, are given a new mission that challenges them to work together to solve a problem such as water safety, food security or sustainable energy. First they are told about the problem via a graphic-novel-style introduction. It is then up to them to do more research and come up with solutions.'

'Agents blog about their ideas or actions. Fellow agents then collectively allocate points based on the blog posts, which push agents higher up the rankings. Inspiring ideas earn "spark" points, for example, while an informative blog will get you "knowledge share" points. Evoke began on 3 March and attracted over 19,000 players from all over the world.'

'The game also has a concealed purpose. Taken together, its 10 missions add up to a bigger task - the creation of a business plan for a social enterprise. The game concluded on 12 May and the best ideas it produced are now being compiled. A few will be put into practice with funding from the World Bank Institute.'

'McGonigal argues that *Evoke* achieves its aim of making reality more like a game. She points out that you don't get positive feedback and points for good ideas in the real world, and no one is breaking down your goals into neat little steps. "It's never going to be more fun than *World of Warcraft*," she says, "but it's more fun than trying to save the world without it.""

### **'Untapped skills'**

'But Ian Bogost at the Georgia Institute of Technology in

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Atlanta, who designed *Killer Flu*, has reservations about games like *Evoke*. "I'm not sure that collective intelligence and collective action necessarily produce reliable answers," he says.'

'Liam Burke, a 26-year-old web designer from London who plays video games for 35 hours or so per week is not impressed either. "Most of the 'missions' look suspiciously like homework," he says. Williams agrees: "If you say 'hey kids, let's learn,' it's game over."'

### 'Playing for real'

**'Real Lives 2010** – [http://www.educationalsimulations. com/products.html] - A reality TV take on *The Sims* or *Second Life* allowing players to experience living anywhere on the planet. Players can choose to live as a Bangladeshi farmer, a Nigerian policeman, an American attorney or thousands of others.'

**'Darfur is Dying** – [http://www.darfurisdying.com] - Players must avoid capture by the Janjaweed militia, then navigate life in a refugee camp. More than 50,000 players have followed through with at least one of the real-world actions suggested in the game, such as writing to President Barack Obama to urge his support for the people of Darfur, according to mtvU.'

**'World Without Oil** – [http://www.worldwithoutoil.org] - An alternate reality game released in 2007 which simulated the first 32 weeks of a global oil crisis. Players were asked to imagine how the crisis would affect their own lives and come up with practical solutions.'

**'Play the News** – [http://www.playthenewsgame.com] - Players take on the role of leading figures in real-world news events. They learn the background of the news event and then try to influence how the story will develop. Players rank one another based on the accuracy of their predictions.'

**'Food Force** – [http://www.food-force.com] - Drought and civil war have ravaged the fictional island of Sheylan in the Indian Ocean. You are part of a team setting up the World Food Programme's relief efforts.'

**Fate of the World** – [http://red-redemption.com/fate-world] - Scheduled for release later this year. The object is to steer civilisation through the next 200 years as the climate hots up.'



## **Technological Environment**

2010-051

**Africa's Booming Tech Space Will Define the Continent's Future** by TMS Ruge. *The Globe and Mail*. 10 May 2010. Online: Available at www.theglobeandmail.com

**Keywords:** Mobile Phones, Broadband, Demographics, Smartphones

'In 2009, Africa's population topped one billion for the first time in history. A study in 2006 estimated that nearly 45 per cent [...] of the continent's population to be under the age of 15! Distinguished economist and author George B.N. Ayittey noted that there is "something" afoot in Africa. A disruption in the fabric of the status quo was under way. He called this group of self-motivated, fast-moving, idea pushers the "cheetah generation."

'By the end of 2011, the entire continent of Africa will be connected to no fewer than nine undersea broadband cable initiatives. Africa will have access to over 17 terabytes of designed broadband capacity.'

'Since mobiles first went mainstream in Africa at the turn of the century, mobile penetration has exploded to approximately 450 million subscribers. Put in perspective, there are more mobile subscriptions on the continent than the population of the United States, Canada and Mexico. Combined! This subscriber base is expect to maintain a 12 per cent annual growth rate through 2013.'

'Smart phones — while out of reach for most people across the continent (right now) — will soon see a significant drop in prices. Already we are seeing growth of the mobile web even without high penetration of traditional smart phones. Before you even say that Africa can't afford smart phones, Apple's iconic iPhone is ringing at the register in 13 countries and counting.'

'The age of the connected palm is upon us. Within the next 5 years, the communication device in the hands of most Africans will be virtually indistinguishable from a laptop by functionality. Next generation data networks are already in place from various multinational carriers, and starting to roll out 3G data plans across the continent.'

'Nigeria is by far the largest connected market with 24 million users online. South Africa just crossed the 5 million mark. A recent survey in Kenya found that 58 per cent of respondents used their mobile phone as a secondary device for accessing the web. Some people are altogether bypassing traditional computing devises like the laptops on their way to regular mobile web use.'

'Keep in mind, that all of this development is happening on the backdrop of insufficient access to energy, sporadic political instability, the effects of climate change, and limited infrastructure. Let's not forget the ever widening gap between stalwart, clueless, post-colonial leadership and an informed young population growing up in a connected world.'

'The arrival of mobile phones, copious amounts of broadband, centres of innovation and technology excellence, strategic investments by multinational tech giants and the perfect demographic soup are providing an excellent opportunity for Africa's outliers to shine.'

2010-052

**The Machines that Ate the Market** by Nina Mehta, Lynn Thomasson & Paul M. Barrett. *BusinessWeek*. 20 May 2010. Online: Available at www.businessweek.com

**Keywords:** High-Frequency Trading, Finance, Wall Street, "Flash Crash"

'A lot of people felt nostalgia for Big Board dominance on May 6. The fleet computers that drive today's securities industry are astounding—and unsettling. "Wall Street is no longer what it was designed to be," Mark Cuban, the tech entrepreneur, veteran investor, and owner of the Dallas Mavericks basketball team, blogged after watching the frantic selloff. "Wall Street is now a huge mathematical game of chess where individual companies are just pawns."

'Hysterical Thursday did no apparent long-term harm. Some venerable stocks dropped to a penny apiece before bouncing back. Overall, the Standard & Poor's 500-stock index declined 6.2 percent, from 1,136.16 to 1,065.79, in a 20-minute span—an \$862 billion paper loss—before recovering to finish down 3.2 percent.'

'A *Bloomberg Businessweek* investigation into those harrowing minutes revealed the extent to which the market is now dominated by quick-draw traders who have no intrinsic interest in the fate of companies or industries. Instead, these former mathematicians and computer scientists see securities as a cascade of abstract data. They direct their mainframes to sift the information flows for minute discrepancies, such as when futures contracts fall out of sync with related underlying stocks. High-frequency traders (HFTs), as they're known, set an astonishing pace. On May 6, 19 billion shares were bought and sold; as recently as 1998, 3 billion shares constituted a very busy day.'

'The SEC and the Commodity Futures Trading Commission issued a preliminary report in which they outlined six hypotheses that could explain the scare. "We continue to

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believe that the market disruption of May 6 was exacerbated by disparate trading rules and conventions across the exchanges," Schapiro said upon the report's release. As one response, the SEC proposed that exchanges halt trading in individual stocks that swing more than 10 percent during a five-minute period.'

"While temporarily slowing trading during periods of investor high anxiety makes sense to regulators, at least some high-frequency traders disagree. "I don't think that's the right solution," Wolverine's Kahn told Bloomberg News after the SEC announcement. "It could cause a lot of complications. On a busy day where the market is making major moves, you'd have a handful of [stock] names where it's circuit breaker-on/circuit breaker-off all day.""

'As this debate unfolds, one danger is that regulators, politicians, and industry executives—already distracted by how to reform Wall Street in the wake of the broader credit crisis of 2008—will shrug off May 6 as a weird blip requiring no fundamental rethinking of how man, machine, and market interact. Absent so far from the public discussion is any talk about whether the next quickie-crash might coincide with an outside event that shakes investor confidence much more severely: Iran and its nukes, industrial-environmental disaster, North Korean aggression. Or all of the above.'

'Today, hedge funds and HFT shops move enormous quantities of stock in fractions of a second. Firms jockey to place their computers near the mainframes of wholly automated trading venues you've never heard of in Jersey City, N.J., and Kansas City, Mo. The speed-of-light traders do this because the distances that their orders travel, measured in feet, can determine profit or loss.'

'High-frequency traders now account for as much as 60 percent of daily volume, according to Tabb Group, a research firm. The most prolific HFT outfits, such as Getco in Chicago, Tradebot Systems in Kansas City, Mo., or RGM Advisors in Austin, Tex., can individually generate as much as 5 percent or 10 percent of all the stocks traded in the U.S. on a given day.'

