United Nations
Economic commission for Africa

The 1999 Economic Sustainability and Policy Stance Indices

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I. Overall Conception[*]

1. The ECA's *Economic Report on Africa 1999* introduces three new composite economic indicators: the Economic Sustainability Index (ESI), the Economic Policy Stance Index (EPSI), and the Annual Performance Trend Index (APTI). The Economic Sustainability Index is designed to measure long-term economic prospects, while the Economic Policy Stance Index evaluates policy effectiveness. The Annual Performance Trend Index is constructed as a simple, single-year measure of economic performance with respect to particular countries' improvement or decline relative to the previous year. The purpose of this paper is to give a more detailed accounting of these indicators than that which appeared in the *Economic Report*, and to elicit comments and suggestions for refinement of the indices for use in future applications.

2. The paper that follows is organized into four sections. Section I discusses the conceptualization of the indices, and puts them into perspective with regards to the current literature. Section II elaborates on the methodology and results of the initial application of the indices. Section III discusses proposed improvements for future versions of the composite indices, and Section IV offers some brief conclusions.

3. A number of previous attempts at the construction of composite indices evaluating various economic criteria have been made. However, the ECA's composite indices represent a departure from such previous efforts on a number of levels. The Economic Sustainability Index is both comprehensive and broad in focus. Other composite indices tend to be one or the other, but not both. For example, the UNDP's Human Development Index is broad in focus, as it seeks to measure overall well-being, but it is comprised of only three indicators. Conversely, HIID's Africa Competitiveness Index is comprehensive, as it is derived from surveys covering a large number of variables. However, it seeks to measure only the business climate in a sample of African countries. In contrast to these examples, the Economic Sustainability Index is both comprehensive and broad in focus. In its current form, it aggregates 24 four variables into a single index, with significantly more variables to be added in future applications. Additionally, the ESI seeks to measure overall long-term economic prospects. Thus, rather than opting for the methodological simplicity of the Human Development Index or the narrower focus of the Africa Competitiveness Index, the Economic Sustainability Index chooses a more ambitious approach.

4. The Economic Policy Stance Index also represents a departure from existing measures. Unlike previous attempts, such as that made in the World Bank's *Adjustment in Africa* publication, it clearly separates policy and performance. Given the vulnerability of African economies to factors which are beyond the influence of economic policy, such as external shocks, civil strife, drought, etc., such a separation between policies themselves and the areas which the policies are intended to affect is necessary. Thus, for instance, trade policies are evaluated on the basis of criteria such as the absence of tariff levels and quotas, and customs procedures, rather than on the basis of export performance, which is often strongly affected by non-policy factors. In making this separation, it is thus possible not only to evaluate policy in a more robust fashion, but also to gain insight into the extent to which policymakers can exert influence over economic conditions.

5. The Annual Performance Trend Index is an effort to produce a simple, easily understood single indicator which takes into account the key measures of economic performance. There can be little doubt that the broad goals of an economy are increased output, price stability, and a sustainable balance of payments, as well as full employment and poverty eradication (Soludo 1998). The APTI is intended to reflect improvement or decline only from the previous year, so that a country that is performing well and continues to perform well will score lower than a poorly performing country which has made significant improvements. Thus, this indicator should thus be seen as a short-term indication of the direction in which a particular economy is moving.

II. Methodology, Results, and Analysis

2.1. Economic Sustainability Index

6. The sustainability index is an aggregate of five separate category indices: human capital development, structural diversity, dependency, transaction costs, and macroeconomic sustainability. Each of these categories consists of between three and six variables, with each variable assigned a score from one to ten. The procedures for determining the scores are detailed below, with an example provided for each step to ease understanding.

(1)　For each variable, the three best performers among the African countries are averaged to find the "best practices" benchmark. Countries with populations under one million are excluded from this calculation. The "best practices" benchmark is then set as a score of seven to reflect the observation that by most criteria, even the best performing African countries could improve significantly.

Ex. For the adult illiteracy variable in the Human Capital Development category, the top three performers are Zimbabwe, Mauritius, and South Africa, at 15%, 17%, and 18% respectively. Since none of these countries have populations in below of one million, all three are used in the calculation. The average of 16.7% is thus set as the "best practices" benchmark and is given a score of seven.

(2)　Next, the mean and standard deviation for each variable is calculated. If the presence of outliers or skewing of the distribution causes the standard deviation to be very high relative to the mean, then the distribution is logarithmically transformed. One-half standard deviations of either the original distribution or the logarithmic transformation of the distribution are then used as the boundaries between the scores. The "best practices" benchmark is set at the midpoint of the range spanning a score of seven (i.e., the benchmark plus or minus one-quarter of a standard deviation equals a score of seven), and the scores are assigned such that half-standard deviations in either direction represent the boundaries for further scores.

Ex. Continuing with the previous example, the mean and standard deviation of the distribution of the adult illiteracy rates has a mean of 44.4 and a standard deviation of 18.4. Since the standard deviation is fairly low, no logarithmic transformation is needed. Since the benchmark in this case was 16.7, and one-quarter of a standard deviation is equal to 4.6, countries with illiteracy rates between 12.1% and 21.3% are assigned a score of 7. A score of 6 would correspond to an illiteracy rate between 21.3% and 30.5%, as 21.3% plus one half of a standard deviation (9.2) is equal to 30.5%. For further scores, each additional 9.6% results in a deduction of one point, so that scoring for this indicator is as follows:

Range	>69	60-69	50-59	41-49	31-40	22-30	13-21	3-12	<3	n/a
Score	1	2	3	4	5	6	7	8	9	10

Thus, for example, Liberia's illiteracy rate of 62% falls between 59.3% and 68.9%, garnering a score of 2.

(3)　The scores for the variables that comprise each of the five categories are then averaged to find the category scores for human capital development, dependency, macroeconomic sustainability, transaction costs, and structural diversity for each

country. If data is not available for all of the variables in a category for a particular country. the category score is computed as the average of the available scores. However. if data is unavailable for more than half of the variables which comprise a particular category, then the country does not receive a score for that category. unless data is available for at least three of the variables in a category. Finally. the category scores are averaged to find the Economic Sustainability Index; countries that did not receive scores for at least three of the five categories were omitted.

Ex. In the Human Capital Development category, Botswana received a 5 for adult illiteracy. a 7 for gross enrolment ratio. a 3 for natural and applied sciences as percentage of tertiary enrolment. a 6 for both percentage of population with access to safe water and population per hospital bed. Data for R&D scientists and technicians per 1.000 people and doctors per 100.000 people were unavailable. Since data was available for at least half of the indicators comprising the category, Botswana receives a score in the Human Capital Development category. This score is equal to 5.40. the average of the scores for the five variables above. Botswana scored 6.5 in the Dependency category, and 6.00 in the Macroeconomic Sustainability category. The country did not receive scores for the Transaction Costs or Structural Diversity categories, as data was unavailable. The average of the three category scores is 5.97, which is Botswana's overall score for the Economic Sustainability Index.

7. The country-by-country results are displayed in table 1 below. Five countries were excluded due to insufficient data. In the way of common features among the highest and lowest scorers, we note that five of the top six countries (Equatorial Guinea. South Africa, Botswana, Tunisia. and Egypt) all enjoy a high level of resource endowment. At the bottom of the rankings, countries with a history of conflict predominate as Sierra Leone. Niger. Benin. Uganda. Central Africa Republic. and Rwanda comprise the six lowest scorers.

Table 1: 1998 Economic Sustainability Index Country Scores and Rankings

Country	ESI	Rank	Country	ESI	Rank	Country	ESI	Rank
Equat. Guinea	6.06	1	Congo Rep.	3.53	17	Gambia	2.96	33
South Africa	6.04	2	Sudan	3.52	18	Burkina Faso	2.93	34
Botswana	5.97	3	Cote D'Ivoire	3.44	19	Mozambique	2.92	35
Mauritius	5.08	4	Senegal	3.36	20	Ethiopia	2.91	36
Tunisia	4.91	5	Cape Verde	3.33	21	Malawi	2.90	37
Egypt	4.74	6	Guinea Bissau	3.27	22	Madagascar	2.87	38
Zimbabwe	4.43	7	Congo D.R.	3.25	23	Guinea	2.79	39
Lesotho	4.42	8	Zambia	3.23	24	Chad	2.75	40
Morocco	4.29	9	Djibouti	3.23	25	Togo	2.72	41
Algeria	4.23	10	Ghana	3.18	26	Mauritania	2.65	42
Seychelles	4.13	11	Nigeria	3.17	27	Uganda	2.50	43
Gabon	4.04	12	Tanzania	3.17	28	Rwanda	2.44	44
Swaziland	3.83	13	Angola	3.07	29	Cent.A.R.	2.42	45
Kenya	3.80	14	Burundi	3.03	30	Benin	2.40	46
Namibia	3.56	15	Comoros	3.00	31	Niger	2.03	47
Cameroon	3.54	16	Mali	3.00	32	Sierra Leone	2.00	48

8. Another notable feature of the scores is the disparity between the top scorers and the rest of the group. Figure 1 shows a reasonably smooth, normal distribution of scores, with the exception of the top three countries. Equatorial Guinea, South Africa, and Botswana, with an average score of 6.02, greatly exceed the rest of the countries' average of 3.31. Additionally, the average of these three countries' scores is not far from the "best practices" benchmark score of seven. This suggests that these three countries tend to consistently outperform the rest of Africa in terms of the variables used to compute the economic sustainability index.

