

A Measure of The Good Society

Erik W. Aslaksen

Gumbooya Pty Ltd

3 Gumbooya Street, Allambie Heights NSW 2100

www.gumbooya.com

Continuing earlier work on the interaction between technology and society, this paper develops a program for calculating a quantitative measure of The Good Society, previously defined as a society that fully exploits the adaptive ability of every individual in determining the direction of its evolution. That measure is based on a model of the extent to which members of the society can exercise their intelligence, and the parameters of the model are parameters of society for which data is readily available.

1 Introduction

An earlier publication [1] discussed the influence of technology and its applications on the evolution of society, and proposed a procedure that would allow the introduction of new applications to be controlled through a public discourse. The main steps in this procedure are shown in Fig. 1, where the parameter X is a measure of the extent to which society is able to exercise its collective intelligence, taken as the average over the members of the society of the individual's ability to exercise its intelligence. That ability was selected as the single most important indicator of The Good Society – a society that fully exploits the adaptive ability of every individual in determining the direction of its evolution.

That extent, X , is a function of two variables: one a characteristic of the individual – the individual's inherent willpower – and the other the restraining circumstances in which the individual finds itself. If there are no restraining circumstances, X takes on its maximum value, irrespective of the willpower of the individual. That is, if there are no restraining circumstances, no willpower is required to exercise the intelligence; willpower is needed only to overcome restraining circumstances. If we denote willpower by w , and the extent of restraint by r , the dependence of X on these two parameters can be expressed by the equation

$$X = e^{-\frac{r}{w}}, \quad (1)$$

but no significance should be given to this particular expression at this point in our development, as we have not defined how r and w are measured.

The foundation on which both the earlier work and this paper are based is that the evolution of society is determined by us – there is no divine or supernatural power guiding it - and that there can therefore not be any fixed, ideal society towards which we are progressing. It is the development process itself that is the object of importance, and The Good Society can only be defined in terms of this process. The process is essentially one of information-processing, and until recently the processing power was provided by the collective brains of the members of society. But now information technology provides an additional means of processing, and control of this process is effectively the same as control of peoples' brains and of the evolution of society. This clearly raises some significant novel philosophical questions of an ethical nature – the beginning of an *information ethics* – and it is the purpose of this work to indicate one possibility of relating this ethical domain to measurable characteristics of our society.

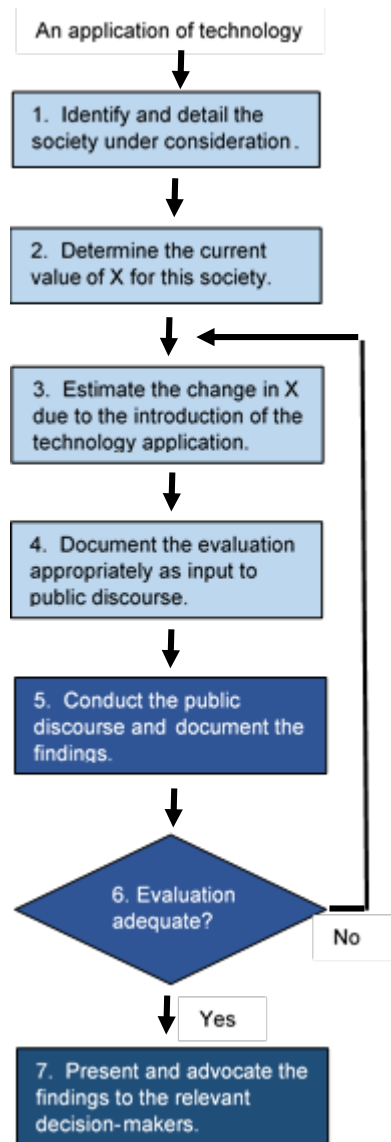


Figure 1 The public discourse control procedure. The participation of the public is indicated by the dark shapes and white font.

2 The Evaluation Model

2.1 General Matters

Of the elements in the control procedure shown in Fig. 1, it is apparent that much of the work involves evaluation; first of the current value of X , then of its future value (as an estimate). Consequently, we require a means, or tool, for carrying out this evaluation, and to that end we develop a *model* of X . That is, an expression of X in terms of a set of significant variables, so that a determination of the values of these variables amounts to an evaluation of X .

