

Impact of English Proficiency on National Prosperity: Comparative Study on the Outer Circle and the Expanding Circle

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Abstract

English has become an international language, with a large number of governments promoting its study for national prosperity and economic development. However, there have been only a few empirical studies concerning the impact of English proficiency on the economic development of their countries. These studies utilized some economic development indicators such as GDP, GDP per capita, as well as GDI. They also adopted various English proficiency indicators: average TOEFL scores, average EF Standard English Test scores, and a comparison of the Outer Circle and the Expanding Circle. They focused on the influence of English proficiency on economic development and foreign trade, but not on prosperity. Results in this field significantly change depending on the types of indicators; therefore, further research is necessary with various indicators to draw a more complete picture. This study adopted the Legatum Prosperity Index as a prosperity measurement and compared the Expanding Circle and the Outer Circle with a t-test. The result showed that the former was superior to the later. The study further investigated the situation in Asia and Africa, since these regions have a significant number of Outer-Circle countries. The research outcome indicated that there was no significant statistical difference between the two circles in these regions. These results suggest that having a large number of those who have high English proficiency does not always lead nations to prosperity. Furthermore, they imply that both educational policymakers and practitioners need to be aware that there are factors other than English which could lead a nation to prosperity. Future research could also be warranted: It is interesting to analyze the difference between the two circles by paying attention to each category of the Legatum Prosperity Index. Another avenue is to conduct the same research with newer data.

Keywords: prosperity, English proficiency, outer circle, expanding circle

Introduction

Many governments are now promoting the teaching and studying of English as an international language, intending to promote national prosperity and economic development (Seargeant & Erling, 2013). Previous research (Arcandi & Grin, 2013; Azam, Chin, & Prakash, 2010; Erling, Seargeant, Solly, Chowdhury, & Rahman, 2015; McCormick, 2013; Ozaki, 2018) has investigated whether people's high English proficiency positively influences economic development, and various results have emerged. Overall, as Ferguson (2013) notes, the relationship between English and economic development is "contested and controversial" (p. 21). Research on the relationship between language and development became very active only in the late 1990s (Seargeant & Erling, 2013), and research results vary depending on research methods, especially types of English-proficiency and economic-development indicators adopted for research (Ozaki, 2018). The outcomes of such research are highly significant for future economic development and prosperity since if the language alone does not positively affect the development and prosperity status of nations, other factors need to be identified.

While some studies have investigated whether the relationship between English proficiency and economic development, I have not been able to find any research on the relationship between English proficiency and prosperity. Therefore, this study focuses on this issue by comparing the Outer Circle—a high English proficiency group— and Expanding Circle —a low English proficiency group—based on the Legatum Prosperity Index as a prosperity measurement.

The following section reviews related literature, which explains the previous research in this field and leads to the following aspects of the present research: a conceptual framework, specific research questions, and methods.

Literature Review

This section serves three purposes: Firstly, it reviews previous research on the relationship between English proficiency and economic development. The reason is that economic development is one of the elements of the Legatum Prosperity Index and there is little existing research concerning the relationship between English proficiency and the prosperity of nations other than this criterion. Secondly, it explains the Outer-Circle and Expanding Circle. Finally, it attempts to define prosperity and explains the Legatum Prosperity Index.

Previous Research on English and Economic Development

This section reviews previous studies in the field to lead this study to the exact research questions and methods.

Ku and Zussman (2010) found a correlational relationship between average TOEFL scores and the promotion of foreign trade in over 100 countries with a majority population of non-native English speakers. This result is understandable as English is the primary language used for international trade. However, trade alone can only partially contribute to the economic development of an entire country. Therefore, this study does not reveal whether English proficiency results in economic development in a given country.

Lee (n.d.) investigated the relationship between average TOEFL scores and three economic growth indicators in 43 countries: “average growth rate of real GDP per worker,” “average investment rate in physical capital (investment share of GDP),” and “real GDP per worker” (p.6). He concluded that English proficiency affected the economic growth of Asian and European countries but not on the growth of Latin American and African countries. This may be explained by the fact that Asian and European countries, unlike Latin American and African countries, had “sufficient accumulation of physical capital, technology and social capital,” which is crucial to economic development in addition to English (Lee, n.d., p.20). The result of his study suggests that research in this field should specifically focus on different regions as well as the whole world.

