Guest editorial

Africa: the next frontier for intellectual capital?

This special issue is of high relevance, since its focusses on a huge continent – Africa, with high promises but also strong uncertainties. Among the promises, those relating to the leveraging of intellectual capital are certainly the most prominent. We can even assume that potentially, and taking a medium/long-term perspective as well as some countries projects and achievements, Africa has the potential of being a new frontier for intellectual capital. Some might find such a proposal too ambitious and even quite naïve, taking into account the way the continent is often perceived in media and other places, as well as among others – the on-going debate and challenges, especially in Europe, on immigration. But beyond these factual elements, there are strong arguments for looking into the issue from a different angle: the potential and the energy which might be produced by African people, their young population and their cultural diversity.

Let us consider here some of the pro arguments for my proposal: demography and sustainable development, institutional reform, digital opportunities and entrepreneurship and creativity.

Demography and sustainable development

Africa is the World's second most populous continents, with more than 1.1 billion inhabitants (2013) and more importantly with the most youngest population among the continents (19.7 median age in 2012 whereas the worldwide median was 30.4)[1]. From an intellectual capital point of view, this presents great challenges, but also a high potential for growth, innovation and entrepreneurship in many areas: valorising traditional knowledge, developing new brands, innovating in financial instruments and digital, developing sustainable energy applications and water management, innovating in IPRs, developing new approaches to deal with inter-generational issues. According to the United Nations data[2], in 1950, the world population was estimated at around 2.6 billion people. In 2011, it was estimated to be seven billion: "Sixty per cent of the world population lives in Asia (4.4 billion), 16 per cent in Africa (1.2 billion), 10 per cent in Europe (738 million), 9 per cent in Latin America and the Caribbean (634 million), and the remaining 5 per cent in Northern America (358 million) and Oceania (39 million)"[3]. Africa is the fasted growing continent, with a total population growing at 2.55 per cent annually during the period 2010-2015.

By 2050 and 2100, according to the main source, the world population is projected at the level of 9.7 billion and 11.2 billion, respectively. More than half of this growth is expected to be originated from Africa. These figures indicate a major challenge for Africa and its main partners, especially in Europe. They also indicate that this growth should lead to the openness of important and ambitious opportunities in terms of job creation, entrepreneurship, innovation and sustainable development for Africa and the improvement of well-being for African population, especially the young ones.

As it has been underlined by the main findings of the African Development Bank Competitiveness Report 2017 "Without urgent action to address stagnating levels of competitiveness, Africa's economies will not create enough jobs for the young people entering the job market. If current policies remain unchanged, fewer than one-quarter of the 450 million new jobs needed in the next 20 years will be created. Policy priorities include reform to improve the quality of institutions, infrastructure, skills and adoption of new technology. House construction and better urban planning present opportunities for short-term competitiveness gains. The ability of Sub-Saharan Africa's economies to

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generate enough jobs for its young and growing population rests on the successful implementation of urgent reforms to boost productivity". Actions here are programmatic and concern different levels of investment for a sustainable development: infrastructure, industrial clusters, but also education, entrepreneurship, innovation policy and institutions.

Institutional reforms

In its report on *Where is the Wealth of Nations? Measuring Capital for the 21st Century* (World Bank, 2006), the World Bank experts developed a comprehensive approach to measuring the wealth of nations, which particularly put an emphasis on the role of intangibles (intellectual capital). Intangibles capital in this context is measured as residual after the subtraction of returns on physical capital and natural capital from the total wealth, measured as the present value of total consumption. This top-down approach is interesting, since it provides a comprehensive value of wealth and its components and therefore shed light on those countries who are really leveraging their intellectual capital (in this case, the residual is at least positive), as well as by contrast on those who do not have enough residual to pay their intellectual capital. Their intellectual capital in this case is negative, in other words, a "non-used capital or a capital in waiting". This applies specifically to oil countries such as Venezuela. Furthermore, the report clearly indicates that even in several underdeveloped countries, including in Africa, intangible capital presents a substantial part of these countries capitals and source of wealth (50 per cent in low-income countries, compared to 81 per cent in high-income countries). Naturally, the methodology presents limits, especially due to the residual nature of intangible capital. But beyond the measurement dimension, the report also emphasises two main components of intangible capital: human capital and institutional capital. These are precisely the two main components on which African countries should put an emphasis, especially towards the young people. For institutions in particular and taking advantage of digital resources, African countries should pay more attention to the increase of trust in national institutions, by addressing corruption, and to the satisfaction of the young people needs. Exemplar institutional innovations should be encouraged and promoted whenever it is possible.