From the foregoing, it is evident that such a model, i.e. a model that determines the value of X , is a model that expresses X as a function of the restraints, and so our first task is to identify and define the relevant restraints. A somewhat related work is the listing of the desiderata for technological change in an article by Sclove [2]. These were presented specifically as a guide to developing and maintaining a democratic control process, and as such are fairly general. They are not directly applicable to a model for evaluating a single application, nor to determining

restraints on an individual person, but the list provides a framework against which we can orient our restraints, and so it is reproduced here:

- a. Seek balance between communitarian/cooperative, individualized, and inter-community technologies. Avoid technologies that establish authoritarian social relationships.
- b. Seek a diverse array of flexibly-schedulable, self-actualising technological practices.
- c. Insofar as technologies each tend to embody or convey symbolic meaning, avoid technologies that promote impoverished or otherwise distorted understanding.
- d. Seek technologies that can help enable disadvantaged individuals and groups to participate fully in social and political life. Avoid technologies that help support illegitimately hierarchical power relations between groups, organizations, or polities.
- e. Restrict the distribution of potentially adverse consequences (e.g. environmental or social harm) to within the boundaries of local political jurisdictions.
- f. Seek relative local economic self-reliance.
- g. Seek technologies (including an architecture of public space) compatible with egalitarian, globally-aware political decentralization and federation.
- h. Seek ecological sustainability.
- i. Seek technologies that are relatively invulnerable to catastrophic sabotage and to attendant risks of civil liberties abridgement.
- j. Seek technologies that are compatible with: world peace, democracy abroad, and securing democratic institutions against coercion. Avoid technologies that jeopardize domestic security, provide security at the expense of democracy at home and abroad, or that contribute to international insecurity or bellicosity.
- k. Seek “local” technological flexibility and “global” pluralism.

The focus, in Sclove’s article, on democracy as the main evaluation criterion is closely related to our choice of the free exercise of intelligence as the all-encompassing criterion.

2.2 The Components of Restraint

For convenience and simplicity, we normalise the scale on which restraints are measured to have a maximum (worst) value of 1 and a least (absence of restraint) value of 0.

- a. A significant factor is clearly the financial situation in which the individual finds itself, as measured by income per person per year, q . If the *subsistence level* at the location where the individual lives is denoted by s (\$/year), the *financial restraint*, r_1 , is defined to be of the form

$$r_1 = e^{-\frac{q-s}{q_a}} \quad (2)$$

where $q \geq s$, $r_1(q < s) = 1$, and q_a is the income averaged over all the members of the society. The interpretation of this restraint is that at (or below) the subsistence level the individual has essentially no time or energy to exercise intelligence; all effort is absorbed by mere existence. Nor is there any surplus income for acquiring information. As the income rises above the subsistence level, the restraint is reduced, but the reduction depends not directly on the value of this increase above the subsistence level, but on the relationship of this value to the average income in the society. If this is the most appropriate measure of the effect of increasing the income above the subsistence level is open to discussion; the choice in Eq. 2 is somewhat arbitrary.

- b. The access to and level of education is a prerequisite for obtaining and evaluating information, and thereby generating the knowledge which forms such an important part of exercising intelligence. As the exercising of intelligence we are considering relates to the evaluation of technology applications for their impact on the evolution of society, the knowledge required is of a general rather than of a detailed nature (such as is required for

creating technology). Consequently, the lower levels of education are more important; literacy is very much more important than having a PhD. We might therefore propose to evaluate the *attained educational level* as 0.6 for primary education, 0.9 for secondary education, and 1.0 for tertiary education, and define the *educational restraint*, r_2 , as

$$r_2 = 1 - \textit{attained educational level} \quad (3)$$

- c. Having both the time and the education to process information into knowledge still leaves the issue of being able to obtain the information. That ability can be considered to consist of two separate factors: One, *access* to the media carrying information (printed matter, radio, television, internet, social media) via such channels as newsagents, public libraries, broadband, and mobile phone. Two, the *quality* of the media, reflected in the level of censorship, diversity, ownership and control, accuracy and completeness of the information, and so on. Evaluating access on a scale of 0 – 1, with the value 1 signifying full access to all existing information channels, as would be the case in many parts of the developed world. Similarly, evaluating quality on a scale of 0 – 1, the value 1 signifies the absence of censorship, a vigorous multiplicity of sources, and a high degree of independence. We therefore define an *information restraint*, r_3 , as

$$r_3 = 1 - \textit{access} \times \textit{quality}. \quad (4)$$

- d. Being able to formulate an adaptive action is one thing; being able to action it is a different matter, and so lack of access to participation in a democratic and political decision process becomes a further restraint. Democratic, in the sense that all involved have the same rights, is not enough; for the outcome of the process to have any effect, it needs to be a political process. That is, a process that is part of the public affairs of a society and of its government. Consequently, if we denote the level of political rights by u , of civil liberties by v , and of democracy by w , all measured on a scale of 0 – 1, we define the *process restraint*, r_4 , as follows:

$$r_4 = 1 - (u+v+w)/3 \quad (5)$$

2.3 Quantifying Will

As was discussed in Section 3, the extent to which persons exercises their intelligence in the form of taking goal-oriented adaptive action depends on both the will (or willpower) of the person and the restraints presented by the society in which the person is embedded. So, what determines a person's will to overcome or reduce the restraints? We might think of personality traits, such as strength of character, motivation, and the like, but how would we measure them? Interrogating or testing enough individuals in whatever society we are considering in order to get a significant measure of the average would seem a hopeless task. Rather than starting with the individual, a different approach would be to ask: What characteristics of a society reflect the strength of will of its members? However, a difficulty with this approach is that it tends to lead to a blurring between restraints and will, in that restraints are characteristics of the society, whereas will is a characteristic of individuals. Is there a characteristic of society that does not represent a significant restraint, as compared to the four we have identified, but that is a good indication of the average strength of individual will? One such characteristic might be the level of corruption; we would expect that the will to oppose corruption is in some way related to the will to overcome restraints, but corruption is not in itself a significant restraint on exercising intelligence.

