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New definitions and new indicators for well-being in developing countries: the example of WAEMU

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New definitions and new indicators for well-being in developing countries: the example of WAEMU

by
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Parallel Session 7B. Measuring Wellbeing: Multiple Dimensions, Objective and Subjective Perspectives

Abstract:
This paper aims to lay the foundations for the construction of a new wellbeing indicator for WAEMU. This indicator should take into account all economic characteristics of this area and also the theory and the practice concerning indicators building. We notably insist on very relevant notions of "optimal currency area", convergence and vulnerability.

Introduction

This paper is built as follows. The first part allows to present quickly the WAEMU zone and to make some reminders on the theories of optimum currency area and convergence. In the second part, we shall reconsider fundamental elements for the construction of the social well-being indicators for low-income countries and present the available statistical data in the WAEMU zone. The third part is dedicated to the presentation of the essential elements for the construction of the new indicator. The objective is to monitor the evolution of well-being without forgetting the development targets, as well as the possible synergies in a monetary and economic union.

I) WAEMU zone: an optimum currency area?

I.1) Characteristics of WAEMU zone

Created in 1994, the West African Economic Monetary Union (WAEMU) replaces the West Africa Economic Community of (WAEC) which originally gathered the countries of Benin, Burkina Faso, Ivory Coast, Mali, Niger, Senegal and Togo. Bissau Guinea joined the organization in 1997, as the eighth West African member country.

The objectives lay down by the WAEMU are:

- To reinforce the competitiveness of the economic and financial activities of the member states within the framework of an open and competing market and a rationalized and harmonized legal environment
- To ensure the convergence of the performances and the economic policies of the member states by the institution of a procedure of multilateral monitoring
- To create between member states a common market based on freedom of movement of the people, the goods, the services, the capital and the right of establishment of the people carrying on an independent or paid activity, like on a common external tariff and a marketing policy
- To institute a coordination of the national policies by the implementation of common actions, and possibly, of common policies in particular in the following fields: human resources, regional planning, agriculture, energy, industry, mines, transport, infrastructures and telecommunication
- To harmonize, to the extent necessary with the correct operation of the common market, the legislations of the member states and particularly the mode of the taxation.

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With an aim of supporting economic integration between the eight member states, the union member countries expressed the need for linking their economic potentialities and their human resources in order to improve the economic, social conditions and of wellbeing of their populations. Despite the implementation of various economic and social policies, such as reduction of taxation, the suppression of certain customs taxes, freedom of movement of the goods and populations…, the countries of WAEMU did not always reach levels of satisfactory economic welfares but on the contrary know deterioration. Thus it was revealed a downward trend of the GDP per capita considered as the indicator of economic and social development. In the same way the human development indicator (HDI) of the UNDP in 2007 shows that the WAEMU countries were ranked last.

Table 1 shows the general characteristics of the union member countries which all belong to the free zone and use the same currency, franc CFA, whose fixed parity is guaranteed by France. Ivory Coast and Senegal seem the two more significant countries of the area from the economic point of view. These two countries have nearly 60% of the GDP of the WAEMU whereas they account for only 37.3% of the total population.
One also notes great disparities with in particular Ivory Coast which represents nearly 50% of exports of the Union.

Table 1: General characteristics of the WAEMU countries (billion of franc CFA)

	Benin	Burkina Faso	Ivory Coast	Bissau Guinea	Mali	Niger	Senegal	Togo
GDP	2 334.0	2 985.0	8 450.7	160.8	2 896.1	1 711.5	4 537.1	1 048.8
External assets Nets	376.6	169.4	704.5	36	424.8	71.9	659.6	136.1
Balance currant account	-102.4	-349.8	-6.6	-7.7	-204.2	-124.1	-382.9	-160.0
Exports	300	183	3949.7	52.1	598.9	304.1	810.1	308.9
Imports	454.6	500	2687.0	62.7	669.0	398.9	1507.8	513.4
Clear credits on the States	-97.5	9.4	379.3	11.2	-26.4	70.5	-34.9	4.5
Trade balance	-154.6	-349.8	1262.7	-10.6	-70.1	-94.8	-697.7	-204.5
Appropriations with the economy	375.1	474.1	1189.4	3.3	516	121.3	1067	195.3

Source : WAEMU ,IMF, 2005

Table 2 gives some statistics of the growth rate which has an effect on the level of wellbeing of the individuals. One notes a significant difference on the level of the growth rate between Ivory Coast, Senegal and the other member states.
The growth rate of the real GDP was 6.5% in 2007 against an average of 6.0% over the four last years. This favorable evolution is in connection with the great demand of the basic commodities, the increase in the entries of capital and the reduction of the foreign debt as well as the implementation of the structural reforms. However, inflationary tensions were also one of the characteristics of the environment in 2007, particularly in the countries located at the South of the Sahara.

