World Journal of Science, Technology and Sustainable Development, Vol. 8, Nos 2/3, 2011

THE STATE OF CAPACITY BUILDING IN AFRICA

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Abstract: How can we account for the actual state of capacity building in Africa? This paper attempts to respond to this question, building on the existing literature and statistical data available both within and outside the continent. Using the arguments put forward by different national and international institutions around the world, it is possible to trace the path followed by the capacity building process in Africa around change and human capital theories. Following the creation of ACBF in 1991 and thanks to the intervention of a number of development partners, capacity building practices have significantly influenced the functioning of African States, the implementation of educational systems, the expansion of microfinance, and the impact of multilateral trade negotiations. This paper suggests that capacity building in Africa still requires urgent and vigorous actions towards a qualitative and quantitative of scientists, for the coordination of the dispersed efforts made by various regional and sub-regional institutions, and for the strengthening of individual and collaborative programmes aimed at developing African human resources in Africa.

Keywords: *Human Capital, Capabilities, Change, Capacity-Building, ACBF, Training, Scientific Research, Projects and Programmes*

INTRODUCTION

Human capital and capacity are closely related concepts. While the benefits of education go beyond the contribution in human capital in the production of commodities, capacity makes it possible to value its other functions (Sen, 2000). Capacity refers to an acquired or developed knowledge which enables an individual to succeed in a physical or intellectual activity. Five broad categories of capacity

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are therefore at the basis of most human activities (Gagné et al., 1992): verbal information (declarative knowledge), intellectual skills (procedural knowledge), cognitive strategies, motor skills and attitudes.

Broadly speaking, capacity building covers three activities: professional enhancement, procedures improvement and organisation strengthening. Pioneering works devoted to the impact of capacity-building on development and growth have increased in recent years and there is consensus that the quality of institutions plays an important role in growth. Apart from the purely technical and traditional training methods developed by public authorities and NGOs, other training methods related to andragogy have proved to be more relevant.

As a consequence, capacity building is concerned with the subsequent modification that is, changes. Change theories developed many years ago has given rise to a huge literature in different disciplines (Bernoux, 2004). It appears from this literature that the notion of change is polysemous as it refers both to the modification of a function, a situation, an operating method, and to the transformation of the way these different aspects are regulated (Durand and Weil, 1993). Following Hall (1986, 1993) and Muller and Surell (1998), one can consider that there is change in public action when the following facts are observed: a change in the *objectives* of the policies; a change in the *tools* used for effective make public action; and a change in the *institutional framework* which guides development oriented public actions.

The aim of this paper is to demonstrate how informal or formal, national or international institutions, use change theories via their training programs to contribute to the African development. The methodological approach consists in a survey of the relevant literature (annual reports, studies, articles, books, among others) and an analysis of available data on capacity building in Africa. The statistical data presented are sourced from various institutions (World Bank, OECD, UNESCO[2], etc), especially from Waast and Gaillard (2000) - a bibliometrical study using the PASCAL data base, surveys

[2]A list of abreviations is given at the end of the paper.

conducted in 14 African countries, semi-directive interviews of 400 African researchers and institution officials, and a questionnaire survey over 1677 researchers from 36 African countries who benefited from the support from IFS or other programmes of the European Commission.

The remainder of this paper could have been organised around two main traditional axes which govern capacity-building, namely human capacities and institutional capacities. This approach is unfortunately irrelevant because the overlapping between the two domains and, as a consequence, a different approach is adopted. The paper comprises nine sections which, taken together, give global view of capacity building in Africa. The first section develops theoretical approaches to capacity building while the second one presents ACBF, the main capacity building organisation in Africa. The third section analyses the State capacities, the fourth one gives an analysis of academic capacities and the fifth one deals with scientific capacities. The sixth section is concerned with microfinance capacities, the seventh one with commercial capacities, and the eighth with the role of international financial institutions in capacity building. The last section sketches a correlation between capacity and development.

THEORETICAL APPROACHES TO CAPACITY BUILDING

Capabilities

The literature devoted to capabilities is abundant and covers a wide range of disciplines ranging from economy to education, from management to public policy. Even if each discipline, depending on its nature, gives a different meaning to the notion of capacity or « capability », common factors emerge (Bryson and Merrit, 2007) amongst others: the importance of individuals' development, the importance of the role that work can play and the scope of interaction between the individual and the organisation in capacity building. Recently, Sen (1997) established a closed link between the theory of capacity and the theory of human capital, which proved to be productive.

The theory of capacity allows establishing a close link between training and the performance of some productivity, growth, development or sustainable development indicators. As it accounts

for the degree of freedom of choice, this theory allows a better appreciation of differences between countries and the identification of more relevant policies. Further, the theory of capacity gives an evaluation of education which is not limited only to initial training. The fact that NICTs, innovation and the economics of knowledge are likely to accelerate the depreciation of human capital, necessitate a fast renewal of the « abilities to do ».

The expression « institutional capacity » often refers to the means a country has at its disposal at the administrative and management levels, especially for the implementation of economic policies. Institutional change is an endogenous process led by the interactions between organised actors whose perception of their interests is likely to lead to the emergence of groups of winners and losers (Nenovsky and Rizopoulos, 2003). The importance of the power relationships in the analysis of institutional change has been highlighted by Marx (1894), Perroux (1973) and Galbraith (1976, 1984). In the institutionalist tradition, Commons (1931) pays a particular attention to « strategic transactions » aimed at controlling and influencing the process of institutional change, whereas Olson (1966, 1995, 2000) and North (1990, 1994, 1997) underline the role of interest groups.

Institutional capacities cover a wide range of aptitudes involving public authorities and their capacity to train human resources as they are renewed. As it allows them to evaluate the cost-effectiveness of their choices using a wide number of performance criterions, the institutional capacity building will enable both countries and donors to optimise their investments (Lusthaus et al., 1996).