Considering will as the means of overcoming constraints, and the level of corruption as a measure of will, leads to a further line of thought. We have said the will is required to overcome restraints, and that in a society where there are no restraints, there is no need for will. This seems to lead to a paradox, in that in a society with small restraints, there is likely to be a low level of corruption and thus there is a strong will for which there is little need, whereas in a society with large restraints there is likely to be a high level of corruption and thus a weak will where it is needed most.

However, that has to be seen in the context of this paper, which is the evolution of society. That is, changes to society, and the restraints are restraints on achieving these changes. But a society that has reached the state of development where there are no restraints to change still needs to *maintain* this state, and that requires will. In such a society a rising level of corruption is therefore the early indication of decay and a reduction in will, soon to be followed by increasing restraints.

If the *level of corruption*, c , is measured on a scale of 0 to 100 with 100 being very clean and 0 being very corrupt, then the relationship to the will, w , will, without any further justification, be taken to be as follows:

$$w = e^{-\frac{100-c}{\sigma}}, \quad (6)$$

where σ is a scale factor that can be adjusted as a better understanding of the problem complex emerges through use of the evaluation model.

2.4 Combining the Restraint Components to Determine r

Having chosen and defined four components of the restraint, r , there remains to decide how these four components are to be combined to form r . There are numerous ways to do this, depending partly on what importance one assigns to each component. For example, one might consider that the financial restraint, r_1 , is so important that if it goes to zero, the other components are insignificant, and so decide on a combination of the form $r_1(r_2+r_3+r_4)$. The combination proposed in this paper does not make such a radical distinction, but allows for a certain weighting of the components:

$$r = \frac{c_1 r_1 + c_2 r_2 + c_3 r_3 + c_4 r_4}{c_1 + c_2 + c_3 + c_4}. \quad (7)$$

3 Data Sources and Numerical Calculations

3.1 The Global Society

The usefulness and significance of the model is determined not only by the structure of the model and by the choice and definition of the restraints, but also by the availability of data as input to the model. Of course, the data required depends on the definition of “society” in each case, and also on how the people in the society are structured into groups. If the society is the global society, or a region thereof, there are a number of institutions that generate relevant data structured by nations, and in the following we look at some calculations based on this data.

a. Financial restraint:

In order to calculate the financial restraint, r_1 , we need the following data for each nation:

q	Individual income
q_a	Average per capita income
s	Subsistence level per capita

All of these parameters are measured in international (PPP) dollars, and for convenience in the following calculations they are normalised to the average per capita income (i.e. $q_0 = 1$) Let the interval $0 - h$, with $0 \leq h \leq 1$, contain the fraction of the population for which any individual in that fraction has an income less than any individual in the rest of the population, then the function $q(h)$, normalised to the average income, is the *income distribution function*. That is, $q(h)$ is a monotonically increasing function, with

$$\int_0^1 q(h)dh = 1 , \quad (8)$$

and the ratio of the average income of the richest t % of the population to that of the poorest t % of the population is given by

$$\int_{1-t/100}^1 q(h)dh / \int_0^{t/100} q(h)dh . \quad (9)$$

There are numerous definition of the subsistence level, and its measurement varies between countries. Often a connection is made between subsistence level and *poverty*, such that the subsistence level is the income below which a person is said to live in poverty. If the fraction of the population living in poverty is denoted by p , then $s = q(p)$. With this, the expression for r_1 in Eq. 2 becomes

$$r_1 = p + \int_p^1 e^{-\frac{q(h)-q(p)}{q_0}} dh . \quad (10)$$

In order to evaluate this expression we need to know the income distribution function, $q(h)$. The development of a proposed form of this function, as well as the numerical evaluation of r_1 , are contained in Appendix A, and the required data was extracted from the following sources:

