Knowledge Leadership

MasterCard African Cities Growth Index 2013

By Prof George Angelopulo and Dr Yuwa Hedrick-Wong

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Foreword: Michael Miebach

This is the fifth publication in MasterCard's portfolio of insight reports that examine the economic landscape and potential for growth on the African continent. In this edition, Dr Yuwa Hedrick-Wong and Prof George Angelopulo provide an overview of their research which forms the basis for the first MasterCard African Cities Growth Index that was launched at the Africa Knowledge Forum in Johannesburg in January 2013.

Africa is a continent of massive opportunity, particularly when you look at it through the lens of MasterCard, a leading technology company in the global payments industry. More than 90% of transactions that take place on the continent are settled with cash and there is very little legacy technology in place to hinder the quick uptake of new payment solutions. This means that innovation in the payment space can take hold much faster in Africa than in other parts of the world.

Additionally, our stakeholders from the public and private sectors across African countries and major cities understand the benefits of electronic payments and are eager to embrace cashless economies to ward off the evils of cash and boost economic growth and development.

One example of this is Lagos in Nigeria, which saw the first rollout of the Central Bank of Nigeria's Cashless Policy. The Policy aims to dramatically reduce the circulation of cash to stabilize the economy and to reduce the costs associated with producing, handling and circulating cash. Stakeholders in all sectors of the economy are collaborating to help bring the benefits of a cashless society to Africa's largest city.

In their previous report entitled "The Challenges of Urbanization in Sub-Saharan Africa: A Tale of Three Cities" published in late 2011, Dr Hedrick-Wong and Prof Angelopulo highlighted the importance of the growth of urbanization on the African continent, noting that it is key to boosting productivity and economic activity in developing markets.

The report also emphasized that unless urbanization is carefully planned and implemented, it can lead to structural weaknesses and even breaking points in cities that are not adequately prepared for the uncontrolled influx of rural populations seeking to improve their lives.

It is off the back of that report that we developed the first MasterCard African Cities Growth Index. The Index has been compiled by collating historic and forward looking data gathered from 19 African cities and it charts their growth potential over the next five years.

It is important to note that the Index is not solely based on the economic power of these cities or that of their respective countries. The Index was developed in the final quarter of 2012 and analyzed 19 cities across Sub-Saharan Africa ranking them according to their growth potential between 2012 and 2017. The rankings were developed from published historical and projected data on selective factors that we believe impact cities' potential for growth, including: economic data, governance levels, ease of doing business, infrastructure and human development factors, and population growth levels.

We have been investing in the continent for 25 years and we strongly believe in the promising future of Africa. Our approach has been to invest in technology solutions that are most relevant to our partners and cardholders in each country, and to continue to invest in local talent wherever we operate across Africa.

I trust that you will find this report a meaningful addition to your research into the significant investment potential offered by the continent.

Michael Miebach
President, MasterCard, Middle East and Africa

Foreword:
Dr Yuwa Hedrick-Wong

Africa, with its population of more than a billion, is undergoing a fundamental transformation that will – according to the United Nations – see its urban population tripling by 2050, with 60% of its people living in cities or urban areas. This population shift will result in rapid urbanization that will come with both immense challenges and opportunities for the people living in its cities, managing its cities and investing in its cities.

This rapid rate of urbanization has the potential to proceed down one of two paths: inclusive or exclusive urbanization. There is no middle route between these two paths – it is either one or the other.

Inclusive urbanization sees cities evolving as gateways to investment and global markets, as generators of wealth, hubs of innovation and business formation, all leading to prosperity and a rising quality of life for their citizens – a desirable and positive path indeed. A path of inclusive growth that has the ability to sustain strong growth in a weak global economy can only be achieved through public-private partnerships, as neither sector can flourish without the help and support of the other.

A great example of this is MasterCard's collaboration with public and private stakeholders across the continent to enable economic growth through the increased adoption of electronic payments, with the financial inclusion benefits of these collaborations already being experienced by the citizens of Nigeria, South Africa and Kenya.

The biggest challenge for emerging markets aspiring to achieve inclusive growth is to inspire increased investment, while improving the efficiency of the economy. Those economies that are based on a single commodity such as oil or gas are going to struggle with this – so they need to focus on broad based economic growth, across diverse sectors, if they are going to take the desired path.

Exclusive urbanization occurs when a city becomes an agglomeration of poverty, congestion and bottlenecks, with pools of unemployed and under-employed labour, and rising costs of living, all resulting in it effectively choking its own economic growth – clearly an undesirable path. An environment that supports exclusive growth is one in which there is runaway inflation that hurts the poor more than the wealthy, growing levels of inequality in a society, that sees wealth lying exclusively with a well-connected few, to the exclusion of the bulk of the population.

It is my opinion that the emerging markets of the future need to satisfy the criteria of inclusive growth, or they will face total failure – there is no halfway measure, neither is there to be any success in trying to balance a combination of the two. But I say this in the face of abundant evidence that Sub Saharan Africa, as a collection of unique countries and cultures, has the opportunity to embrace and engage inclusive growth.

Despite a slowdown in GDP growth worldwide, the level of inward investment into developing markets has increased significantly. By taking advantage of this investment to stimulate urbanization, and the increased economic growth that it brings, developing markets, and the cities that power them, can fuel private domestic consumption and insulate themselves from the negative effects of the global slowdown.

The reality is that in this increasingly complex, interdependent era, the challenges of rapid urbanization far exceed the capacity and interests of any one industry, sector, or country. All stakeholders now stand at a fork in the path of African economic growth. Inclusive or exclusive? Only time will tell. Let's hope they have a good roadmap.

Dr Yuwa Hedrick-Wong,
Global Economic Advisor, MasterCard Worldwide

Foreword:
Prof George Angelopulo

Cities are where an ever increasing majority of the world's population are living – and many economists agree that understanding the dynamics in a country's cities is perhaps even more important than understanding the dynamics of that specific country. Countries, and their various legal frameworks, provide the environment for an economy, but it is in the cities where all the action takes place – where people seek employment, consumers spend their money and where investors seek new opportunities.