Education

The human capital theory developed by Becker and Schultz in the 1960s considers education as an investment. Arguments developed by Becker in 1967 were widened by Becker and Tomes (1986) as their model included the effects of family relationships, credit constraints and sources of heterogeneity. If education can be appreciated for itself, as a consumption good, it becomes difficult to dissociate part of the human capital which is acquired for the sake of future returns from the one which is acquired for the sake

of enjoyments. As a consequence, the later can be considered as a « symbolic » consumption of education (Banerjee, 2004).

Above all, funding education remains the main concern. While public intervention is a constant in all educational systems, its main constraint is related to the imperfect financial markets. The presence of externalities that impede economic efficiency justifies State intervention (as a mean of correcting the price system through taxes and subsidies) and serves as fundamentals to some theories of endogenous growth. This argument can serve as a mean of justifying public funding, since constraints are particularly binding when it comes to fund human capital production, for whom there is no side material and where the mobility of the beneficiaries is high (Friedman, 1955).

The case of Africa

The theoretical analysis of public intervention motives critically highlights the absence of financial markets which upsets the market from its optimal equilibrium. While this argument justifies public intervention, education funding in Africa remain a thorny issue because of shortages in available resources. The importance of development tasks and requirements embarrass governments when it comes to choose the most urgent option. Focussing only on education, it appears on table 1 that public resources allocated by African countries to education are generally less than 10% of GDP.

The proportion of current expenditures allocated to both higher education and research varies between 15% and 30% (21% on average), which may be considered as relatively insufficient. If we agree that the production of scientists is an important is central to the building process of the continent, then we can assert that there is a need to increase the number of students registered in these areas, since actually the highest proportion does not exceed 30% (Zambia). Notwithstanding this, it is noted with satisfaction that economic management institutions in Africa are increasingly being strengthened, especially in issues related to policy formulation and implementation. Their development has speeded up over the last decade, as is shown by the overall improvement in the implementation of economic policies in

Table 1: Some indicators of education in Africa (1990 and 2000): a selection of countries

	Public Expenditure on Education as % of GDP 1990	Public Expenditure on Education as % of GDP 2000	Public Expenditure allocated to higher education as % of levels	% of public expenditure on education allocated to higher education	Public Expenditure allocated to higher education as % of levels	Students registered in the Sciences, Engineering and Mathematics as % of the number of students
	1990	2000	1990		2000	1998-2003
Angola	3.9	2.8	3.7		-	18
Benin	-	3.3	-		16.4	25
Burkina Faso	2.7	-	-	9	-	-
Burundi	3.4	3.6	22.0		26.9	10
Cameroon	3.2	5.4	29.5	24	-	-
Côte d'Ivoire	-	4.6	-	20	25.1	-
Egypt						
Kenya	6.7	6.2	21.6		-	29
Madagascar	2.1	2.5	-		11.9	20
Morocco						
Mozambique	3.9	2.4	9.9		-	-
Nigeria	0.9	-	-		-	-
Senegal	3.9	3.2	24.0	24	-	-
South Africa	6.2	5.7	21.5		14.5	17
Tanzania	3.2	-	-		-	22
Chad	-	2.0	-		16.6	-
Zambia	2.4	1.9	-		-	30
Zimbabwe	-	10.4	12.3		-	-

Source: Figures are taken from UNESCO (2005) and UNDP (2004) statistics.

Africa and their results (Calamitsis, 1999; Fischer, Hernández-Catá and Khan, 1998).

CAPACITY-BUILDING IN AFRICA: ACBF

On the initiative of Edward Kim Jaycox (whose mandate as World Bank Vice-President ran from 1984 to 1996), the World Bank launched, together with the ADB and the UNDP, an African capacity building initiative, at a donors meeting in Paris in 1990 (Jaycox, 1993). Following the results of a fundraising which was beyond all expectations, an agreement between the donors led to the creation of ACBF, officially on the February 9th, 1991. The World Bank (2005) notes that at its beginnings, ACBF donations to economic policy units and training programmes aimed at improving the activities of some

ministries, agencies and supporting them in their planning and management tasks. The incorporation, in 2000, of a new initiative named PACT into ACBF agenda, broadened the range of its activities including the interaction between decision-makers, civil society and the private sector.

On this basis, the vision of ACBF is to be the leading African institution whose partnership with all the stakeholders aims at constructing and building capacities, the final objective being good governance and poverty alleviation in Africa. Among other things, ACBFs interventions include:

- economic policy management and analysis,

- financial management and accountability,

- strengthening and monitoring national statistics,

- public administration management,

- building the capacities for analysis of national parliaments,

- Professionalization of the private sector's and civil society's voice.

With its three-pronged intervention in most African countries (design and development of projects and programmes, funding of projects and programmes, management and networking of knowledge), this independent institution whose head office is in Harare (Zimbabwe) gives donations (through « donation agreements ») to national and regional institutions and programmes, can give long-term funding, and supports a wide range of development activities which are not limited to technical assistance and individual training. Beneficiaries of the donations appreciate the crucial funding role played by ACBF in contributing to recurrent and indirect costs, unlike other donors who only fund projects. Almost two hundreds projects and programmes have been financed by in Africa on various domains of its areas of expertise.

THE CAPACITIES OF THE STATE

The State's capacity building refers to the assistance given to state institutions willing to develop competences and skills, or improve the performances of their personnel and structures. It is therefore necessary to restore a State which is able to promote the

development of the country and build the capacities of the state institution, as it emerged from the African forum on governance held in Ouagadougou (Burkina Faso) in October 2007 and whose theme was "*Building the State capacity in Africa*".

In fact, since the independences, States have unsatisfactorily been trying to find ways to support their development, as each African State has its own particular needs in when it comes to state-building and because of several historical reasons which are peculiar to the fact that the state structure did not emerged from the society itself but was imposed from outside by foreign powers one.