Per capita income	<p>International Monetary Fund – World Economic Outlook Database, October 2014, www.imf.org/external/</p> <p>The World Bank – Gross National Income on a per capita basis, using the Atlas method and converted to US\$, http://data.worldbank.org/indicator/ny.gnp.pcap.cd</p> <p>In using this type of data, it should be noted that economic activity that does not result in monetary income, such as services provided within the family, or for barter, is usually not counted; the importance of these services varies widely among different economies. Also, per capita income does not take into account how income is deployed; whether it is invested in factors likely to improve the development of a country or nation such as medical facilities, educational facilities, transport infrastructure etc.</p>
Population	<p>One World – Nations Online, http://www.nationsonline.org/oneworld/population-by-country.htm</p> <p>Worldometers, http://www.worldometers.info/world-population/population-by-country/</p>
Income distribution	<p>United Nations Development Program – Human Development Report, http://hdr.undp.org/sites/default/files/reports/269/hdr_2009_en_complete.pdf</p> <p>Wikipedia reference http://en.wikipedia.org/wiki/List_of_countries_by_income_quality)</p>
Poverty (+ other)	<p>OECD, http://stats.oecd.org . Where no poverty data is available, the common assumption $s = q_0/2$ has been adopted.</p>

b. Educational restraint:

In order to calculate the educational restraint, r_2 , we need data on the level of education within each nation and, as discussed in sec. 5.2, we intend to characterise this level in terms of three parameters that define the levels of primary, secondary, and tertiary education. The best data for the global society is provided as part of the United Nations Development Program – 2014 Human Development Report,

<http://www.undp.org/content/undp/en/home/librarypage/hdr/2014-human-development-report/>. In the spreadsheet *Educational Attainment of the Population Aged 25 years and Older/ Latest Year Available*, the data (as percentages of the population) is given in terms of the ISCED classification of educational levels (see <http://www.uis.unesco.org/Education/Documents/isced-2011-en.pdf>):

ISCED level 1	<i>Primary education.</i> Programmes at ISCED level 1 are typically designed to provide students with fundamental skills in reading, writing and mathematics (i.e. literacy and numeracy) and establish a solid foundation for learning and understanding core areas of knowledge, personal and social development, in preparation for lower secondary education. It focuses on learning at a basic level of complexity with little, if any, specialisation. Primary education typically lasts until age 10 to 12.
ISCED level 2	<i>Lower secondary education.</i> Programmes at ISCED level 2 are typically designed to build on the learning outcomes from ISCED level 1. Usually, the aim is to lay the foundation for lifelong learning and human development upon which education systems may then expand further educational opportunities. Some education systems may already offer vocational education programmes at ISCED level 2 to provide individuals with skills relevant to employment.
ISCED level 3	<i>Upper secondary education.</i> Programmes at ISCED level 3 are typically designed to complete secondary education in preparation for tertiary education or provide skills relevant to employment, or both. Exit from upper secondary education may range across education systems from usually 11 to 13 years of education since the beginning of ISCED level 1.
ISCED level 4	<i>Post-secondary non-tertiary education.</i> Programmes at ISCED level 4 are typically designed to provide individuals who completed ISCED level 3 with non-tertiary qualifications required for progression to tertiary education or for employment when their ISCED level 3 qualification does not grant such access. The content of ISCED level 4 programmes is not sufficiently complex to be regarded as tertiary education, although it is clearly post-secondary.
ISCED level 5+	<i>Tertiary education</i> builds on secondary education, providing learning activities in specialised fields of education. It aims at learning at a high level of complexity and specialisation. Tertiary education includes what is commonly understood as academic education but also includes advanced vocational or professional education. It comprises ISCED levels 5, 6, 7 and 8, which are labelled as short-cycle tertiary education, Bachelor's or equivalent level, Master's or equivalent level, and doctoral or equivalent level, respectively.

For our purposes, the three levels of attained education are defined in terms of the ISCED levels as follows:

Primary:	ISCED levels 1 and 2
Secondary:	ISCED levels 3 and 4
Tertiary:	ISCED levels 5, 6, 7, and 8

The OECD data and the resultant value of the restraint is contained in the Education spreadsheet in Attachment 1.

c. Information restraint:

The information restraint, r_3 , is composed of two main factors, the *access* to information, and the *quality* of the information. However, it should be noted that this leaves out an important aspect of information; the ability use information, or what UNESCO calls Media and Information Literacy (MIL). The MIL website, <http://www.unesco.org/new/en/communication-and-information/media-development/media-literacy/mil-as-composite-concept/>, makes the following statement:

“Empowerment of people through Media and Information Literacy (MIL) is an important prerequisite for fostering equitable access to information and knowledge and promoting free, independent and pluralistic media and information systems. Media and Information Literacy recognizes the primary role of information and media in our everyday lives. It lies at the core of freedom of expression and information - since it empowers citizens to understand the functions of media and other information providers, to critically evaluate their content, and to make informed decisions as users and producer of information and media content.”

In the approach taken in this paper, the information restraint considers only the infrastructure that makes information available and the quality of the information. The ability to use information is assumed to be included in the education restraint.

The *access* can be considered to be composed of two components: the communications channels available to the average person in society, as a measure of the volume of information available, and the means of accessing these channels. The first component is characterised by a number of parameters, such as the number of radio channels, the number of TV channels, and the number of daily newspapers. However, while there are several sources of this type of data, such as that provided by an UNESCO pilot survey, <http://www.uis.unesco.org/Communication/Pages/media-statistics.aspx>, or that contained in the Wikipedia *List of media by country*, http://en.wikipedia.org/wiki/Category:Lists_of_media_by_country, this data cannot easily, if at all, be converted into a meaningful score on a fixed scale; providing such a score by country would require a major effort on its own.