Arcandi and Grin (2013) investigated the correlation between average TOEFL scores and GDP per capita in postcolonial Sub-Saharan Africa and Asia. They found that English did not have an impact on economic development, although wide-spread local languages did. Thus, they concluded that “English isn’t special in terms of economic development or growth” (p. 22). However, it is not reasonable to use average TOEFL scores as an indication of English proficiency, since these scores do not accurately represent the average English proficiency of a country’s population due to the very small number of test-takers (Ozaki, 2018).

In another study, EF, a global language training company, utilized the English Proficiency Index (EPI), which was developed based on their English proficiency test called the EF Standard English Test (EF SET®). They found a correlation between English proficiency and economic development as indicated by the EPI and GNI as well

as GDP (McCormick, 2013). The drawback of this study is the imprecision of this English proficiency and economic development indicators: The number of test-takers is too small, and it measures only reading and listening skills; therefore, the average test score does not accurately represent the average English proficiency of people in the investigated countries (Boas, 2015). Although the test follows the six levels of CEFR from A1 to C2 (Education First, 2018a), it is not widely recognized, and the test score is not adopted as a qualification or requirement for job or study opportunities. It is for this reason that the number of test-takers is extremely small. According to Education First (2018b), which administers this test, in 2018 only 1.3 million people took the test in 88 countries, which were fewer than half of the countries in the world, and there were fewer than 400 test-takers in some countries. Furthermore, GNI and GDP are significantly influenced by population size; therefore, they do not accurately indicate the economic development of nations (Ozaki, 2018).

Ozaki (2018) criticized the use of the average English proficiency test score as an English proficiency indicator. There is no English proficiency test the average score of which accurately represents the entire population's average English proficiency in diverse countries in the world, although some countries may have a test whose average score can show the average English proficiency of the only people living in those countries. Based on this criticism, Ozaki (2018) used a comparison between the Outer Circle and Expanding Circle as an English proficiency indicator. Also, he adopted two different types of GDP per capita and poverty lines as economic development indicators. According to Kachru (1985), the spread of English can be explained with three concentric circles: the Inner Circle, the Outer Circle, and the Expanding Circle. The Inner Circle includes countries where the majority of people use English as their mother tongue or first language (White, 1997). The Outer Circle consists of countries where English is an important second language in a multilingual setting (Rajadurai, 2005). Since citizens of these countries have many opportunities to use English in their everyday lives, as an official language, a second language, and/or a medium of instruction, they generally have high English proficiency. In contrast, in the Expanding Circle, people study English only as a foreign language (White, 1997), which means that they usually learn the language only at school and do not use the language in their daily lives. Therefore, their average English proficiency is typically not as high as the Outer Circle population's. Ozaki (2018) found that the Expanding Circle was economically more developed than the Outer Circle, and he discussed implications from the perspectives of economic development and education, in addition to research methodology.

This approach is more valid than the adoption of the average score of an English proficiency test. The reason is that the comparison of the two circles more accurately represents the entire population's average English proficiency, even though it is not a perfect measurement. As Ozaki (2018) explains: English proficiency differs from person to person and country to country in both circles (Ozaki, 2018). For instance, some Expanding-Circle countries may have many people with very high English proficiency.

In conclusion, previous studies in this field have indicated different results depending on the types of both economic-development and English proficiency indicators, as well as the countries or areas of the world they investigated. Another significant finding through the literature review is that only the relationship between English proficiency and economic development has been investigated. Nevertheless, the relationship between English proficiency and prosperity has not been researched yet.

Definition of Prosperity and the Legatum Prosperity Index

Dictionary definitions of prosperity are “the state of being successful, especially in making money” (Oxford Advanced Learners’ English Dictionary 8th edition, electronic version, n.d., no page number), “when people have money and everything that is needed for a good life” (Longman Dictionary of Contemporary English 5th edition, electronic version, n.d., no page number), and “a condition in which a person or community is doing well financially” (Collins Advanced Dictionary of English, electronic version, n.d., no page number). In conclusion, when people or countries have sufficient money to lead a good life, they are prosperous, and in this sense, prosperity seems synonymous with economic development. Among common economic development measurements the sums of GDP per capita figures, especially GDP per capita (PPP) rather than GDP per capita (nominal), and the percentages of people below poverty lines for the Outer-Circle countries and External-Circle countries respectively could be used as operational definitions (Ozaki, 2018). Although some researchers adopted GDP (Arcandi & Grin, 2013; McCormick, 2013) and GNI (McCormick, 2013), these are strongly influenced by population size and do not always show the average economic status of the individuals living in a country. For example, although China’s GDP was the second-highest in the world in 2018 (Statistics Times, 2019a), its GDP capita (PPP) was as low as the 79th place (Statistics Times, 2019b). Nevertheless, the question remains: What is a good life? Thus, the definition of prosperity is still ambiguous. That being the case, this study uses the Legatum Prosperity Index as a prosperity measurement, since it was established through the rigorous methodology.