Table 2: Evolution of the growth rate

	2000	2001	2002	2003	2004	2005
Benin	6.2	6.2	4.5	3.9	3.1	3.5
Burkina Faso	2.2	6.8	4.6	8.0	4.6	7.1
Ivory Coast	-2.3	0.1	-1.6	-1.7	1.5	1.8
Bissau Guinea	7.5	0.2	-7.2	0.6	2.2	3.5
Mali	-3.3	11.9	4.3	7.6	2.3	6.8
Niger	-0.2	5.8	5.8	3.8	-0.6	7.1
Senegal	5.6	5.6	1.2	6.5	5.6	5.5
Togo	-0.8	0.6	4.1	-1.3	3.7	1.1

Source : WAEMU

I.2) The optimum currency area theory

Since a certain number of years, the question of the optimum currency area returns in the center of many debates. This raised many questions about the definitions of an optimal currency area, as well as about the selected criteria of convergence.
In order to improve the wellbeing of their populations, the countries of the WAEMU must improve the structures of their economies (bases tax, distribution of the expenditure…) as well as the relevance and the effectiveness of the common economic policies.
The approach of the economic integration of the WAEMU comprises a mechanism of multilateral monitoring of which the goal is to ensure the convergence of the economies. The guarantee of the conditions necessary of economic integration, by the member states of the WAEMU, passes by the respect of the convergence of their economies. Convergence can be defined like the progressive reduction of the economic variations of indicators between the union member states. The objective of economic convergence is to facilitate the bringing together of the behaviors of the member states as regards economic policies. Nominal convergence and real convergence are distinguished. Nominal convergence is based on the trend of the variables costs and prices, like their subjacent determinants such as, the interest rate, exchange rates and public finance ratio. As for real convergence, it aims at the bringing together of the standards of living and/or the attenuation between the structural differences.
For Mundell, the author of the theory of the optimal currency area (OCA), the stress should be laid on the real convergence which will lead thereafter to nominal convergence. But the countries of the WAEMU, in their sequential diagram to follow for the process of convergence adopted the contrary step. That was also the case of the European Union which had chosen nominal convergence, by hoping that it will lead to real convergence. This step aiming at seeking nominal convergence can be expensive for the poor countries of a group, and can involve perverse behaviors following structural shocks, (Loufir and Rechlin, 1993). Thus the countries of the WAEMU set up a pact of convergence, stability, growth and solidarity to ensure the respect of the criteria of convergence.

The universalization and the constitution of the regional blocks have relaunched the debate on the question of the currency areas. Thus, much of works relating to the optimum currency area theory were realized in order to judge the relevance of the theoretical analysis.
The installation of a currency area generates costs which can put in evil the operation of the union. It implies the abandonment of the monetary policy on a supranational scale. Thus Mundell (1961), in its theory of the currency area, defines the criteria which the applicant countries for a monetary

union must fill to minimize the dependent costs with the abandonment of the monetary instrument. Other theories in particular those of McKinnon (1963), Kenen (1969), Ingram and Johnson (1969), Cooper (1977) and Kindelberger (1986), were developed thereafter to define the preliminary criteria which we present thereafter.

Mundell's theory of “a strong flexibility of the wages and prices”

Mundell defines optimum currency area like a space in which the factors of production are mobile. It is the most efficient way to deal with asymmetric shocks. For Mundell, countries may find it beneficial to form a monetary area if and only if the mobility of the factors inside the zone which they constitute is higher than with outside. Thus, the mobility of the factors should be able to correct imbalances following a shock (internal or external) without move in the exchange rate. This thesis presents some limits according to McKinnon.

McKinnon's theory of “degree of openness”

McKinnon stresses the degree of openness of the economies and not on the mobility of the factors. It defines the openness of an economy as being the ratio of the exchangeable goods on the non-exchangeable goods, that is to say the imports and exports brought back to the GDP. Thus, McKinnon advances that the risks related to the abandonment of the rate of exchange decrease with the degree of openness of the economies and the intensity in their reciprocal exchanges. Indeed the very open economies, therefore strongly interdependent, are unceasingly exposed to the external shocks. Consequently, the open economies may find it beneficial to constitute a monetary area to eliminate the risks from the rate of exchange which is sources of strong instabilities. But this theory seems presented limits for Kennen.

Kenen : the nature of specialization

Kenen stresses the structures of economies candidates with a monetary union. He advances that the economies having a diversified productive structure, resist the shocks easily. Indeed, the shocks cannot simultaneously reach all the sectors of the economy. Consequently, the countries which have a high degree of diversification can fix their rate of exchange and therefore constitute a monetary area. This theory, like those of McKinnon and Kennen, does not take into account the movements of the financial sphere which can play a role determining in the fixing of the rates of exchange.

Ingram and Johnson: financial and tax integration.