'HFT firms that pulled back may have acted appropriately, given that they had no legal obligation to do otherwise [...]. In addition to its circuit-breaker proposal, the SEC is expected to consider requiring high-frequency traders to continue to make markets, even during a major selloff.'

'Some would resist such a mandate. "No one should be forced to provide liquidity when CNBC is showing riots in Greece in the morning and there are worries the bailout of Greece and Portugal will fall apart and they'll default on their debt," says Pipeline's Federspiel.'

'On another front, some lawmakers have proposed enacting a tiny tax on each equity trade. Such a levy would likely discourage some high-frequency trading, slow the market's pace overall, and raise billions in revenue for the federal government. Some of the tax proceeds could be used to bolster SEC monitoring.'

'Manuel Henriquez, the Palo Alto venture capitalist, acknowledges "a visceral reaction to pull all the computers out." He doesn't think that's feasible, though. "We need to continue to embrace technology, but understand that technology can bite both ways."

### 2010-053

One Laptop Per Child Targets Middle East and E Africa by Jonathan Fildes. *BBC News*. 29 April 2010. Online: Available at www.news.bbc.co.uk

**Keywords:** One Laptop Per Child (OLPC), East Africa, Palestine

'The partnership between One Laptop per Child (OLPC) and the East African Community (EAC) aims to deliver 30 million laptops in the region by 2015.'

'OLPC has also announced a partnership with a UN agency which aims to deliver 500,000 machines in the Middle East.'

'The two groups aim to find donors to help pay for the machines, which currently sell for more than \$200, despite intentions to sell them for less.'

"This is a very ambitious project for which we will have to partner with various people and institutions to mobilise and fund the resources required to meet our objectives by 2015," said Ambassador Juma Mwapachu, secretary general of the EAC.'

'Some of the countries have already run small trials with the machines, including Rwanda which has more than 20,000 pupils using them.'

'[The UN Relief and Works Agency (UNRWA)] looks after more than four million Palestinian refugees in five countries.'

'It has been conducting trials with 1,500 machines in the region and has begun to distribute a further 2,100 to a school in Rafah, in the south of the Gaza strip.'

'OLPC has had difficulty selling its computers and its alternative vision of education around the world.'

'The organisation - a spin out from US university MIT - originally aimed to sell the low-cost laptops in lots of one million to governments in developing countries for \$100 each.'

'The rugged machines - which are designed specifically for children in the developing world and run both Linux and Microsoft Windows - are now offered in single units for around \$200 each.'

'Mr Keller said that there were currently around 1.6 million machines distributed around the world, with commitments for another 400,000.' [48%]



### 2010-054

Immobile Biometrics Don't Show Promise When it Comes to Security. Anonymous. *Yahoo News*. 24 April 2010. Online: Available at http://in.news.yahoo.com

**Keywords:** Biometric Security, Passwords, Mobile Technology

'With the advent of mobile devices, such as netbooks, PDAs and smart phones, biometric logins would be impossible when one is on the move, say researchers from the US and Germany.'

'The researchers said that biometric logins, being immobile in nature might not do much good in boosting security for the financial industry.'

'Biometric logins that use fingerprints, voice recognition, or identify you based on how you type look set to replace conventional passwords for accessing online banking and credit card services, online payment companies and even internet stockbrokers.'

'However, smart phones and other portable devices do not currently have the sophistication to be adapted easily for biometric technology.'

'In addition, users are likely to be reluctant to carry yet another device and its associated electrical charger along with their smart phone simply to login to their bank account when not at their desktop computer.'

"Passwords have been widely used because of their simplicity of implementation and use, but are now regarded as providing minimal security," said the researchers.'

'While biometric readers are being adapted for desktop computers they are seriously lagging behind in portability and compatibility with smart phones and other mobile computing devices.'

'The study has been published in the International Journal of Electronic Marketing and Retailing.' [66%]

### 2010-055

**Changing Technologies to Keep Up with Climate Change**. Anonymous. *IRIN*. 10 May 2010.

Online: Available at www.irinnews.org

**Keywords:** Agriculture, Climate Change, Poverty, Adaptation, Technology

'Technological innovation is key to helping African farmers cope with the increasing challenges posed by climate change, say specialists.'

"Temperatures have increased and the danger is that agriculture is the backbone of [Africa's] economies," Lindiwe Majele Sibanda, chief executive officer of the South-African based Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), told IRIN. "The increase in tempe-

ratures means we have less water in some places and we are already a drought-prone region."

"The technologies that we have on the shelf... like the seeds, may not be compatible with the increased temperatures," she added.'

"Malawi recorded world renowned success in terms of food security because we have experienced a fairly stable climate regime over the last 100 years. The technologies that were there [such as] the hybrid seeds... could be taken in, planted. As long they were accessible to the farmers, we could then register increases in yields.'

"But the challenge we face now is that there will be new diseases, new vectors and pests that we have not known or seen before .... All these challenges are being superimposed on a system that has not been food-secure," she said.'

"We need to rethink agriculture as a platform from which the world will learn to ensure that 50 years from now we can produce food to feed nine billion," [The UN Environmental Programme (UNEP) Executive Director, Achim Steiner] said."

"Clearly increasing yields is paramount, but we cannot look at the development of agriculture driven by the horizontal approach; slash-burn, moving to new frontiers ... this paradigm is deceptive. You only have so much for horizontal expansion."

'He proposed the "vertical expansion of agriculture" through methods such as plant breeding with perennial food crops, and improved farm management practices to increase soil fertility and moisture retention. Perennial crops are less disruptive to the soil structure as there is less tilling and they help trap nutrients.'

"Farming in the future will not just be about food production but other services rendered captured in an economic model. If we can prove that a certain farming system is better at reducing carbon emissions, what is there to stop farmers from being paid for their efforts five to 10 years from now?" Steiner posited.'

### 'India's experience'

'India saw food production rise from about 65 million tonnes in the 1960s to 230 million tonnes in 2008 due to higher yielding varieties, said Pramod Aggarwal of the Indian Agricultural Research Institute.'

'Aggarwal said improved crop, pest and risk management as well as changes in sowing dates, improved crop varieties; irrigation and fertilizer efficiency could further mitigate climate effects while increasing production.'

### 'Learning by doing'

"We are at a stage where we need to learn quickly. Climate adaptation is a classic case of learning by doing," Saleemul Huq, a senior fellow at the London-based International Institute for Environment and Development (IIED), said. "We used to think of adaptation as localized. We are

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now thinking in-situ in the short term. Planned migration due to rising sea levels, where people may move further inland, may have to be considered in the long term. [We] need a new way although we don't know what this new way is."

### 2010-056

### Wheat Variety Thrives on Saltier Soils by

Wagdy Sawahel. *SciDev.* 28 April 2010. Online: Available at www.scidev.net

Keywords: Wheat, Salty Soils, Irrigation

'Unlike bread wheat, durum wheat is generally intolerant to salinity.'

'A variety of wheat that thrives on salty soils has been bred by scientists who say they will make it freely available to the developing world.'

'The enhanced durum wheat is 25 per cent more productive in saline soils than its normal counterpart, according to Rana Munns, chief research scientist at the Australia-based CSIRO Plant Industry.'

'Some 17 million hectares of durum wheat are cultivated worldwide, with 60 per cent of cultivation taking place in developing countries in regions including the Middle East, North Africa, Latin America and central India, according to the Food and Agriculture Organization.'

'Around one third of the world's food is produced on irrigated land, and is thus susceptible to salinity problems. Introducing salt-tolerance genes to crops is one way of dealing with this issue [...].'

"The additional significance is that it is non-GM and CSIRO Plant Industry is willing to share it with developing countries," [Francis Obgbonnaya, researcher at the International Center for Agricultural Research in the Dry Areas, Syria] said.'

'But Hans-Joachim Braun, global wheat director at CIMMYT, said: "Breeding salt tolerant plants for such systems will provide a short term solution but in the long term this will only make the situation worse as it allows farmers to continue with sub-optimal practices that increase salt concentration. Such salt problems must be addressed through engineering and agronomy practices".'

### 2010-057

**Eskom Sees Power Supply Tight in 2011-12, after 2017**. Anonymous. *Reuters*. 29 April 2010. Online: Available at www.engineeringnews.co.za

Keywords: Power Generation, South Africa, Eskom

'South Africa's power utility Eskom is confident it will be able to meet this year's power demand, including during the World Cup, but supply will be tight from 2011-2012 unless new capacity is brought on stream.'

'Brian Dames, head of Eskom's generation business, said the Medupi and Kusile coal-fired power plants will provide a buffer once their first units come on stream in 2012 and 2014 respectively. The plants will each generate 4 800 MW.'

