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Title: The Measure of America

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URL: <http://map.measureofamerica.org>

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THE CONTEXT

I regularly use and review statistical databases, and I particularly like those that rank and compare countries by certain measures. Still, I somehow missed the publication of the book "The Measure of America", in July, 2008. Luckily, the December 1 issue of TIME magazine had the cover story about the "[Sorry State of American Health](#)", with a series of splendid graphic inserts "[5 Truths About Health Care in America](#)", which whetted my appetite for further details. We heard too many rhetoric claims during the presidential campaign, but none of them had the kind of clear and powerful arguments that this article presented, especially the enlightening graphical representation of the rather depressing data, the superb work of the TIME illustrator, Jackson Dykman. The book itself was merely acknowledged in a tiny footnote, but it was sufficient to lead me to the Web site of the [American Human Development Project](#).

There are many other Web sites that provide a wide variety of statistics about hundreds of measures of the state of the union, and state of the states. I must not be alone in getting sick and tired of hearing every evening the status of the Dow Jones, Nikei and other indexes. Only those may feel more sick and tired who had some money, or their home at stake while the incompetent managers of the despicable banks, financial institutions and [insurance](#) companies were bailed out with our tax money. It was refreshing to learn something factual about the human development in this country.

For quite some time there have been some useful, freely accessible data sources about human developments in the United States, but "The Measure of America" book and the Web database brought important novelties. The U.S. Census Bureau's [QuickFacts](#) pages provide the most often needed and most current statistics at the country, state and county levels. Beyond the demographic data, there are information about the educational attainment, housing, business and income of the population at various levels of aggregation. The American [FactFinder](#) site of the Bureau provides a broader and deeper source of statistical information on economic and demographic data. Recently, its scope was extended to cities and towns with populations of more than 25,000 people – which is laudable. The visually more appealing [WorldAtlas](#) with excellent universal coverage has a Fast Facts section about each states, and these include some essential statistics, but the statistical data are not in a tabular format and are not comparable among states.

None of the above resources offer substantial health-related statistics. The best source for such information is the CDC, the Centers for Disease Control and Prevention, especially –but not exclusively– through the [National Center for Health Statistics](#).

Although there are many unique statistics, most of them require the lengthy downloading and installation of the huge Beyond 20/20 ProBrowser software, which is not sufficiently intuitive, and not state of the art. Many users may not even be able to download and install it because of security restrictions at an increasing number of PCs in public libraries and offices.

Somewhat surprisingly, it is a non-governmental organization, the Kaiser Family Foundation that offers the most innovative, readily accessible, interactive health statistics, the [State Health Facts](#) that I reviewed [last month](#). [FirstGov](#) and [FedStats](#) are good portals and gateways for statistical information but don't offer aggregate versions of the statistics.

There have been many efforts to come up with a magic single number that could offer summative and universally comparable measure of the well-being of countries and their citizens, instead of, or in addition to using the Gross National Product per capita as a proxy measure. An extreme example for this is the Gross National Happiness measure, coined by the late king of Bhutan in 1972. (Extreme as it may be, it is useful, and I will wish my readers Happy New Year reviewing the Happiness-index related digital sources in the December issue of my column).

As for a human development index, a weighted mix of health and wealth indicators there is the Human Development Report (HDR) which has been published by UNDP, the United Nations Development Program (UNDP) every year since 1990. I should say used to be published annually, because this year there will be no new edition, the last one came out with title Human Development report 2007/2008. I reviewed that most [current edition](#) a few months ago.

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THE CONTENT

The American Human Development Report (AHDR) was modeled after the HDR, but it is much deeper than the UNDP version. It is the equivalent of an MRI-based diagnosis versus diagnosis based on a lung screening. Not accidentally, two of the three main [researchers and authors](#) worked on the HDR project at the UNDP, and it shows in the competent use and interpretation of the data collected from U.S. government sources for the AHDR, such as the decennial census and the series of American Community Survey of the Census Bureau, and the statistics collection of CDC.