2.2.   Economic Policy Stance Index

9. The initial implementation of the economic policy stance index was in an extremely limited form, as it was limited to those variables which are quantifiable. Accordingly, the index was limited to the two categories of monetary policy and fiscal policy, consisting of 3 and 4 variables respectively. The scores were determined using the same procedures as in the Economic Sustainability Index, as the average of the three best performing countries was set at seven, and further scores were determined by one-half standard deviations (see section 2.1 above for details).

10. Scores were obtained for 33 of the 53 African countries. Table 2 below shows the scores and country rankings for the 1998 Economic Policy Stance Index. As was the case for the Economic Sustainability Index, the bottom of the rankings is dominated by countries with a history of conflict (Sierra Leone, Guinea-Bissau, Rwanda, Mozambique). At the top of the rankings, it is notable that four of the five highest scorers (Ethiopia, Egypt, Seychelles, and South Africa) garner relatively high approval ratings from the World Bank.

Table 2: 1998 Economic Policy Stance Country Scores and Rankings

Country	EPSI	Rank	Country	EPSI	Rank	Country	EPSI	Rank
Seychelles	5.33	1	Gambia	3.92	12	Nigeria	3.33	22
South Africa	5.29	2	Namibia	3.75	13	Cameroon	3.25	24
Congo Rep.	4.88	3	Zambia	3.75	13	Senegal	3.25	24
Ethiopia	4.83	4	Zimbabwe	3.75	13	Sao T. & Pr.	3.21	26
Egypt	4.75	5	Swaziland	3.71	16	Chad	3.17	27
Guinea	4.58	6	Lesotho	3.58	17	Mozambique	3.00	28
Equat. Guinea	4.42	7	Tanzania	3.58	17	Guinea Bissau	2.96	29
Kenya	4.42	7	Morocco	3.50	19	Madagascar	2.79	30
Gabon	4.38	9	Uganda	3.50	19	Rwanda	2.75	31
Botswana	4.33	10	Cent.A.R.	3.42	21	Malawi	2.58	32
Mauritius	4.04	11	Cape Verde	3.33	22	Sierra Leone	2.29	33

Figure 2: Frequency Distribution of 1999 Economic Policy Stance Index Scores
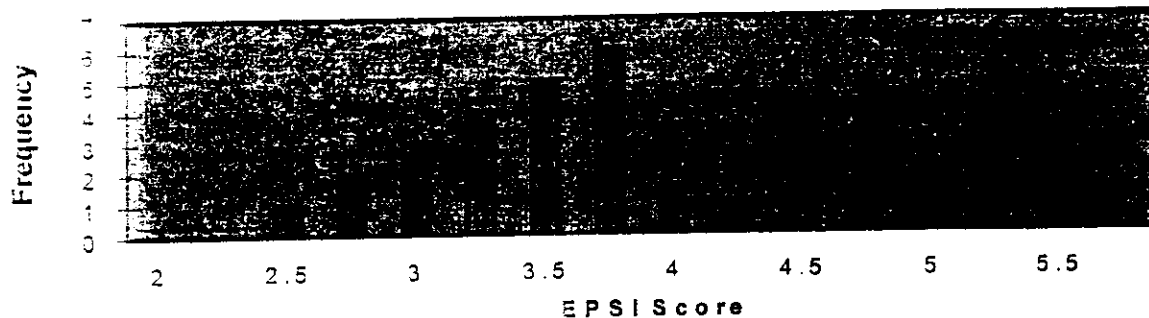
11. The distribution of the scoring, as shown in figure 2, reveals that as in the Economic Sustainability Index, the majority of the scores are low, with a small group of countries obtaining higher scores. However, the difference between the high and low scorers is not nearly as pronounced as in the previous case. This is interesting, as given the smaller number of variables used to compute the policy stance index, one would expect greater variance than in the sustainability index. In contrast to the sustainability index, the average score of the three highest scorers (Seychelles, South Africa, and the Republic of Congo) is 5.17, well below the benchmark of seven. The conclusion that can be drawn is that rather than a few countries consistently setting the standard for performance, as was the case in the sustainability index, the best performers in one policy area may perform poorly in others.

2.3 Annual Performance Trend Index

12. The 1998 Annual Performance Trend Index was computed using three measures of change in 1998: change in output per head (i.e., per capita GDP growth), change in the rate of inflation, and change in the current account balance as percentage of GDP. For each variable, countries are assigned scores between −10 and +10. The scores are determined as follows:

(1) For each variable, no change is set at a score of zero. For change in per capita output and inflation, scores of plus and minus 10 are set at plus and minus two standard deviations of the distributions respectively. For the change in current account balance, plus and minus 10 correspond to plus and minus three standard deviations of the distribution. Equal intervals are used to determine further scores.

Ex. The standard deviation of the distribution of per capita GDP growth rates was 2.97. Therefore, a growth rate of 5.94% (twice the standard deviation of 2.97) garners a score of ten, while a growth rate of −5.94% receives a minus 10. Equal intervals between the scores correspond to 0.59% per capita GDP growth per point, so that a country with a per capita GDP growth rate of 0.59% receives a score of 1, a 1.18% growth rate receives a 2, etc.

(2) The scores are then weighted so that change in per capita output accounts for half of the final score, while change in current account balance and change inflation account for one-quarter of the final score each.

Ex. In 1998, Cameroon's per capita GDP grew by 2.4%, earning a score of +3.9, its rate of inflation shrank by 0.2% corresponding to a score of +0.6, and the current

account balance worsened by 1.1% of GDP for a score of −1. Cameroon's final score is thus (1/2 X 3.9) − (1/4 X 0.6) + (1/4 X −1.0) = −1.7.

13. The scores and country rankings are displayed in table 3 below. Three countries were excluded due to lack of data. Of the top scoring countries, it is notable that most benefited from temporary or external conditions in 1998, such as oil discovery, favorable agricultural conditions, or the cessation of civil unrest. The countries that received high negative scores tended to suffer from falling oil prices, or damaging conflicts.

Table 3: 1998 Annual Performance Trend Index Country Scores and Rankings

Country	APTI	Rank	Country	APTI	Rank	Country	APTI	Rank
Equat. Guinea	6.4	1	Tunisia	2	18	Niger	-0.1	35
Mauritius	4.6	2	Namibia	1.8	20	Madagascar	-0.3	36
Congo Rep.	4.5	3	Senegal	1.8	19	Angola	-0.5	37
Sudan	4.1	4	Cameroon	1.7	22	Algeria	-0.8	38
Guinea	3.7	5	Gambia	1.7	23	South Africa	-0.8	39
Morocco	3.4	6	Ghana	1.7	21	Gabon	-1.4	40
Chad	3.3	8	Botswana	1.5	24	Swaziland	-1.8	41
Cote D'Ivoire	3.3	7	Sao T. & Pr.	1.5	25	Ethiopia	-2.3	42
Guinea Bissau	3.3	9	Benin	1.4	26	Djibouti	-2.4	43
Egypt	2.9	10	Lesotho	1.4	27	Malawi	-2.5	44
Burkina Faso	2.7	12	Uganda	0.8	28	Comoros	-3	45
Togo	2.7	11	Zambia	0.8	30	Sierra Leone	-3.1	46
Cent.A.R.	2.2	13	Zimbabwe	0.8	29	Nigeria	-3.3	47
Mali	2.1	14	Kenya	0.6	31	Libya	-3.4	48
Tanzania	2.1	15	Cape Verde	0.4	32	Seychelles	-3.9	49
Burundi	2	16	Mauritania	0	33	Rwanda	-4.1	50
Mozambique	2	17	Congo D.R.	-0.1	34			

14. Closer scrutinization of the scores reveals that though African economic performance in 1998 provides some grounds for optimism, overall performance in the year was far from exemplary. Although 32 of the 50 countries received positive scores, indicating improvement in the year, many of the more populous African countries backslid in 1998, while progress was led by the North African subregion. The 17 countries which received negative scores account for 49.6% of the African population, while the aggregate score for the continent was a modest +0.21, with an alarming −0.37 for sub-Saharan Africa.

2.4   Correlations with other indices

15. Having obtained scores for the 1998 Economic Sustainability, Policy Stance, and Annual Performance Trend Indices, we now examine the relationship between the ECA's composite indices and other selected indicators. To this end, we employ correlation analysis to determine what links, if any, exist between our indices and the following existing composite indicators: HIID's Africa Competitiveness Index, the UNDP's Human Development and Human Poverty Indices, Institutional Investor's Country Risk Ratings, and Transparency International's Corruption Perception Index. Additionally, we examine the correlation between the ECA indices and per capita income.

Table 4: Spearman (Rank) Correlation Coefficients

	ESI	EPSI	Per cap. GDP 1998	HDI 1995	TPI 1995	ACI 1998	RISK 1998	CORRUP-TION 1998
ESI	1	0.34	0.50	0.61	0.60	0.45	0.54	0.36
EPSI	0.34	1	0.30	0.25	0.20	0.21*	0.10*	0.15*
APII	0.03*	0.03*	0.00*	0.00*	0.01*	0.30	0.01*	0.04*

Note: (*) indicate that the coefficients are statistically insignificant at 5 percent. The rest of the coefficients are statistically significant at or below 5 percent.