It is in cities that the wheels of an economy actually turn, and this is as true in Africa as anywhere else in the world, with its rapid rate of urbanization, growing infrastructure and the increasing realization of African governments that in order to attract investment, resources need to be allocated to the development of cities.

Urbanization is in my opinion perhaps the most influential economic trend on the continent, but to date there has been no reliable resource that compares the growth potential of the continent's cities.

With this in mind, our research team collaborated to produce the first MasterCard African Cities Index, with the goal of creating a valuable knowledge resource that will be of interest to MasterCard's customers and stakeholders, and to businesses contemplating investment or expansion on the continent.

We developed the Index in the final quarter of 2012, and analyzed a wide range of cities across Sub-Saharan Africa, ranking them according to their growth potential between 2012 and 2017. The Index rankings were developed from published historical and projected data on typical factors that impact cities' growth rates, including: economic data, governance levels, ease of doing business, infrastructure and human development factors including population growth levels.

Of the 19 researched cities, Accra, the capital city of Ghana, was ranked as having the highest growth potential, followed closely by Lusaka and Luanda.

While many of the larger and more established cities offer the expected potential for growth, other less prominent ones are quietly establishing themselves as those with even higher growth potential, and these are the cities to look out for in the near future. This is primarily due to high scores on accelerated growth factors that include health, education, governance, infrastructure development, and the ease of doing business in those cities.

It is important to note that the 19 cities included in this first edition of the Index are by no means exhaustive, and they simply form the foundation of further studies. Africa is an incredibly diverse continent comprised of literally thousands of different cultures, languages and traditions, and these all play a part in determining each city's character and their economic growth potential.

We hope that this report provides valuable insight and knowledge about an incredibly diverse and complex continent and begins the process of looking at the exciting growth potential of Africa's cities.

Prof George Angelopulo

Introduction

The African continent is taking its place on the global agenda as an investment destination of choice, having weathered the storm of the 2008 global economic crisis relatively unscathed.

Indeed, the continent seems to have benefited from this time in which developed economies have been forced to slow down and regroup, with many African countries building the foundations for solid growth in the last five years, in preparation for further development in the coming years.

Africa is certainly no longer the poor relation – it is a continent on the move, with individual countries asserting their own identities while presenting unprecedented opportunities for investment and development. Covering 11 million square miles, it is bigger than the United States, China, India and the whole of Western Europe combined. It is so rich in resources that it is estimated that Sub-Saharan Africa accounts for approximately one third of the planet's known global mineral reserves.[1]

At an average annual growth rate of 2.4%, Africa's population is the fastest growing in the world. In fact, its working age population is the highest as a percentage of total population compared to anywhere else in the world. With an estimated 40% of the continent's population aged under 14, and less than 5% aged over 65, the region will have the biggest increase in absolute terms of working age population in the next few decades globally.[2]

These statistics are not new, but for most of the second half of the last century they were reported as indicators of lost opportunities and development failure.

For example, in spite of having the highest population growth in the world, the sad truth is that in 18 out of 35 years over the period of 1960 to 1995, per capita GDP growth was negative in Sub-Saharan Africa.[3] In other words, in this three-and-a-half decade period, Sub-Saharan Africa's population grew faster than its economy for 72% of the time. Not surprisingly, the incidence of poverty in the region rose as a consequence.

So what has changed so that we can now speak of Sub-Saharan Africa's growth potential instead of its lost opportunities?

[1] Estimates by USGS Mineral Services.
[2] UN Population data.
[3] Estimated with data from the World Bank.

Investment in Growth

The most significant new development in Sub-Saharan Africa in the last decade has been the steadily growing rates of investment, which was initially driven by resource-oriented development projects led by investors from China and other emerging markets. This investment has subsequently broadened gradually to manufacturing, services and transportation.

Investment is the prime mover of growth, and its impact is especially powerful in a region like Sub-Saharan Africa which has suffered from under-investment for decades. The region's investment as a percentage of GDP is estimated at close to 20% over the 2005 to 2010 period, which is a huge improvement over the single digit level seen in previous decades.

The gold standard of investment-led growth is set by the countries of East Asia: at their respective "take-off" periods, the so called East Asian Tigers[4] had investment levels of around 30% to 35% of GDP (China is an outlier at close to 50% in recent years)[5]. This means that today, Sub-Saharan Africa is about two-thirds of the way to achieving the economic take-off level of the East Asian Tigers.

The impacts of rising investment in Sub-Saharan Africa are likely to be more powerful as well. This is because the capital stock per capita is so low in the region. The capital stock per capita is a calculation of the total cumulative productive assets of the country, reported on a depreciated basis, divided by the population. Thus, the higher the capital stock per capita, the stronger the potential for increasing productivity and competitiveness. This will in turn lead to better opportunities for employing the labor force productively.

For example, in 2009, the capital stock per capita in the US was estimated at US$92,000. In contrast, it was US$8,000 in China and US$2,000 in India. In South Africa, it was estimated at US$5,000. China and India, two developing markets, have a very low capital stock per capita when compared to the US and other developed countries, but they literally tower over other Sub-Saharan African countries.

The capital stock per capita was estimated at US$710 in Kenya, US$500 in Ghana, US$322 in Tanzania, and US$301 in Nigeria in 2009. At these levels, any sustained increase in investment in public infrastructure and in industrial production capacity will immediately translate into a faster increase in growth in real GDP and productivity.

The fact that China and India are among the biggest investors in Africa is also driving trade with them. In 2010, for example, trade with China and India accounted for 35% of total trade in Angola, 25% in Ethiopia, 19% in Sierra Leone, 16% in Tanzania, 14%in Ghana, and 12% in Nigeria[6].

A similar trend can also be observed in Sub-Saharan Africa's trade with other fast growing emerging markets. While the global economic outlook continues to be plagued by persistent uncertainty and weaker growth prospects in developed markets, Sub-Saharan Africa's growing trade links with the faster growing emerging markets put the region in a more advantageous position to weather the inevitable global economic headwinds.

[4] They are Japan, South Korea, Taiwan, Malaysia, Indonesia, Thailand and China.
[5] Estimated with data from UNCTAD and WDI.
[6] Data from UN Comtrade.