What is available is data provided by the International Telecommunications Union (ITU) in the form of percentages of households that have radio, TV, and internet access, downloadable from <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>. In addition, the UNESCO Institute for Statistics (UIS) provides information regarding literacy for the population over 15 years of age per country, <http://www.uis.unesco.org/DataCentre/Pages/regions.aspx>, which may be taken as an indication of the ability to absorb information through the media, so that the access is calculated as the sum of the three percentages multiplied by the literacy rate, divided by 300.

The *quality* of information is measured by the Freedom of Information score generated by Reporters Without Borders. Data is collected through questionnaires that are completed by a diverse, but knowledgeable international group of people. The questions consider six general criteria, and using a system of weighting for each possible response, countries are given a score of between 0 and 100 for each of the six overall criteria. These scores are then used as indicators in calculating each country's final score, also between 0 and 100, with 0 being perfect freedom and 100 being a total lack of freedom. The six criteria are:

Pluralism [indicator Plu]

Measures the degree to which opinions are represented in the media

Media independence [indicator Ind]

Measures the degree to which the media are able to function independently of the authorities

Environment and self-censorship [indicator EnA]

Analyses the environment in which journalists work

Legislative framework [indicator CaL]

Analyses the quality of the legislative framework and measures its effectiveness

Transparency [indicator Tra]

Measures the transparency of the institutions and procedures that affect the production of news and information

Infrastructure [indicator Inf]

Measures the quality of the infrastructure that supports the production of news and information

Reporters Without Borders meanwhile calculates a score of between 0 and 100 reflecting the level of violence against journalists during the period considered. The score is based on the monitoring carried out by RWB’s own staff. The overall score, the one that determines a country’s ranking, is calculated on the basis of these seven scores in a three-step process. A first score (SCOA) is calculated on the basis of the questionnaire alone, using the following weighting:

$$SCOA = \frac{1}{3} \cdot Plu + \frac{1}{6} \cdot (Ind + EnA + CaL) + \frac{1}{12} \cdot (Tra + Inf)$$

A second score uses the first score but incorporates the violence score, giving it a weight of 20%:

$$SCOB = \frac{1}{5} \cdot Exa + \frac{4}{15} \cdot Plu + \frac{2}{15} \cdot (Ind + EnA + CaL) + \frac{1}{15} \cdot (Tra + Inf)$$

The final score is determined as follows:

$$ScoreFinal = \max(SCOA, SCOB)$$

The violence score (scoreExa) is calculated according to the following formula:

$$scoreExa = 10 * \log(90 * Mor + Coeff_i * Emp_i +$$

$$10 * Enl + 5 * Med + 3 * Exi + Arr + Agr + noteHT)^1$$

Mor: number of dead, *Emp_i*: number of imprisoned since *i* years, *Enl*: number of kidnapped, *Med*: number of media attacked and ransacked, *Exi*: number who have fled the country, *Arr*: number of arrests, *Agr*: number of physical attacks, *noteHT*: score on respect for freedom of information in foreign territory.

The longer a journalist, netizen or media assistant is imprisoned, the more this imprisonment penalizes the country concerned. The weighting coefficient has the following values, based on the length of imprisonment in years :

<i>i</i>	1-	2	3	4	5	6	7	8	9	10	10+
<i>Coeff_i</i>	10	20	35	60	80	85	87	88	89	89,5	$\lim_{\infty} Coeff_i = 90$

The *quality* parameter is simply the *ScoreFinal* divided by 100, as is shown in the Information spreadsheet in Attachment 1.

d. Process restraint:

The process restraint, *r₄*, is composed of three components: political rights, civil liberties, and a global democracy rating. Data for the first two is sourced from World Concern Institute, publisher of World Audit, www.worldaudit.org, data for the last is sourced from Democracy Ranking Association, <http://democracyranking.org/>, as follows:

Political rights *u* Scale 1 – 7 (1 = best, 7 = worst)

Civil liberties	v	Scale 1 – 7 (1 = best, 7 = worst)
Democracy	w	Scale 0 – 100 (0 = worst, 100 = best)

The raw data is normalised to a common scale of 0 – 1 (with 1 = best, 0 = worst), and then the values of the democracy component, which considers a number of factors (political system, economic environment, gender equality, health, environment, knowledge) and which is included here as in order to have two independent sources, are multiplied by a factor, m , which makes the average value of the two sets of data identical. The process restraint is then given by

$$r_4 = \left[\left(1 - \frac{u-1}{6}\right) + \left(1 - \frac{v-1}{6}\right) + m \frac{w}{100} \right] / 3. \quad (11)$$

The raw data and the calculation of r_4 are shown in the Process spreadsheet in Attachment 1.

e. Will

Having decided to measure the parameter will, w , in terms of the level of corruption, data on the latter is sourced from Transparency International, www.transparency.org, and from the World Bank's Worldwide Governance Indicators (WGI) project, <http://info.worldbank.org/governance/index.aspx#home>. Both sources provide the data in the form of a score between 0 and 100 for each nation, with 0 being highly corrupt, and 100 being very clean. The data and the calculation of w is contained in the Will spreadsheet in Attachment 1.