16. Table 3 above displays the Spearman Rank correlation coefficients between the variables. The Economic Sustainability Index shows moderate-to-high, statistically significant correlation with all of the other variables. This implies that investment in long term sustainability is linked to improved standards of living, reduced poverty and corruption, and an environment more conducive to investment. The Economic Policy Stance Index shows significant correlation with the sustainability, competitiveness, and human development indices, suggesting that policy improvements lead to improvements in these areas as well. It is difficult to draw conclusions from the observed correlations between per capita income and the policy and sustainability indicators. Clearly, good performance in the areas of policy and sustainability should lead to rising levels of income; however, it is also to be expected that higher incomes would lead to investment in these areas as well. Thus, it is impossible to determine which exerts a stronger effect on the other. The lack of correlation between the Annual Performance Trend Index and the other indices highlights the difficulty in assessing the overall health of an economy based on its performance in a single year.

III.   Proposed Improvements

17. Significant refinement is planned for future applications of the composite indicators discussed above, which are to become a regular feature in ECA's annual Economic Report on Africa. The following section discusses planned and proposed improvements for the Economic Sustainability, Economic Policy Stance, and Annual Performance Trend Indices.

18. Next year's Economic Sustainability Index will be revised in a number of ways. Most importantly, significant amount of additional data will be collected, particularly in the area of infrastructural development under the transactions costs category. Much of this data will be unavailable from other sources. Appendix Table 1 provides a complete list of the data of which the sustainability index will ultimately be comprised.

19. Secondly, additional categories are planned. In any measure of long-term economic sustainability, the role of the environment must be accounted for. Thus, a new category covering natural resource depletion, pollution, and other environmental factors will be included. A planned category accounting for market and institutional development was not implemented due to data constraints. This category will include measures of the formalization of the economy, as well as the effectiveness of property rights. A final area of importance which was not included in the index is that of regional integration. It is the position of the ECA that strengthening economic ties on a regional basis is a crucial element of long-term development. However, the extent of a particular country's "regionalization" is difficult to measure. If some basis for evaluating countries in this regard can be established, an additional category will be added.

20. Finally, changes are planned with regards to the manner in which the variables are aggregated. In the original formulation, no weighting scheme was used, as there is little theoretical guidance on the subject. However, future versions of the index will include some attempt to ensure that more important variables are given more influence than less important ones. Additionally, some of the more volatile variables may be considered on the basis of three-to-five year averages, in order to smooth out

the effects of single-year "spike" aberrations. Lastly, certain variables may be evaluated on the basis of level rather than change.

21. In order to assess how some of these changes will improve the Economic Sustainability Index, we consider the case of the top scoring country, Equatorial Guinea. This is perhaps the most curious result of the exercise: though the Equatoguinean economy has made great strides in recent years, few would argue that it has the best prospects for long-term development in all of Africa. Table 4 displays the composition of Equatorial Guinea's final score of 6.06. The influence of two factors explains the inflated score: first, data was insufficient to obtain a score for the Structural Diversification Index. Given that the recent growth explosion in the country is due almost entirely to oil exports, one would expect a poor score in this category. Improved data collection will correct this problem. Second, the score of 10 in the category of Macroeconomic Sustainability is surprising. Table 4 shows that this score results from scores of 10 in both investment and export growth, with no score recorded for savings. The aforementioned oil boom accounts for the fact that investment in Equatorial Guinea in 1997 was 93.9% of GDP. Using a three-to-five year average of the level of investment, rather than a single year value, would ameliorate the effects of this sort of aberrant, temporary situation, and serve as a better indicator of investment as it pertains to long-term economic prospects. Similarly, growth exports may fluctuate wildly from year to year due to temporary shocks, as was the case for Equatorial Guinea in 1997, when real per capita exports grew by no less than 205%. Again, using a three-to-five year average, or, alternatively, the level of real per capita exports, would provide more robust results.

Table 5: Economic Sustainability Index, Equatorial Guinea

Overall Score: 6.06								
Human Capital Development index			Dependency index			Index of Macroeconomic Sustainability		
Variable	Level	Score	Variable	Level	Score	Variable	Level	Score
Gross Enrolment Ratio	64%	6	Ratio of ODA to Total Gov't Revenue (excluding grants)	68 %	2	Real Per Capita Export Growth	205%	10
Population % with Access to Safe Water	95%	7	Total External Debt as % of GDP	84 %	3	Gross Private Investment as a % of GDP	94%	10
Doctors per 100,000	21	4						
Total		5.67	Total		2.5	Total		10.0

22. The Economic Policy Stance Index will be significantly expanded in future applications. As was the case for the sustainability index, a significant amount of the data which comprises the original conception of the index was unavailable (see Appendix Table 2). More importantly, the majority of the components of the policy stance index consist of qualitative assessments of various policy areas. Time constraints limited the initial computation of the index to those variables which are quantifiable. In the future, attempts will be made to subjectively assess a broad range of the economic policies of African countries, combining both quantitative and qualitative measures to produce a far more comprehensive indicator of economic policy stance. Such qualitative assessment may be carried out through evaluation and discussion by ECA staff members with expertise in the relevant regions and policy areas. Alternatively, surveys of businesses, policymakers, and/or other informed sources may be undertaken.

23. The Annual Performance Trend Index will be improved in later years as reliable annual data becomes available in further areas. To the goals of GDP growth, price stability, and a sustainable balance of payments, we can add full employment, and in the African context, poverty eradication. Unfortunately, reliable annual data on employment and poverty does not exist at this time for the vast majority of African countries. As such data becomes available, measures of employment and poverty reduction will be included in the Annual Performance Trend Index.

IV. Conclusions

24. The initial application of the Economic Sustainability and Policy Stance Indices has produced useful and interesting results as exemplified by the correlation coefficients between the indices and other measures of economic conditions and performance. These strong and significant correlations demonstrate not only the links between sustainability, policy stance, and the other indicators, but also intuitively indicate the veracity of our composite indicators themselves. However, perhaps the most intriguing part of the exercise has been that these results were derived from a limited form of the overall conception if the indices. With the proposed refinements, the Economic Sustainability Index promises to be an authoritative and exhaustive measure of long- term economic prospects. Additional data will make the category indices (Human Capital Development. Transactions Costs, etc.) of interest in and of themselves. The Economic Policy Stance Index. once fully implemented. will be a unique and detailed indicator of the effectiveness of economic policy. The Annual Performance Trend Index provides a convenient single indicator measuring overall economic performance, and will become more robust as employment and poverty data improve. Such measures should prove to be of great interest to policymakers. academics. and other observers of the African economies.

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Appendix Table 1: List of Variables, Economic Sustainability Index

I)   **Human Capital Development Index**

Education

* Aggregate school enrolment ratio
* Adult illiteracy rate
* Natural and applied sciences as percentage of total tertiary enrolment
* R&D scientists and technicians (per 1.000 people)
* *Total number of university graduates in the civil service*
* *Total number of engineers and scientists in the civil service*

Health

* Population per hospital bed
* Doctors per 100.000 people.
* Percentage of population with access to safe water supply

II)   **Structural Diversification Index**

* Share in manufacturing as a % of total output
* Diversification Index
* Concentration Index
* *Largest share of total exports going to a single trading partner*

III)   **Dependency Index**

* Ratio of ODA to total government expenditure excluding grants
* Total external debt stock to GDP
* Debt service ratio
* Food imports as a % of total imports

IV)   **Transaction Costs Index**

Communication

* Number of telephone lines per 1.000 people
* Unmet telephone demand as % of total
* Internet hosts per 1.000 people
* Average cost per minute of local telephone call
* *Average cost of telephone call per minute to London, Paris, and Brussels.*
* *Number of post offices per 100.000 people*
* *Number of days required for ordinary surface mail to be delivered within a distance of 300 kilometres*
* *Number of days for ordinary surface mail to be delivered to/from Europe*

Transportation

* *Ratio of paved roads to the country's effective land area.*
* *Average cost of overland shipping per kg * km*

Utilities

* Per capita electricity consumption
* Electric power transmission and distribution losses as % of total
* Cost per unit of electricity consumption
* *Percentage of population with access to electricity*
* *Number of days per month there is electricity supply in main cities*
* *Average cost per litre of gasoline*
* *Average number of days there is water supply in major industrial cities*

Cost of doing business

* *Average number of days it takes domestic investor to process documents/license to set up factory*
* *Average number of days it takes foreign investor to process documents/license to set up factory*
* *Average cost per plot of land to set up factory in major industrial cities*
* *Average number of weeks/months/years it takes to procure land for business*
* *Average number of days it takes a manufacturer to process bank documents to import necessary inputs*
* *Average number of days it takes to clear merchandise at the seaport/airport*
* *Average hourly wage for unskilled labor*
* *Average hourly wage for skilled labor*
* *Estimated number of man-hours lost due to labor unrest (work stoppages)*
* *Total number of weeks/ months there is civil war in any part of the country*
* *Total number of violent political protests in the year*