Urbanization as a Catalyst for Growth

It is clear that a new set of economic dynamics has emerged in recent years, putting Sub-Saharan Africa on a rising growth trajectory. This is further complemented by more stable and more development-oriented governments [7]. In this context, a particularly striking trend is the region's accelerating rate of urbanization. At 36% of the total population, Sub-Saharan Africa's urban population is the lowest among all regions in the world, but its urbanization rates are likely to become the fastest in the coming decades. There are already 52 African cities with populations of more than one million, and the continent is set to have the highest increase in urban population in the world [8].

Africa's cities are the portals to its future. In Sub-Saharan Africa, cities are poised to become powerful hubs for employment generation, financial and commercial services, in-bound technology and knowledge transfer, thus developing consumer markets on a massive scale.

As a result of the critical mass achieved by the concentration of people in urban areas, investment in public services like education, health care, and transportation infrastructure is more cost-effective in cities than it is when trying to provide those services to thousands of scattered rural settlements. The fact that cities are growing rapidly in Sub-Saharan Africa is a clear strategic opportunity for the region to fast track investment and growth.

But it is in this investment in urban development that strategic decisions must be made, because such rapid growth in urbanization can be a double-edged sword that slays the best of intentions if it is not managed with great planning and foresight. Cities must be able to function as fertile grounds for business germination and job creation, but for cities to become powerful hubs for growth, they must have adequate public infrastructure, along with education and health care services, which are made available and accessible to the vast majority of the population.

Furthermore, the construction and management of this infrastructure will require effective governance that provides law and order, a credible judiciary and a functioning and business-friendly bureaucracy. These are the basic pre-conditions for cities to thrive and prosper.

Failure to meet these pre-conditions places cities with rapidly growing populations at risk, as they can become agglomerations of poverty and under-development, likely to smolder into festering clusters of social and political discontent.

[7] For example, see Radelet, S. 2012. "Emerging Africa: How 17 Countries are leading the Way". Center for Global Development. Washington, D.C.
[8] UN Population data.

Measuring the Dividends of Growth

One way to measure dividends of growth is to take the example of the often cited notion of demographic dividends. Demographic dividends are usually explained in terms of higher population growth leading to an expanding working age population, which in turn means that the society can benefit from having more people who are both able to work and eager to consume.

Demographic dividends are seen as particularly enticing during the phase in which high population growth is gradually being moderated by a dropping fertility rate, which reduces the growth rate of the very young while the working age population is still large and expanding. This has the virtue of lowering both the child dependency and the old age dependency ratios, with the result that the society is endowed with a greater proportion of people of working age who have relatively few young and old people to support. Over time, a more mature working age population tends to save more, looking to their future retirement needs. Consequently the society's savings rate is raised, and a larger savings pool can in turn better support the economy's investment needs.

The demographic profiles of virtually all Sub-Saharan African countries would suggest that they should be able to enjoy abundant demographic dividends, especially in the cities where younger populations tend to gravitate. But what is often forgotten is the simple fact that before demographic dividends are enjoyed, there are demographic burdens that need to be mitigated.

Neither high population growth nor a city that boasts a younger population can deliver better economic performance on their own. The stark reality is that a society has to invest in and prepare its young people before there are any demographic dividends to be had. Without adequate investment in educating and providing health care for the young, and more importantly, without sufficient investment in the economy to generate productive employment, all that a society can expect are the demographic burdens of mounting youth unemployment and underemployment with all the associated social and political malaise.

To a large extent, the phenomenon of Arab Spring [9] in 2011 can be interpreted as a consequence of these demographic burdens spinning out of control.

So the challenge is how to ensure that the expanding young population is converted into demographic dividends, not demographic burdens. And with continuing high population growth expected in Sub-Saharan Africa, coupled with the region's high urbanization rates, it is clear that cities in Sub-Saharan Africa are the frontline of this challenge.

The management of these cities' growth, and the factors that influence this, will determine whether the future is one of strong growth and spreading prosperity, with the swelling ranks of young people providing the society with demographic dividends; or whether it is a future of massive urban slums and seething poverty with armies of unemployed and underemployed youth becoming demographic burdens to society.

It is therefore imperative to get urbanization and the management of the urban economy right in Sub-Saharan Africa. The stakes are huge.

[9] The Arab Spring is a revolutionary wave of demonstrations, protests and wars in the Arab world that began on 18 December 2010. They occured primarily in Tunisia, Egypt, Libya, Yemen, Syria and Bahrain.

Insights into Local Context is Vital

In this context, the new MasterCard African City Growth Index is a timely and important contribution that offers unique insights into the growth potential of 19 of the region's most important cities. As explained later in this report, these cities are analyzed and ranked with a comprehensive and multi-dimensional range of performance indicators. Collectively and in their sub-categories, the information can be utilized to generate actionable intelligence that supports governments, businesses and civil society in their endeavors to get urbanization and the management of the urban economy right in the region.

The MasterCard African Cities Growth Index has been specifically designed to identify and rank the growth potential of Sub-Saharan African cities. The Index assesses the inclusive growth potential of cities and their promise as business and investment destinations.

The Index is longitudinal, looking back from 2009 with established performance, and looking forward to 2017, with a range of projections that are indicative of sustainable, inclusive urban growth. Further, rate of growth, not economic size, is the central focus of assessment, although the effect of economic magnitude on growth is briefly discussed. By stripping out the size of their economies, the Index focuses more intrinsically on cities' growth potential.

Criteria of Assessment

The MasterCard African Cities Growth Index assesses growth potential in terms of urbanization, governance, variables of economic well-being and growth, business friendliness, inbound travel, infrastructure, connectivity and development. These variables are selected because they collectively determine whether African cities could improve their social and economic wellbeing while coping with rapidly expanding populations. They are briefly explained as follows.

Urbanization

The link between urbanization and economic development has been identified and analyzed in many parts of the world. The relationship is not necessarily causal however, having been found to differ in developed and developing countries, and a strong link between urban population growth and economic growth has not yet been established in Sub-Saharan Africa [10 11].

As mentioned earlier, urbanization and rapid urbanization in particular, may either yield a dividend or may hinder economic growth, depending on more general conditions such as health, education, urban infrastructure and the balance between investments in productive assets versus consumption. The Index takes two perspectives on urbanization: City Population Growth[12] and National Urbanization[13].