'He said South Africa's power demand rose 8 percent during the first quarter from last year after the country started emerging from the recession.'

'Dames said he expects electricity demand to grow annually by 3% for the next 20 years, leading to a doubling of present demand levels of around 37 000 MW by 2030.'

T48%1

### 2010-058

**Cost Solar Solution Could Empower Off-Grid Poor** by Rhiannon Smith. *SciDev.Net.* 14 June 2010. Online: Available at www.scidev.net

**Keywords:** Solar Power, Low-Cost Power, Portable Solar Lamps

'A low-cost, plastic solar lamp could provide affordable lighting for millions living in rural off-grid areas across Africa.'

'The lamp is made from polymer solar cells and although it is not as efficient as similar technologies, it could prove more affordable, according to its developers.'

'Several versions of the lamp are under development, following trials on a prototype in Zambia in 2009. One, a pocket-sized torch that could be used for night-time navigation, is ready to be rolled out commercially and [Frederik Krebs, from the Risø National Laboratory for Sustainable Energy, in Denmark] is confident that it could be produced for as little as €3 (around US\$4).'

'Solar lighting is an important alternative to the kerosene lamps currently used in off-grid developing areas [...]. Kerosene lamps are a fire hazard, release damaging fumes, and place a financial burden on the user who constantly has to buy fuel.'

'The field trials allowed researchers to improve subsequent versions of the lamp by identifying the problems users encountered. For example, some people mistakenly charged the lamp upside down, reducing efficiency. Others charged it in front of a campfire and accidentally destroyed the solar cell.'

'The lamp was developed as part of the 'Lighting Africa' initiative, established by the World Bank, which promotes sustainable lighting solutions for Africa.' [48%]



### 2010-059

**Econet Launches Solar Handset**. Anonymous. *African Business*, Issue 360(January 2010): 9.

Keywords: Mobile Phones, Solar Power, Burundi

'Burundi mobile operator Econet [...] has launched a new rechargeable solar handset that it forecasts will boost subscriber numbers to 800,000.'

'Econet Burundi [...] has invested \$40m in its new network but recognized that power demand in the land-locked country, at around 45MW against an installed generating capacity of 32MW, placed a severe constraint on subscribers' telecom use.'

### 2010-060

### **Shoppers Check Out of Stores Via Cell**

**Phone** by Olga Kharif. *BusinessWeek*. 16 May 2010. Online: Available at www.businessweek.com

**Keywords:** Mobile Phones, Near Field Communication, Mobile Money

'Credit-card issuers are testing "contactless commerce" that lets consumers pay for purchases with a chip affixed to their cell phones'

'Discover Financial Services, Citigroup, and Visa are introducing "contactless payment" technology that lets consumers pay for purchases by waving chips attached to their cell phones. Instead of swiping a credit or debit card, consumers can wave or tap phones—items that are nearly always handy—equipped with specially encoded stickers, or holsters, on receivers at the checkout counter.'

'Card issuers also hope that handset makers will embed the RFID chips into phones, then create smartphone applications to help shoppers manage payments. "Everything you store in a leather wallet will migrate to a mobile handset," says Barry McCarthy, a general manager at First Data, which processes transactions for 2,000 card issuers worldwide.'

### 'convenience increases transactions'

'The card issuers' goal is to decrease the use of cash, still involved in half of all point-of-sale transactions. Each purchase conducted with a contactless card affords issuers a small fee. The financial institutions also share in late charges consumers can accrue on their credit cards. "For us, it's real growth if we can be more competitive with cash," says James Anderson, a vice-president at MasterCard.'

'Because of the convenience they offer, mobile wallets can boost consumers' purchases. When Discover tested the stickers with more than 700 employees last year, the company saw "a good uptick" in how frequently participants charged purchases, says Farhan Ahmad, a general manager

at Discover Network. He declined to detail the results of the trial '

'North American consumers paid for less than \$100 million worth of goods in 2010 using a type of mobile contactless payment chip technology that is known as Near Field Communication, according to telecom industry analysis firm Juniper Research. By 2012, the total could rise to \$5 billion. NFC chips, made by companies that include NXP Semiconductors and Inside Contactless, contain tiny antennae that communicate with in-store scanners. Outfitted with these accessories, phones can function as electronic wallets.'

'In the U.S., contactless payments have been limited to small trials because of wireless carriers' reluctance to build NFC chips into their phones. Carriers, handset makers, and banks are still figuring out how they would divide related fees, say analysts.'

'Security has also been a concern, although consumers typically have to enter passwords or PINs to complete purchases made via NFC devices. "It's probably more secure than your traditional wallet," says Howard Wilcox, a senior analyst at Juniper Research.'

### 'Technology vendors committed to contactless com'

'Technology vendors committed to contactless commerce are working to develop enabled devices. Contactless payment chips could also serve as health cards that contain insurance information and health records or as security badges enabling entry to office buildings.' [49%]

### 2010-061

## **Cables Bring Cheap, High-Speed Connectivity** by Richard Seymour. *African Business*,

Issue 364(May 2010): 16.

**Keywords:** Undersea Cables, East Africa, Infrastructure, Broadband

'According to Internet World Usage Stats, only 8.7% of Africans had Internet connectivity in 2009, compared to 29.7% for the rest of the world. In the last 10 years, growth in Internet use in Africa has barely moved at 1.8%, compared to 381.4% everywhere else.'

'Parts of North Africa are already connected to the world's longest submarine telecommunications cable which stretches from the Far East to Europe; and South Africa is similarly connected via the South Africa-Far East (SAFE) cable, but lack of capacity has rendered connection speeds low.'

'The privately funded Sea-com cable is the first to connect East Africa to the world. Connecting South and East Africa to each other and to global networks linking Europe and India, the cable became operational in June 2009. Its potential speed of 1.28 terabits per second (Tbps) — of

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which 100 gigabits per second (Gbps) is currently being used — is more than enough capacity to make available high-definition television, and TV that uses the Internet to reach users, while still keeping up with demand from business and home users.'

'Kenya's Internet providers (IPs), in anticipation, laid out cables across the country to bring high-speed broadband from the coastal landing points to inland stations and major population centres and neighbouring countries.'

'The East African Submarine Cable System (EASSy) — a 10,000km underwater cable — is another such project, with nine landing points, connecting the whole of East Africa, with landlocked countries such as Chad, Rwanda and Zimbabwe also benefiting.'

### 'Kenya initiative'

'A third cable, the 1.2 Tbps East African Marine System (TEAMS) is already operational. Regional networks to carry broadband from coastal landing points to homes and businesses across the continent, many of which take advantage of those existing for rail and electricity, have already made significant progress.'

'[...] [N]ow that the backbone of the necessary infrastructure is in place, Africa can merge, albeit slowly, into the fast lane of the worldwide information super highway, with all the joys — and tribulations — that brings.' [48%]

### 2010-062

### **Broadband Speeding Ahead in South**

**Africa** by Loni Prinsloo. *Engineering News*. 17 March 2010. Online: Available at www.engineeringnews.co.za

**Keywords:** Broadband, Internet, South Africa, Undersea Cables

'A study conducted by [Cisco and World Wide Worx], 'Internet Access in South Africa 2010', [...] revealed that wireless broadband had been growing almost three times as fast as fixed line broadband in South Africa.'

'World Wide Worx MD Arthur Goldstuck said that [...] [g]rowth in wireless broadband was mainly a result of large companies giving 3G cards to employees who need to be connected while out of the office.'

"This ability to collaborate and share information in realtime will undoubtedly help to increase business productivity and profitability across the region," said Goldstuck.'

'On the other hand, the study showed that most of the growth in fixed-line broadband comes from small and medium-sized enterprises (SMEs) upgrading to ADSL, extending Internet access to more than half-a-million South Africans working in small offices, who did not previously have access.'

'The study also indicated that if all current cable projects come to fruition, by 2011, the total capacity of undersea

cables connecting Africa to the rest of the world would have increase [sic] 150-fold over 2008.'

'The availability of both fibre access and new licenses had sparked an 18% increase in the number of Internet access and service providers in South Africa.' [49%]

### 2010-063

## **2010 Seen as 'Defining Year' for Africa's Telecoms Sector** by Jacqueline Holman.

Engineering News. 31 March 2010. Online: Available at www.engineeringnews.co.za

**Keywords:** Broadband, South Africa, Telecommunications, Low-Cost Devices

'This year is likely to be a defining year for Africa's telecommunications (telecoms) sector, with South Africa's 2010 FIFA World Cup to determine the robustness and relevance of submarine cable systems, terrestrial backhaul networks and metro networks, market intelligence and advisory services provider International Data Corporation (IDC) forecasts.'