These authors advance the idea that the financial sphere plays a significant role in the analysis of the optimum currency area. For them, the mobility of the financial capital can replace the low mobility of the labour. This theory is based on the fact that the movements of capital are done often more quickly than those of the labour, and than the total mobility of the capital and the liberalization of the financial services allow to correct imbalances of the balance of payments. This correction of imbalances of the balance of payments is carried out without pressure on the rate of exchange and the interest rates. Thus, a currency area is optimal if it is completely integrated at the financial point of view.

In addition, in the lack of adjustment of the rate of exchange, the effect of the asymmetrical shocks can be mitigated by taxation. This compensation should allow transfers from surplus countries towards deficit countries. But this theory of financial and tax integration presents limits. According to Cooper and Kindelberger, the criterion of optimality of the monetary area finds its bases in the structure of the preferences of the economic agents.

Cooper and Kindelberger: homogeneity of the preferences.

Cooper (1977) and Kindelberger (1986) consider that a monetary union is a collective good emanating from the manifestation of the common request for country pertaining to the same zone. The member states which have intense trade and which expresses similar preferences, as well for the private goods as for the collective goods, meet the conditions to form an optimum currency area. It is then interesting to make compromises as regards economic policy because of the homogeneity of the preferences.

Thus, we can admit that all the criteria put forward in defining the optimum currency area, are not exclusive, but can be complementary.

I.3) The problem of convergence

In fact, the creation of a monetary area is rather related to political logic. We present the criteria of convergence used in WAEMU.

a) Presentation of the criteria

According to the additional Act N°04/99 of 8 December 1999 modified by the additional Act N°03/2003 of January 29, 2003, two types of criteria of convergence are retained: on the one hand criteria known as *of first rank* and criteria known as *second-rank.* The criteria of first rank are those whose non-observance involves the formulation of corrective measurements and sometimes even of sanctions. The 12 criteria second-rate are regarded as indicative reference marks structural being the object of a rigorous follow-up because of the determining role which they play in the realization of the domestic and external equilibrium of the economies. Their non-observance does not involve, however not, the formulation of corrective or rectifying measurements. However, they can be the subject of recommendations of economic policy.

- **Criteria of first rank**

There are four criteria of first rank:

- The ratio of the net budgetary position brought back to the nominal GDP (key criterion) should be equal to or higher than 0%. Key criterion, its non-respect gives place to sanctions.
- Average annual inflation rate: it should be maintained to 3% to the maximum per year;
- The ratio of domestic debt and external brought back to the nominal GDP should not exceed 70% from 2005.

- **Criteria second-rank**

There are also four:

- The ratio of the public wage bill on taxes revenues should not exceed 35 %;
- Ratio of the public investments financed on internal resources brought back to the revenues from taxes: it should reach at least 20 %;
- Ratio of the external balance running except public transfers compared to the nominal GDP: it should be equal to or higher than -5 %;
- Tax pressure ratio: it should be equal to or higher than 17 %.

These criteria thus defined, meet specific aims. Indeed, the decade eighty will have been marked by a continual degradation of the budget deficits and an over-valuation of the rate of real exchange in the majority of the countries of the WAEMU and particularly Ivory Coast. In this context of degradation of the finance public, the net budgetary position has the advantage of revealing the efforts of adjustment necessary to ensure the viability of the finance public which, in its turn makes it possible to establish the conditions of a bearable debt.

b) State of convergence in 2007

The state of convergence of the WAEMU arises as follows:

b1) Criteria of first rank

· Ratio basic net budgetary position on the nominal GDP equal to or higher than 0

Only the Benin one and the Ivory Coast respected this criterion with surpluses of 2.8% and 0.4%. As for the corrected criterion, it was respected by five Member states, namely the Benin one (3.6%), the Ivory Coast (0.5%), Niger (1.2%), Senegal (0.5%) and Togo (0.1%). The other States have each one a deficit of 1.7% (Burkina Faso), 1.5% (Guinea-Bissau) and 0.7% (Mali).
The non-respect of the criterion is explained by the weakness of the tax pressure and the rise in the recurring expenses, in particular the wages and the administrative expenditures. In 2008, the

corrected criterion would be respected by the Benin one (0.9%), the Ivory Coast (0.8%), Mali (0.0%) and Niger (2.2%).

· **The average annual inflation rate of 3% maximum per year**

Except Guinea Bissau and Senegal, the other states respected this criterion in connection with the moderate rise in the prices of cereals, consecutive with the increase in the food production at the time of the crop year 2006/2007 in the union member states. For the rate of subjacent inflation, only Senegal carried out a rate beyond the community standard.

For 2008, it is awaited that all the states carry out a rate of inflation beyond the community standard of 3% maximum, in connection with the rise in the prices of the foodstuffs on the international market and the high level of the courses of oil.

· **The ratio of incur domestic debt and external brought back to the lower or equal nominal GDP à.70%**

Five Member states, namely, the Benign one (22.8), Burkina Faso (23.9), Mali (22.7), Niger (24.4) and Senegal (19.8) respected this criterion. Only completion of this point by the States not having respected this criterion could contribute to a significant reduction of this ratio. The benefit of the various initiatives of reduction would make it possible the other Member states to respect this criterion.