Governance

While the relationship between governance and growth has yet to be fully and satisfactorily explained, it is widely recognized that good governance correlates positively with equitable and sustainable economic growth [14 15]. In this Index, the World Bank's criteria of governance [16] are used as measures of how African cities perform in governance in six areas.

Political Stability and Absence of Violence addresses the likelihood that a government will be destabilized or overthrown by unconstitutional or violent means that may include politically-motivated violence or terrorism.

Government Effectiveness reflects perceptions of the quality of public services, the civil service and its independence from political pressures, the quality of policy formulation and implementation, and the credibility of government's commitment to such policies.

Regulatory Quality considers the ability of government to formulate and implement policies and regulations that permit and promote private sector development.

Voice and Accountability assesses freedom of expression, association, media, and citizens' ability to select their government.

Rule of Law identifies confidence in the rules of society and in particular the quality of contract enforcement, property rights, the police, courts, and the likelihood of crime and violence.

Finally, Control of Corruption reflects perceptions of the extent to which public power is exercised for private gain, the extent of petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests.

Variables of Economic Well-Being and Growth

The Index incorporates a number of measures that relate directly to urban economic growth and well-being. City-level growth is measured [17] through GDP Per Capita Growth, Household Consumption Expenditure Growth and Middle Class Household Growth. These assess per capita real growth, increase in household consumption expenditure and the growth of the middle class, all within a standardized city household segmentation model of socio-economic status based on education, dwelling, services and amenities.

The Index includes Upper Middle, Middle and Lower Middle Class categories within the 'Middle Class' designation, and excludes Upper, Low and Lowest categories. As such, the size and growth rate of the middle class and its expenditures in a city relative to overall growth of population and household expenditures are powerful indicators of the inclusiveness of growth.

Foreign Direct Investment as a Percentage of GDP [18] is an important indicator of a region's appeal as an investment destination and is a strong driver of economic expansion. However, this variable can net to a negative figure where repatriation of capital or profit exceeds investment inflow, but in the Index such figures are adjusted to zero.

Business Friendliness

Doing Business [19] data is used as an objective measure of business regulation and the ease of conducting business operations for firms, domestic as well as foreign, in an African city. Top of mind for investors when they prepare to invest in a city or country, set up a business or consider expansion, is the ease of doing business there.

Inbound Travel

International business travel is a catalyst for economic performance and business investment, and passenger arrivals and departures are directly related to the flow of labor, knowledge transfer, investment, tourism and the movement of goods [20 21 22]. The Index identifies two dimensions of inbound travel [23] : International Non-Resident Arrivals which identifies non-resident arrivals in numbers and International Non-Resident Arrivals Expenditure that identifies spend by non-resident arrivals at individual cities.

Infrastructure

The allocation of resources to infrastructure development, stock and productive assets, and the outcomes of this investment, are measured through Gross Fixed Capital Formation as a Percentage of GDP. It plays a central role in providing basic services to developing urban populations, thereby crucially determining the sustainability of urban expansion and growth. The specific variables are personal Access to Water, Access to Electricity and Access to Sanitation, all of which are identified in the World Development Indicators [24].

Connectivity

The link between mobile telephony and economic growth has been widely reported [25] with stronger links evident in developing economies, with greater quality of service, and with the introduction of enhanced technologies [26]. The Index captures this connectivity by estimating Mobile Telephone Subscriptions as a percentage of the population aged 15-64 [27].

Development

While it has been frequently noted in research literature that the causal relationship between economic growth, health and education is under-determined, nevertheless it is well recognized that poor health and low levels of education can hinder economic growth [28].

Health and Education measures are accordingly incorporated in the Index and are drawn from two components of the Human Development Index [29]. The Health component reflects national average life expectancy at birth. The Education component measures adult literacy and combined primary, secondary and tertiary gross enrollment.

[10] For example, see UN HABITAT, "State of the World's Cities 2010/2011".
[11] For example, see Shabu, T. 2010. "The Relationship between Urbanization and Economic Development in Developing Countries". International Journal of Economic Development Research and Investment 1(2&3):30-36.
[12] Canback Danglar.
[13] World Bank, World Development Indicators.
[19] World Bank.
[20] WTTC.
[21] He, L. & Zeng, X.2011. "Empirical Analysis on the Relationship between Tourism and Economic Growth in Sichuan". Journal of Agriculture Science 3(1):212-217.
[22] Richardson, R.B. 2010. "The Contribution of Tourism to Economic Growth and Food Security". Accelerated Economic Growth Team, USAid.
[23] MasterCard, MasterCard Global Destination Cities.
[24] World Bank, World Development Indicators.
[25] For example, see Kumar, R. 2009. "India:The Impact of Mobile Phones". ICRIER.
[26] For example, see Deloitte 2012. "What is the Impact of Mobile Telephony on Economic Growth?".
[27] ITU.
[28] WHO
[29] UN, HDI.

The Assessment Process

The first step in the construction of the Index was to convert the values of all variables to a 100-point scale to allow for calculation along a single dimension. The scale was retained where data was already indexed on a 100-point scale. Where raw scores were the basis of assessment, the city/country with the largest raw score was used as the divisor and set at 100, and in these cases negative raw scores were set at zero. Where data was fractional, it was multiplied by 100, and where data ranged from negative to positive, it was transformed to a 100-point positive range using linear transformation.

Individual criteria were then weighted at a full weight of 1 or at fractions of 1. The geometric averaging method of Potgieter and Angelopulo [30] was used in aggregation because of its suitability in calculating scores for disparate criteria and mutually non-commensurable data in a way that maintains sharp distinctions along single dimensions in the aggregate score.

The data was then presented along two axes. The first incorporated recent historical data from the period 2010 to 2012 and its variables were described as the Lagging Indicators of the Index. These indicators describe factors that underpin the current status of the assessed cities.

The second axis included data that points to the emerging potential of cities – the Leading Indicators – with projections to 2017.

The criteria of assessment were either assigned as Leading or Lagging indicators, except for GDP Per Capita Growth and Household Consumption Expenditure Growth, which were used as measures along both axes, but as historical data on the one and as projections on the other.