'[...] IDC East Africa regional manager Francis Hook says that mobile broadband will prevail in Africa while fixed-line services gradually come to an inevitable demise.'

'Research in 2009, showed that Africa's telecoms channels accounted for 3% to 4% of all mobile or portable units shipped [...].'

'Currently, African mobile penetration rates average from 25% to 45% of the entire population, with the rate for the adult population being from about 70% to 80%.'

'[Hook] says that developments in broadband connectivity, some of which are due to go live in 2010, will affect the wider market, although last-mile access and affordability will present key challenges.'

'Operators and vendors will also pay closer attention to social networking, news portals and other content to grow data revenue. The provision of content in local languages could be another thrust.'

'The availability of low-cost devices will be an important factor in the adoption of these offerings, resulting in telecoms companies becoming an increasingly important channel for notebook, netbook and smart phone vendors.' [62%]



### 2010-064

**It's a Long Way to 4G Nirvana**. Anonymous. *Knowledge@Wharton*. 17 March 2010. Online: Available at http://knowledge.wharton.upenn.edu

**Keywords:** 4G, Telecommunications, Infrastructure, Mobile Broadband

'[...] 4G, or fourth generation, wireless networks [...] promise speeds fast enough to replace wired Internet connections and the ability to enable a wide range of new applications for mobile consumers involving rich media such as video.'

'Gerald Faulhaber, a business and public policy professor at Wharton, agrees. "4G mobile technology holds a lot of promise. [It] presages the notion that you can use your phone as a computer."

'First, service providers will need to create the necessary infrastructure for a 4G rollout. Meanwhile, there's a looming wireless spectrum crunch: The various frequencies needed to deliver services are in short supply.'

'Despite any differences in these technologies, one thing is clear: Faster wireless broadband speeds are expected to be a game changer. Scott Snyder, who wrote *The New World of Wireless: How to Compete in the 4G Revolution*, published by Wharton School Publishing, argues that 4G's promises — faster downloads, interoperability between various devices and the improved ability to share data — will change user behavior. "This technology platform will really allow much more interconnectivity across the planet." With all of that connectivity, innovation and productivity should blossom, he adds.'

'But before Snyder's vision can become a reality, the wireless industry needs a building boom to upgrade from 3G hardware and software to the next generation.'

"Werbach notes that the 4G build-out may move more rapidly than some observers think." 4G will roll out faster than 3G in the U.S. for several reasons. Some of them have to do with competition" between the providers, none of which are likely to remain dormant while others pull ahead. The most time-consuming component of the mobile infrastructure to upgrade is the towers, he adds, "[but] tens of thousands have been built around the U.S. over the past decade, so the 3G to 4G upgrade should be easier than in the past."

'Payoff for 4G investments will largely depend on pricing of services, according to Clemons. Carriers can target niche markets — say, business travelers who want the fastest connections for their laptops — or try to go mainstream with lower prices. But going mass market with 4G won't be the first priority, Clemons predicts.'

'Over time, [Kartik Hosanagar, an operations and information management professor at Wharton] and others predict that broadband substitution will occur as consumers drop wired access for wireless. "The substitution effect will

eventually happen, but it will take time," Hosanagar says. "It took time for consumers to get comfortable with dropping their phone lines for cell phones."

"The FCC needs to release new spectrum," says Faulhaber. "If people start using 4G a lot, it will eat up bandwidth, just like the iPhone is stressing 3G networks. You can either get more spectrum, or build more cell towers closer together — although there are already 225,000 cell towers." That spectrum squeeze is one of the reasons 4G is likely to start by focusing on business users instead of the mass market, he adds.'

### 2010-065

## Assessing the Broadband Gap: From the Penetration Divide to the Quality Divide

by María Rosalía Vicente & Fernando Gil-de-Bernabé. *Technological Forecasting and Social Change*. Vol 77(5): 816-822.

**Keywords:** Broadband, Telecommunications, OECD, BRICs

'High-quality broadband networks sit at the heart of the coming video revolution. Therefore, countries with good broadband penetration but with poor quality are in danger of falling behind in the next wave of productivity, collaboration, and entertainment made possible by the Internet. Hence, the combination of penetration and quality could be defined as Broadband Leadership.'

'Thus, the aim of this paper is to assess Broadband Leadership across 42 countries—including the member states of the European Union (EU), the Organization for Economic Cooperation and Development (OECD) as well as Brazil, Russia, India, and China (BRIC).'

'Our conceptual model is that technical quality can be captured through a combination of speed and latency. The resulting Broadband Quality Score provides free insights into a nation's ability to harness the next generation of e-services.'

'[...][Q]uality depends on mainly three parameters: download speed, which is critical for streaming high-quality video and sharing large files; upload speed, which is becoming increasingly relevant for two-way high-quality communications, and uploading and sharing files; and latency, which is vital for real-time applications. Therefore, the [Broadband Quality Score (BQS)] is a combined measure of these three parameters.'

'Using nearly eight million records from actual broadband speed tests conducted through www.speedtest.net during the month of May 2008 by users in 42 countries, we calculate the averages for each country on these three indicators and standardized them on a scale of zero to one, by indexing relative to maximum and minimum values across the sample of countries. The BQS for each country is the weighted average of the standardized scores in the three

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quality indicators.'

'In addition to calculating "the Broadband Quality Score of Today" for each country, a BQS threshold was estimated for today's and tomorrow's applications in order to evaluate each country's readiness to support the next generation of video and web services. These thresholds are based on the assumption of the consumer having a good consistent experience with the most commonly used applications today and those expected in the next three years which are ramping up today.'

'For instance, the BQS threshold for today is 32, and it is based on 3.75 Mbps download speed, 1 Mbps upload, and 90 ms latency. These values are derived from the requirements of a basket of applications that include social networking, low-definition video streaming, basic video-chatting, upload of lower quality pictures and videos, and one channel of Internet Protocol Television (IPTV). The BQS threshold for the future will be 75, when broadband will need to deliver 11.25 Mbps download speed, 5 Mbps upload and 60 ms latency, which is based on a basket of applications that include visual networking, high-definition video streaming, consumer telepresence, upload of pictures and videos in their actual quality, and own high-definition IPTV channel. For both thresholds the experts assumed that two to three applications would be running in a home at a given time, and that the service experience would be on average good enough that consumers would be compelled to use these services regularly. These are conservative estimates.'

'Overall, are there any lessons here for countries to learn to improve broadband performance? The successful stories of Japan and South Korea tell us that government and policymakers have an important role to play in setting the agenda on broadband quality, providing the right competitive environment to encourage investment and innovation, and supporting the growth of consumer demand. Thus, financial incentives such as favorable tax policies or low-cost loans may help in encouraging investment in the next generation of networks, especially in rural areas where it is particularly expensive for operators to deploy broadband. Such measures might be of special importance in the current situation of economic crisis in which operators might tend to reduce their investments, a fact that would lead to the stagnation of digital progress, and to the loss of future of opportunities in this field. In pursuit of cost-effectiveness these incentives should focus on upgrading existing networks instead of subsidizing additional pipes in those communities already connected.'

'Moreover, it is particularly important to reinforce the policies towards investing in wireless technologies. The future of broadband will be increasingly shaped by wireless networks. Hence, it is the right moment for countries to do a real beat on this technology. Finally, it is vital to keep on tracking the quality of broadband connections, not only in a certain moment of time but its evolution. The use of tools like the Broadband Quality and the Broadband Leadership

Scores would allow us to identify those countries that are consistently performing well (badly) over time, and analyze the reasons of their broadband success/failure.' [20%]

### 2010-066

### **Smartphones to Get Novel Memory**

**Material.** Anonymous. *BBC News*. 30 April 2010. Online: Available at http://news.bbc.co.uk

**Keywords:** Nanotechnology, Smartphones, Samsung, Phase Change Memory

'Samsung has announced plans to produce memory modules built of what is known as a phase change material.'

'It plans to produce phase change memory (PCM) chips in the same format as existing designs so they can easily be worked into production runs.'

'The most widely adopted form of PCM is typically made from an alloy of germanium, antimony and telllurium [sic] which forms a glass-like material. Heating it by applying a current makes the material turn into two separate forms that exhibit very different resistances to electricity.'

'At its mobile technology forum held in Taipei, Samsung announced plans to start producing PCM modules 512megabits (Mbit) in size.'

'Samsung lab tests suggest that the 512Mbit phase change memory can read and write data up to 10 times faster than some existing flash memory types. Overall, said Samsung, phase change memory is about three times faster than existing flash memory.'

### 2010-067

### **Company Sees Leap for Cellphone**

**Cameras** by Ashlee Vance. *New York Times*. 22 March 2010: B6.

**Keywords:** Nanotechnology, Quantum Dots, Mobile Phones, Photography

'Mobile photographers could soon have much better cameras on their cellphones, thanks to technology known as quantum dots.'