· **Late payment:**

- Not accumulation of late interiors payment on management of the current period

Ivory Coast, Guinea Bissau and Togo accumulated interior arrears of 62.4 billion, 7.8 billion and 0.7 billion, respectively.

- Not accumulation of late outsides payment on management of the current period

Ivory Coast, Guinea Bissau and Togo accumulated arrears of 275.2 billion, 7.9 billion and 26.7 billion, respectively.

The respect by these three states of this criterion in 2008 will depend on the diligence observed in the signature or not of a program supported by the resources of the Facility for the Reduction of Poverty and Growth (FRPC) with the institutions of Bretton Woods.

b2) Criteria second-rank

· **The ratio of the wage bill on the revenues from taxes, less than or equal to 35%**

Five member states, the Benign one (31.5), Mali (27.2), Niger (28.2), Senegal (29.5) and Togo (31.0) respected this criterion. The states not respecting this criterion recorded a corrected ratio of 60.9% for the Guinea-Bissau, 43.2% for Ivory Coast and 39.3% for Burkina Faso. The results of the States not having respected the criterion in 2007 would remain in on this side standard in 2008.

· **The ratio of the public investments financed on internal resources brought back the revenues from taxes, to equal to or higher than 20%**

Five member states respected this criterion. It is about Benign (20.6), of Burkina Faso (35.2), of Mali (30.7), Niger (28.8) and Senegal (28.2). All the states having respected the criterion also respected the corrected criterion. For the other states, the corrected ratio was 12.7% for Ivory Coast, 4.4% for the Guinea-Bissau and 6.7% for Togo. Only the states having respected the criterion in 2007 would respect it in 2008.

· **The ratio of the balance external running except gifts compared to the nominal GDP, equal to or higher than 5%.**

Only Ivory Coast respected, like the previous years, this criterion with a deficit accounting for 1.5% of the GDP. The other member states released from the deficits ranging between 7.6% (Benin) and 16.3% (Guinea-Bissau). The weak diversification of the economies explains this situation. No other state would respect this criterion in 2008.

· **The tax pressure ratio, equal to or higher than 17%**

Only Senegal respected, like the previous years, this criterion with a rate of 20.1%. For the other states, this ratio is included between 10.4% (Guinea Bissau) and 16.9% (Benin). This situation is explained primarily by a low capacity of the tax authorities, the exemptions and the importance of the abstract sector. Senegal would remain the only state to respect this criterion in 2008. In 2008, the tax pressure would vary between 11.4% (Guinea-Bissau) and 20.9% (Senegal).

Also the implementation of adequate policies to surmount such obstacles would make it possible zone CFA to form a homogeneous OCA able to absorb other countries today not members. This conclusion is to be put in parallel with this other of Fielding and Shields (2001) according to which, so that zone CFA evolves/moves harmoniously, it would be necessary that it is able to follow convenient policies of stabilization.

TABLE 3: Key macroeconomic indicators

YEAR	2004	2005	2006	2007	2008
INDICATORS OF CONVERGENCE					
First rank					
Basic net budgetary position (% GDP)	-1.2	-1.7	-1.7	-1.1	-1.5
total national debt (% GDP)	71.8	67.8	51.7	45.7	39.6
Variation of postpone payment (of billion FCFA)	897.2	398.6	235.4	225.9	-460.2
Postpone payment of the period of current management	951.3	516.9	402.6	380.7	8.7
Accumulation of postpone interiors payment	164.3	52.5	102.9	70.9	0.0
Accumulation of postpone foreign payment	787.0	464.4	299.7	309.8	8.7
Reduction of postpone payment (billions of FCFA)	-54.1	-118.3	-167.2	-154.8	-468.9
Reduction of postpone internal payment	-52.1	-118.0	-150.3	-146.2	-209.7
Reduction of postpone foreign payment	-2.1	-0.3	-16.9	-8.6	-259.2
Variation of postpone internal payment (billions of FCFA)	112.3	-65.5	-47.4	-75.3	-209.7
Variation of postpone foreign payment (billions of FCFA)	784.9	464.1	282.8	301.2	-250.5
Second rank					
Salaries and wages (% tax revenues)	37.5	38.0	37.6	37.3	37.0
Corrected salaries and wages of the budgetary supports of EPC (% tax revenues)	36.2	36.3	35.9	35.2	34.7
Capital expenditure on financing interns (% taxes)	21.7	23.2	24.0	25.1	48.6
Capital expenditure on internal financing corrected of the supports budget PPTE (% taxes)	17.8	18.7	20.9	21.2	44.0
Tax revenues (% GDP)	14.8	14.7	15.1	15.8	16.0
Current balance except gifts (% GDP)	-5.7	-7.2	-5.4	-8.1	-7.3
OTHER BUDGETARY INDICATOR					
Total balance (% GDP)	-2.5	-2.8	-2.8	-1.9	-2.6
NATIONAL ACCOUNTS					
Real GDP Growth rate (*)	2.9	4.2	2.9	3.2	4.4
MONETARY SITUATION					
Private debts	3518.1	3908.8	4298.1	4905.2	--
EXTERNAL BALANCE ON GOODS AND BALANCES PAYMENTS					
Imports FOB	5911.7	7027.6	7452.4	7947.0	8674.2
Exports FOB	6110.4	6672.6	7467.9	7060.9	7683.2
Services balance	-1153.4	-1235.9	-1357.2	-1376.7	-1406.1
Current account balance	-1016.2	-1433.8	-1079.9	-1664.3	-1595.9
Current account balance except gifts	-1288.2	-1747.1	-1398.9	-2227.8	-2168.9
Total balance	210.7	49.8	636.9	708.7	147.0
Cover rate: Exports/Imports (%)	103.4	94.9	100.2	88.8	88.6
Current balance (% GDP)	-4.5	-5.9	-4.2	-6.1	-5.4
FOREIGN DEBT					
External debts	13896.4	14316.8	11532.0	10524.7	9966.5
Servicing of actual external debts (% Total incomes)	23.4	18.3	32.6	10.8	10.0