3.2 The Global Value of X

From the definitions of the various quantities entering into the determination of X , we see that in the case of the global society our evaluation model involves a number of parameters:

Primary parameters:

r_1	Financial restraint
r_2	Educational restraint
r_3	Information restraint
r_4	Process restraint
w	Will

Adjustable parameters:

c_1	Financial restraint weight
c_2	Educational restraint weight
c_3	Information restraint weight
c_4	Process restraint weight
σ	Corruption scale factor

Input parameters:

F	10 % ratio	>0
G	20 % ratio	>0
p	Fraction living in poverty	0-1
q	Per capita income by society element (nation)	PPP \$
q_0	Society per capita income	PPP \$
	Fraction of households with radio	0-1
	Fraction of households with TV	0-1
	Fraction of households with Internet access	0-1

Level of political rights	0-1
Level of civil liberties	0-1
Level of democracy	0-1
Level of corruption	0-1

The value of the measure X , for the data selected, and for the values of adjustable parameters defined in Attachment 1, is 0.239.

3.3 Other Groupings and Societies

For some purposes, the grouping into nations may not be appropriate. As there are nearly two hundred nations, this may still be too large a set to be the basis for a simple and intuitive model, and it may be difficult to obtain or estimate data for each nation. One approach is to group the nations into a small set of groups according to their per capita income (expressed by purchasing power parity (PPP) in so-called international dollars), but this does not give a realistic picture of the distribution of income among individuals, which is what we need for our model. For example, a country might have a relatively high per capita (i.e. average) income, but this can be the result of having a small, very wealthy part of the population, while the rest is actually relatively poor. A better approach is to use available information on the income distribution within each nation, e.g. in the form of the ratio of the average incomes of the richest to the poorest 10 % of the population, and the same for the richest and poorest 20 %. A small Visual Basic module, based on Model B, converts that data into a distribution over four income ranges, defined by three income values, a , b , and c , as follows:

A - low income:	$\text{income} < a$
B – lower middle income:	$a \leq \text{income} < b$
C – upper middle income:	$b \leq \text{income} < c$
D – high income:	$\text{income} \geq c$

The values of the quantities A , B , C , and D , are the number of people within each range, with the total making up the population of the nation, as provided e.g. by One World – Nations Online, as referenced above.

The input data, which is identical to that used in Attachment 1, and the Visual Basic module are contained in Attachment 2. The result of one such calculation is shown in Table 1.

PPP Income			
Low < \$3,000	Lower middle \$3,000 - \$12,000	Upper middle \$12,000 - \$48,000	High > \$48,000
23.2 %	36.4 %	32.3 %	8.1 %

Table 1 The percentage of the world's population in each of the four income per capita ranges.

This approach can also be used when considering the impact of a new technology application in a society that is a single nation if there is expected to be a significant correlation between income and impact.

4 Further Issues

4.1 The Authority

The issue of the implementation of a public control procedure through some form of an authority was raised in secs. 4.4 and 4.8, and it was pointed out how the need for substantial funding could lead to a conflict of interest. If the funding is provided by private sources, as is the case with many "think tanks", the purpose is to provide substantiated and rigorously presented evidence in support of the viewpoint favoured by the funding sources. And publicly funded bodies are no more independent, being imbedded in the political process; even the judiciary is susceptible to interference, as can be observed in the appointment of judges.

However, the judicial system is probably still the best model, and reflected onto the control procedure, it would mean that the responsible organisation, or authority, should consist of two parts: a coordinating and evaluation body, and a body, possibly involving many organisations, that carries out the bulk of the work in the form of investigations, tests, modelling, and associated studies required to estimate the impact of applications of technology. There are already various organisations performing work of this type, but there is no coordination of these efforts, and if the individual reports reach the public, it is left to the public to try to make sense of the differing viewpoints. The individual organisations could well be each presenting one aspect of an application, but as long as it is done with integrity, and as long as there are enough organisations to address all aspects, the fact that each organisation is financed and influenced by a special interest group is not a significant problem. This is no different to opposing sides presenting their views of the evidence in a court case.

The evaluating authority would be relatively modest in size and of a statutory nature, with the members of its evaluating team acknowledged experts appointed for the remaining duration of their working career. And, most importantly, this authority must be accountable only to the public, and with all details of the inputs and outputs of the evaluation process in the public domain. The purpose is not to provide advice to government or to any industry, but to present an unbiased evaluation of the impact of applications of technology as input to the public discourse.