Finally the data was consolidated to derive a single hierarchical city ranking by combining the individual cities' scores from both axes.

[30] http://www.potgieter.org/doku.php?id=mv index

Chart 1 Lagging Indicators (weights)

GDP Per Capita Growth (1.0)	Household Consumption Expenditure Growth (0.6)	National Urbanization (0.5)
Political Stability & Absence of Violence (0.1666)	Government Effectiveness (0.1666)	Regulatory Quality (0.1666)
Voice and Accountability (0.1666)	Rule of Law (0.1666)	Control of Corruption (0.1666)
Doing Business (1.0)	City Population Growth (0.5)	Middle Class Household Growth (1.0)

Chart 1 shows the full set of lagging indicators and their respective weights in the Index.

Chart 2 Leading Indicators (weights)

Gross Fixed Capital Formation as % of GDP (0.8)	GDP Per Capita Growth (1.0)	Household Consumption Expenditure Growth (0.6)
Access to Water (0.05)	Foreign Direct Investment as % of GDP (1.0)	Health (0.5)
Access to Electricity (0.1)	Mobile Telephone Subscriptions (0.6)	Education (0.5)
Access to Sanitation (0.05)	International Non-Resident Arrivals (0.5)	International Non-Resident Arrivals Expenditure (0.5)

Chart 2 presents the set of leading indicators used in the Index and their respective weights.

Cities

The range of the cities selected for assessment was drawn from the United Nations' regions of Sub-Saharan Africa. The selection included cities large and small in population terms, and located across the entire region.

The cities selected were:

CITY	COUNTRY	REGION
Luanda	Angola	Central Africa
Abidjan	Côte d'Ivoire	West Africa
Kinshasa	Democratic Republic of Congo	Central Africa
Addis Ababa	Ethiopia	East Africa
Accra	Ghana	West Africa
Nairobi Mombasa	Kenya	East Africa
Luanda	Nigeria	West Africa
Dakar	Senegal	West Africa
Johannesburg Cape Town Durban	South Africa	Southern Africa
Khartoum	Sudan	West Africa
Dar es Salaam	Tanzania	East Africa
Kampala	Uganda	East Africa
Lusaka	Zambia	East Africa
Harare	Zimbabwe	East Africa

Cities Continued

Khartoum was the only city drawn from North Africa as most prominent cities in the region are not defined as Sub-Saharan. Johannesburg, Cape Town and Durban were selected because of their comparative economic importance in the region as a whole. Johannesburg, Lagos and Nairobi were essential to the study as they are most often held up as key growth points in Africa, and as three of the primary portals for investment on the continent.

It can certainly be argued that the list is incomplete. Cities such as Serekunda (in the Gambia), Maputo (in Mozambique), Ibadan (in Nigeria) or Kigali (in Rwanda) would certainly contend as high growth candidates and such cities would be part of extensions to the study. In total, 19 cities were included in this first Index and their locations are shown in Chart 3.

Chart 3 The Cities

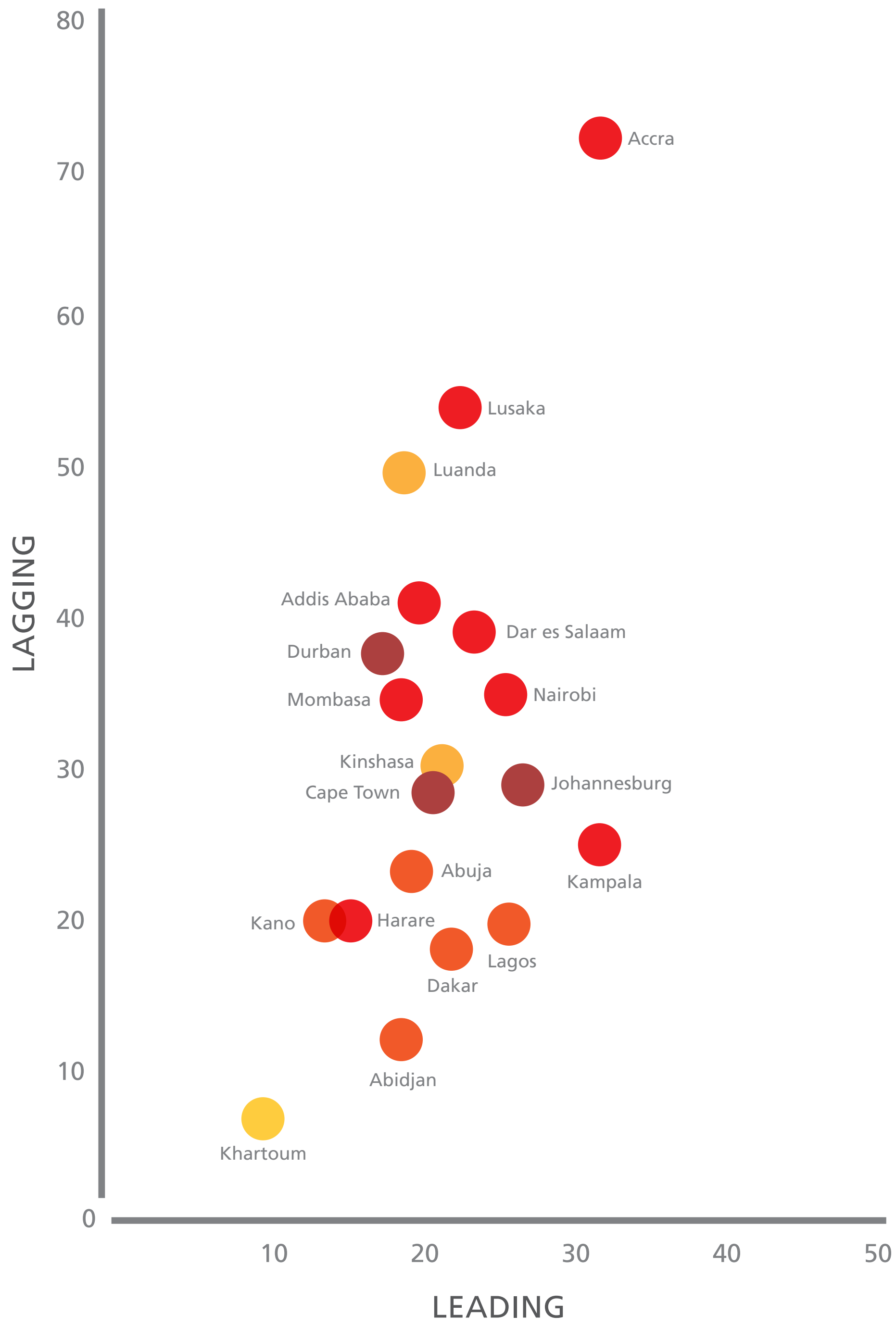
UN regions of Sub-Saharan Africa

City Growth Potential

Chart 4 illustrates a two-dimensional array of cities determined by their scores on the leading and lagging axes and indicates growth potential by individual city and region.