The Legatum Institute created the Legatum Prosperity Index (Legatum Institute, 2017a), which is “a framework that assesses countries on the promotion of their citizens’ flourishing, reflecting both wealth and wellbeing across nine pillars of prosperity” (Legatum Institute, 2017b, p. 1). In other words, this index covers both money and good life aspects, the latter of which was the problem concerning the dictionary definitions. It covers 149 countries and includes nine pillars, each of which comprises various variables: “economic quality,” “business environment,” “governance,” “personal freedom,” “social capital,” “society and security,” “education,” “health,” and “natural environment” (Legatum Institute, 2017b, p. 8). Each country is scored in each of the nine criteria, with a highest possible score of 100. Furthermore, the countries were ranked based on the mean of the total scores allotted to the nine areas.

Present Study

This section explains the details of the current study, such as the conceptual framework, research questions, and methods that were determined based on the literature review.

Conceptual Framework and Research Questions

The underlying theme of the research is the power of language over people’s life; the more specific question is whether or not high proficiency in English, which is a very powerful international language, positively influences nations’ prosperity. There is no existing research on whether English is related to comprehensive prosperity. However, there has been some research on the relationship between English proficiency and economic development, as the Literature Review Section discussed. This study adopted Ozaki’s (2018) study as its conceptual framework. He claims that the key to valid research in this field is the selection of appropriate English proficiency and economic development indicators; research results significantly vary according to research methods. The study conducted by him had two constructs: English proficiency and economic development.

The operational definitions of the former were the Outer Circle and the Expanding Circle, and those of the latter were GDP per capita and poverty lines. The present research adopted the first construct and its operational definitions used in his research since there are no language tests that can describe the average English proficiency of people from a large number of countries of both the Outer Circle and Expanding Circle, as Ozaki (2018) stated. Some other studies attempted to investigate the correlation between English proficiency and economic development (see Literature Review), which seems to be an attainable goal since no test can rank a large number of countries in the world based on their people's average English proficiency. Concerning the second construct, the focus of the present research is not on economic development but prosperity. Therefore, it selected the Legatum Prosperity Index scores as the operational definition, for the Index comprehensively evaluates the prosperity of as many as 149 countries. This study compared the mean prosperity scores of the Expanding-Circle and Outer-Circle countries, and the more details are given in the Research Methods section.

Based on the literature review and the above-mentioned conceptual framework, the following two research questions were formed:

1. Which countries are more prosperous around the globe, Expanding-Circle countries, or Outer-Circle countries?
2. Which countries are more prosperous in Asia-Pacific and Sub-Saharan Africa, Expanding-Circle countries, or Outer-Circle countries?

The second question focuses on only Asia-Pacific and Sub-Saharan Africa, since these regions have a significant number of outer-circle countries, unlike the other regions such as Europe, North America, Central America, South America, the Middle East, and North Africa.

Research Methods

To answer the research questions, the first step of this research was to create the lists of Expanding-Circle and Outer-Circle countries. First, I deleted the six English-speaking countries, which were suggested by Crystal (2003), from the list of countries on the 2017 Legatum Proficiency Index (Legatum Institute, 2017a). It should be noted that the 2018 edition was not yet available at the time of conducting this research; therefore, the research utilized the 2017 edition, which is no longer accessible on the Legatum Institute website, as the data were replaced with the 2018 edition. After the completion of this article, the 2018 edition appeared on their website. I then divided the remaining countries into Outer-Circle and Expanding-Circle countries (Appendix A) using the lists of outer-circle countries created by Crystal (2003) and Ozaki (2018). When these procedures were completed, I compared these two types of countries in terms of the Legatum Prosperity Index scores with an independent samples t-test. I also compared the two circles in Asia-Pacific (Appendix B) and Sub-Saharan Africa (Appendix C) by using the same method. Also, the effect size *eta squared* was calculated to examine the magnitude of the difference when the difference was statistically significant, as suggested by several scholars (Brown, 2016; Field, 2005; Ishii, 2005; Pallant, 2005; Turner, 2014). Among various types of effect size measurements, eta squared is recommended by Hatch and Lazaraton (1991) and Pallant, (2005). Eta squared ranges between 0 and 1 (Mujis, 2004, p. 194), and its interpretation varies from literature to literature: “0.02 = small, 0.13 = medium, 0.26 = large” (Draper, 2019, table 2); “0 – 0.1 = weak effect, 0.1 – 0.3 = modest effect, > 0.5 = strong effect” (Mujis, 2004, p. 195) “.01 = small effect, .06 = moderate effect, .14 = large effect” (Pallant, 2005, p. 209);.