'InVisage Technologies, based in Menlo Park, Calif., has spent more than three years trying to build a proprietary film that coats the image sensors used in cellphone cameras and allows them to capture more light. The film stands as a rare commercial use of an exotic semiconductor material called a quantum dot.'

'Jess Lee, the chief executive of InVisage, said the company's lab tests had convinced him that within two years cellphone companies would be able to offer cameras that work about four times better than today's cameras, particularly in low light.'



'The image sensors in cellphone cameras now use silicon to capture light, which is then processed to create a picture. Companies making these sensors have run into problems as they keep shrinking and tweaking the innards of the devices so that they can absorb more light.'

'[Quantum dots] are essentially semiconductor particles about a nanometer — or a billionth of a meter — in size. Technologists want to control the physical properties of the quantum dots to make them behave a certain way.'

'Typically, researchers must build the quantum dots with exotic materials and then struggle to control their properties in a repeatable fashion.'

'The liquid [in which quantum dots are suspended] is spread across the top of an image sensor. Mr. Lee expects that companies producing image sensor chips could use the film without substantial changes to their existing equipment.'

'With such technology, the current three-megapixel camera found in the Apple iPhone could be turned into a 12-megapixel camera that works better in varying light conditions, Mr. Lee said.'

### 2010-068

**H.P. Sees a Revolution in Memory Chip** by John Markoff. *The New York Times*. 7 April 2010. Online: Available at www.nytimes.com

**Keywords:** Memory Chips, Nanotechnology, Memristors, Computers

'The devices, known as memristors, or memory resistors, were conceived in 1971 by Leon O. Chua, an electrical engineer at the University of California, Berkeley, but they were not put into effect until 2008 at the H.P. lab here.'

'They are simpler than today's semiconducting transistors, can store information even in the absence of an electrical current and, according to a report in [Nature], can be used for both data processing and storage applications.'

'The scheme could potentially free designers to stack thousands of switches in a high-rise fashion, permitting a new class of ultradense computing devices even after two-dimensional scaling reaches fundamental limits.'

'[...] Stan Williams, a company physicist, said that in the two years since announcing working devices, his team had increased their switching speed to match today's conventional silicon transistors.'

'That is a significant hurdle to overcome, indicating that it is now possible to consider memristor-based chips as an alternative to today's transistor-based flash computer memories [...].'

'The most advanced transistor technology today is based on minimum feature sizes of 30 to 40 nanometers — by contrast a biological virus is typically about 100 nanometers — and Dr. Williams said that H.P. now has working 3-nano-

meter memristors that can switch on and off in about a nanosecond, or a billionth of a second.'

'He said the company could have a competitor to flash memory in three years that would have a capacity of 20 gigabytes a square centimeter.'

'The H.P. technology is based on the ability to use an electrical current to move atoms within an ultrathin film of titanium dioxide. After the location of an atom has been shifted, even by as little as a nanometer, the result can be read as a change in the resistance of the material. That change persists even after the current is switched off, making it possible to build an extremely low-power device.'

[47%]

### 2010-069

**Web Hit by Hi-Tech Crime Wave**. Anonymous. *BBC News*. 20 April 2010. Online: Available at http://news.bbc.co.uk

**Keywords:** Hi-Tech Crime, Malware, Professional Crime

'Hi-tech criminals are racking up more than 100 attacks a second on the world's computers, a survey suggests.'

'The number of malware (malicious software) samples that Symantec saw in 2009 was 71% higher than in 2008.'

'This meant, said Symantec, that 51% of all the viruses, trojans and other malicious programs it has ever seen were logged during 2009.'

'The steep rise in malware was driven largely by the growing popularity of easy to use toolkits that novice cyber criminals are using to turn out their own malware, said Tony Osborn, a technology manager for the public sector at Symantec.'

'One, called Zeus, was available for around \$700 (£458) and many had become so successful that their creators now offer telephone support for those who cannot get them to work '

'Zeus relies on spam to lure people to websites where victims will be tricked into installing malicious code or which sneaks on to a computer via a known vulnerability.'

'Often, said the report, this can help criminals set up botnets — networks of hijacked home PCs that can be used to send spam or plundered for lucrative personal data.'

'Many [professional cyber criminals] now scour social network pages for details about employees inside companies and craft their spam and other messages to capitalise on the details they can gather.'

'The continuing growth of hi-tech crime meant that many developing nations were starting to suffer significant numbers of attacks. Brazil and India were becoming hot spots of cyber crime, said Mr Osborn.'

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### 2010-070

### **Protecting Cyberspace from Terrorist**

**Attack** by Rochelle Garner. *BusinessWeek*. 13 May 2010. Online: Available at www.businessweek.com

**Keywords:** Cyber Terrorism, National Security, Industry Information

'Richard Clarke says the next national security threat is online, and has advice for companies on how to battle it'

- **'1. Get serious about industrial espionage.** Clarke says many companies aren't aware of how common tradesecret theft has become, partly because the federal government doesn't keep track of the financial consequences. More than a year ago, the security agency MI5 told the biggest 300 companies in Britain to assume their computers had been hacked by the Chinese and then met with executives to discuss the breaches it knew about and how to prevent future ones.'
- **'2. Create information quarantines.** Too few companies and agencies keep their most valuable information on a computer network that's separate from the rest of the company—and thus easily sealed off from the Internet as a last resort, Clarke says. Last year [Johns Hopkins University's Applied Physics Lab] noticed that data were being pilfered, but they couldn't figure out how to plug the leaks. So it disconnected from the Net. "When a sophisticated place like APL has to resort to unplugging from cyberspace, you realize it's a difficult problem," says Clarke.'
- **'3. Build, don't buy, security.** Off-the-shelf software may be cheaper, but the more widely available a program is, the more practiced hackers are at cracking it. Clarke identifies two areas too important to leave to nonproprietary technology: military networks and the U.S. electricity grid.'
- **'4. Sign a cyber-arms control treaty.** Clarke says a good place to start would be an agreement that the international banking system is off limits to government-sanctioned attacks. Every year, he says, some kind of cyber-weapon nonproliferation proposal appears before the U.N. And every year the U.S. opposes it.'



## **Physical Environment**

2010-071

**Monitoring a Changing Climate** by Isaiah Esipisu. *IPS*. 13 April 2010. Online: Available at www.ipsnews.net

Keywords: Climate Change, Weather, Monitoring

'The gathering environmental crisis presented by global warming makes effective weather information and prediction a matter of urgency. As Africa's farmers come to grips with adapting to climate change, it may be that the best way to equip them is to involve them directly in collecting the data.'

'Evidence presented to the first conference of ministers responsible for meteorology in Africa, taking place in Nairobi, Kenya from Apr 12-16, shows that countries which have involved local communities in monitoring of climatic conditions have markedly better outcomes in terms of improved agricultural yields and public health.'

'African governments may need to localise meteorological services from the monitoring level, through data analysis, to dissemination, in order for weather and climate information to make sense to the people who need it most in agriculture and related sectors.'

'Twelve years ago, Mali adopted a new system in which rain monitoring is carried out entirely at the local level. Thousands of rain gauges are located in villages, and community members are involved in collection and analysis of rain patterns.'

'The information is then passed on at community meetings and through community radio stations broadcasting in local languages.'

"Packaging of the information is extremely important. The farmers will use it accurately only if they understand it fully," [Issa Djire, the director of the Upper Niger River Valley Programme] told IPS at the conference.'

"Local monitoring of rainfall patterns has boosted preparedness among farmers, and through agricultural extension officers, they have been able to determine exactly the type of seed they should plant, when to plant them, and the insecticides they need to buy in advance," said Djire.'

'Meteorologists at the conference want other African governments to emulate Mali's strategy as a method of improving resilience to the impact of climate change.'

'[Adama Diallo, the director general of the African Centre of Meteorology Applications for Development (ACMAD)] said that Africa has only an eighth the required number of meteorological stations as per the standards of the World Meteorology Organisation. He said governments must set aside funds to be used for meteorological services

as part of plan for disaster management."

'Kenya needs roughly 70 meteorological stations to deliver accurate predictions, but it currently has only 37. Yet Kenya is considered one of the continent's leaders in gathering weather information.'

'To boost weather and climate monitoring systems in Africa, the African Development Bank (ADB) and the World Bank have agreed to provide 155 million dollars through ACMAD.'

'The money will be used to train and re-train experts across the continent in better processing and analysis of climate data, and to strengthen communication strategies to reach farmers in a format they can understand.'