Projects and programmes aimed strengthening state structures which are funded by ACBF, under various names in host countries (CAPE, CENAREC, PRECAREF or CASC), seek to participate to the implementation of a global and coherent policy oriented towards the control of the use of public resources by supporting Revenue Courts, National Assemblies, Administrative Reform Institutions, Anti-corruption Commissions, Economic Commissions, and all the institutions concerned with governance. These contributions are organised around training programmes (particularly in the context of EPM programmes existing in seven countries – Cameroon, Cote d'Ivoire, Ghana, DRC, Mozambique, Uganda and Zambia), through institutional supporting programmes. This initiative brings together researchers and decision-makers in the process of economic policies making.

UNIVERSITY AND POST-GRADUATE TRAINING CAPACITIES

Higher education, including the research carried out in universities, plays a crucial role in the development process. In French-speaking Africa, the French colonisation, while advocating for an assimilation policy, led to the training of Africans élite in French institutions. Except in few cases, it is only after independencies that higher education and research institutions were set up (UNESCO, 2004). Unfortunately with the 1980s economic crisis, African countries resources gradually decreased, leading to a serious crisis in the higher education which brought about a continuous deterioration of study conditions.

While university lecturers now constitute a non-negligible entity

as reflected in table 2 by the particular cases of South Africa, Morocco, Tunisia and Egypt, they are still faicing problems related both to the ancientness and obsoleteness of Research Centres equipments and to the fact that those Research Centres are closed. This situation may lead to stopping of PhD holders' production and to shortages in the recruitment of new lecturers, these problems coupled with the increasing demand for higher education, translates into an explosion in the student population, such that lecturers find it increasingly difficult to devote time to research.

Table 2: Researchers and academics in Africa: selection of countries in 1999

	Personnel in higher education	Full-time researchers employed by public sector	Full-time researchers employed by private sector	Equivalent full-time researchers	Researchers per million inhabitants
Algeria	16 000	1 200	700	3 000	100
Burkina Faso	700	200	-	350	30
Cameroon	1 800	300	-	800	60
Côte d'Ivoire	2000	500	-	600	55
Egypt	40 000	1 500	-	10 000	230
Kenya	1 800	600	-	1 000	35
Madagascar	900	260	-	300	35
Morocco	10 000	700	3	200	120
Mozambique	600	-	-	-	-
Nigeria	14 000	1 300	-	3 000	40
Senegal	1 000	435	-	600	80
South Africa	17 000	8 500	5 000	13 000	350
Tanzania	1 400	-	-	600	70
Tunisia	9 000	800	400	3 000	350
Zimbabwe	1 100	300	-	600	30

Source: Figures taken from Waast and Gaillard (2000).

In such a situation, efforts made in research are important as shown Table 3, the most satisfactory performances being in South Africa, Morocco, Kenya, Tunisia, and Nigeria. But, the fact that these performances are still insufficient may have deterrent effects in terms of promotion (For example, in French-speaking Africa, promotion of lecturers and researchers is based on their scientific production, the later being examined within CAMES). Several capacity building project were therefore proposed, especially for post-graduate programmes in economics and management in African universities.

In English-speaking Africa, the African Economic Research Consortium (AERC) was set up with its head office in Nairobi (Kenya). This institution manages and funds research and training programmes, the main ones being a Collaborative Masters Programme and the Collaborative PhD Programme; ACBF is one of its main funders. In the French-speaking university system, AUF, formerly known as AUPELF-UREF, plays an important role in the capacity building of lecturers and in terms of the availability of doctoral and post-doctoral programmes. PTCI, which is the counterpart of AERC's Collaborative Masters Programme was initiated by the

Table 3: Scientific articles published in 1998: selection of countries

	Number of scientific articles	Articles per million inhabitants	Articles per billion dollars of GNP
Algeria	241	8	5.5
Burkina Faso	72	7	26.0
Cameroon	167	12	18.0
Côte d'Ivoire	87	6	8.0
Egypt	1 313	120	17.0
Kenya	506	17	53.0
Madagascar	50	3	13.5
Morocco	510	20	14.5
Nigeria	450	4	14.5
Senegal	106	12	21.0
South Africa	2 738	72	21.0
Tanzania	196	6	30.0
Tunisia	55	55	26.0
Zimbabwe	176	16	21.0

Source: Figures taken from Science Citation Index and the PASCAL Data Base.

CIEREA. With the support of ACBF, the PTCI hosts an international doctoral programme intended to students from several universities in 18 countries, namely Angola, Benin, Burkina Faso, Burundi, the Central African Republic, Chad, the Comoros, the Congo, Cote d'Ivoire, the Democratic Republic of the Congo, Gabon, Madagascar, Mali, Mauritania, Niger, Rwanda, Senegal and Togo. Since 1975, CODESRIA has been running a programme of small subsidies for the writing of Masters and Thesis dissertations and many other capacity building programmes through the organisation of seminars in various domains of social science.

Apart from the support given to institutional research projects, IDRC has often contributed to the capacity building of its partners by providing equipment, training and improved accounting management systems. Since 1987, IDRC's actions have gone far beyond the direct support to research and have also been oriented to increasing the ability of institutions to carry out their research assistance duties.

SCIENTIFIC CAPACITIES

Building on an endogenous scientific potential extremely poor in 1960 (Eisemon, 1979), Africa experienced a particularly active phase of institutional development (training schools, research centres and institutes, and universities) in the 1970s and 1980s (Davis, 1983; Kolinsky, 1985; Gaillard et al., 1997) which was accompanied by an explosion of its university population and rapid growth in the number of students and researchers. Table 4 shows that South Africa accounts for two thirds of research institutional capacity in Africa, that is 172 research institutions out of the 602 that existed between 1998 and 2007.