Accra leads the Index, followed by Lusaka and Luanda. In comparison with the other cities, Accra ranks most consistently at a high level across all indicators. It performs particularly strongly in GDP per capita growth, middle class expansion, governance and connectivity.

Chart 4 City Growth Potential



City Growth Potential Continued

The city has grown on an economic foundation of resources and agriculture and has exploited these better than most. Accra has high upside potential strengthened by the implementation of a broad-based, inclusive platform for growth. The picture is, however, not perfect and can be improved. Having become a model in Africa for its democratic process, for example, it did not function as well as anticipated in the 2012 national elections. Poverty, crime, unemployment and associated development challenges remain priority issues to be addressed.

However, Accra's overall position is one of high potential and promise. In an international comparison on the same set of measures, the inclusive growth potential of the city appears similar to that of Chongqing in China, and is ahead of both Chennai in India and Jakarta in Indonesia.

Lusaka has a number of sound economic foundations that are central to its growth and further expansion. Its GDP per capita growth, household consumption growth and foreign investment are among the highest in Africa, and it also ranks strongly in the population and middle class growth indicators. The city has a stable political environment that is central to its attractiveness as an investment destination.

Luanda's position is buoyed by a surging consumer economy, with the highest household consumption growth of the cities evaluated, and it also has very high population and middle class growth.

Both Lusaka and Luanda are interesting in that they hold their strong positions despite a number of indicators that undermine their economic inclusivity. Luanda has the weakest governance ranking among the top cities and it scores very poorly as a business destination. Both Lusaka and Luanda have a number of infrastructure shortcomings. Despite these factors both cities should be able to continue to grow strongly, and should do so even faster if their shortcomings, or at least some of them, are addressed.

Of interest are the relative positions of Johannesburg, Lagos and Nairobi – cities that are widely regarded as dominant in their regions. Of these, Nairobi's potential is shown to be somewhat higher than Johannesburg's, with Lagos some way behind. None of these cities appear in the first tier in terms of growth rates.

This is in part as a result of their relative maturity and the higher base off which their growth is assessed. Johannesburg has the highest infrastructure, governance and ease of business rankings, but it falls significantly behind in measures of economic growth. What is interesting is that with its established economy, large size and comparatively high proportion of economically active citizens, Johannesburg lies in the first three cities on the leading axis with Kampala and Accra, suggesting greater upside potential to growth than is currently being realized.

Lagos performs well in terms of GDP per capita growth and foreign investment but it performs poorly on a number of economic measures: education, investment, infrastructure, and business regulation.

Nairobi slumps in terms of foreign direct investment and infrastructure, but as a counter to this, there is now significant investment in infrastructure in the city.

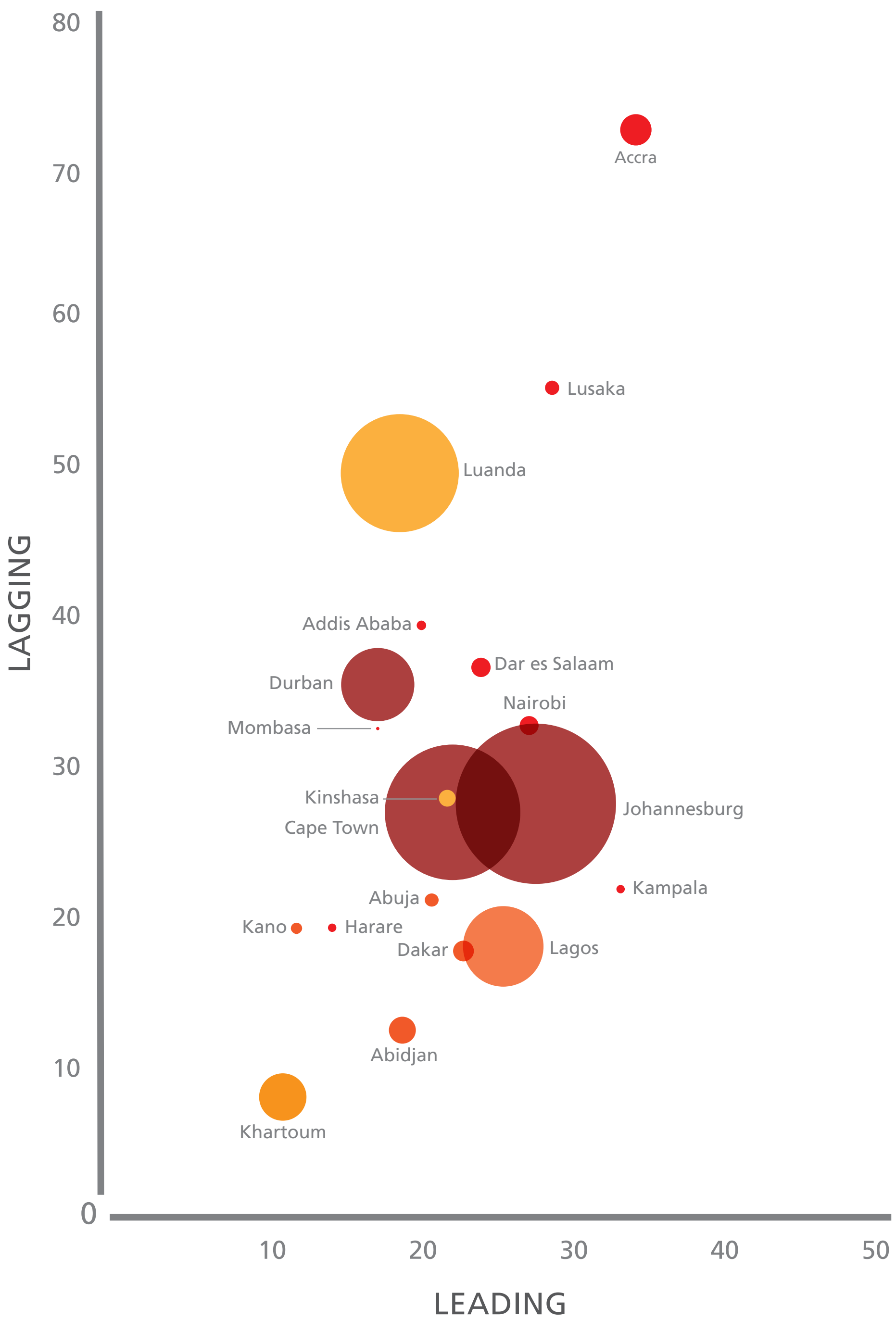
Both Lagos and Nairobi are held back by national and regional political uncertainty.