'The importance of meteorological services is not limited to agriculture and food security. Climate is important for the monitoring and management of public health, for example where diseases such as malaria may spread to new areas as average temperatures and rainfall shift.'

'Transport - particularly the aviation industry - water resources management, energy and tourism are other sectors that can benefit from improved weather observation and reporting.'

2010-072

**Movies that Save Lives**. Anonymous. *IRIN*. 12 April 2010. Online: Available at www.irinnews.org

**Keywords:** Early Warning, Environment, Food Security, Natural Disasters

'More intense and more frequent floods, droughts and storms generated by the unfolding impact of climate change are hitting millions of people, especially in rural areas in developing countries, yet many are unaware of the growing danger because climate change is hard to understand, and even fewer are prepared to deal with it.'

'On the other hand, humanitarian organizations and governments have piloted several successful projects to help vulnerable rural farmers adapt to a future characterised by bad-tempered weather.'

'During a workshop in Mozambique some years ago the Red Cross discovered that small-scale farmers were highly receptive to audiovisual presentations showing other small-scale farmers applying solutions and adapting to similar conditions.'

'In 2000 the Mozambican farmers were affected by devastating floods that killed 700 people, followed by two dry spells that ravaged their crops.'

'The Red Cross told the farmers about climate change,

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but they were not entirely convinced. "Like everybody else, I thought it was God punishing us, or that the ancestors were angry ... and we can't do much about it," said one of the women farmers at the workshop.'

'Three years ago, the Red Cross began toying with the idea of using participatory video - in which a group or community makes a film based on their experiences - as a tool to inform people of climate risks and how to prepare for them.'

'After a series of workshops on working with filmmaking equipment, the villagers were ready to make a short video about their response to floods, and measures to reduce the impact of shocks: they built houses from reeds, which could be moved during floods, and planted reeds on the river bank to prevent water damage and decrease siltation in the river.' 'After the film was made, the villagers analyzed what was being done differently as a result of climate change and decided on six key adaptation messages - based partly on local knowledge and partly on what was being practiced elsewhere - to be included in another film that would be shown in neighbouring villages.'

'Adaptation measures included crop diversification - planting more drought-tolerant food crops, like cassava, rather than maize; irrigation - the neighbouring village of Kasache used treadle pumps to irrigate their fields rather than depending only on rainfall.'

'Mphunga residents learnt that women in Bangladesh raised ducks rather than chickens because they were able to float during floods and survive, and encouraged other villagers to do the same.'

'Planting grass slowed down the flow of floodwater; storing grains in bags rather than granaries made it easier to relocate during floods; blowing a whistle to alert people about approaching floods could save lives, livestock, food and belongings.'

'After the film was screened on a laptop computer in the five neighbouring villages, Baumhardt found almost all the people understood the concept of climate change and more than half were willing to make changes to adapt.' [50%]

### 2010-073

**Competing for Limpopo Water**. Anonymous. *IRIN*. 19 April 2010. Online: Available at http://www.irinnews.org

Keywords: Limpopo, Southern Africa, Irrigation, Water

'Climate change will bring higher temperatures to Southern Africa while changing rainfall patterns will affect the amount of water available for food production.'

"Irrigation is often listed as an adaptation strategy for farmers, but no one has really looked at the impact of climate change on irrigation," said Claudia Ringler, a Senior Research Fellow at the US-based International Food Policy Research Institute (IFPRI).' 'Ringler and her colleague, Tingju Zhu, a senior scientist at IFPRI's Environment and Production Technology Division, have published a series of research papers on the effect of various scenarios[...].'

'One of their papers looked at the Limpopo River Basin, which crosses four Southern African countries - Botswana, South Africa, Zimbabwe and Mozambique [...] and found that water supply would start diminishing in another two decades.'

'Nearly a quarter of South Africa's population of 48 million and 60 percent of Botswana's people live in the basin, which has 2.9 million hectares of farmland, with 91 percent cropped under rain-fed conditions.'

'Climate change will affect rainfall in the basin severely it will receive between 10 and 25 percent less in the next two decades [...].'

'Rainfall in the basin is highly seasonal and unevenly distributed, already affecting food production in the region, and climate change projections indicate that floods and droughts will worsen.'

"The commercial farmers ... are well prepared for the water-stressed scenario with drip irrigation systems in place and access to drought-tolerant seed varieties," said Ringler. Most of the small-scale farmers also depend on the river for irrigation but do not have access to drip irrigation systems, which use very little water.'

'Most of the basin - 45 percent - falls within South Africa's borders and its needs dictate the share of water that other countries in the region receive, Ringler said.' [49%]

### 2010-074

**Powering Africa** by Neil Ford. *African Business*, Issue 360(January 2010): 36-38.

**Keywords:** Economic Development, Power, Carbon Trading, Natural Gas

'The correlation between power sufficiency and economic development is unmistakable. Closing the power gap has now been identified as one of Africa's top priorities.'

'Most state-owned power companies have received too little support and possess limited revenue bases, while private sector investment has been thin on the ground. There is no single solution to the problem but developments in a range of sectors could increase the proportion of Africans with access to electricity over the next decade and beyond.'

'Firstly, the continent's gas reserves are finally being tapped for power generation. New gas-fired power plants are planned in Tanzania, Mozambique, South Africa and Egypt. Even in Nigeria, where a dozen gas-fired plants have been promised but not yet completed, there are signs of progress. Gas production is recovering in the wake of the improved security situation, increasing the amount of feedstock available for the various generation projects being

developed by foreign investors, mainly in the Niger Delta itself.'

'Secondly, the long-awaited renewable energy revolution is finally making inroads in Africa. Wind power is no longer considered an expensive option, nor suitable only for South Africa and the Mediterranean littoral. Few regions of the world boast more solar photovoltaic (PV) and solar thermal potential than North Africa.'

'Wave-power technology is being tested off the coasts of Namibia and South Africa, while the construction of geothermal power plants is being discussed in a dozen countries along the Great Rift Valley.'

### 'Carbon-trading potential'

'The Copenhagen climate change conference has focused minds on many issues, including the potential of global carbon trading. Carbon-trading investment in power projects designed to supply consumers in Saharan Africa may also double as development funding. At the same time, production costs for solar and wind-power technologies are falling steadily at a time when the price tag of other energy technologies is rising.'

'Finally, the continent's reliance on hydro-electricity is often considered a prime cause of the sector's weakness, but it could become part of the solution. Hydro schemes account for about 16% of all power production on the African continent but this figure is skewed by the lack of hydro generating capacity in the continent's most advanced economies.'

'The five North African states largely rely on oil- and gas-fired thermal power plants, while South Africa is hugely dependent upon its vast coal reserves. Many of the countries in between source most of their electricity from hydroelectric dams: these include Ethiopia and Democratic Republic of Congo, which are 95% reliant on hydro production.'

'There are certainly huge problems with this dependency. Prolonged low rainfall results in falling water levels at the continent's dams and the lack of alternatives often necessitates damaging power rationing. At the same time, climate change is altering rainfall patterns and could threaten the viability of some dam projects.'

'Variations in seasonal rainfall patterns mean that greater regional or even continent-wide transmission integration would allow electricity to be exported from areas with high seasonal rainfall to regions with low rainfall, with the flow of electricity reversed when conditions change.'

'Construction work on Ghana's 400MW Bui dam is now well under way and the West African state should become an important net power exporter within the emerging West African Power Pool (WAPP) within three years.' [49%]

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2010-075

**Think Tank Attacks West as 'Out Of Touch' on Africa**. Anonymous. *AllAfrica.com*. 3 June 2010. Online: Available at allafrica.com

**Keywords:** Diplomacy, Aid, Emerging Markets, International Engagement

'In a major report published on [June 3rd], the Londonbased Chatham House says the emerging economies of Asia, Latin America and Africa are finding commercial and political opportunities in Africa that are being overlooked by the continent's traditional partners.

'The author of the report, Tom Cargill, Chatham House's Africa programme assistant director, says countries such as the United Kingdom fail to engage seriously with Africa diplomatically, and rely too heavily on "aid policies that rarely deliver influence" and on "historical ties that are fading."

"Meanwhile the emerging economic powers of the G20 see Africa in terms of opportunities – as a place in which to invest, gain market share and win access to resources."

### **'Consumption Boosts Growth'**

"Yet while conventional wisdom is that recent growth has been largely driven by higher commodity prices, there is much evidence that increased consumption has played a central role, driven by and further driving the emergence in many African countries of a more assertive middle class with disposable wealth and an appetite for consumer goods."

'Cargill says this is highly significant because it points to a more critical and robust relationship between governments and taxpaying citizens, helping cement good governance and pro-growth reforms.'

"Africa seems increasingly to be the final frontier for economic globalization; arguably it has already become the most politically globalized," he says.'