This institutional development, which is modest when compared to the entire whole world, received support and subsidies from many sources as highlighted in Table 6. Although the results vary considerably at comparable levels of investment, they are still quite noticeable. In sub-Saharan Africa (with the exception of South Africa), science measured by published production barely represented 0.5% of world production in the mid-1980s, that is about as much as the same in North Africa or in South Africa (Gaillard and Waast, 1993). Existing statistics present a general picture from which it appears that African scientific knowledge

Table 4: Number of institutions per field between 1998 and 2007: selection of countries

	Agriculture, fisheries and forestry	Health, nutrition	Energy, mines and geology	Manufacturing	Environment	Basic Science	Social sciences	Multidisciplinary	Total
Burkina Faso	1	1	1	-	-	-	1	2	6
Cameroon	12	2	5	-	2	-	4	2	27
Côte d'Ivoire	5	1	2	2	2	1	2	2	17
Egypt									
Kenya	14	4	-	4	2	1	3	1	29
Madagascar	-	1	-	-	1	-	1	-	4
Morocco									
Mozambique	1	1	-	1	-	-	-	1	4
Nigeria	21	2	2	4	-	-	6	-	35
Senegal									
South Africa	30	31	11	21	6	17	37	19	172
Tanzania	19	5	1	3	1	-	4	3	36
Tunisia									
Zimbabwe	25	-	2	2	3	1	1	2	36
Africa (with South Africa)	232	76	35	50	38	24	90	57	602
Africa (without South Africa)	202	45	24	29	32	7	53	38	430

Source: Figures taken from UNESCO and Word Sciences Report 1998 statistics

which is not worthless. Table 3 shows that the 14 selected countries produced 6667 scientific publications while and the continent as a whole produced a total of 50361 in 1998 (Table 5).

Since then, the situation has deteriorated in most African countries that, while suffering from a fall in public budgets, registered some damages in their education, higher education and research systems. Recruitments do not exist or are limited; salaries - when they are paid- are not enough to live on and often come late. As shown by Dahoun (1997), Gaillard et al. (1997) or Lebeau and Ogunsanya (1999), a state of crisis prevails. From 0.5% in 1985, scientific production in Sub-Saharan Africa (South Africa excluded) represented only 0.3% in the mid-1990s (Arvanitis et al., 2000). The Northern Africa and the Maghreb have experienced an unprecedented increase in strengthening of their scientific production and in the development of engineering, whereas in Nigeria, science production is collapsing because of the decline in basic sciences and the stagnation

Table 5: Regional scientific production in Africa 1991-1997

Regions	Scientific publications	Articles only	% percentage of all scientific publications	% of all articles
English-speaking Africa (not including South Africa)	10 639	9 155	21	22
French-speaking Africa (not including North Africa)	5 938	4 958	12	12
South Africa	13 997	11 813	28	28
North Africa	18 906	15 542	37	37
Medial Africa	881	759	2	1
Total	50 361	42 227	100	100

Source: Figures taken from the PASCAL data base (1991-1997).

of agricultural and medical sciences.

A survey for IFS grant-holders and INCO beneficiaries (Table 6) shows that the role of international institutions is crucial in the identification of sources of funding for research in Africa and among these institutions, the decisive role of the IFS can be singled out (Gaillard and Furó Tullberg, 2001). During its first 26 years in operation (1974-1999), IFS supported more than 3000 researchers of which 1022 were from Africa.

The renewed interest for regionalism has also created a favourable environment for sub-regional scientific and technical cooperation. Regional committees such as CEMAC, ECOWAS,

Table 6: Sources of research funding in Africa in 1999 by region

Regions	International organisations	National institutions	National public funds	International companies or foundations	National companies or institutions	Others
South Africa	44,8	20,9	25,9	6,4	2,3	2,4
North Africa	44,9	29,5	13,7	5,5	1,9	4,5
Medial Africa	54,2	18,1	12,4	5,9	1,5	7,9

Source: Figures taken from Gaillard and Furó Tullberg (2001).

COMESA, SADC and UMA can give a decisive impetus to this sub-regional cooperation for scientific and technical capacity building. Through policies, institutional arrangements and financial aid, RECs can serve as the basis for the cooperation between higher education and research institutions with view of producing top-level scientists. Africa has experienced two models of sub-regional cooperation enabling it to build capacities: the ANSTI, which was set up by UNESCO in 1980, is an institutional network model compounding a set of institutions and the GCRAI, set up in 1971, which is a model of a network of centres of excellence. The GCRAI created some regional centres of excellence and pooled their resources within a network. This Centres of excellence network is different from the one suggested in the NEPAD, as in the later institutions are selected, designated as regional excellence centres, and are driven to cooperate within the network.

Thanks to NICTs, many existing networks are benefiting from the use of skills produced outside Africa. IDRC has engaged in the setting of such electronic networks, among which we have NGONET and EASTNET located in Kenya. EASTNET connects researchers from the universities of Kampala (Uganda), Nairobi (Kenya), Dar-es-Salaam (Tanzania), Lusaka (Zambia), and Harare (Zimbabwe). HEALTHNET, which works in collaboration with an NGO of Boston named Satel Life, was set up as a project of the International Physics International Institute for the Prevention of Nuclear War. PADISNET joins together development and plannification centres of 34 countries and VITANET was developed to provide information and assistance to development agencies in some fields. Other scientists in the African Diaspora have also taken initiatives connecting them to their colleagues in their home countries; some of these initiatives are AKA, MARS, ANA, SANSA, and TSC. Such programmes have set up 41 networks around the world, which are linked to 30 African countries.

MICROFINANCE CAPACITIES

In 1997, CGAP's initiative for the capacity building of microfinance institutions in Africa launched an experimental operation called *Pilot Initiative for the Capacity Building of Microfinancing in Africa*. This operation, which covered

East and West Africa, aimed at organising training sessions on *financial management* for microfinance institutions (MFIs), in collaboration with African training institutes.