Results

This section presents the results of independent samples t-tests in terms of the whole world, Asia-Pacific, and Sub-Saharan Africa. Statistical results are shown in the way suggested by Pallant (2005).

An independent samples t-test was conducted to compare the prosperity scores of all the Expanding-Circle countries and Outer-Circle countries that were included in this study. The mean score of the former was higher than that of the latter, and there was a significant difference in scores for the former ($M = 58.99$, $SD = 9.60$) and the latter ($M = 52.02$, $SD = 5.26$); $t(71.66) = 5.01$, $p = .01 < .05$. Besides, the magnitude of the difference in the means was at least modest or medium ($\eta^2 = .163$). This means that the former countries were more prosperous than the latter.

An independent samples t-test was conducted to compare the prosperity scores for Expanding-Circle countries and Outer-Circle countries in Asia-Pacific. There was no significant difference in scores for the former ($M = 55.18$, $SD = 5.20$) and the latter ($M = 59.51$, $SD = 8.73$); $t(11.69) = -1.50$, $p = .08 > .05$. This means that the former and latter countries were not different in terms of prosperity.

An independent samples t-test was conducted to compare the prosperity scores for Expanding-Circle countries and Outer-Circle countries in Sub-Saharan Africa. There was no significant difference in scores for the former ($M = 46.15$, $SD = 4.72$) and the latter ($M = 52.42$, $SD = 6.35$); $t(34.45) = -3.44$, $p = .40 > .05$. This means that the former and latter countries were not different in terms of prosperity.

Discussion

This section commences by answering the research questions of this study in detail. It then discusses the answers, implications as well as limitations of this research, and recommendations for future research.

Answers to the Research Questions

The two research questions of this study are as follows:

1. Which countries are more prosperous around the globe, Expanding-Circle countries, or Outer-Circle countries?
2. Which countries are more prosperous in Asia-Pacific and Sub-Saharan Africa, Expanding-Circle countries, or Outer-Circle countries?

In response to question one, Expanding-Circle countries were found to be more prosperous than Outer-Circle countries. Although outer-circle countries are generally considered to have a larger number of people with a good command of English, their average prosperity score was lower than their Expanding-Circle counterparts'.

In response to question two, the mean prosperity scores of the Expanding-Circle and Outer-Circle countries did not differ in Asia-Pacific and Sub-Saharan Africa, perhaps because most of the countries in these regions were not very prosperous, while the situation is much more diverse worldwide.

Discussion on the Answers

The first answer suggests that English does not always lead a nation to prosperity and corroborates Ozaki's (2018) study on the relationship between English proficiency and economic development. In contrast, it contradicts the results of Lee's (n.d.) and McCormick's (2013) studies, possibly because they adopted a wrong English proficiency indicator, which is average TOEFL scores, and used GDP or GNI as an economic development indicator. Research results in this field may differ significantly depending on

the research methods used, particularly operational definitions such as the types of economic development and English proficiency indexes employed (Ozaki, 2018).

The second answer also suggests that English does not always lead a country to prosperity, although it cannot be compared to Ozaki's (2018) research results since his research did not pay attention to different areas of the world. However, the mean proficiency score of the Outer Circle was higher than that of the Expanding Circle in both Asia-Pacific and Sub-Saharan Africa, even though the difference in mean scores was not statistically significant. In the future, the gap might become wider and statistically significant if outer-circle countries become more prosperous due to a large number of people with high English proficiency.