### 'Developmental Focus Essential'

"A purely or overwhelmingly diplomatic approach could bring back the kind of narrowly exploitative and dismissive approach that characterized the relations of some countries with Africa in the past, and which did not recognize the potential of strategic partnerships," Cargill says.'

"This is particularly important as more emerging economies become interested in strengthening their engagement across Africa, since they bring very different conceptions of what is acceptable business and diplomatic practice."

[48%]

2010-076

### Making the Most of Chinese Aid to Africa

by Steve Davis & Jonathan Woetzel. *McKinsey Quarterly*. June 2010. Online: Available at www.mckinseyquarterly.com

Keywords: China, Aid, Development

'The debate over China's role in Africa continues to rage. One side contends that China is a rapacious neocolonial oppressor, while the other sees it as a miraculous alternative to decades of failed Western aid. To a large extent, however, facts on the ground have rendered this debate academic: China already has become an indisputably significant force in Africa's development, with substantially increased commitments and engagements just in the past few years. Pragmatism argues for moving the discussion ahead, to how China's involvement can reap the greatest benefit for both Africans and Chinese.'

'African and Chinese leaders—along with interested outside parties, such as multilaterals, foundations, and non-governmental organizations (NGOs)—should focus on three opportunities. The first is strengthening Africa's economic-development strategies and capabilities at the national and regional levels. Second, China's willingness to undertake additional strategic-development projects in Africa, including the recent emphasis on sustainable and results-driven models, should be supported. Finally, collaboration between Chinese institutions working in Africa and other donors or partners ought to be developed and encouraged.'

### 'Credibility as a fellow developing country'

'It's no secret that some Chinese activities in Africa have prompted concern and even hostility, particularly the long-standing support of leaders in countries like Sudan and Zimbabwe, as well as questions about worker safety, community engagement, and environmental degradation. Overall, however, the evidence suggests that many Africans welcome the involvement of China not only because of the scale of its resources and commitments but also because it has credibility. The Chinese see themselves as a developing country, a view shared by many Africans; indeed, China still ranks 97th in the world for GDP per capita, according to the International Monetary Fund (IMF).'

'Yet China's recent development trajectory—lifting hundreds of millions of its people from poverty in the past 30 years—offers Africans lessons and hope. Other factors adding to China's credibility are its pragmatic, business-like approach to development and focus on much-needed infrastructure projects. Also, Chinese workers are generally well-



respected because they are prepared to work in Africa's fields or factories, often at the locals' salaries, in contrast to the wages, housing, and approaches of Western aid organizations or commercial enterprises. For this reason, China still explicitly rejects the label of donor.'

### 'Project-based aid and investment models'

'Chinese aid generally focuses on specific projects rather than the large programmatic models familiar to Western donors, such as the President's Emergency Plan for AIDS Relief, a US-sponsored program for HIV/AIDS prevention and treatment. This US effort has a broad strategy, operating across several countries, with a multiyear approach and standardized practices. By contrast, China's health assistance generally involves commitments to build a clinic or hospital in a country or region or to send Chinese medical personnel or medicines to specific countries. These efforts are sometimes associated with a particular investment or a Chinese official's political commitment to a local African leader. Such projects are not part of a broader program to build networks of hospitals, for example, or to develop a replicable and scalable approach. Instead, the Chinese focus on an immediate need—though sometimes a very large one, such as dams or highways—which they generally execute in a timely, effective way.'

### 'Broad-based interests'

'While access to natural resources and consumers is an important goal for many of China's African projects, such a narrow view of its role risks missing the broader commitment. Today, China is involved in almost every African country that does not recognize Taiwan—even the resource-poor ones. While the majority of China's \$107 billion-a-year bilateral trade with African countries still involves extractive industries, China's reach extends to almost every sector. In 2009, the Chinese Ministry of Commerce reported that about 1,000 Chinese enterprises do business in Africa, spanning fields such as trade, transportation, agriculture, and the processing of agricultural products. Even official Chinese development aid does not appear to be disproportionately provided to countries with large endowments of natural resources.'

### 'New approaches and enhanced engagements'

'China's engagement with the region appears to be growing not only in sectors and geographies but also in a broader strategic commitment. Premier Wen suggests as much in his recent focus on support for African development in the fields of agriculture, debt relief, expanded market access, climate change, health, education, environmental protection, and investment. Similarly, African leaders increasingly seek more comprehensive and heavily negotiated packages of aid and investments from China—a preoccupation reflected in recent deals with Ghana and Malawi.'

## 'Strengthening African development strategies and capacity'

'Chinese leaders frequently make state visits to Africa. On their return to Beijing, they often take a "checkbook" approach to aid, charging Chinese government ministries with fulfilling commitments to high-level African officials for construction, infrastructure, health, agricultural, or other projects. Although this approach has led to random acts of kindness, they are often not only unrelated to the recipient government's agricultural- or industrial-development strategies but also not sustainable. What's more, the Chinese often rely on their own labor and materials, so projects may have little connection or benefit to local workers or industries [...].'

### **'Encourage more collaboration'**

'While some believe that China wishes to go it alone in Africa, there is increased evidence to the contrary. China's engagement with African national and regional organizations and leaders on a variety of projects has significantly increased. A formal dialogue among donors is taking place in the OECD's Development Assistance Committee (DAC). Many NGOs, foundations, and academic institutions in China, Africa, and elsewhere are beginning to work together. China invited academics, African health officials, and international representatives to Beijing last December, for example, to attend an international roundtable on China–Africa health collaboration. The discussions could promote greater cooperation between China and other partners—through temporary staff transfers, joint missions, and pilot projects—in delivering health assistance to Africa.'

'China could catalyze the efforts of African countries to develop economically and lift their people from poverty. Let's move the debate beyond "good versus bad" and "China versus the West" to capitalize on the opportunity at hand.'

[42%]

### 2010-077

## **Third World' Concepts No Longer Relevant - Zoellick.** Anonymous. *Reuters.* 15 April 2010. Online: Available at www.engineeringnews.co.za

Keywords: Third World, World Bank, Development

'[World Bank chief Robert Zoellick] said economic progress in developing countries had profound implications for global cooperation, multilateralism and the work of institutions such as the World Bank.'

'While rich industrial countries have been the biggest contributors to the World Bank and long dictated how the money is spent, emerging market countries will have a bigger role.'

'The Bank's resources have been stretched by record borrowing from developing countries during the financial

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crisis, as global demand dropped and credit markets dried up.'

'Since the crisis hit in mid-2008, the World Bank has committed more than \$100-billion in loans and grants to developing countries.'

'Records show total disbursements between July 2008 and March 2010 was \$67,7-billion for the World Bank and \$56.9 billion for the IME.'

'But with signs of global economic recovery now underway, Zoellick said he worried that the incentive to cooperate will fade as the recovery gives way to a fast-evolving multipolar world economy.'

'The shifts in the world are not only in China and India, he said. Sub-Saharan Africa is set to grow by an average of over 6% to 2015 while South Asia, where half the world's poor live, could grow by as much as 7% over the same period.'

"We need to move away from the binary choice of either power or environment," he said. "Climate change policy can be linked to development and win support from developing countries for low carbon growth — but not if it is imposed as a straitjacket," Zoellick added.'

'While he did not mention it, the World Bank last week approved a controversial loan for a coal-fired plant in power-strapped South Africa despite abstentions from the United States, Britain and the Netherlands over concerns about its environmental impact.'

### 2010-078

**All Fired Up Over Coal**. Anonymous. *IRIN*. 8 April 2010. Online: available at www.irinnews.org

Keywords: Coal, World Bank, Climate Change

'The first of the Millennium Development Goals set by the United Nations and endorsed by its global membership is to eradicate poverty and hunger, but the energy to drive the economy that creates the jobs that earns the money to buy the food and all that flows from there needs to be as cheap as possible. The answer in South Africa is coal; cheap but dirty.'

'South Africa's case illustrates the dilemma but also, possibly, offers a solution. The country is facing an electricity crisis and the parastatal electricity provider, Eskom, plans to boost prices by more than 76 percent and borrow \$3.75 billion from the World Bank to build Medupi, a new coal-fired plant, leading civil society organizations and labour unions to react with anger and dismay.'

'Unions claim the loan will have economic consequences to the detriment of the poor; civil society worries that the world's fourth biggest power station will expand the country's already considerable carbon footprint - South Africa is one of the world's biggest greenhouse gas emitters.'

'The proposed loan has far wider ramifications. The New

York Times newspaper billed it as the US's first test case of "its new guidelines discouraging coal-fired power projects in developing nations".'

'At the centre of the debate is whether governments should pursue a development agenda of accelerating growth rates to reduce poverty, at the environmental cost of using energy that is less green, undermining the climate change agenda.'