The EU/ACP programme on microfinance, which intends to remedy to the absence of retailed institutional capacity, has granted a 6.5 million Euros subsidies to eleven partner organisations in order to support MFIs, but two of them are going to create new microfinance banks. By the end of September 2007, this programme recorded many results among which: the direct strengthening of at least 40 MFIs in DRC, Ghana, Rwanda, Kenya, Uganda, Senegal, Togo, Mali, Niger, Mozambique, Malawi, Zambia and Zimbabwe; the support given to ProCredit in DRC which enabled it to expand its activities over the country and to give a 24-hour access to its clients through the installation of the first cash slot machines in the country; the creation of new MFIs in Madagascar and Cameroon; the training of more than 500 people throughout Africa; the setting up of SMARTRAC for the training of local management consultants and the carrying out of some missions. Capacity building is a human resources management action which pertains to the GPEC as well as to the monitoring of the careers of microfinance stakeholders.

COMMERCIAL CAPACITIES

The framework for the action of public authorities

One of the main objectives of capacity building in trade is to help developing countries to set in frameworks and strategies for sustainable actions. Without claiming to propose an ideal framework for action, some characteristics appear to favour its success. Donors and developing countries must set in: a coherent trade strategy which is fully incorporated into the country's global development strategy; effective consultation mechanisms between public authorities, firms and the civil society; effective mechanisms for policies coordination between government services; some networks, supported by local research institutions, for the elaboration of trade policies.

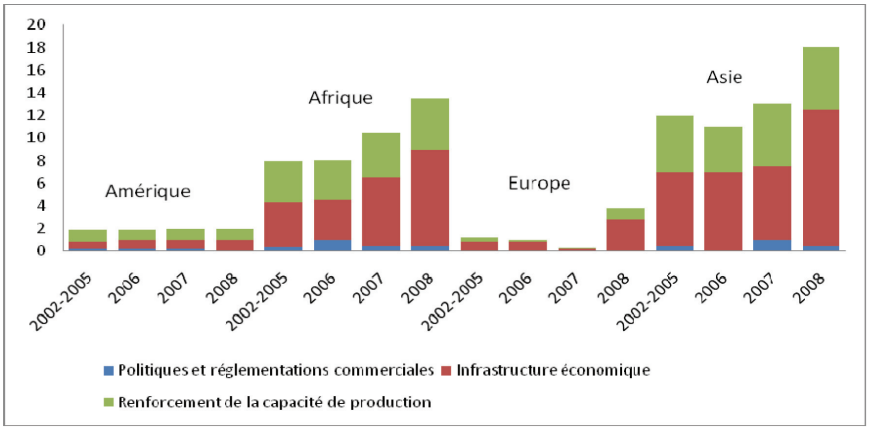
Such a commitment has several implications. The first one for donors implies a closer coordination of trade capacity building efforts. Such a framework cannot be effectively if the institutions and

arrangements which structure him are made up independently. The second implication is to ensure that trade capacity building actions have a global impact and are carried out in an integrated manner. The third implication is to encourage local populations to take responsibility and to participate in all the activities related to trade cooperation. The fourth implication requires the adoption of approaches which increase the partner countries' capacity of to sustain those actions once the donors have left. The fifth implication suggests that they build countries' own trade capacities and the final implication requires, in developing countries, the commitment of considerable financial and human resources in the setting of frameworks for public authorities trade actions, with a view to obtaining substantial results.

Trade aid

When concluding its work in 2006, the special WTO team in charge of trade aid stated that « *Trade aid for aims at helping developing countries to increase their exports of goods and services, to integrate the multilateral trade system and to take advantage of international trade liberalisation and of the greater access to markets* ». This aid is part of the PAD; it is a mean of capacity building which brings together different themes in a single framework, and especially trade technical assistance; trade-related infrastructure; the strengthening of the production capacity; trade related assistance for adjustment; etc. As it appears on Figure 1, the greatest part of trade aid goes to Asia (44%), but flows to Africa are steadily increasing (35%).

Figure 1: Regional and sectoral distribution of trade aid as a %



Source: OECD (commitments in US dollars in 2008)

Since 2005, trade aid resources have increased by about 10% per annum (OECD statistics). In 2007, trade aid represented 32% of the total PAD. Japan committed himself to a trade aid contribution of 12 billion dollars between 2009 and 2011 and the Netherlands committed himself to pay at least 550 million Euros per annum. The commitment of France was 850 million Euros, starting from 2010 and the United Kingdom's commitment to stimulate growth and trade in poor countries, between 2009 and 2011, was around 1 billion pounds per annum. These commitments complement the previous collective commitment to donate 2 billion Euros per annum until 2010 that was made in Hong Kong. At the Hong Kong Ministerial Conference in 2005, the USA committed to devote 2.7 billion dollars per annum until 2010, as their contribution to this aid.

INTERNATIONAL FINANCIAL INSTITUTIONS AND CAPACITIES

The IMF

The IMF makes an important contribution to capacity building through actions, for a wide range of African public bodies, which go far beyond loans to institutions and debt-relief efforts. The IMF activities are oriented in four axes.

The first axe is the economic training offered by the IMF's Institute. Over the last 20 years, more than 3000 African civil servants have participated to the IMF's Institute, and around 8000 applications are expected in the upcoming years. The second axe is technical assistance, which aims to respond to the various needs expressed by member States (public finance, currency and exchange, statistics). The third axe is related to the IMF's periodic consultations with member States. Though less explicit, these consultations are conducted in accordance with Article IV of its status and enable the IMF to dialogue with the officials of a country on issues related both to a detailed analysis of the economy, the examination of possible options and the formulation of action to be taken. The last axe deals with the dialogue which presides over the formulation and the monitoring of programmes supported by the IMF.