Entrepreneurship, culture and creativity

Intangibles are now the main source for innovation growth (Bounfour and Miyagawa, 2015). Via adapted institutional reforms, there is a high potential for entrepreneurship in Africa, in economic arena as well as within societal arena. Such an entrepreneurship potential might also be directed towards leveraging culture diversity and creativity of entrepreneurs. In this regards, scientific, technical, artistic and business diasporas might be leverages. More generally, societal innovation can also be leveraged in this context:

(1) Digital transformation and innovation. Digital transformation is a challenge for African countries as well as a source of major innovative opportunities (Bounfour, 2015, 2017). Due to the weak or absence of legacy systems in many contexts, African countries can fastly move to the next generation of technologies and related services. Several innovations are already taking place in Africa and for which even a form of pioneering exercises are registered: this is typically the case for mobile payment with MPesa in Kenya, but it might also be the case tomorrow with blockchains, for securing new business models or developing public services (such as securing land rights in Ghana).

(2) These are some of the major themes for Africa sustainable growth and where intellectual capital should play a critical role. These are topics of high potential for firms, nations and communities and for which, there is a need to further investigate how intangibles can contribute. From this perspective, and in line with the call for

papers for this special issue, there are still several topics for which there is still a need for research and further analysis. To narrow down the agenda, there is still a need to understand and document:

- How African countries, communities and firms approach their intellectual capital?
- What innovations, programmes and approaches to leveraging intellectual capital are implemented or should be implemented at national, regional firms and communities' levels?
- What are the potentials for leveraging intellectual capital in firms, nations and communities?
- What learning processes can be organised between African countries and communities and other nations/communities worldwide for intellectual capital valuation and management?

This special issue is a first contribution to this broad and high-level business and policy agenda. The ten selected papers can be organised along four topics: intangibles/intellectual capital relevance and measurement in the African context; leveraging intellectual capital and innovation policy; business models and platforms for innovation and finally; reporting and valuing intellectual capital, a traditional field of research for intellectual capital scholars.

Intellectual capital relevance and measurement in the African context

Five papers are proposed under this theme. The first paper by Leonard Nakamura provides an overview of the deep nature of intangibles, delineates their contribution to innovation and creativity and indicates potential implications for innovation and creativity in Morocco. Since now several years, this country develops a clear, consistent and pioneering strategy for economic and social growth in Africa in partnership with several countries, especially in the western part of the continent. Morocco is a leading foreign investor in most of these countries. As for intangibles, and as a follow-up of the speech from the throne of 30 July 2014, a report has been issued by the Conseil Economique, Social et Environnemental (2016) in partnership with Bank Al-Maghrib. In the meantime several workshops, conferences and policy, business and media events have been organised around intangibles relevance for Morocco economy and society in general. The Royal Institute for Strategic Studies included the theme of intangible capital as one of the key topics of its programme. Ad hoc metrics are also issued and published under the *tableau de bord stratégique* for Morocco (Royal Institute for Strategic Studies, 2017). The paper by Leonard Nakamura have been presented at a high-level workshop organised by Al Akhawayn University in Ifrane, Morocco. The paper delineates the increasing role of intangibles for economic growth, the role of creativity and cultural differences, as well as in the development of new economic forces, using Harry Potter book series as an illustration. The paper then indicates some possible implications for the intangibles agenda in Morocco, including with regards to the leveraging of its reputation, creativity and culture. The next paper by Wen Chen, using Corrado *et al.*'s (2005) framework, proceeds to analysis of the level of investment in Egypt in comparison to South Africa, over the period 1995-2011. The paper indicates that South Africa adopted a consistent strategy for investment in intangibles over the period, both in absolute and relative terms (share of GDP). During the period of reference, the intangible investment in South Africa increased form 1.9 per cent in 1995 of GDP to 2.8 per cent in 2011, whereas this share remains stable around 0.5 per cent in Egypt. As for the structure of investment, Egypt is mostly investing in brand equity and less in R&D, whereas South Africa invest in all the intangibles components: scientific R&D, organisational and capital and brand equity.

The next paper by Carol Lin, based on the intellectual capital framework (structured around three components – human capital, market capital, renewal capital), proceeds to the comparison of South Africa investment with two extra – African countries: Poland and Romania, over the period 2001-2015. From the analysis, South Africa appears as lagging behind the two eastern countries. The level of national intellectual capital of South Africa is lower than that of both Poland and Romania. As for the components, South Africa appears to invest more in human capital then in the other components of intellectual capital. The paper finally indicates how Poland and Romania might be referred to as benchmarks for South Africa.

The next paper by Wolfgang Baer, Ahmed Bounfour and Thomas Housel, develops an econophysics modelling the development of micro-finance in Sub-Saharan Africa, with a specific focus on MPesa. Mobile phone as a technology radically transformed micro-finance in Kenya in particular. The econophysics model aimed at predicting the value of MPesa for Kenya and South Africa consumers. Based on the components of the model, the paper indicated that the success in Kenya *vis-à-vis* South Africa can be explained by a better fit and a smaller distance to adoption in Kenya.