### 'Balancing the agenda'

'South Africa generates more than 60 percent of all the electricity produced in sub-Saharan Africa. "Tight supplies are not just a problem for us. Our neighbours - Botswana, Lesotho, Namibia, Swaziland and Zimbabwe - all rely on Eskom for their electricity," [Finance minister Pravin Gordhan] pointed out.'

"They face the same growth constraints that we do. Their factories and businesses, hospitals and schools, and their ability to provide basic services, all depend on Eskomgenerated power."

### 'But will it help the poor?'

'In addition to the loan, the National Energy Regulator of South Africa (NERSA) recently gave Eskom the go-ahead to hike prices over a three-year period to fund its current operating costs and an ambitious expansion programme. According to the World Bank's website, "Eskom provides free basic electricity to 27 percent of its customer house-holds."

'The World Bank maintains that the new power plant will benefit poor households because the government plans to electrify the remaining 19 percent of unconnected rural households by 2014.'

'The loan with its green credentials in a way also offers a solution to the larger dilemma that confronts developing countries. Medupi will use cleaner coal technology and part of the loan will used to build two renewable energy plants - a wind-powered project, and the biggest grid-connected solar thermal project in any developing country.' [44%]

### 2010-079

### Oil Discoveries in Uganda: A Blessing or

**Curse?** by Ezra Suruma. *The Brookings Institution*. 18 May 2010. Online: Available at www.brookings.edu

Keywords: Uganda, Oil, African Conflicts, Investment

'Uganda is a poor country whose population is largely dependent on traditional agriculture and 30 percent of whom are still below the poverty line. Yet, Uganda has been active in persistent military struggles within the region.'

'The discovery of substantial oil reserves in Uganda, therefore, may not be an idle event in the life of the Great Lakes Region. The oil discoveries promise to dramatically



increase the government revenue, a substantial blessing to the people of Uganda if the revenues are well invested in building the country's dilapidated infrastructure, promoting agricultural transformation, and also by investing in human capital.'

'An optimistic scenario is one whereby Uganda would focus on productive investments that lead to a dramatic transformation of its economy. Under the conducive business and investment climate, Uganda would become an important market to its neighbors—especially those members of the East African Community and Customs Union namely Kenya, Tanzania, Rwanda and Burundi. Such expansion of intra-Africa trade is critical for the continent's development.'

'A less optimistic scenario, and one that is not unlikely, could be one that results in different groups chaotically scrambling for the oil revenues, causing discontent and consequently adding fuel to political upheaval along the traditional ethnic and religious fault lines. Enemies of Uganda could certainly exploit such upheaval. Such emerging rivalries could also trigger intense military response both in Uganda and beyond. As has happened in many other African countries, the natural resource revenues could end up creating conflicts, instability and underdevelopment. In short, there is a risk of the natural resource curse.'

'Oil revenues will strengthen national and regional stability only when real democratic competition forces those in government to account for every drop of it. Neither Uganda nor the African Great Lakes Region can afford oil without democracy. Non-democratic oil is too hot to handle. It should be labeled "hatari," the Swahili word for "danger: do not touch."

### 2010-080

### **Seven Tools for Creating Adaptive**

**Policies**. By D. Swanson, S. Barg, S. Tyler, H. Venema, S. Tomar, S. Bhadwal, S. Nair, D. Roy & J. Drexhage. *Technological Forecasting and Social Change*. Vol 77(6): 924-939.

**Keywords:** Adaptive Policies, Uncertainty, Social Networking, Legislation

'Unknown unknowns and deep uncertainty will always be part of policymaking. Adaptive policies are able to navigate toward successful outcomes in settings that cannot be anticipated in advance. This can be done by working in concert with certain characteristics of complex adaptive systems and thereby facilitating autonomous actions among stakeholders on the ground.'

'A policy that is unable to continue to perform in a dynamic and uncertain setting, or unable to detect when it is no longer relevant, is a policy that is more likely to hinder the freedom and capability of people to adapt to change.'

### '1. Integrated and forward-looking analysis'

'By identifying key factors that affect policy performance and identifying scenarios for how these factors might evolve in the future, policies can be made robust to a range of anticipated conditions, and indicators developed to help trigger important policy adjustments when needed.'

'Integrated and forward-looking analysis offers policymakers a way to view policy design retrospectively, prospectively, and comprehensively.'

'In a scenario planning process for creating adaptive policies, if the policy outcomes assessed under a particular scenario do not perform well in relation to established targets for success, then three policy design questions should be addressed in order to help formulate an adaptive policy.'

'Can a policy option be developed to perform in a range of anticipated future conditions?'

'What are the potential adverse and unintended impacts of the policy and what actions can be taken now to mitigate or hedge against the consequences?'

'How might the policy need to be adjusted in the future in order to continue to perform successfully and how will the adjustment be triggered?'

### '2. Built-in policy adjustment'

'Some of the inherent variability in socio-economic and ecological conditions can be anticipated, and monitoring of key indicators can help trigger important policy adjustments to keep the policy functioning well.'

'Built-in policy adjustment mechanisms help policies respond well in a variety of plausible and clearly identified future circumstances. They can speed up the process of response to conditions that are more or less anticipated. They can be used in complicated policy environments by separating the various policy issues into units wherein the understanding of the system is high, allowing for fine-tuning of the system and making adjustments that help reduce risks and maintain performance. Built-in policy adjustment can be both fully- and semi-automatic.'

### '3. Formal review and continuous learning'

'Regular review, even when the policy is performing well, and the use of well-designed pilots throughout the life of the policy to test assumptions related to performance, can help address emerging issues and trigger important policy adjustments.'

### '4. Multi-stakeholder deliberation'

'Multi-stakeholder deliberation is a collective and collaborative public effort to examine an issue from different points of view prior to taking a decision. Deliberative processes strengthen policy design by building recognition of common values, shared commitment and emerging issues, and by providing a comprehensive understanding of causal relationships.'

'Deliberation is commonly defined as "discussion and

## Political Environment

consideration by a group of persons (as a jury or legislature) of the reasons for and against a measure." The term implies the reasoned consideration of evidence, careful forethought prior to decisions, and looking at different sides of an issue. In the context of public decisionmaking, the term implies a collective and collaborative effort to examine an issue from different points of view in order to share learning and build consensus prior to taking a decision.'

### '5. Enabling self-organization and social networking'

'Ensuring that policies do not undermine existing social capital; creating forums that enable social networking; facilitating the sharing of good practices; and removing barriers to self-organization, all strengthen the ability of stakeholders to respond to unanticipated events in a variety of innovative ways.'

'Self-organizing has been described as the process of social interaction around common issues that, from a policy perspective, enables the group to identify and implement innovative solutions. This process of self-organizing has been described as social networking, building social capital, participation, and collaboration. Social networks are a system of sustained, patterned relationships among actors that facilitate the pooling of knowledge, concerns, and efforts toward a common cause.'

### '6. Decentralization of decisionmaking'

'Decentralizing the authority and responsibility for decisionmaking to the lowest effective and accountable unit of governance, whether existing or newly created, can increase the capacity of a policy to perform successfully when confronted with unforeseen events.'

'The potential for decentralization in any particular policy area will depend on the scale of intervention needed, the extent of local knowledge and capacity, and the structure of governance mechanisms for accountability and coordination.'

### '7. Promoting variation'

'Given the complexity of most policy settings, implementing a variety of policies to address the same issue increases the likelihood of achieving desired outcomes. Diversity of responses also forms a common risk-management approach, facilitating the ability to perform efficiently in the face of unanticipated conditions.'

'Diversity is indeed a key to understanding the structure and function of complex adaptive systems and enhancing their resilience to stress. The ability to deploy a number of different responses enables a community to spread risk and create buffers in the face of shocks and stresses. Any strategy that has a myopic focus and reduces the scope for variation faces a high risk of failure, especially when the strategy is based on an unreliable, uncertain hypothesis.'

'Variation in the policy realm simply means that several options are being used to achieve an intended outcome.

Variation can be viewed as several "parallel experiments" being undertaken simultaneously with the aim of achieving a common objective.'

### 'Reflecting on the seven tools for adaptive policymaking'

'In addition to avoiding difficulties of failure over time, adaptive policy design can also help with gaining policy support. When implications or policy outcomes are uncertain, decisionmakers may well prefer to postpone decisions until the issues are better understood. This not only slows decision processes and clogs up policy pipelines, but in some cases, it can exacerbate the problem and further complicate the eventual need for action. However, if decisionmakers can be shown policy instruments that will be effective across a range of plausible futures, and can handle anticipated and unanticipated circumstances gracefully, there might be more willingness to make commitments that will unblock policy logjams.'



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