The World Bank and other donors

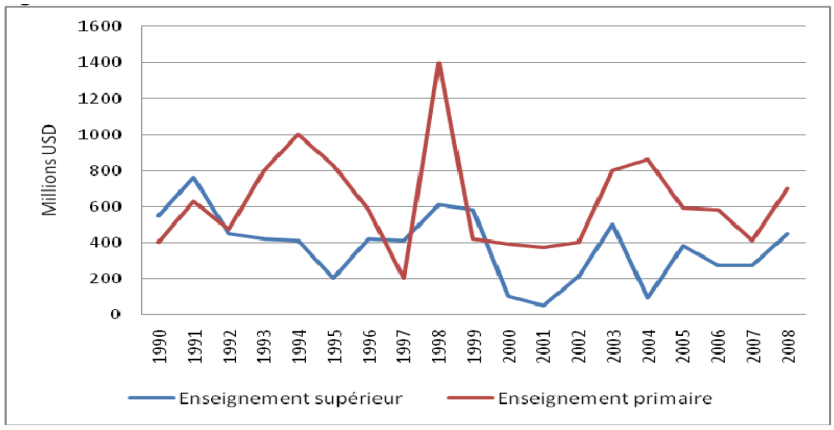
Two decades after the independences, higher education fall under disgrace, partly because a

World Bank study estimated in 1986 that it's social returns rate – that is the increase in national revenue resulting from an additional year of study – was on average 13% lower than returns from primary education in developing countries. Later on, another study on 98 countries covering the 1960-1997 period estimated that the social returns rate was 18.9% in primary education and 10.8% for higher education. In 1994, the World Bank insisted on the fact that priority should no longer be given to higher education in development strategies and, as a consequence, it reduced its spending on higher education from 17% in 1985-1989, to 7% in 1995-1999 (Figure 2).

Fortunately, a report from the World Bank and UNESCO in 2000 claimed that the situation of higher education in developing countries was critical and that any sustainable progress was impossible without higher education. In 2005, the African Commission set up by the British government, clearly suggested to recognise the value of higher education for development and to increase its capacity in Africa by investing 500 million US dollars per annum (and up to 3 billion US dollars over ten years) in scientific and technological centres of excellence.

In 2008, the World Bank recognised the need for a « knowledge-oriented *approach to development* » in Africa and emphasised that more focus should be put on higher education. But the World Bank is not the single financial donor as many other governments and private foundations

Figure 2: Evolution of World Bank loans for education



Source: Constructed from World Bank statistics.

are currently investing important amounts of money to boost higher education in developing countries (see on table 7).

France, which is probably the largest bilateral donor in the higher education sector, devoted almost 1361 US dollars as PAD to higher education in 2007 (see on table 8). One of that country's leading projects in sub-Saharan Africa is the International Institute of Water Engineering and the Environment (2iE), located in Ouagadougou (Burkina Faso). It brings together researchers from partner universities among which six from Africa and seven from France. A French aid of 8 million US dollars made it possible to revise the structure of this institution and to train more than 3000 technicians and executive managers for the private and public sectors.

Figure 3 below traces the amount of public aid for development devoted to higher education coming from the 10 leading donors. It appears from this figure that for a long time, the United States has been supporting higher education in the developing world. USAID's African Graduate Fellowship Programme operated from 1963 to 1990 and was followed by the Advanced Training for Leadership and Skills project from 1991 to 2003. Investments of both programmes represented

Table 7: Higher education donors by types of aid

Type of aid	Definition	Principal donors
Bilateral aid	Aid paid directly by the government of one country to another country	France (AFD), Germany (GTZ), Japan (JICA), Netherlands (Nuffic), Spain (AECID), Sweden (SIDA), United Kingdom (DFID), United States (USAID)
Multilateral aid	Aid or loans granted by the government of a foreign country other than a Developing Country to an international agency.	World Bank, European Commission, regional development banks (AsDB, ADB, IDB)
Private foundations	Charity Organisations which distribute private funds which are not official or public	Bill and Melinda Gates Foundation, Carnegie Foundation, Rockefeller Foundation, Ford Foundation, John D. et Catherine T. MacArthur Foundation, William et Flora Hewlett Foundation, Andrew W. Mellon Foundation, Kresge Foundation.

Source: Constructed from observation

Table 8: PAD (millions of US dollars) devoted to higher education

Country	1995	1998	2001	2004	2007
France	-	380.25	415.38	1045.29	1361.17
Germany	78.17	504.59	445.77	860.9	1054.66
Japan	223.82	83.27	401.87	804.53	338.48
Netherlands	6.78	68.56	23.24	119.64	279.92
European Commission	5.2	-	72.11	159.81	241.71
Turkey	-	-	-	133.79	150.07
Austria	76.11	69.28	52.98	70.27	129.46
Belgium	47.79	29.68	39.85	82.57	115.43
United States	-	6.65	110.74	33.36	87.38
Korea	-	1.26	6.75	27.42	81.67
Spain	29.24	43.25	43.66	41.03	75.04
Greece	-	3.87	5.14	17.22	56.52
United Kingdom	40.06	10.81	3.65	1.41	54.37
Norway	-	0.57	51.71	28.79	50.78
Australia	246.44	82.48	23.85	15.67	49.65
Portugal	17.69	9.88	10.58	43.07	47.49
Canada	100.94	37.11	50.48	80.33	32.84
New Zealand	27.12	-	20.86	19	21.94
Italy	67.5	3.59	12.99	17.22	21.42
Switzerland	9.65	4.4	5	3.93	11.04
Sweden	16.73	9.05	15.97	17.38	10.18
Member countries of CAD, Total	993.58	1349.06	1743.98	3322.71	3800.62