Capacity utilization

* *Industrial capacity utilization rate*

V) Macroeconomic indicators of sustainability

* Real per capita export growth rate
* Gross domestic savings as a % of GDP
* Gross private investment as a % of GDP

VI) Market and Institutional Development Index

Financial depth and extent of formalization of the economy

* *Ratio of M2/GDP*
* *Ratio of currency in circulation to M2 (indicator of pervasiveness of informal sector or lack of use of formal financial system)*
* *Proportion of labor force in subsistence farming*
* *Number of commercial bank branches per 100,000 people*
* *Assets of merchant banks to GDP ratio*
* *Assets of insurance companies to GDP ratio*
* *Capitalization ratio of the capital market*

udicial system and guarantee of property rights

* Number of court houses per 100,000 people
* Number of days/weeks/months/ years it takes to get judgement in a civil suit

VII) **Regional Integration Index**

VIII) **Environmental Index**

Appendix Table 2: List of Variables. Economic Policy Stance Index

Note: *Italics* indicate variables which have not yet been implemented. <u>underline</u> indicates qualitative indicators which must be subjectively assessed (and thus have also not yet been implemented)

I) Macroeconomic Policy Index

Fiscal Policy

* Ratio of budget deficit to GDP
* Taxes on income and profits (i.e.. low-distortion) as a % of total government revenue. with higher percentages getting higher scores
* Taxes on trade and international transactions as a % of total government revenue. with lower percentages getting higher scores
* Indirect (i.e.. high-distortion) taxes as a % of total government revenue. with lower percentages getting higher scores
* *Proportion of total government expenditure devoted to capital spending and maintenance.*
* *Extra-budgetary expenditures as a % of GDP*

Monetary Policy

* Growth rate of real money supply (M2)
* Spread between the prime lending (nominal) interest rate and the savings deposit rate
* Real savings interest rate
* *Proportion of banking sector credit going to the government*
* <u>Extent of reforms and conduct of monetary policy through the indirect instruments (eg. market determined interest rates. market-based allocation of credit, etc) rather than solely on directed credit. fixed interest rates. etc.</u>

Exchange rate policy

* *Spread between official exchange rate and parallel market rate*
* *Percentage spread between mean exchange rate and highest or lowest rate for the year (exchange rate volatility)*
* <u>Extent of foreign exchange restrictions on long-term capital inflows</u>
* <u>Extent of interference in the administration of foreign exchange with full current account convertibility: extent to which exchange rate is market determined</u>

Macroeconomic policy coordination

* <u>Effectiveness of coordination of monetary. fiscal and exchange rate policies</u>

II) Policies for sustainable growth and structural transformation

Trade Policy

* Average tariff rate on imports
* Spread between the highest and mean import tariff
* Average tariff rate on exports

Assessment of trade policy regime in terms of having insignificant or no quantitative restrictions, absence of discriminatory or ad-hoc exemptions and valuations on the part of the customs officials, and efficiency in terms of timely clearance of goods at the customs office, etc

Financial sector policy

* Assessment of financial sector policies with regards to the effectiveness of the prudential and supervisory roles of government and independent agencies and their capacity to identify institutions at risk; extent of diversification and competitiveness of the financial sector; absence of dominance by monopolies; corporate governance policies/laws that protect minority shareholders, etc.

Product market policy

* Assessment of government policies to minimize or ensure the absence of state-imposed or sanctioned prohibitions or barriers to entry or exit in major productive and trade activities; ie, the absence of state-supported monopolies and firms having equal access to entry and exit in all products and sectors.

Factor market policy

* Assessment of policies to enhance the efficiency of the factor markets- whether there are controls on wages and labor mobility; restrictions on land transfers/transactions; requirements for prior government approval for most investments; significant tax on capital imports; etc.

Administration of public enterprises

* Assessment of policies regarding public enterprise administration on the basis of the extent to which they are run on commercial/ competitive terms, ie, fully self-financing and not dependent on government subsidies, as well as the extent to which they enjoy considerable special privileges, crowd out the private sector with regards to access to bank credit, and quality of management.

Effectiveness of sectoral policies

* Assessment of effectiveness of policies directed towards the development of agriculture (provision of farm inputs- fertilizer, improved seedlings-, marketing arrangements, extension services, irrigation programs, etc) and to industry such as industrial targeting, promotion of competition, and export promotion measures.

Pro-poor policies and targeting

* Assessment of the extent and effectiveness of policies specifically targeted at the poor and vulnerable groups e.g. micro finance programs, rural development programs, urban housing programs, adult literacy programs, and programs targeted at empowering women.

Private and public sector coordination

* Evaluation of the effectiveness of the mechanisms for, and extent of, coordination between public and private sectors in formulating and implementing public policies.

III) **Policies for Market and Institutional Development**

* *Government expenditure on the Judiciary (as % of total expenditure)*
* Assessment of the degree of independence of the Central Bank in its conduct of monetary policy
* Assessment of the degree of independence of the judiciary
* Assessment of the crime and theft rates as indicator of effectiveness of policies towards crime prevention
* Assessment of policies regarding property rights and rule-based governance in the sense of whether: property rights are well defined by law(s); contracts can be enforced through formal mechanisms; business laws/government regulations are applied selectively or changed unpredictably.
* Assessment of the budget process in terms of whether public expenditure and investment priorities are established by systematic and objective criteria, and whether systems exist to ensure that expenditures match budget allocations.
* Assessment of whether there are adequate provisions for in-service training of civil service personnel; competitive incentive structure to attract and retain highly qualified staff in the civil service; and whether promotion in the civil service is merit-based.
* Assessment as to whether externally audited actual expenditures of government are available within twelve months of the end of the fiscal year.

IV) **Policies for Human Capital Development**

* *Government expenditure on health as % of GDP*
* *Government expenditure on education as % of GDP*
* *Government expenditure on research and development as % of GDP*

V) **Policies for Regional Integration**

* Assessment of the extent to which government policies and actions promote regional integration, evaluated on the basis of: implementation of community protocols regarding trade and movement of persons, payment of dues to regional organizations, investment in infrastructure designed to facilitate regional trade, participation in regional security arrangements, harmonization of macro and sectoral policies with other community members

VI) **Policies for environmental/ecological balance**

* Assessment of the effectiveness of government policies with regards to sewage and rubbish disposal facilities, clear separation of industrial districts from residential areas, re-forestation programs, pollution control, and policies/incentives for population control

Appendix Table 3: Economic Sustainability Index

	Human Capital Development	Structural Diversity	Dependency	Transactions Costs	Macroeconomic Sustainability	Economic Sustainability Index
Algeria	6.00	3.00	3.67	4.17	4.33	4.23
Angola	3.00	1.33	3.67	2.00	5.33	3.07
Benin	2.43		2.50	2.00	2.67	2.40
Botswana	5.40		6.50		6.00	5.97
Burkina Faso	2.00	3.00	4.67	1.67	3.33	2.93
Burundi	2.67	2.67	2.00	4.50	3.33	3.03
Cameroon	4.20	3.00	3.33	3.17	4.00	3.54
Cape Verde	5.00		2.67		2.33	3.33
Cent.A.R.	3.00		2.67	2.00	2.00	2.42
Chad	2.00		3.67	2.33	3.00	2.75
Comoros	4.00		2.67		2.33	3.00
Congo D.R.	4.25	3.00	4.33	3.00	1.67	3.25
Congo Rep.	3.80	2.33	3.67	4.50	3.33	3.53
Cote D'Ivoire	3.60	4.00	2.33	3.60	3.67	3.44
Djibouti	4.20	3.00	2.50			3.23
Egypt	5.57	6.33	4.00	4.80	3.00	4.74
Equat. Guinea	5.67		2.50		10.00	6.06
Eritrea			4.50			
Ethiopia	1.67	1.67	2.67	3.20	5.33	2.91
Gabon	4.80	1.67	4.33	4.40	5.00	4.04
Gambia	2.20		3.67		3.00	2.96
Ghana	3.75	2.67	4.00	3.50	2.00	3.18
Guinea	2.50		3.00	2.67	3.00	2.79
Guinea Bissau	3.80		1.00	3.60	4.67	3.27
Kenya	4.60	4.33	4.00	3.40	2.67	3.80
Lesotho	4.00		3.50	3.50	6.67	4.42
Liberia						
Libya	7.00	1.50				
Madagascar	3.00	4.33	3.33	1.67	2.00	2.87
Malawi	3.50	2.33	3.00	3.00	2.67	2.90
Mali	2.00		2.67	1.67	5.67	3.00
Mauritania	3.25	2.33	2.00	3.00	2.67	2.65
Mauritius	6.50	5.00	5.00	5.25	3.67	5.08
Morocco	4.17	5.67	4.00	4.60	3.00	4.29
Mozambique	3.60		2.67	2.40	3.00	2.92
Namibia	2.67			5.33	2.67	3.56
Niger	1.60		2.00	2.50	2.00	2.03
Nigeria	4.33	1.33	4.67	2.20	3.33	3.17
Rwanda		3.33	2.00		2.00	2.44
Sao T. & Principe	5.67		1.33			
Senegal	2.80	3.67	3.67	3.33	3.33	3.36
Seychelles	6.33	1.50	4.67		4.00	4.13
Sierra Leone	2.00	2.00	1.33	2.33	2.33	2.00
Somalia						
South Africa	7.20	6.00	6.67	6.33	4.00	6.04
Sudan	3.40	3.50		3.67		3.52
Swaziland	4.50		4.33		2.67	3.83
Tanzania	3.17	4.00	3.33	2.17		3.17
Togo	3.33	3.00	2.00	2.25	3.00	2.72