Source : WAEMU, 2008

II) Indicators for low-income countries

Poverty Reduction Strategy Papers (PRSP), prepared by governments in low-income countries through a participatory process involving domestic stakeholders and external development partners (including the IMF and the World Bank), aim to provide the development outcomes needed to meet the United Nations' Millennium Development Goals (MDGs), on which we focus on halving the

rate of poverty between 1990 and 2015. PRSPs also provide the operational basis for debt relief under the Heavily Indebted Poor Countries (HIPC) Initiative. HIPC is a comprehensive approach to debt reduction for heavily indebted poor countries. The Initiative entails coordinated action by the international financial community, including multilateral organizations and governments, to reduce to sustainable levels the external debt burdens of the most heavily indebted poor countries. In 2005, to help accelerate progress toward the United Nations Millennium Development Goals (MDGs), the HIPC Initiative was supplemented by the Multilateral Debt Relief Initiative (MDRI). The MDRI allows for 100 percent relief on eligible debts by three multilateral institutions—the IMF, the International Development Agency (IDA) of the World Bank, and the African Development Fund (AfDF). To be considered for HIPC Initiative assistance, a country must establish a track record of reform and sound policies through IMF and IDA supported programs.
Five countries of the West African Monetary and Economic Union Area: Benin, Burkina Faso, Senegal, Mali, Niger, have been qualified for receive HIPC initiative assistance. Guinea Bissau belongs to the group of interim countries (between decision and completion point); Ivory Coast and Togo belong to the group of pre-decision-point countries as of end-August, 2007.

. The PRSP workgroup has developed and presented a concept paper to the stakeholders on the establishment of the PRSP monitoring system. The PRSP monitoring indicators system, created by experts and a consulting firm, includes 177 indicators (36 of which are considered as objective indicators, and 141 perceiving indicators) classified into the following six groups:

i. Poverty reduction and improved welfare;
ii. Education;
iii. Health care;
iv. Basic social services and housing conditions;
v. Social and civil dissociation and inequality;
vi. Sustainable environmental development.

The system of monitoring indicators is – to the extent possible – harmonized with the framework of the Millennium Development Indicators.

Table 4: Summary statistics on indicators to be included in 2004 PRSP Evaluation Report

	Target indicators	**Factor indicators**	**Total**
Total	**36**	**141**	**177**
Poverty reduction and improved welfare	3	41	34
Education	6	23	29
Health	9	32	41
Basic public services and housing conditions	10	12	22
Social and civil exclusion and inequality	5	27	32
Sustainable environmental development	3	6	9

Source : http://www.imf.org/external/pubs/ft/scr/2005/cr05175.pdf

An indicator building includes three phases:

- Fixation of the targets according to the main objectives of poverty reduction strategy
- choosing the aggregation level and the frequencies of the indicators
- defining the indicator evolution process

For the follow-up of the poverty, there are essentially four approaches: the monetary approach, the approach of essential need, the capability approach and the social exclusion approach. So, poverty measures or poverty indicators include:

- Monetary measures: monetary measures (income, expense, food consumption) are more used. For the Less Developed Countries, the common households' consumption is frequently used as indicator.
- The main indicators of essential needs are : indicators of food deficiency, indicators of human capital and competence level (net rate of primary schooling, net rate of secondary schooling, rate of literacy), health indicators (infant mortality rate, maternal mortality rate, number of births assisted by the medical personnel, etc.), drinking water access indicators, unemployment indicators
- measures of vulnerability include : diversity of the household income sources, capital availability allowing to face up temporary difficulties (labour force, education level, household stock number, ownership or not of accommodation, of means of locomotion, of lands) and social capital (membership or not in family or social networks), social process in the society, presence or not in the society of disposals of social security (health insurance , unemployment benefits, retirement, welfare, etc.).