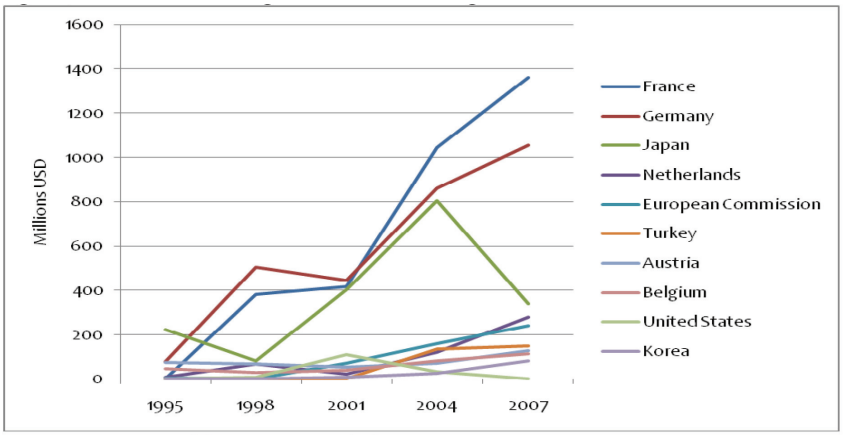
Source: Figures taken from OECD statistics

182 million US dollars and aimed at funding more than 3200 African students pursuing higher studies in more than 200 American universities. About 85 to 90% of these students returned home at the end of their training.

THE CORRELATION BETWEEN CAPACITY AND DEVELOPMENT

Although numerous capacity indicators may be identified, they do not give clear information on their correlation with development. This is however an extremely useful tool for the identification of the most important variables for capacity building and their classification in terms of importance, especially in an African context characterised by binding financial constrains. Despite the limited availability of the required statistical data, it has been possible to test the existence of a correlation with the per capita GDP using the Principal Components Analysis (PCA) method on a matrix of 10 sub-Saharan

Figure 3: PAD devoted to higher education: 10 largest donors



Source: Constructed from OECD statistics

African countries (see Table Annexe 1) with 16 variables presented in Table 9. These countries are: Nigeria, Côte d'Ivoire, Burkina Faso, and Senegal for West Africa; Cameroon for Central Africa; Kenya, Tanzania and Zimbabwe for East Africa; South Africa and Madagascar for Southern Africa.

Table 10 ranks the variables according to their correlation coefficients with the per capita GDP. It then appears that the number of researchers and the

Table 9:Variables used in the PCA

Description	Rating in the ACP
Total of higher education teaching staff in 1999	V1
Number or researchers per million inhabitants in 1999	V2
Number of articles per million inhabitants in 1998	V3
Number of articles per billion dollars of GNP in 1998	V4
Total of research and development personnel in 1995	V5
Internet penetration rate in 2002/Internet users for 1000	V6
Literacy or schooling rate of men over 15 years old in 2002	V7
Literacy or schooling rate of women over 15 years old in 2002	V8
Literacy or schooling rate of men 15-24 years old in 2002	V9
Literacy or schooling rate of women 15-24 years old in 2002	V10
Rate of economic activities of men over 15 years old in 2002	V11
Rate of economic activities of women over 15 years old in 2002	V12
Public health expenditure in 2000 (% of GDP)	V13
Number of primary school teachers in 2000	V14
Education expenditure (% of GDP) in 2000	V15
Per capita GDP in 2002	V18

Table 10: Capacity indicators positively correlated with per capita GDP

Capacity indicators	Rating	Correlation with per capita GDP
Number of researchers per million inhabitants	V2	0,98
Number of articles per million inhabitants	V3	0,98
Total of research and development personnel	V5	0,87
Internet penetration rate/Internet users for 1000	V6	0,85
Total of higher education personnel	V1	0,73
Public health expenditure (% of GDP)	V13	0,55

number of articles per million inhabitants are key capacity building variables which very strongly boost development (taken here from per capita GDP).

CONCLUSION

Capacity building is a global challenge which has peculiarities in Africa, in terms of funding, structures, organization, programmes and expertise. The objective of this article was to take a look at the state of capacity building in Africa by providing the theoretical bases of capacity building in light of change theories and the multidimensional developments of the human capital theory. The review of both the existing literature and the multifaceted efforts made here and there have made it possible to give an idea of what is being done by the States, international institutions, the United Nations system, NGOs and international financial institutions on this issue.

To avoid the sometimes doubtful separation between human capacities and institutional capacities, we have chosen to make this evaluation by highlighting ACBF contribution, and then by alternately evoking what is being done in the capacity building of the States, university systems, scientific research systems, microfinance, for participation in the multilateral trade system, and for the contribution of all types of donors. Finally we proposed a brief analysis of the possible correlation between capacity indicators and development for a panel of African countries.

At the end, three main ideas may be drawn in terms of the agenda for the future. First of all, the quantity and the quality of researchers together are key factors the growth and development of Africa. Endogenous and decisive efforts must be devoted to these factors in order to accumulate as much human capital as possible.

Secondly, it is imperative to set up both at the individual level of African countries, at the regional level via the RECs, and at the level of the African Union, incentive programmes giving priority to the development of the African human resources in Africa. Finally, a particular attention must be given as far as possible to strengthening and pooling African's and international institutions' capacities aimed at improving both human and institutional expertise for Africa's development.

BIOGRAPHY

Professor Roger Tsafack Nanfoso studied at the University of Yaounde (Cameroon) and the University of Auvergne in Clermont-Ferrand (France) and obtained a PhD in Business Economics and a Doctorate of State in Economic Sciences, and was ranked first at the Aggregation Contest in Economics in 2001. He is a Full Professor at the University of Yaounde II and is involved as a teacher, lecturer or consultant in many Universities and institutions in Africa and Europe. He is author of eight books and half a hundred articles published in Africa, Europe, America and China. He is Director of the Centre for Research in Applied Microeconomics (REMA), and Director of the Economic Policy Management (EPM) Training Program at the University of Yaounde II.