Algeria	Human Capital Development	Structural Diversity		Transactions Costs	Macroeconomic Sustainability	Economic Sustainability Index
Tunisia	5.67	6.33	5.00	4.00	3.67	4.91
Uganda	2.67	2.00	2.50	2.00	3.33	2.50
Zambia	3.67	3.33	3.33	3.50	2.33	3.23
Zimbabwe	4.67	5.33	4.67	4.17	3.33	4.43
Mean	3.89	3.29	3.28	3.27	3.5	3.48

Human Capital Development Index

Enrol: Gross enrolment ratio, ages 6-23, 1995	70.67	Swaziland 72, Botswana 71, Egypt 69
Natsci: Natural & applied science as % of tertiary, 1995	53	S. Africa 57, Algeria 52, Mozambique 50
R&D: R & D Scientists and technicians per 1000, 1990-6	0.8	S. Africa 1.2, Egypt .7, Mauritius .5
Docs: Doctors per 100,000, 1993	141.33	Egypt 202, Libya 137, Mauritius 85
Water: % of pop. with access to safe water, 1990-6	98	S. Africa 99, Mauritius 98, Tunisia 98
Beds: Population per hospital bed, 1990-4	286	Libya 240, Congo 306, Gabon 313

	Adlit	Score	Enrol	Score	Natsci	Score	R&D	Score	Water	Score	Docs	Ln	Score	Beds	Score
Algeria	38	5	66	6	52	7			78	5	83	4.4188	6	475	7
Angola			31	2					32	1				774	6
Benin	63	2	35	3	19	2	0.2	4	50	3	6	1.7917	2	4,281	1
Botswana	30	5	71	7	24	3			93	6				635	6
Burkina Faso	81	1	20	1	18	2			78	5				3,392	1
Burundi	65	2	31	2			0.1	3	52	3	6	1.7917	2	1,519	4
Cameroon	37	5	46	4					50	3	7	1.9459	2	392	7
Cape Verde	28	6	64	6					51	3	29	3.3672	4	631	6
Cent.A.R.	40	4	37	3			0.1	3	38	1	6	1.7917	2	1,140	5
Chad	52	3	25	1	14	1			24	1	2	0.6931	1	1,373	5
Comoros	43	4	39	3					53	3	10	2.3025	3	362	7
Congo D.R.	23	6	38	3					42	2				702	6
Congo Rep.	25	6			11	1			34	1	27	3.2958	4	306	7
Cote D'Ivoire	60	2	39	3	26	3			82	5				1,268	5
Djibouti	54	3	20	1					90	6	20	2.9957	4	394	7
Egypt	49	3	69	7	15	1	0.7	7	87	6	202	5.3082	8	476	7
Equat. Guinea			64	6					95	7	21	3.0445	4		
Eritrea									22	1	2	0.6931	1		
Ethiopia	65	2	18	1	36	4			25	1	4	1.3862	1	4,141	1
Gabon	37	5					0.2	4	68	4	19	2.9444	4	313	7
Gambia	61	2	34	2					48	2	2	0.6931	1	1,639	4
Ghana			44	4					65	4	4	1.3862	1	685	6
Guinea			24	1					46	2	15	2.7080	3	1,816	4
Guinea Bissau	45	4	29	2					59	3	18	2.8903	4	671	6
Kenya	22	6	55	5					53	3	15	2.7080	3	602	6
Lesotho	29	5	56	5	25	3			62	4	5	1.6094	2		
Liberia	62	2													
Libya									97	7	137	4.9199	7	240	7
Madagascar			33	2	23	3	0	3	34	1	24	3.1780	4	1,072	5
Malawi	44	4	67	7	18	2			37	1	2	0.6931	1	645	6
Mali	69	1							68	4	4	1.3862	1		
Mauritania			36	3	8	1			74	5				1,488	4
Mauritius	17	7	61	6			0.5	6	98	7	85	4.4426	6	325	7
Morocco	56	3	46	4	29	3			65	4	34	3.5263	5	898	6

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Mozambique	30	2	25		50	3			63	4				1,153	5
Namibia					6	1			67	3	23	3.1354	4		
Niger	16		15				0.1	2	48	2	3	1.0986	1		
Nigeria	43	4	50	4	41	5			50	3	21	3.0445	4	599	6
														605	6
Rwanda	40	4													
Sao T. & Principe									82	5	32	3.465	5	212	7
Senegal	67	1	31	2					63	4	7	1.9459	2	1,371	5
Seychelles	21	6			45	3					104	4.6443	7		
Sierra Leone	69	1	28	2	30	4			34	1					
Somalia														1,472	4
South Africa	18	7			57	7	12	9	99	7	59	4.0775	6		
Sudan	54	3	31	2					50	3	10	2.3025	3	919	6
Swaziland	23	6	72	7	22	2			60	3					
Tanzania	32	5	34	2	39	5			38	1	4	1.3862	1	1,123	5
Togo	48	3	50	4	16	2			55	3	6	1.7917	2	664	6
Tunisia	33	5	67	7	24	3	0.4	5	98	7	67	4.2046	6	568	6
Uganda	33	5	34	2	13	1			46	2	4	1.3862	1	1,092	5
Zambia	22	6	48	4					27	1					
Zimbabwe	15	7	88	7	23	2			79	5	14	2.6390	3	1,959	3

STRUCTURAL DIVERSIFICATION INDEX

Benchmarks		
Manur: Manufacturing as % of output, 1995	26.33	Zambia 30, Egypt 25, S.Africa 24
Div: Diversification Index, 1992	0.684	Tunisia .209, Egypt .361, S. Africa .378
Conc: Concentration index, 1992	0.206	Morocco .16, Tunisia .209, Tanzania .248

	Manur	SCORE	Div	SCORE	Conc	SCORE
Algeria	9	2	0.883	2	0.546	4
Angola	6	2	0.906	1	0.912	1
Benin	8	2				
Botswana	4	1				
Burkina Faso	19	5	0.923	1	0.623	3
Burundi	18	5	0.96	1	0.667	2
Cameroon	10	3	0.891	2	0.485	4
Cape Verde						
Cent.A.R.	9	2	3	3		
Chad						
Comoros						
Congo D.R.	5	2	0.868	2	0.371	5
Congo Rep.	6	2	0.892	2	0.636	3
Cote D'Ivoire	18	5	0.861	2	0.368	5
Djibouti			0.852	3	0.56	3
Egypt	25	7	0.69	7	0.361	5
Equat. Guinea						
Eritrea						
Ethiopia	3		0.941	1	0.557	3
Gabon	5	2	0.918	1	0.743	2
Gambia	7	2				
Ghana	9	3	0.9	1	0.465	4
Guinea	5	2				
Guinea Bissau	7	2				
Kenya	11	3	0.808	4	0.305	6

Lesotho		16	4			
Liberia						
Libya				0.887	2	0.809	·
Madagascar		12	3	0.799	4	0.285	6
Malawi		14	4	0.923	1	0.704	2
Mali		7	2			
Mauritania		10	3	0.971	1	0.605	3
Mauritius		23	6	0.834	3	0.332	5
Morocco		17	5	0.754	5	0.16	7
Mozambique						
Namibia		12	3			
Niger		7	2			
Nigeria		8	2	0.907	1	0.934	1
Rwanda		18	5	0.95	1	0.505	4
Sao T. & Principe						
Senegal		12	3	0.865	2	0.258	6
Seychelles				0.978	1	0.721	2
Sierra Leone		6	2	0.924	1	0.586	3
Somalia						
South Africa		24	6	0.693	7	0.378	5
Sudan				0.898	2	0.373	5
Swaziland						
Tanzania		7	2	0.858	3	0.248	7
Togo		9	3	0.891	2	0.491	4
Tunisia		18	5	0.67	7	0.209	7
Uganda		8	2	0.931	1	0.561	3
Zambia		20	4	0.932	1	0.787	1
Zimbabwe		19	5	0.742	5	0.329	6

DEPENDENCY INDEX
Benchmarks

ODA: ODA as a % of total government revenue excluding grants. 1996	1.7	S. Africa 0.9, Nigeria 2.0, Algeria 2.2
Debt: Total external debt as a % of GDP, 1996	13.86	Namibia 11.78, Botswana 11.79, South Africa 18.02
Food: Food imports as a % of total imports, 1996	0	Congo D.R 0, Eritrea 0, Burkina Faso 0