Synthetic indicators

Synthetic indicators, weighted average of elementary indicators, suffer from an intrinsic theoretical weakness. The rational justification of the weights is, in obviousness, difficult. Such indicators can however be obvious for pragmatic reasons, considering their popularity and considering their media impact. A too big number of information should not be included in such indicators. It should reflect an aspect of reality which is reasonably univocal. Difficulty is to grab in a unique figure the complex reality which represents human development and misery. The synthetic indicators have to be interpreted in evolution and not directly in level.

The most known synthetic indicators are mainly calculated by PNUD.

Typology of indicators

Indicators can be classified in four types:

• Indicators of means or of variables of entrance (inputs),
• Indicators of operational results or direct achievements either of activities or variables of exit,
• Indicators of results,
• Indicators of impacts.

The World Bank calls intermediate indicators first two types of indicators and final indicators two last types. The (financial and physical) indicators of means measure resources given by authorities and backers (example: expenses for education). The indicators of operational results assess operational generated results (example: number of constructed schools). The indicators of intermediate results measure the direct impact of the action of authorities on the population or the group of population targeted (example: school attendance).

The target indicators and impact indicators allow to estimate progress fulfilled in the research of fixed objectives but they know a slow evolution in time and are often the product of many factors among which some are independent of the action of the decision-makers and of the administrators of programmes (pluviometry, fall of courts of the primary products on the international market, etc.). They bring therefore not enough lessons in operational terms and their measures often pose problem.

The indicators of intermediate results, on the other hand, change generally under the influence of the actions of the government or of other agencies and give a more punctual picture of what is occurring. They allow, so, to undertake corrective actions during the implementation of a programme. The intermediate indicators are therefore as important at least as the final indicators.

The factor indicators allow assessing in a concrete way, especially at financial level, efforts made by governments and agencies as part of the success of an objective. The indicators of operational results or direct achievements allow assessing results got in a direct way from clear means.

Statistical data used for the calculation of indicators come from three sources:
• Administrative data are generally limited to three categories in the sub-Saharan Africa countries (administrations expenses, school data, and health data)
• Household Inquiries,
• Specific surveys.

Table 5: Main sub-Saharan Africa survey

Survey	Main themes	***Comments***	***Frequency***
Demographic Survey (DS)	Demographic characteristics and living conditions (age, gender, disabilities, activities, conjugal status, place of residence, etc.)		about every 10 years
Living Conditions Survey (LVS)	- incomes and expenses, health, education, employment, access to basic services, etc.		very variable according to countries
***Core Welfare Indicators Questionnaire* (CWIQ)**	access to education and to health, public satisfaction, employment, nutrition, habitat characteristics		very recent device
Participatory Poverty Assessments (PPAs)	household inequalities, difficulties of poor people and poverty factors, priorities, etc.		very recent device
Demographic and Health Survey (DHS)	level of education and school attendance, characteristics of the habitat, health and fecundity, availability of public services, anthropometry etc. ;	Survey financed by the World Bank http://www.measuredhs.com/countries/start.cfm	Every 4-5 years.
***Multiple Indicator Cluster Sample Survey (MICS*)**	habitat characteristics, hygiene, education, child labour, woman health and child health , etc.	This device was founded by UNICEF in 1996	Every 4-5 years.

PRSP favours the final indicators. Yet, only the intermediate indicators allow undertaking corrective actions during the program implementation. Final results depend on external factors (climatic, political ...); operational results are only tributary on means. It is the only way to see if means achieved defined intermediate objectives. The indicators of intermediate results better highlight the results of led policies. But they often have to be calculated only from relatively heavy statistical operations.

The countries concerned by PRSP initiative made the commitment to assure a regular monitoring of the living conditions by means of household inquiries. Household inquiries are carried out in general by the national statistics Institutes (NSI) of each country. Generally, their human and financial resources are deficient. Some surveys are also accomplished by the statistical services of the technical Ministries (Health, Education). The statisticians and the budget in these services are very limited too, which has certain influence on reliability and the delay of statistical publications. The surveys therefore are subjected to the vagaries of the donors' financings, which imply a risk of lesser States implication.