The birds' eye view data have been provided for almost two decades by an increasing number of countries (177 in the most current version) to create the yearly HDR by UNDP. The Human Development Index (HDI) has been widely used in many arguments, in pleas for funding, and in warnings where a country is heading to. Indeed, it is sobering to see that the U.S. which used to be ranked second in 1995 (and in the retroactively created 1980 and 1985 editions), steadily lost its [position](#) throughout the years and is now ranked #12.

However, what one can see in the macro and micro-level data for the U.S in AHDR at the [state](#) and [congressional district levels](#), respectively, it is much more specifically sobering for politicians, administrators and for anyone who cares to have less disparity between states and especially between congressional districts.

I think it was a very smart idea to collect, process and present the data at the congressional district level rather than the county level, because they can be directly used to "whip" the congressmen and congresswomen to get financial resources to alleviate the most serious shortcomings that make a district's AHD Index (AHD Index) and/or one or more of its component so appallingly low as that of an underdeveloped country.

The index composition

The AHD Index is very similar in concept and composition to the HDI, but they are not the same and therefore are not comparable. Possibly in order to avoid any ill-conceived comparison with HDIs, the developers of AHD Index use a multiplying factor of 10 in most of the index calculation, so the theoretical ranges have a maximum value of 10 while in HDR the value varies from 0 to 1. Don't even think about multiplying the HDI of a country or territory to compare it with the AHD Index of a state of comparable state (in terms of territory, population, GDP), because the indicators are also slightly different.

The three component indexes are the same in HDR and AHDR: Health Index, Education Index and Income Index [3-indexes].

The first one is based on a single indicator, the life expectancy at birth. The third one is somewhat different: HDR uses the Gross Domestic Product (GDP) per capita, AHDR uses the median earnings because the income (or a significant portion of it) is generated within a state and especially within a congressional district does not stay in the region. (Just think about the huge long-term house and apartment rental market in Hawaii whose owners live in another state).

The second component, the Education Index, is the most different. It has two components: the educational attainment, and the enrollment rate in AHDR, while in HDR the two elements are adult literacy rates and enrollment rate. The latter seems identical, but it is not, because AHDR includes the nursery and pre-kindergarten rate, while HDR considers only elementary, secondary and tertiary school enrolment, and therefore the age groups are also different.

The educational attainment indicator is used in AHDR instead of the literacy rate, simply because in the U.S. (and in almost all of the developed world), the literacy rate is 99%. (Functional literacy may be lower, but there are no satisfactory statistics for that), so it would not help in distinguishing states (and congressional districts) in the U.S. – but they are essential differentiators in ranking countries where the low end of literacy is at 23.6% in Burkina Faso, and barely higher in Mali, Chad, Niger, Sierra Leone and Benin; sharply different in Africa alone from Swaziland, Kenya, Madagascar and South Africa where the [literacy rate](#) is significantly higher at 70–80%.

A lot of work went into verifying that these component indicators are in balance, so the index values don't get distorted. The creators deserve credit for the carefulness in choosing the set of indicators, developing and corroborating the stability and feasibility of the algorithm for calculating the indexes. The superb chapter about the methodology in the print edition is also present on the [Web](#) and there is an excellent the [FAQ](#) section.

Of course, the whole concept of coming up with a single composite number was simplicity, but reading the methodology is not required to understand and use the AHD Indexes, but very convenient if you doubt if community college and associate degrees would count in the tertiary category of the attainment scores (they don't). The whole document is free of highfalutin deep thoughts, and full of eye opening, really illustrative examples that are called [factoids](#), but not in the negative sense, because they are really quantifiable, verifiable facts.

I agree with the simplicity principle of the HDI and AHD Index, but not with the scope of the included indicators for the Health Index and the Income Index that rely exclusively on the life expectancy and the median earnings.