	ODA	In	Score	Debt	In	Score	Food	Score
Algeria	2.2	0.78	7	58.9	4.08	3	23.3%	1
Angola	16.0	2.77	4	169.8	5.13	1	5.3%	6
Benin	86.8	4.46	2	70.1	4.25	3		
Botswana	3.2	1.16	6	11.8	2.47	7		
Burkina Faso	134.1	4.90	2	27.7	3.32	5	0.0%	7
Burundi	145.5	4.98	1	130.8	4.87	1	11.3%	4
Cameroon	32.6	3.48	3	104.1	4.65	2	7.2%	5
Cape Verde	108.0	4.68	2	56.8	4.04	3	16.5%	3
Cent.A.R.	291.7	5.68	1	82.1	4.41	3	10.9%	4
	262.0	5.57	1	75.0	4.32	3	0.7%	7
	136.2	4.91	2	89.5	4.49	2	12.6%	4
	61.8	3.95	3	73.9	4.30	3	0.0%	7
	61.6	4.12	3	237.1	5.47	1	0.8%	7
Cote D'Ivoire	40.0	3.69	3	184.4	5.22	1	15.0%	3
Djibouti	68.1	4.22	2	66.9	4.20	3		
Egypt	12.5	2.52	5	44.8	3.80	4	17.0%	3
Equat. Guinea	67.8	4.22	2	83.7	4.43	3		
Eritrea	77.3	4.35	2				0.0%	7
Ethiopia	76.6	4.34	2	85.3	4.45	2	13.0%	4
Gabon	8.4	2.13	5	68.2	4.22	3	9.1%	5
Gambia	52.4	3.96	3	87.4	4.47	2	3.1%	6
Ghana	53.6	3.98	3	81.7	4.40	3	2.7%	6
Guinea	74.3	4.31	2	89.8	4.50	2	8.7%	5
Guinea Bissau	532.0	6.28	1	341.4	5.83	1	25.6%	1

Kenya	23.7	3.16	4	59.9	4.25	3	6.6%	5
Lesotho	23.8	3.17	4	31.8	4.40	3		
Liberia								
Libya								
Madagascar	104.6	4.65	2	107.0	4.67	2	5.8%	6
Malawi	128.7	4.86	2	103.8	4.64	2	6.7%	5
Mali	125.8	4.83	2	108.4	4.69	2	12.3%	4
Mauritania	80.6	4.39	3	214.2	5.37	1	14.3%	3
Mauritius	2.7	0.98	6	27.7	3.32	5	13.1%	4
Morocco	7.3	1.99	5	59.4	4.08	3	11.7%	4
Mozambique	299.3	5.70	1	542.2	6.30	1	3.0%	6
Namibia				11.8	2.47	7		
Niger	166.7	5.12	1	78.7	4.37	3		
Nigeria	2.0	0.71	7	104.1	4.65	2	7.3%	5
Rwanda	527.2	6.27	1	84.0	4.43	2	14.1%	3
Sao T. & Principe	780.6	6.66	1	688.2	6.53	1	19.0%	2
Senegal	75.6	4.33	2	72.2	4.28	3	3.3%	6
Seychelles	8.6	2.15	5	39.6	3.68	4	9.6%	5
Sierra Leone	213.3	5.36	1	119.1	4.78	2	25.9%	1
Somalia								
South Africa	0.9	-0.06	8	18.0	2.99	6	5.6%	6
Sudan	45.2	3.81	3					
Swaziland	8.2	2.10	5	19.6	2.98	6	20.6%	2
Tanzania	115.9	4.75	2	153.6	5.03	1	1.3%	7
Togo	87.8	4.47	2	99.8	4.60	2	20.7%	2
Tunisia	2.3	0.85	7	57.2	4.05	3	7.4%	5
Uganda	110.9	4.71	2	57.4	4.05	3		
Zambia	90.5	4.51	2	173.2	5.15	1	1.9%	7
Zimbabwe	16.4	2.79	4	60.2	4.10	3	1.7%	7

TRANSACTION COSTS/SUPPLY SIDE INDEX	
Benchmarks	
Phone: Telephone main lines per 1,000 people, 1996	108.67 | Mauritius 162, S. Africa 100, Tunisia 64
Intnet: Internet hosts per 1000 people, 1997	11.56 | S. Africa 30.67, Namibia 2.16, Mauritius 1.84
Phcost: Average cost of local phone call, 1994-6	0.02 | Egypt .01, Algeria .02, Botswana .03
Phdem: Unmet telephone demand as % of total, 1996	1.09 | Burundi 0, Congo .28, S. Africa 3
Elcons: Electric power consumption per capita, 1995	2779.9 | S. Africa 3874.1, Libya 3569.3, Egypt 896.3
Elloss: Electric power transmission and distribution loss as % of total, 1995	2 | Congo Rep. 0, Congo D.R. 3, Ethiopia 3

	Phone	ln	Score	Intnet	Score	Elcons	ln	Score	Elloss	Score	Phcost	Score	Phdem	ln	Score
	44	3.7841	6	0.01	1	512.8	6.2398	5	17	4	0.02	7	55.94	4.0243	2
Algeria															
Angola	5	1.6094	2	0.02	1	59.9	4.0926	2	28	3					
Benin	6	1.7917	2	0.02	1	43.3	3.7681	1	50	1	0.13	3	14.80	2.6947	4
Botswana											0.03	6			
Burkina Faso	3	1.0986	1	0.04	?						0.12	3			
Burundi	2	0.6931	1	0.01	?						0.04	6	0.00		0
Cameroon	5	1.6094	2	0.05	1	196.4	5.2801	3	4	7	0.08	4	61.31	4.1160	
Cape Verde											0.05	5			
Cent.A.R.	3	1.0986	1	0.02	1						0.2	2	9.95	2.2975	4
Chad	1	0	1	0							0.2	2	15.13	2.7165	4
Comoros											0.2	2			
Congo D.R.	1	0	1	0		132	4.8828	3	3	7			221.40	5.3999	1
Congo Rep.	8	2.0794	3	0.02	1	206.6	5.3307	3	0	7	0.13	3	0.28	-1.2684	10
Cote D'Ivoire	9	2.1972	3	0.17	3	159.3	5.0707	3	4	7			57.42	4.0503	2
Djibouti											0.2	2			
Egypt	50	3.9120	6	0.31	3	896.3	6.7982	5			0.01	8	44.20	3.7888	2
Equat. Guinea											3.01	1			
Eritrea											0.03	6			
Ethiopia	3	1.0986	1	0		21.9	3.0864	1	3	7	0.03	6	111.84	4.7170	1
Gabon	32	3.4657	5	0		736.8	6.6023	5	10	6	0.18	2	11.06	2.4035	4
Gambia											0.09	4			
Ghana	4	1.3862	2	0.15	2	318.2	5.7626	4	4	7	0.08	4	39.93	3.6871	2
Guinea	2	0.6931	1	0							0.12	3	14.75	2.6911	4
Guinea Bissau	7	1.9459	3	0.09	2				16	5	0.09	4	13.11	2.5730	4
Kenya	8	2.0794	3	0.16	3	122.8	4.8105	3			0.06	5	32.46	3.4796	3
Lesotho	9	2.1972	3	0.08	2						0.04	6	27.50	3.3142	3
Liberia															

Country															
Libya						3569.3	3.1801	7			0.03	5			
Madagascar	3	1.0986	1	0.03	.								23.71	3.1658	3
Malawi	4	1.3862	2	0							0.04	6	74.93	4.3164	
Mali	2	0.6931	1	0.03	.						0.17	3			
Mauritania	4	1.3862	2	0							0.13	3	10.73	2.3730	
Mauritius	162	5.0875	8	1.84	5						0.06	5	19.49	2.9700	
Morocco	45	3.8066	5	0.32	3	406.6	6.0078	4			0.09	4	3.94	1.3716	
Mozambique	3	1.0986	1	0.02	1	36.8	4.2017	2			0.04	6	46.24	3.8338	
Namibia	54	3.9889	3	2.16	3								5.86	1.7681	
Niger	2	0.6931	1	0.04	1						0.15	3	5.36	1.6787	
Nigeria	4	1.3862	2	0		34.8	4.4402	2	32	2	0.26	2	21.42	3.0641	
Rwanda	3	1.0986	1	0.01	.						0.02	7			
Sao T. & Principe											0.1	4	18.81	2.9343	3
Senegal	11	2.3978	3	0.31	3	90.8	4.5086	2	13	5	0.17	3			
Seychelles											0.07	4	75.59	4.3253	
Sierra Leone	4	1.3862	2	0											
Somalia															
South Africa	100	4.6051	7	30.67	3	3974.1	8.2620	7	6	6	0.09	4	3.00	1.0975	2
Sudan						37.4	3.6216	1	19	4	0.03	6			
Swaziland											0.14	3			
Tanzania	3	1.0986	1	0.02	1	52.4	3.9589	1	13	5	0.06	4	118.07	4.7712	1
Togo	6	1.7917	2	0.01	1						0.12	3	31.52	3.4506	3
Tunisia	64	4.1588	6	0.02	1	661.4	6.4943	5			0.07	4	14.02	2.6403	4
Uganda	2	0.6931	1	0.01	1						0.19	2	15.21	2.7221	4
Zambia	9	2.1972	3	0.27	3	574.3	6.3531	5	11	5	0.25	2	30.26	3.4097	3
Zimbabwe	15	2.7080	4	0.24	3	738.1	6.6040	5	7	6	0.03	6	87.20	4.2077	1

INDEX OF MACROECONOMIC SUSTAINABILITY
Benchmarks

Expgr: Real Per Capita Export Growth %, 1997	67.10	Guinea Bissau 111.7, Mali 46.2, Ethiopia 43.5
Sav: Gross Domestic Savings as % of GDP, 1997	44.8	Gabon 46.7, Angola 44.2, Botswana 43.5
Inv: Gross Private Investment as % of GDP, 1997	37.97	Lesotho 70, Eritrea 22, Congo Rep. 21.9