Table 6: Recent WAEMU Surveys

	Benin	Burkina Faso	Côte d'Ivoire	Guinée Bissau	Mali	Niger	Sénégal	Togo
1985		RGP	LCS2					
1986	LCS3		LCS2				DHS	
1987			LCS2		DHS			
1988			LCS2		LCS3			LCS3+DHS
1989								
1990								
1990								
1991		DS		LCS1			LCS1	
1992			LCS1			LCS3+DHS		
1993		DHS		LCS3			DHS	
1994		LCS1	DHS		LCS2		LCS3	
1995			LCS1				HI	
1996	DHS	RGP			DHS	MICS I	MICS I	
1997							DHS	
1998		LCS1	LCS1			DHS		DHS
1999		DHS	DHS				DHS	
2000	I-PRSP	PRSP I	MICS II	MICS II+I-PRSP		MICS II	MICS II+I-PRSP	MICS II
2001	DHS				DHS		LCS0	
2002	PRSP I		I-PRSP		PRSP I	PRSP I	HI + MICS III PRSP I	
2003		DHS					WHO	
2004								
2005	PRSP	PRSP II	DHS			PRSP	DHS+PRSP I	
2006	DHS	MICS III	MICS III	MICS III +PRSP	DHS	DHS	NA+PPAs +MIS	MICS III
2007							PRSP I	
2008	PRSP II				PRSP II	PRSP II		I-PRSP

Sources :	**Liste des acronymes**
AFRISTAT : www.afristat.org *World Bank: www4.worldbank.org/afr/poverty, wbln0018.worldbank.org/dg/povertys.nsf* *UN Division Statistique des Nations Unies : www.un.org/depts/unsd/demog/cendate* *IMFs : dsbb.imf.org/gddsweb/country.htm* *MacroInternational: www.measuredhs.com* *UNICEF: www.childinfo.org/eddb* *US Census Bureau:* www.census.gov/ipc/www/cendates	MIS Malaria Indicator Survey LCS: Living Conditions Survey (0: Without budgetary shutter, 1: With very limited budgetary shutter, 2: With limited budgetary shutter, 3: With complete budgetary shutter, ? : not known) RGP : Recensement général de la population NA National Accounts *HI Household Inquiries* WHO World Health Survey, 1984, 1986, 1987, 1992, 2003. I-PRSP Interim Poverty Reduction Strategy Paper

Three types of social indicators can be identified (Stateco, 2004):
Normative welfare indicators, life satisfaction and/or happiness indicators, and descriptive indicators.

Normative welfare indicators
These types of social indicators relate directly to social policy-making considerations. Such a

measure is a direct measure of welfare and changes in the "right" direction means everything else being equal, people are better off. This type of social indicator is a target which public policy tries to influence. Use of social indicators in this sense requires that society agree about what needs to be improved.

Life satisfaction indicators

Life satisfaction, subjective well-being, or happiness indicators, attempt to measure psychological satisfaction. The approach is based on the belief that direct monitoring of key social-psychological states is necessary for an understanding of social change and the quality of life.

Descriptive social indicators

Descriptive social indicator focuses on social measurement. Descriptive social indicators try to measure the state of society. Sustainability indicators attempt to describe the interrelations of economic, environmental, and social concerns.

Table 7: Example of summary social indicators

Summary social indicators	**Developed by**	**Comments**
MEW: the Measure of Economic Welfare	William Nordhaus and James Tobin	MEW is a measure of economic and not social welfare
GPI: the Genuine Progress Indicator	the Redefining Progress Institute	Measures streams of average annual incomes adjusted by the deterioration of the environment. Does not take into account the inheritance bequeathed to the future generations
IEWB: the Index of Economic Well-Being	Centre for the Study of Living Standards	
ISH: the Index of Social Health	Fordham University 1986	The Index of Social Health identifies 16 social issues dealing with health, mortality, inequality, and access to services.
ILS: the Index of Living Standards	the Fraser Institute	index which measures education, life expectancy and standard of living
HDI: the Human Development Index	PNUD	HDI is into a composite index which introduced a new way of measuring development by combining indicators of life expectancy, educational attainment and income
QOL: the Quality of Life Index	Carol Estwing Ferrans and Marjorie Powers	The QLI produces five scores: quality of life overall and in four domains (health and functioning, psychological/spiritual domain, social and economic domain, and family)
ISP: the Index of Social Progress	Richard Estes of the University of Pennsylvania 1974	It tries to measure economic development, social and political conditions, and the ability of nations to produce welfare services for their citizens.
ISEW: Index of Sustainable Economic Welfare	Herman Daly and John Cob	It measures the portion of economic activity which delivers genuine increases in our quality of life. It covers areas such as income inequality, other environmental damage and makes an addition to count unpaid household labour.
HPI: Human Poverty Index	United Nations	The HPI concentrates on the deprivation in the three essential elements of human life already reflected in the HDI: longevity, knowledge and a decent standard of living.

Source : http://hdr.undp.org/en/humandev/

III) A new indicator for WAEMU zone:

We offer to focus on three key criteria to create an indicator specifically intended for the WAEMU zone:

- The traditional indicators corresponding to the Millennium Development Goals, as those ones mentioned in the previous chapter, by stressing more the measures of the vulnerability;
- Convergence criteria, by carrying the analysis on the most adapted criteria according to the analyzed area;
- Criteria concerning the evolution of the infrastructures. The low-income countries, notably most African countries suffer from a blatant lack of infrastructures. These criteria partly join vulnerability criteria, but also cover other notions.