The last paper under this theme is proposed by Sacha Wunsch-Vincent, Fred Gault and Jacques Charmes, and addresses an important issue for developing countries: how to measure informal economy innovation and what should be a content of an agenda for Africa. The paper reviews options for measuring innovation in the informal sector, including by considering specific modules and using semi-structured interviews and questionnaires in ad hoc informal sectors. A set of policy indicators are then recommended for the implementation of a policy agenda.

Leveraging intellectual capital and innovation policy

To what extent do African countries leverage their intellectual capital for their innovation policy? Two papers are proposed under this theme. The paper by Jean-Eric Aubert concerns one of the most fast growing countries in Africa: Rwanda. It addresses this country's innovation challenges and policies, as well as the possible lessons to be derived for Africa. The reviews of Rwanda innovation policies consists in analysing different components of intangibles in a broad sense, such as research, education structure, finance and their interactions. The paper underlines the exceptional economic recovery of the country made by efficient government policies. These policies concern in particular ICT (access to internet) as well as science and technology, with the institution of a national commission aiming increasing substantially the share of R&D in GDP (1 per cent by 2020 against 0.4 per cent in 2015). In total, the case of Rwanda appears as of particular relevance for those African countries who want to embark on an intellectual capital strategy. In this perspective, structural reforms and a close follow-up are necessary to achieve results.

The next paper by Silvia Ferramosca and Alessandro Ghio addresses the issue of how intellectual capital is leveraged in a specific community: an aggregation of artists in Kenya. The deep research question addresses here concerns how organisational aggregation can influence intellectual capital performance in a context marketed by simultaneous presence of a strong traditional knowledge and the willingness for growth, and development. The research concludes to the importance of social and organisational resources for performance. Leveraging community dimension appears as a critical level, especially via facilitating knowledge interaction and networking (Bounfour and Edvinsson, 2005).

Business models and platforms for innovation

The next paper by Olayinka David-West, Immanuel Ovemeso Umukoro and Raymond Onuoha deals with a relevant and emerging topic in business modelling and organisational design: the role of business incubation for the development of start-ups un Sub-Saharan

Africa, taking a platform perspective. Data are collected for over 600 platforms and 196 incubators. The research, which emphasises the successful growth development of platform start-ups in the region, explains why the platform ecosystem in the region is still in its early stage with regards to produced innovation. The research indicates the predominance of private owned platforms, while private-public partnership platforms are completely absent. The paper recommends gaps to be filled by African Governments, in order to fully take advantage of the platform business models movement.

Reporting and valuation

This is a traditional topic of intellectual capital management, for which established taxonomies do exist. Two papers are presented under this theme. The first one by Salma Loulou-Baklouti and Mohamed Triki, addresses the issue of the usefulness of intellectual capital information for users in Tunisia, taking into account different possible differentiating criteria (sex, age, function, professional experience of respondents). A survey questionnaire has been sent to five groups of users and preparers of financial data, who has been invited to provide their perception of the usefulness of the information. The study concludes to the usefulness of the information for the five categories, as well as its differentiation by professional experience, but not for the other criteria (education, sex, age, function, etc.).

The last paper by Anifowose Mutalibe *et al.* covers the issue of intellectual capital efficiency and corporate book value in Nigeria. The study is conducted based on a sample of 91 listed firms on main board of Nigeria Stock Exchange, for the period 2010-2014. The study concludes to the existence of a significant and positive relationship between overall intellectual capital efficiency and corporate book value, measured as cash flow from operation and economic value added. This study is one of the first to be conducted in Nigeria, and as such, contribute to the corpus of literature on the relevance of intellectual capital for value creation in Africa.

Conclusion

Due to its high potential as well as to the major challenges it faces, Africa should be the next frontier for intellectual capital. The continent has the tangibles and more importantly the intangibles resources, including the energy of the people and, in several cases, the leadership necessary, to the achievement of a sustainable development. Several countries (Morocco, Rwanda, Ghana) have already implemented consistent and ambitious programmes and reforms. Several countries have already initiated ad hoc programmes aiming at their intellectual capital identification and leveraging: these initiatives aimed at revising science, technology and education policies, institutional reforms, implementing digital strategies, and valorising countries and local knowledge and brands. Africa should now build on some of these initiatives, to be disseminated widely. More globally, the challenges now for African countries consist in building autonomous intellectual capital that should be the basis for a renewal and sustainable agenda to be designed adequately so as to face major challenges.

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Notes

1. Source: Wikipedia
2. www.un.org/en/sections/issues-depth/population/
3. www.un.org/en/sections/issues-depth/population

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