	Expgr	Score	Sav	Score	Inv	Score
Algeria	6.8	4	23.8	4	19.5	5
Angola	7.0	4	44.2	7	20.5	5
Benin	3.2	3	11.9	2	10.0	3
Botswana	13.8	5	43.5	7		
Burkina Faso	11.3	4	9.3	2	15.5	4
Burundi	24.9	7	2.9	1	1.7	2
Cameroon	6.3	4	15.6	4	15.6	4
Cape Verde	3.8	3	-6.2	1	6.5	3
Cent.A.R.	0.8	2	2.4	1	3.5	3
Chad	13.9	5	-0.7	1		
Comoros	1.0	2	-3.1	1	14.6	4
Congo D.R.	-14.4	1	6.0	1	4.6	3
Congo Rep.	9.0	4	-2.4	1	21.9	5
Cote D'Ivoire	10.4	4	18.4	3	11.2	4
Djibouti						
Egypt	-1.3	2	4.4	3	13.3	4
Equat. Guinea	205.0	10			93.9	10
Eritrea					22.0	5
Ethiopia	43.5	10	12.3	2	11.4	4
Gabon	1.8	3	46.7	7	19.1	5
Gambia	2.5	3			9.3	3
Ghana	-6.5	1	9.4	2	3.7	3
Guinea	9.4	4	10.0	2	7.7	3
Guinea Bissau	111.7	10	5.3	1	6.1	3
Kenya	-14.2	1	15.3	3	11.3	4
Lesotho	17.1	5	30.5	5	70.0	10
Liberia						
Libya						
Madagascar	-1.9	2	4.7	1	5.5	3
Malawi	3.0	3	10.0	2	5.2	3
Mali	46.2	10	13.6	3	12.7	4
Mauritania	-17.7	1	6.5	3	15.2	4
Mauritius	3.4	3	17.8	3	20.0	5
Morocco	4.6	3	15.7	3		
Mozambique	-8.2	1	14.2	3	19.5	5
Namibia	-1.7	2	9.7	2	11.5	4
Niger	-6.2	1			4.8	3
Nigeria	-1.8	2	28.7	5	6.7	3

Rwanda	1.5	.	-5.9	.	1.8	2
Sao T. & Principe	-7.1	.				
Senegal	7.2	4	11.9	2	14.1	4
Seychelles	12.6	5	7.7	2	25.8	5
Sierra Leone	4.2	.	-23.9	1	6.0	3
Somalia						
South Africa	16.5	6	17.8	3		
Sudan						
Swaziland	3.1	2	5.6	4	21.1	5
Tanzania	3.9	4				
Togo	4.4	3	7.0	2	12.3	3
Tunisia	-1.0	2	5.5	4	19.7	5
Uganda	13.8	5	3.1	1	10.4	4
Zambia	0.9	2	3.5	2	9.5	3
Zimbabwe	3.2	3	13.5	3	12.5	4

Appendix Table 4: Economic Policy Stance index
ECONOMIC POLICY STANCE INDEX

	Fiscal Policy	Monetary Policy	Economic Policy Stance index
Algeria	4.50		
Angola	7.00		
Benin	4.25		
Botswana	4.67	4.00	4.33
Burkina Faso	2.25		
Burundi	3.25		
Cameroon	3.50	3.00	3.25
Cape Verde	2.00	4.67	3.33
Cent.A.R.	2.50	4.33	3.42
Chad	3.00	3.33	3.17
Comoros	2.00		
Congo D.R.	3.00		
Congo Rep.	5.75	4.00	4.88
Cote D'Ivoire	3.25		
Djibouti	4.00		
Egypt	4.50	5.00	4.75
Equat. Guinea	5.50	3.33	4.42
Eritrea	4.50		
Ethiopia	3.67	6.00	4.83
Gabon	4.75	4.00	4.38
Gambia	2.50	5.33	3.92
Ghana	3.00		
Guinea	2.50	6.67	4.58
Guinea Bissau	2.25	3.67	2.96
Kenya	4.50	4.33	4.42
Lesotho	2.50	4.67	3.58
Liberia			
Libya			
Madagascar	2.25	3.33	2.79
Malawi	3.50	1.67	2.58
Mali	2.25		
Mauritania	4.50		
Mauritius	2.75	5.33	4.04
Morocco	3.50		3.50
Mozambique	3.00		3.00
Namibia	3.50	4.00	3.75
Niger	2.25		
Nigeria		3.33	3.33
Rwanda	2.75		2.75
Sao T. & Principe	3.75	2.67	3.21
Senegal	3.25		3.25
Seychelles		5.33	5.33
Sierra Leone	2.25	2.33	2.29
Somalia			
South Africa	5.25	5.33	5.29
Sudan			
Swaziland	2.75	4.67	3.71
Tanzania	3.50	3.67	3.58
Togo	2.75		
Tunisia	3.00		
Uganda	2.33	4.67	3.50
Zambia	3.50	4.00	3.75
Zimbabwe	4.50	3.00	3.75
mean	3.45	4.13	3.75

Benchmarks		
MSGr: Growth rate of money supply (M2), 1996	-11	Niger -19, C.A.R. -9, Chad -5
Savint: Commercial bank deposit interest rate. 1995-6	18	Kenya 22, Gambia 18, Guinea 15
Spread: Spread between deposit and lending interest rates. 1995-7	4.2	Egypt 4, Guinea 4, Ethiopia, Guinea Bissau 4.5

	MSGr	n	Score	Savint	Score	Spread	Score
Algeria	-59.6						
Angola							
Benin	13	2.5649	4				
Botswana	30.4	3.4144	2	--	3	5	7
Burkina Faso	5.2	1.5486	6				
Burundi				-6	1	10.5	4
Cameroon	-10.1			-1	2	10.5	4
Cape Verde	10	2.3025	4	--	4	7	6
Cent.A.R.	4.9	1.5892	6	--	3	10.5	4
Chad	27.9	3.3286	2	--	4	10.5	4
Comoros	9.8	2.2823	4				
Congo D.R.	147.9	4.9965	1				
Congo Rep.	15.7	2.7536	3	-1	5	10.5	4
Cote D'Ivoire	3.9	1.3609	6				
Djibouti	-7.4						
Egypt	10.8	2.3795	4	6	4	4	7
Equat. Guinea	42.8	3.7565	1	-0	5	10.5	4
Eritrea							
Ethiopia	9.4	2.2407	5	3	5	4.5	7
Gabon	17.2	2.8449	3	0	5	10.5	4
Gambia	5.8	1.7578	6	18	7	13	3
Ghana	32.6	3.4843	2				
Guinea	3.6	1.2809	7	5	6	4	7
Guinea Bissau	48.4	3.8794	1	2	3	4.5	7
Kenya	26.2	3.2657	2	22	8	12.6	3
Lesotho	18.1	2.8959	3	3	4	5	7
Liberia							
Libya	1.8	0.5877	8				
Madagascar	16.2	2.7850	3	0	5	15.6	2
Malawi	39.6	3.6788	1	--	3	19	1
Mali	24.5	3.1986	3				
Mauritania	-5.1						
Mauritius	7.6	2.0281	5	14	6	9.8	5
Morocco	6.6	1.8870	5				
Mozambique	19	2.9444	3				
Namibia	29	3.3672	2	3	4	7.5	6
Niger	-6.6						
Nigeria	20.1	3.0007	3	-24	1	6.7	6
Rwanda	10.9	2.3887	4				
Sao T. & Principe	84.5	4.4367	1	-3	1	7	6
Senegal	11.7	2.4595	4			9.5	5
Seychelles	14.8	2.6946	4	14	6	6.3	6
Sierra Leone	29.6	3.3877	2	3	4	18.1	1
Somalia							
South Africa	14.3	2.6602	--	0	5	4.6	7
Sudan	65.3	4.1789	1				
Swaziland	16.3	2.7911	3	11	5	7.5	6
Tanzania	8.4	2.1282	5	12	5	21.4	1
Togo	-6.3						
Tunisia	13.3	2.5877	4				
Uganda	17.3	2.8507	3	14	6	9.6	5
Zambia	35	3.5553	2	3	6	11.7	4
Zimbabwe	33.3	3.5055	2	0	5	15.6	2

Budget: Government budget deficit/surplus excluding grants, 1997	2.3	Mauritania 4.2, Lesotho 2.7, Nigeria 1.4
Inctax: Taxes on income and profits, % of gov't revenue, 1997	66.1	Angola 86.9, Congo Rep. 61.5, S. Africa 49.8
Trdtax: Taxes on trade and int'l trans. as % of gov't revenue, 1997	5.8	S. Africa 3.4, Angola 5.6, Congo Rep. 8.5
Indtax: Indirect (sales, excise) taxes as % of gov't revenue, 1997	18.2	Angola 10.7, Benin 18.4, Gabon 25.6