The Health Index is meant to represent long and healthy life. Longevity by itself represents only the lengthy aspect, but there are millions in the population who are inflicted with debilitating conditions especially in their 70s and 80s and are not healthy, they are

simply alive, many of them homeless or vegetating in a nursing home. There are plenty of health statistics about physical conditions, the volume of the uninsured that should not be ignored in calculating the Health Index. The same is true for the mental health conditions of the population (even for the much younger generation) where the consequences of the endless wars, the hopeless incompetence and brutally neglected and under-financed Veteran Administration, guarantee that the already epidemic growth of post-traumatic stress disorder, dozens of clinical anxieties, and other mental illnesses make not only their lives, but also that of their parents, and children, and other family members much less healthy than the life expectancy alone may suggest.

As for the Income Index, the median earning acting as a surrogate for a decent standard of living, it is also unrealistic. Ignoring such factors as some wealth indicator to reflect assets inherited; a "sweat indicator" (for lack of a better word) for working two or three jobs; the plummeting rest and recreation time; the exploding debt rates; the decreasing rate of home-ownership; and many other indicators that are available through statistics paint a rosier picture and higher HDI values than realistic.

There are many more indicators beyond the ones that I listed above. These are presented by the three major [dimensions/indexes](#) in tabular format. All the tables can be downloaded in Excel format, so the content can be further processed and analyzed.

THE SOFTWARE

The virtue of the software is that it allows customization, selecting the choice of details, the strata levels, and to create theme maps. One has to choose from the Tools menu the [Interactive maps](#) option to get started, then click on the rather tiny Launch interactive maps link.

First you need to make the choice between [state](#) and congressional level. The [maps](#) can be scaled and the legend shows the value ranges with their associated shades of colors. The window itself cannot be resized, that why I had to cut the map into two parts. However, the maps can be saved by the click of a button. It may be added to a [gallery](#) and the set of images saved can played as an album or a movie clip. Hovering with the cursor across states would show the appropriate index value.

You can map not only the three AHD indexes, but also their [component](#) indicators, as well as the several other indicators which are not part of any of the indexes but illustrate the enormous differences between the states, for example in terms of infant mortality rates where all the Southern states are show a rate of 8–12 which is much worse than the 10 new members of the OECD, mostly from the former Soviet block. These indicators can be compared with identical indicator types from the HDR. (It would be a good idea to show automatically in a meshed pop-up list the list of countries by region which have comparable indicator values. The map can be panned but the legend remains anchored in the right bottom corner.

Scrolling down the submenu of indicators within the three main indexes allow the selected values to be mapped. You must be careful because the darkest color may mean the best value (such as for the composite AHDI value, or the worst as was the case with the infant mortality rate. You can switch to the congressional district level to see more details within states – if the data is available. If its unavailable at that level, a clear error message box shows up. Alternatively, you may select the Congressional District option on the main menu, and see the list of indicators with the ones available at the district level displayed in bold.

There is a software option to show what is your personal human development index (by the American algorithm), but it is a marketing gimmick. The developers warn you that "the Human Development Index for large groups cannot be used for individuals, however, you can get a sense of your own human development level by using our well-o-meter".

I don't think so, because among the 25 questions that have to be answered there is no question about the state, let alone the congressional district where you live, neither about your ethnicity. The extra beauty of the HDR is that it shows (although not on the map) the two and three fold differences in the AHDI and its major component indicators by gender, ethnicity, state and congressional district. It does not tell me much that I have a 6.80 AHDI score, ignoring these crucial filters or lenses. I bet this was forced on them by a PR executive.

The good side of it is that some of the questions ask exactly the questions that relate to those indicators that I suggest to be included in calculating a much more sophisticated Health Index and Income Index for the AHDI. Actually, there are 23 questions, as two are duplicates or quasi duplicates asking "are you happy" then on the next screen "are you unhappy?", and a similar pair "are you aggressive" followed by "are you aggressive". I am unhappy and aggressive when I see such gimmicks undermining the excellent job of the developers, even if I know that in surveys with several hundred questions such reliability test questions are scattered, but they are never adjacent like here, when even a user with Alzheimer's disease would remember what was his or her reply.

This is a very worthy project that should be extended and enhanced with a few more indicators relevant for the U.S., and incorporating some of those in the algorithm by the time the 2010 census will be done. Information visualization tools will offer more options for better understanding of huge amount of data at a glance.