The cities of the three regions of East, West and Southern Africa are clearly clustered. With the exception of Harare, East African cities as a group perform comparatively better than the clustered cities of the other regions. With the notable exception of Accra, the West African cities cluster towards the lower end of the growth scale. The Southern African cities do not show great growth potential, although they cluster higher than the West African cities.

The Impact of Economic Size

Before moving from the city array of Chart 4 it is worth reviewing it in terms of one significant factor – economic size. The MasterCard African Cities Growth Index assesses growth potential irrespective of economic size, but it remains true that economic size has a bearing on growth and growth potential. Small growth in a large market with established infrastructure and services may be more appealing to particular investors than high growth in a small and developing market, or vice versa. Chart 5 retains the relative position of the cities but in addition reflects their economic size, giving more perspective to the relative value, promise and opportunities of the cities in the Index.

Chart 5 Economic Size



City Rankings

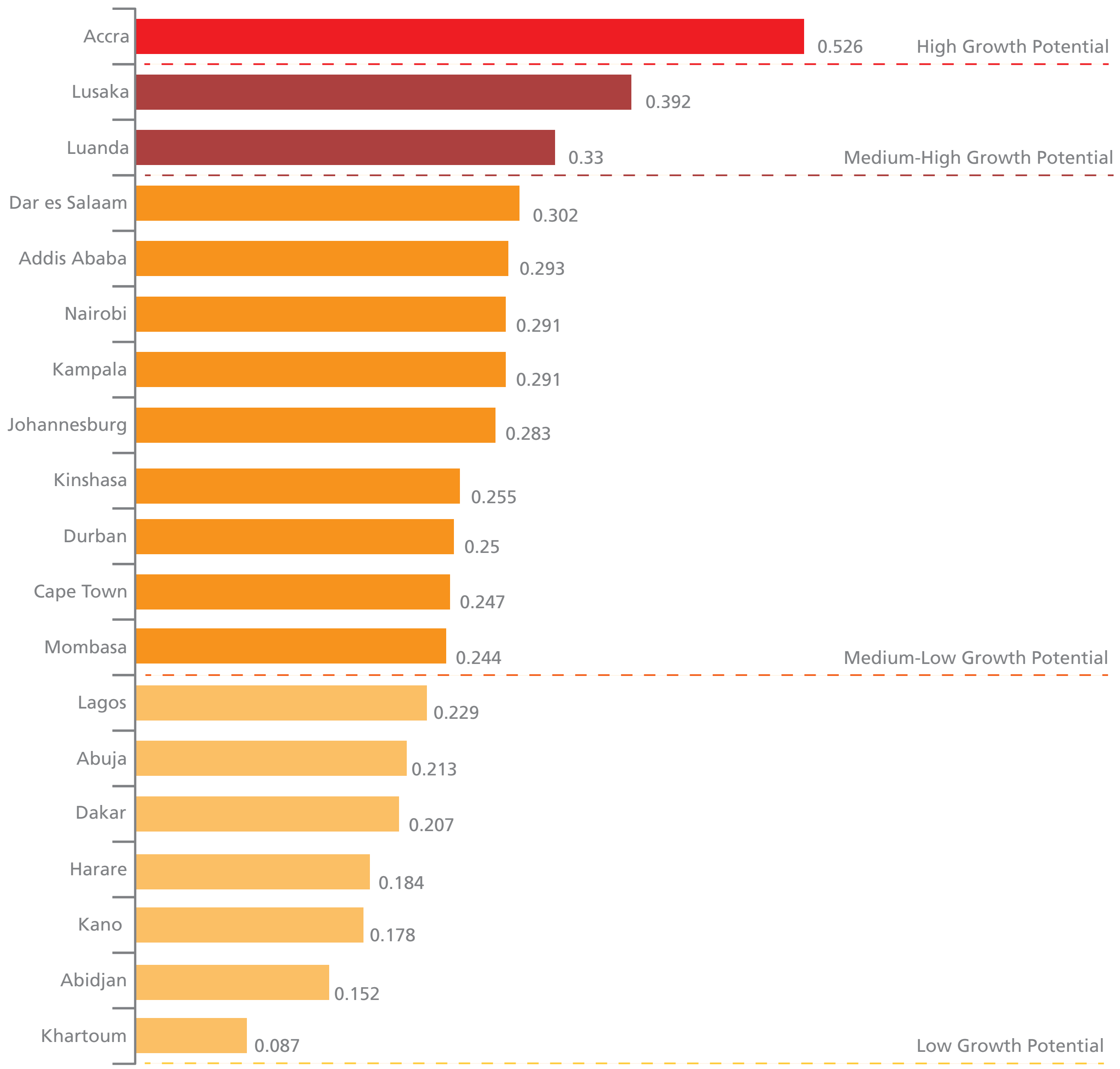
The leading and lagging scores were consolidated to derive the MasterCard African Cities Growth Index. The derived ranking of the cities in the Index sees them divided into categories of High, Medium-High, Medium-Low and Low Growth Potential, as shown in Chart 6. Only Accra is identified as having high growth potential given its score (0.526 against a perfect 1.0), a position relative to the other cities in the Index and in comparison to the growth potential of cities around the globe at similar levels of development and per capita income.