A further characteristic of the authority is what might be called its *scope*; it is defined by the size of the society affected by the applications of technology the authority is constituted to consider. A national authority would be provided with the funding, the interfaces to national organisations such as research centres and think tanks, and the means to reach its national audience, appropriate for evaluating applications with significant impacts limited to that nation. This would include applications that might also be relevant to a wider society, but where the impacts are dependent on the specific national environment, such as is the case with coal seam gas recovery and fracking.

However, with increasing globalisation, the impacts of many applications of technology are felt on an international scale, and for the evaluation of such applications only an international authority, provided with the appropriate means and with internationally recognised independence,

would be adequate. Such an authority could possibly be established under the umbrella of the United Nations.

4.2 Distortions and Distractions

A discussion of the influence of technology on society usually tends to focus on major applications and inventions, from the steam engine to nuclear energy, the Internet, fracking, and genetic modifications, just to mention a few. But there are numerous artefacts that surround us in our daily lives that are not the explicit result of a new technological development, but owe their existence to decisions to apply existing technologies. These decisions are taken purely on the basis of the applications as investment opportunities, without any consideration to their effect on society, and each one is too small to warrant any significant public scrutiny. Three examples are: relatively inexpensive, flat-pack unassembled furniture, electronic equipment and gadgets, and plastic toys. All of these are recycled at a high rate, as can easily be observed on the yearly council clear-up days, when the footpaths are piled high with such items. This phenomenon, which seems to be accepted as an inevitable hallmark of an affluent society, should be seen as a symptom of a degenerate capitalism, under which the roles and relative importance of society and the economy have been reversed. Instead of the economic system and the mode of production serving to further the goals of society, the purpose of society has become to serve the economic goals of growth and return on investment.

Not only is this a distortion of our allocation of resources, but it is also a distraction from actively pursuing a cogent evolution of society. These approaches to investment and growth are quick fixes, avoiding the need for any serious consideration of how we would want society to evolve and what this would mean.

This situation, with its reversal of roles, is made possible by technology; not by any single technology, but by the myriad of technologies making up our level of technological development. But there is nothing inevitable about this outcome; technology does not have a will of its own. Technology is like any drug; it requires our decision to apply it for it to have any effect. Just as alcohol can be a source of enjoyment and an expression of achievement, while at the same time be a means of misuse and destruction of our faculties, so technology provides the means for both the ongoing development of society and its destruction. A danger is that concentrating on the effects of a few major and very visible applications of technology, we are distracted from considering and acting on the much less easily identifiable and insidious effects of technology on the fabric and evolution of society.

References

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2. Sclove, R.E, *The Nuts and Bolts of Democracy*, in *Democracy in a Technological Society*, L. Winner (ed.), Kluwer Academic Publishers, 1992.

Appendix A – Income Distribution and Financial Restraint

A1 Introduction

In order to determine the value of the financial restraint, r_1 , as defined by Eq. 2 (numbered equations refer to equations in the body of the paper), it is necessary to know the form of the income distribution function, $q(h)$, for each nation. However, readily available data is presented in the form of average per capita PPP (purchasing power parity) income (e.g. International Monetary Fund) and the ratios $\{F,G\}$ of the average income of the richest $\{10\%$ and $20\%\}$ and the poorest $\{10\%$ and $20\%\}$ of the population of each nation (e.g. United Nations). Thus, any income distribution function to be defined by these two ratios will need to be a function with only two parameters, and in the following, two possible functions are proposed, and one is selected based on its ability to determine the Gini coefficient.

A2 Distribution Model A

The first version of the income distribution function is as shown in Fig. A1.

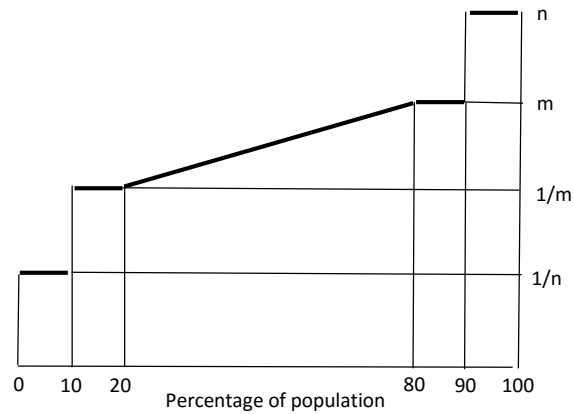


Figure A1 The simplified income distribution model, Model A. For any particular nation, the vertical scale is defined by the requirement that the area under the distribution (i.e. the average) equals the per capita income of that nation.