These results imply that language is not always powerful enough to improve people's life. More specifically, high proficiency in a very powerful international language English does not positively influence nations' prosperity. There exist "factors other than English proficiency, for example, stable politics, quality education, advanced technology, diligent and highly skilled workers, or natural resources, which may be more important than the English language" (Ozaki, 2018, p. 52). Physical and social capital is also important (Lee, n.d.). Ozaki (2018) notes that language is merely a set of symbols (Klopf, 2001) and sounds, which are not very useful without any specific knowledge, non-language skills, and/or well-developed cognitive abilities.

Furthermore, the negative effects of educating children in English, which is not their L1, have been reported, although such education significantly improves the whole population's English proficiency. Minority language students who received education in their first language achieved higher academic goals than those who were educated in a second or third language (Ramirez, Yuen, & Ramey, 1991; Thomas & Collier, 1997; Walter & Dekker, 2011). Moreover, a study conducted in Pakistan found that adopting English as the medium of instruction led to a high illiteracy rate due to a lack of qualified teachers and resources, particularly in rural areas (Melitz, 2008). National illiteracy rates generally correlate with low economic and social development (Ricento, 2015). Finally, in Zambia, using English as the educational language was found to negatively influence primary students' reading and arithmetic skills (Rassool, 2013).

Both English education policy-makers and practitioners need to consider these findings and improve English language education to ensure that it contributes to national prosperity.

Limitations and Recommendations for Future Research

This research has two limitations: Firstly, it did not compare the two concentric circles regarding each of the nine pillars of the Legatum Prosperity Index. If this had been done, more details concerning the relationship between English proficiency and prosperity would have been revealed. Therefore, such research is the next step in this research field. Secondly, the Index is renewed annually, and further research with newer data may lead to different results.

Conclusion

This study investigated the relationship between English proficiency and the prosperity of countries by comparing Expanding-Circle and Outer-Circle countries based on the Legatum Proficiency Index. The results demonstrated that Expanding-Circle countries were globally more prosperous than outer-circle countries, although there was no difference between them in Asia-Pacific and Sub-Saharan Africa.

The results of this research and the previous studies in related fields suggest that English alone does not bring prosperity to a nation. Therefore, the non-language factors

mentioned in this article should be incorporated into the teaching of English as an international language to relate the language to national prosperity.

Finally, a comparison of the two circles from the viewpoint of each of the nine pillars of the Legatum Prosperity Index would reveal more details of the relationship between English proficiency and prosperity. It would also be interesting to conduct the same study by using a newer edition of the Legatum Prosperity Index since such research might show a different tendency.

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Appendices

Appendix A: World Prosperity Index

Rankings	Expanding Circle		Outer Circle	
	Countries	Score	Countries	Score
1	Norway	79.85	Singapore	73.53
2	Finland	78.46	Malta	70.66
3	Switzerland	77.64	Hong Kong	69.83
4	Sweden	77.59	Mauritius	65.90
5	Netherlands	77.33	Malaysia	63.69
6	Denmark	77.06	Trinidad and	62.44
7	Germany	76.41	South Africa	61.11
8	Iceland	76.06	Sri Lanka	61.00
9	Luxembourg	75.71	Jamaica	60.46
10	Austria	75.24	Dominican	60.23
11	Belgium	74.24	Botswana	59.55
12	France	72.01	Philippines	59.33
13	Spain	71.42	Namibia	58.64
14	Slovenia	71.31	Guyana	57.91
15	Japan	70.40	Belize	57.44
16	Portugal	69.55	Ghana	56.61
17	Czech Republic	69.24	Rwanda	56.50
18	Estonia	69.16	Nepal	56.18
19	Uruguay	67.40	Kenya	54.50
20	Costa Rica	66.69	India	54.38
21	Italy	66.20	Zambia	53.91
22	Cyprus	66.17	Tanzania	53.59
23	Poland	66.08	Malawi	52.68
24	Chile	66.04	Bangladesh	52.17
25	Slovakia	65.50	Lesotho	51.71
26	South Korea	65.36	Uganda	50.93
27	Latvia	65.35	Zimbabwe	50.37
28	Israel	65.32	Sierra Leone	49.08
29	United Arab Emirates	64.36	Nigeria	48.20
30	Panama	64.19	Cameroon	48.20
31	Lithuania	63.69	Swaziland	48.13
32	Croatia	63.48	Liberia	48.10
33	Hungary	62.30	Ethiopia	46.80
34	Romania	62.05	Pakistan	45.52
35	Qatar	62.00	Burundi	43.76
36	Argentina	61.78	Sudan	38.39
37	Greece	61.64		
38	Suriname	61.29		
39	Bulgaria	61.20		
40	Brazil	60.64		
41	Macedonia	60.31		
42	Serbia	60.20		
43	Indonesia	60.18		
44	Peru	60.03		
45	Mexico	59.97		