A) Vulnerability

Well being is linked to the level of poverty and more precisely to the level of vulnerability. In a broader context, vulnerability is the probability or the risk to see one’s living conditions degrade or deteriorate with time. The vulnerability is the risk of not being able to perform its basic operations. It is the possibility to suffer a decline in the well-being, especially a fall below the poverty line due to adverse external shocks.
lwang and Siegel (2000) connect directly vulnerability to risks. The risk for individuals is determined according to their own characteristics (or capability using Amartya Sen's terminology): education, health, material possessions, consumer preferences, and also depending on external characteristics: geographical location, political and economic conditions ... the ex-ante responses take the form of strategies to reduce social risk. The ex-post responses try to reduce the severity of the outcome due to the adverse events.

The equation below is often given to describe the relationship between the three previous key-notions:

Vulnerability = risk / capabilities

But, in fact, the risk depends itself on the level of the capabilities, the risk is endogenous, and capabilities depend on the risk too. One can sometimes succeed, through their capabilities, in finding strategies to protect themselves from the risk and to strengthen their capabilities. In case of exogenous shock, the structure of the capabilities of individuals can be modified. It means to adapt themselves to a certain extent, notably by substituting some capabilities from others. For example in case of bad harvest, thus of almost non-existant monetary comebacks, one can either intensify his other profitable activities, or have appeal to his social network. But one cannot infinitely substitute his capabilities, certain capabilities are complementary.

Levels of vulnerability, of poverty and capabilities are essential to understand, to describe and measure the level of well being. But these different notions are hardly valuable, notably considering their endogeneity, thought they have already been the object of numerous tries of valuation.

The vulnerability, it is also the lack of possibility of having an influential political expression.
Vulnerable people are "voiceless" people. According to, A. Sen, democracy, in other words

possibility for the poorest ones of having a political representation, can allow them to improve their situation. The indicators of democracy are scarce and still difficult to implement. Criteria coming from external agencies which try to assess the level of corruption, for example, can always be criticised and do not represent necessarily the populations thinking.

According to Amartya Sen, reducing vulnerability implies to strengthen the capabilities of people or households for an increase of opportunities that could improve their long-term well-being. But the increase of capabilities does not equally benefit poor and non poor, as we could see in many micro-finance projects. And an increase of inequality may have a negative effect on the reduction of vulnerability. The behavior of the dominant social group towards poor people is also very important, since inequality can go on for many generations.

The vulnerability is an essential element of welfare; the evaluation criteria must be refined and strengthened, according to statistics available or readily usable.

B) The infrastructures development

The GDP, indicators of health and of the level of education are not sufficient to describe living conditions, the welfare of the population and the development opportunities needed for the future well-being.

These criteria should take into account not only the traditional infrastructure (transport, such as roads, railways, airports; health: hospitals, clinics; education: schools, universities ...), but also the infrastructure in the field of technology information and communication technologies (ICT) which may have a role in the possible future development (Jubénot, 2008).

The data needed to calculate these statistics are generally available, either in different surveys cited in the table ... or on the much documented site of the CIA, or in specific agencies. For example, agencies such as the African Information Society Initiative (AISI), which establish the broad outlines of the African Regional Action Plan on the Knowledge Economy (ARAPKE), provide specific statistics in the ICT field.

C) The convergence

The theories of the convergence, examined in first part, supply us very varied criteria. We saw higher those who are used in the WAEMU zone as in the European Union. Nevertheless, these criteria seem not adapted for low-income countries. Building a monetary and economic union with low-income countries differs from building one with very industrialized countries, as those of the European Union in the beginning. Current convergence criteria focus too much on the budgetary deficits, the external deficits and inflation to the detriment of development goals. Thus, convergence criteria, besides the traditional economic criteria, could be based on previous both points, namely: the decrease of the vulnerability and the intensification of infrastructures, in order to push all the countries, belonging to the area, in doing efforts on these essential points. We must also take into account the notion of convergence club. It can be assumed that within a convergence club, the countries most advanced in some area should exert positive externalities on the countries most late. This can also push countries to strengthen the cooperation and the synergies, particularly as regards the field of infrastructures.

The new indicator that we propose takes into account these three elements. An econometric study could help determine the weightings assigned to each component. That is what we intend to achieve in our further works. The statistical data are sufficient to build such an indicator. In addition, the fact of belonging to a same economic and monetary area, allows countries to better harmonize the definitions of statistical indices.

Conclusion

The zone UEMOA is constituted by low-income countries, and its infrastructures remain very limited. However, countries of this union, notably the 7 countries founders, have many common points due to the colonial past, such as: the French language and the currency unit. our intention was to link its various components namely the objective to monitor the evolution of population's well-being while stressing the need to maintain the development conditions. We think that collaboration and synergies in this zone, in accordance with the theory of the convergence club, can also contribute to the amelioration of the well-being. Therefore, the new indicator takes into account all these elements.

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