Lusaka and Luanda are seen to hold medium to high growth potential. Although their potential for inclusive growth is somewhat curtailed, the purely economic growth momentum evident in both cities should buoy growth over the next five years. Whether this growth will translate into long term benefits for their broader urban populations will depend on how well revenues from rising resource exports are translated into more and better investment in infrastructure, human enterprise and productive assets that will generate continuing growth and innovation in these cities.

The majority of the cities in the Index fall into the medium-low and low ranges of growth potential. Other than growth factors beyond their control such as global resource demand, the growth potential of cities in these lower two ranges will be determined to a large extent by their willingness and ability to embrace growth accelerating factors such as health, education, governance, infrastructure development, and their partnership with businesses. These are also factors that help position cities for more inclusive growth.

Harare (Zimbabwe), Kano (Nigeria), Abidjan (Côte d’Ivoire), and Khartoum (Sudan) are at the lower range of the 19 cities examined in the study. Although a number of these cities scored well in some categories such as overall health and foreign direct investment, their potential for growth was negatively impacted by low scores in areas such as their political and regulatory environments, lower historical economic growth and the challenges of doing business. These are the critical challenges that these cities must overcome in order to start improving their growth potential.

Chart 6 African Cities Growth Index



Conclusion

Sub-Saharan Africa and the cities within it are on a rising growth trajectory. The continent has the fastest growing population in the world and some of the world's swiftest rates of urbanization. Africa's steady economic growth and investment are largely driven by resource demand from beyond its borders.

For growth to become sustainable and to continue beyond the time-bound limits of high resource demand, Africa's cities have to develop as innovative, wealth-creating economic hubs that offer inclusive growth to its urban populations. While rapidly expanding urban populations often contribute to economic growth, the risk is that these expanding populations may become demographic burdens in the absence of inclusive growth.

In contrast, good governance and an effective bureaucracy, efficient infrastructure, sufficient investment in health and education, financial inclusion, and an environment that encourages business investment are essential conditions for long-term sustainable growth that will outlast the boom-bust cycles of resource demand.

Furthermore, progress made in improving these conditions could in turn create a virtuous circle of generating greater demand for further improvement because of an expanding middle class and rising expectation of greater accountability. These are also the very same conditions for achieving inclusive growth.

Africa's societies have to invest in their young people through education and health care in order to make them employable, and to make the labor market attractive to new business investment. The participation of urban populations in the economies of their cities must be expanded, and this will only occur in environments that are favorable to investment and businesses.

Thus, there is a symbiotic relationship between business incubation, investment and job creation on the one hand; and effective governance, rule of law and a business-friendly, functioning bureaucracy on the other. These are the basic pre-conditions for cities to thrive and prosper.

In short, future growth of Sub-Saharan African cities must become more inclusive if these cities are to regenerate, reduce poverty, and build prosperous populations. Some of Africa's key economic and social challenges are related to how its cities attract investment compete globally, serve as magnets for inbound capital flow, technology and knowledge transfer as well as how they perform as hubs of innovation.

The MasterCard African Cities Growth Index assesses these challenges and how cities in Sub-Saharan Africa are making progress in addressing them, thereby changing their growth trajectory and ability to attain desirable inclusive development.

Biography
Yuwa Hedrick-Wong, Ph.D.

Yuwa Hedrick-Wong is currently HSBC Distinguished Professor of International Business at the University of British Columbia, Canada; and Global Economic Advisor at MasterCard Worldwide.

Yuwa is an economist and business strategist with 25 years of experience gained in over thirty countries. He is a Canadian who grew up in Vancouver, British Columbia, and spent the last 20 years working in Europe, Sub-Sahara Africa, the Indian Sub-continent, and Asia/ Pacific.

He has served as strategy advisor to over thirty leading multinational companies.

In 2010, Yuwa was appointed as Global Economic Advisor to MasterCard Worldwide. Prior to this role, he was Economic Advisor to MasterCard in Asia/Pacific, a position he held since 2001. His other appointments are: Advisor at Southern Capital Group, a private equity fund (since 2007); member of the Investment Council of ICICI, India's largest private bank (since 2008); and Advisor at New Harbor Capital Partners, a hedge fund (Since 2011).

Yuwa is a frequent speaker at international conferences and a regular commentator in the broadcast and print media on economic, policy and business issues. He is a published author on consumer markets, economic development, trade, and international relations. He was voted "Communicator of the Year" in Asia by the Asia/ Pacific Association of Public Relations Professionals. He wrote a regular column in Forbes Asia called "Asian Angles" in 2005 and 2006 and was a guest lecturer at the Graduate School of Business, University of Chicago from 2004 - 06.

As a student of philosophy, political science, and economics, Yuwa studied at Trent University and pursued post-graduate training at the University of British Columbia and Simon Fraser University in Canada. He also received post-doctoral training in energy and resource economics and scenario forecast and planning.

He lives with his wife and two cats on Salt Spring Island, off the west coast of Canada, and is an eager apprentice in the fine art of gardening.

Biography
Professor George Angelopulo

Professor George Angelopulo's area of interest is the relationship between corporate integration, communication and sustainable competitive advantage.

He has published in peer-reviewed journals; produced standard academic works that are used throughout southern Africa; edited and authored a number of books; and produced academic papers for conferences around the globe, always retaining a focus on the corporate world. George has worked with organisations that include listed and unlisted companies, multinationals, NGOs, most of South Africa's government departments and a number of parastatals.

He holds a particular interest in research methodology and has developed diagnostics for stakeholder perception analysis in marketing and communication that include the iBrand Barometer® and the Communication Prioritisation Index®.

George has undertaken research in Finland, Germany, Great Britain, Italy, Namibia, the Netherlands, Norway, Peru, South Africa, the USA and Zimbabwe. He is a member of the MasterCard Africa Knowledge Panel, holds a DLitt et Phil (UJ) and academic positions at the Department of Communication Science at the University of South Africa (Unisa), and CENTRUM Católica, the business school of the Pontificia Universidad Cotólica del Perú. Prior to his academic career George worked in media and advertising in Africa.

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