	Expanding Circle		Outer Circle	
46	Bahrain	59.61		
47	Montenegro	59.04		
48	Colombia	58.93		
49	Thailand	58.91		
50	Mongolia	58.65		
51	Paraguay	58.64		
52	Ecuador	58.33		
53	Kazakhstan	58.14		
54	Oman	58.06		
55	Albania	57.89		
56	Bolivia	57.62		
57	Vietnam	57.52		
58	Saudi Arabia	57.51		
59	Kuwait	57.41		
60	Honduras	57.29		
61	Kyrgyzstan	57.08		
62	Nicaragua	56.94		
63	Georgia	56.93		
64	Guatemala	56.65		
65	Turkey	56.28		
66	China	55.83		
67	El Salvador	55.47		
68	Jordan	55.28		
69	Cambodia	55.27		
70	Tunisia	55.21		
71	Belarus	55.09		
72	Armenia	54.83		
73	Morocco	54.65		
74	Moldova	54.61		
75	Russia	54.28		
76	Tajikistan	53.99		
77	Lebanon	53.57		
78	Azerbaijan	53.33		
79	Senegal	53.20		
80	Laos	53.09		
81	Djibouti	52.33		
82	Ukraine	51.75		
83	Burkina Faso	51.75		
84	Algeria	50.82		
85	Iran	50.65		
86	Egypt	49.99		
87	Ivory Coast	49.54		
88	Mozambique	49.48		
89	Gabon	49.16		
90	Madagascar	49.15		
91	Togo	48.50		
92	Comoros	48.41		
93	Venezuela	47.87		

	Expanding Circle		Outer Circle	
94	Mali	47.17		
95	Congo	46.67		
96	Libya	45.54		
97	Guinea	45.06		
98	Niger	44.69		
99	Angola	42.21		
100	Iraq	40.60		
101	Democratic Republic of	40.59		
102	Mauritania	40.58		
103	Chad	39.59		
104	Afghanistan	38.76		

Appendix B: Asia-Pacific Prosperity Index

	Expanding Circle		Outer Circle	
Rankings	Countries	Scores	Countries	Scores
1	Japan	70.40	Singapore	73.53
2	South Korea	65.36	Hong Kong	69.83
3	Indonesia	60.18	Malaysia	63.69
4	Thailand	58.91	Sri Lanka	61.00
5	Mongolia	58.65	Philippines	59.33
6	Kazakhstan	58.14	Nepal	56.18
7	Vietnam	57.52	India	54.38
8	Kyrgyzstan	57.08	Bangladesh	52.17
9	Georgia	56.93	Pakistan	45.52
10	China	55.83		
11	Cambodia	55.27		
12	Armenia	54.83		
13	Tajikistan	53.99		
14	Azerbaijan	53.33		
15	Laos	53.09		
16	Afghanistan	38.76		

Appendix C: Sub-Saharan Africa Prosperity Index

	Expanding Circle		Outer Circle	
Rankings	Countries	Scores	Countries	Scores
1	Senegal	53.20	Mauritius	65.90
2	Burkina Faso	51.75	South Africa	61.11
3	Benin	50.37	Botswana	59.55
4	Ivory Coast	49.54	Namibia	58.64
5	Mozambique	49.48	Ghana	56.61
6	Gabon	49.16	Rwanda	56.50
7	Madagascar	49.15	Kenya	54.50
8	Togo	48.50	Zambia	53.91
9	Mali	47.17	Tanzania	53.59
10	Congo	46.67	Malawi	52.68
11	Guinea	45.06	Lesotho	51.71
12	Niger	44.69	Uganda	50.93
13	Angola	42.21	Zimbabwe	50.37

	Expanding Circle		Outer Circle	
14	Democratic Republic of	40.59	Sierra Leone	49.08
15	Mauritania	40.58	Nigeria	48.20
16	Chad	39.59	Swaziland	48.13
17	Central African Republic	36.87	Liberia	48.10
18			Ethiopia	46.80
19			Burundi	43.76
20			Sudan	38.39