	Budget	Score	Inctax	in	Score	Trdtax	Score	Indtax	in	Score
Algeria	1	7	31.4	3.4468	4	13.9	6	66.8	4.2017	1
Angola	-17.8	3	86.9	4.4647	8	5.6	7	10.7	2.3702	10
Benin	-4.2	6	23.5	3.1570	3	45.5	1	18.4	2.9123	7
Botswana	-2	6				12.3	6	53.5	3.9796	2
Burkina Faso	-8.2	5	20.9	3.0397	2	46.9	1	69.1	4.2355	1
Burundi	-6.1	5	23	3.1354	3	24	4	66	4.1896	1
Cameroon	-1.2	6	13.7	2.6173	1	17.3	5	52.4	3.9589	2
Cape Verde	-27.7	1	27.8	3.3250	3	41.8	2	47.2	3.8543	2
Cent.A.R.	-6.5	5	19.3	2.9601	2	38	2	74.9	4.3161	1
Chad	-9.9	4	32.8	3.4904	4	30.3	3	55.2	4.0109	1
Comoros	-12.5	4	11.2	2.4159	1	43.1	2	82.1	4.4079	1
Congo D.R.	-14.4	4	22	3.0910	2	23.1	5	78	4.3567	1
Congo Rep.	-7.7	5	61.5	4.1190	7	8.5	7	34.1	3.5292	4
Cote D'Ivoire	-2.8	6	22.9	3.1311	3	36.5	3	60.9	4.1092	1
Djibouti	-5.8	5	41	3.7135	5			46.5	3.8394	2
Egypt	-0.9	6	22.5	3.1135	3	12.6	6	40.3	3.6963	3
Equat. Guinea	-1.1	6	61.9	4.1255	7	19.8	5	30.9	3.4307	4
Eritrea	-13.2	4	22.8	3.1267	3	15.2	6	26	3.2580	5
Ethiopia	-4.9	5	23.9	3.1738	3			43.1	3.7635	3
Gabon	6	8	10.7	2.3702	1	18.8	5	25.6	3.2425	5
Gambia	-7.8	5	23.1	3.1398	3	59.3	1	68.3	4.2239	1
Ghana	-11.1	4	24.8	3.2108	3	27.2	4	59.8	4.0910	1
Guinea	-5.9	5	9.5	2.2512	1	45.4	1	41.8	3.7328	3
Guinea Bissau	-30.9	1	8.4	2.1282	1	28	4	43.8	3.7796	3
Kenya	-2.9	6	32.3	3.4750	4	14.1	6	53.4	3.9778	2
Lesotho	2.7	7	15.1	2.7146	1	50.4	1	62.9	4.1415	1
Liberia										
Libya										
Madagascar	-7.8	5	18.7	2.9285	2	52.9	1	78	4.3567	1
Malawi	-7.6	5	37.5	3.6243	5	36.9	3	57.4	4.0500	1
Mali	-7.8	5	20.3	3.0106	2	49	1	65.2	4.1774	1
Mauritania	4.2	7	19.3	2.9601	2	12	6	38.7	3.6558	3
Mauritius	-5.2	5	19.6	2.9755	2	34.3	3	66.6	4.1987	1
Morocco	-3.3	6	24.7	3.2068	3	27.6	4	61.9	4.1255	1
Mozambique	-14.2	4	19.2	2.9549	2	17.7	5	73.2	4.2931	1
Namibia	-4.7	5	28.7	3.3568	4	29.9	4	60	4.0943	1
Niger	-6.1	5	21.1	3.0492	2	47.7	1	64.9	4.1728	1
Nigeria	1.4	7								
Rwanda	-11.2	4	24.6	3.2027	3	32.1	3	70.1	4.2499	1
Sao T. & Principe	-54.5	1	35.5	3.5695	4	11.8	6	34.4	3.5380	4
Senegal	-1.5	6	21.8	3.0819	2	30	4	72.7	4.2863	1
Seychelles										
Sierra Leone	-7.4	5	17.1	2.8390	1	42.2	2	79	4.3694	1
Somalia										
South Africa	-5.2	5	49.8	3.9080	6	3.4	7	37.4	3.6216	3
Sudan										
Swaziland	-2.8	6	27.2	3.3032	3	51.1	1	63.4	4.1494	1
Tanzania	-1.6	6	34.7	3.5467	4	30.4	3	55.2	4.0109	1
Togo	-3.4	6	26.7	3.2846	3	44.3	1	63.3	4.1478	1
Tunisia			18.3	2.9069	2	15.2	6	59.1	4.0792	1
Uganda	-6	5	14	2.6390	1			80.1	4.3832	1
Zambia	-7.1	5	31.8	3.4594	4	28.2	4	62.9	4.1415	1
Zimbabwe	-9.6	4	47	3.8501	6	16.7	5	44.3	3.7909	3

Bold indicates 1996 data

ANNUAL PERFORMANCE TREND INDEX

	Per Capita GDP Growth 1998	Score	Change in Inflation. 1998	Score	Change in Curr. Acc't Bal. 1998	Score	Annual Performance Trend Index. 1998
Algeria	.4%	2.3	....	-2.7	-6.3	-7.3	-3.8
Angola	-4.8%	-6	-27.8	3.1	-5.7	-5	-5.5
Benin	.5%	2.7	-0.5	1.2	0.0	0	1.4
Botswana	-7%	-9	1.2	-0.4	-10.6	-9.3	.5
Burkina Faso	2.2%	1.5	-5.3	-1	.3	1.6	2.7
Burundi	1.4%	2.3	-22.0	4.2	-4.3	-3.8	2
Cameroon	1.4%	1.9	2.6	-5.2	-1.1	-1	1.7
Cape Verde	1.3%	0.5	-5.3	1.1	0.7	0.6	1.4
Cent.A.R.	3.3%	3.5	-.3	-5.6	-1.8	-1.6	2.2
Chad	5.1%	5.1	-1.3	5.4	3.0	2.6	3.3
Comoros	-4.2%	-7	-5.2	3.1	2.2	1.9	-3
Congo D.R.	-5.1%	-5.1	-56.0	-0			-0.1
Congo Rep.	5.2%	3.6	2.4	-0.8	1.7	1.5	1.5
Cote D'Ivoire	3.6%	5.9	-2.6	2.9	0.7	0.6	3.3
Djibouti	-1.0%	-1.6			-2.0	-1.8	-2.4
Egypt	3.6%	5.9	2.0	0	-0.2	-0.2	2.9
Equat. Guinea	12.0%	10	2.2	-0.7			6.4
Ethiopia	-2.7%	-4.5	-0.2	5.1	-0.4	-0.4	-2.3
Gabon	-0.8%	-1.3	0.4	-5.1	-3.5	-3.1	-1.4
Gambia	1.6%	2.7	-1.0	0.3	1.0	0.9	1.7
Ghana	0.9%	1.6	-5.7	1.9	2.0	1.8	1.7
Guinea	2.2%	7	-0.6	0.2	0.5	0.4	3.7
Guinea Bissau	5.5%	5.3	-14.7	1.0	-9.6	-8.4	3.3
Kenya	.5%	2.9	2.6	-0.2	0.7	0.6	0.6
Lesotho	.3%	1.2	2.8	-0.9	-9.0	-7.9	1.4
Libya	-3.8%	-6.3	-16.2	5.3	-7.3	-6.4	-3.4
Madagascar	1.3%	1.5	4.0	-1.3	-1.1	-1	-0.3
Malawi	1.1%	5	16.9	-5.8	-5.4	-4.7	-2.5
Mali	2.3%	3.8	1.6	-5.5	1.6	1.4	2.1
Mauritania	0.4%	0.7	2.6	-5.8	-0.5	-0.4	0
Mauritius	5.2%	3.7	2.2	-0.7	1.9	1.7	4.6
Morocco	1.6%	7.7	1.2	-0.4	-1.7	-1.5	3.4
Mozambique	5.5%	5.8	1.3	-0.4	-3.7	-3.2	2
Namibia	2.0%	3.3	-1.8	0.6	0.1	0.1	1.8
Niger	0.0%	0	1.2	-0.4	-0.3	-0.3	-0.1
Nigeria	-0.5%	-0.8	-.4	-2.4	-10.7	-9.4	-3.3
Rwanda	-3.8%	-6.4	5.1	-2.6	-1.2	-1.1	-4.1
Sao T. & Principe	1.1%	1.9	-4.1	0.7			1.5
Senegal	2.2%	3.7	.3	-5.1	0.1	0.1	1.8
Seychelles	-3.4%	-5.7	-.5	-0.5			-3.9
Sierra Leone	-2.2%	-3.6	53.8	-10	5.4	4.7	-3.1
South Africa	-1.4%	-2.3	-2.2	0.7	0.6	0.5	-0.8
Sudan	5.6%	9	-15.0	4.9	-0.8	-0.7	4.1
Swaziland	-2.3%	-3.8	-10.3	3.4	-3.1	-2.7	-1.8
Tanzania	2.8%	4.6	-3.1	1	-2.2	-1.9	2.1
Togo	3.2%	5.3	-0.6	0.2	0.0	0	2.7
Tunisia	2.6%	4.4	1.0	0	-1.0	-0.9	2
Uganda	1.4%	2.4	-2.0	0.7	-2.5	-2.2	0.8
Zambia	2.9%	4.9	.3	-1.6	-5.7	-5	0.8
Zimbabwe	.4%	2.3	.1	-0.1	0.7	0.6	0.8