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ACRONYMS AND ABBREVIATIONS

ACBF: African Capacity Building Foundation

ADB: African Development Bank

AECID: Spanish Agency for International Cooperation and Development

AFD: Agence Française de Développement

AKA: Association of Kenyans Abroad

ANA: Association of Nigerians Abroad

AsDB: Asian Development Bank

AUF: Agence Universitaire de la Francophonie (Agency of French-speaking universities)

BCEAO: Banque Centrale des Etats de l'Afrique de l'Ouest (Central Bank of West African States)

BEAC: Banque des Etats d'Afrique Centrale (Bank of Central African States)

CAMES: Conseil Africain et Malgache pour l'Enseignement Supérieur (African and Malagasy Council for Higher Education)

CAPE: Cellule d'Analyse des Politiques Economiques (Economic Policy Analysis Unit)

CASC: Projet de Renforcement des Structures de Contrôle (Project for strengthening monitoring structures)

CENAREC: Cellule Nationale de Renforcement des Capacités (National Capacity Building Unit)

CGAP: Consultative Group to Assist the Poor

CIEREA: Conférence des Institutions d'Enseignement et de Recherche en Economie en Afrique (Conference of Teaching and Research in Economics in Africa)

CODESRIA: Council for the Development of Social Science Research in Africa

CREA/AERC: Consortium pour la Recherche Economique en Afrique, African Economic Research Consortium

DFID: Department for International Development

EASTNET: Easthern and Southern Africa Network

EIB: European Investment Bank

EFA: Education For All

EPM: Economic Policy Management

GCRAI: Groupe Consultatif pour la Recherche Agricole Internationale

GPEC: Gestion Prévisionnelle des Emplois et des Compétences

GTZ: Deutsche Gesellschaft für Technische Zusammenarbeit

HEALTHNET: Health Network

ICL: Income Contingent Loans

IDB: Interamerican Development Bank

IDRC: International Development Research Centre

IFS: International Foundation for Science

JICA: Japanese International Cooperation Agency

MARS: Moroccan Association of Researchers and Scholars

NEPAD: New Partnership for Africa's Development

NGO: Non-Governmental Organisation

NGONET: NGO Network

NICT: New Information and Communication Technologies

NUFFIC: Dutch body for international cooperation in higher education

OECD: Organisation for Economic Cooperation and Development

PACT: Partenariat pour le renforcement des capacités en Afrique

PAD: Public Aid for Development

PADISNET: Pan African Documentation Centre Network

PCBA: Partnership for Capacity Building in Africa

PRECAREF: Projet de Renforcement des Capacités de Responsabilité Financière et de Transparence

PTCI: Programme de Troisième Cycle Interafricain en Economie

RAIST: Réseau Africain d'Institutions Scientifiques et Technologiques

RCA: République Centrafricaine

RDC: République Démocratique du Congo

REC: Regional Economic Communities

SAP: Structural Adjustment Policies

SANSA: South African Network of Skills Abroad

SIDA: Swedish International Development Agency

SMARTRAC: Programme d'assistance technique sur la gestion de risque et publication des résultats obtenus en matière de performance social

TSC: Tunisian Scientific Consortium

UNDP: United Nations Development Programme

EU/ACP: European Union/Africa, Caribbean, Pacific

UNESCO: United Nations Educational, Scientific and Cultural Organisation

USAID: United States Agency for International Development

VITANET: Volunteers in Technical Assistance

WTO: World Trade Organisation

Table Annexe 1: Matrix of data used

Variables / Country	Total of higher education personnel in 1999	Number of researchers per million inhabitants in 1999	Number of articles per million inhabitants in 1998	Number of articles per billion dollars of GNP in 1998	Total of research and development personnel in 1995	Internet rate of penetration 2002/Internet users for 1000	Rate of literacy or schooling of men over 15 years old in 2002 (as %)	Rate of literacy or schooling of women over 15 years old in 2002 (as %)
	V1	V2	V3	V4	V5	V6	V7	V8
South Africa	17000	350	72	21	16946	68.2	90	88
Kenya	1800	35	17	53	5832	12.7	90	83
Zimbabwe	1100	30	16	21	4369	43	94	89
Cameroon	1800	60	12	18	5110	3.8	84	68
Senegal	1000	80	12	21	1607	10.4	52	33
Burkina Faso	700	30	7	26	1205	2.1	37	22
Côte d'Ivoire	200	55	6	8	1546	5.5	64	44
Tanzania	1400	70	6	30	6069	2.3	79	66
Nigeria	14000	40	4	14.5	7913	3.5	72	49
Madagascar	900	35	3	13.5	1012	3;5	77	65

Table Annexe 1: Matrix of data used (cont)

Variables / Country	Rate of literacy or schooling of men aged 15-24 in 2002 (as %)	Rate of literacy or schooling of women aged 15-24 in 2002 (as %)	Rate of economic activities of men over 15 years old in 2002 (as %)	Rate of economic activities of women over 15 years old in 2002 (as %)	Public health expenditure in 2000 (% of GDP)	Number of primary school teachers in 2000	Education expenditure (% of GDP) in 2000	Per capita GDP in 2002
	V9	V10	V11	V12	V13	V14	V15	V18
South Africa	96	98	63	47	3.4	222487	5,4	3123.1
Kenya	92	93	88	76	2.1	146205	6,3	413.9
Zimbabwe	98	99	74	60	3.7	66440	6,9	538.3
Cameroon	88	84	81	54	1.3	43135	2,1	708.7
Senegal	58	45	89	65	1.7	21755	3,3	427.6
Burkina	47	33	91	78	2.1	17435	2,4	239.2
Côte d'Ivoire	72	60	82	51	0.9	43204	4,6	592.1
Tanzania	79	76	91	86	1.8	105964	2,4	285.7
Nigeria	78	65	73	39	1.4	458002	0,9	391.0
Madagascar	73	68	89	84	1.2	46051	1,8	209.4