From this model, it follows that the two ratios, F and G , define the two parameters m and n . It follows immediately that

$$n = F^{1/2} .$$

Furthermore,

$$G = (m + n) / (1/m + 1/n) ,$$

or

$$nm^2 + (n^2 - G)m - Gn = 0 ,$$

which has the solution

$$m = G / F^{1/2} .$$

With this, the average income (i.e. the average of the distribution in Fig. A1, Q , which is the area under the function) can be expressed in terms of F and G ; that is,

$$\begin{aligned} Q &= 0.1(1/m + 1/n + m + n) + 0.6/m + 0.3(m - 1/m) \\ &= 0.4(m + 1/m) + 0.1(n + 1/n) \end{aligned}$$

becomes

$$Q = 0.4(G/F^{1/2} + F^{1/2}/G) + 0.1(F^{1/2} + 1/F^{1/2}),$$

and so multiplying the income (vertical) scale in Fig. A1 by $1/Q$, the distribution is that of a population characterised by F and G , and with a per capita income of 1.

A3 Distribution Model B

A slightly different income distribution model, Model B, is shown in Fig. A2. This model preserves the relationships between (m,n) and (F,G) of Model A, but the average income is now given by

$$Q = 0.55(G/F^{1/2} + F^{1/2}/G) - 0.05(F^{1/2} + 1/F^{1/2}) .$$

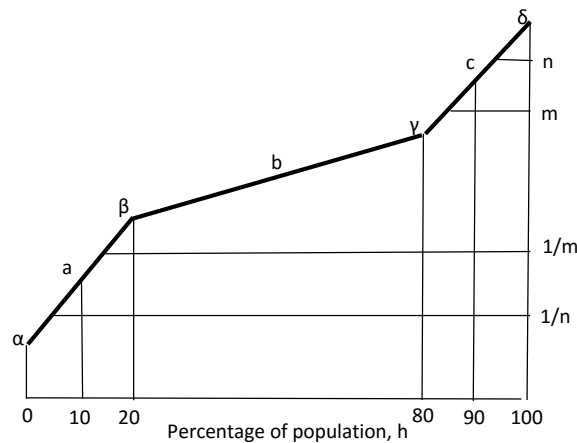


Figure A2 The simplified income distribution model, Model B. For any particular nation, the vertical scale is defined by the requirement that the area under the distribution (i.e. the average) equals the per capita income of that nation.

The values at the segment endpoints are as follows:

$$\begin{aligned} \alpha: & 1.5/n - 0.5/m \\ \beta: & 1.5/m - 0.5/n \\ \gamma: & 1.5m - 0.5n \\ \delta: & 1.5n - 0.5m \end{aligned}$$

The segment functions are as follows:

$$\begin{aligned} a: & 1.5/n - 0.5/m + 10 \cdot (1/m - 1/n) \cdot h \\ b: & 2/m - 0.667/n - 0.5m + 0.167n + (2.5m - 0.833n - 2.5/m + 0.833/n) \cdot h \\ c: & 9.5m - 8.5n + 10 \cdot (n - m) \cdot h \end{aligned}$$

The requirement that the income distribution must be a monotonically increasing function results in the condition $\gamma \geq \beta$, which equates to $G > 1.5 + 0.329 \cdot F$, as well as the requirement that $G \leq F$. Consequently, G is constrained to lie in a range that is a function of F , as shown in Fig. A3. This is satisfied for all the nations listed, except Honduras and Nicaragua, as demonstrated by the “Check” column in the Financial spreadsheet in Attachment 1.

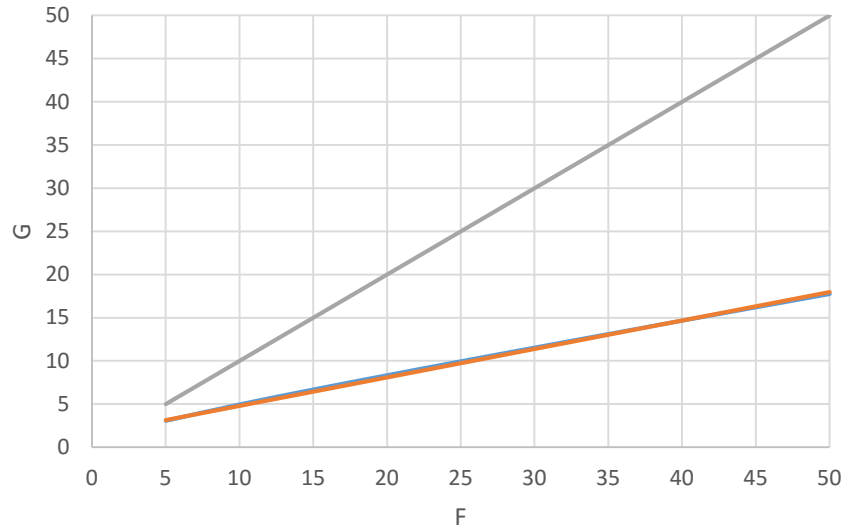


Figure A3 In order for Model B to be valid, the value of parameter G must lie between the two lines. The lower line is in fact two lines, one being the straight line approximation to the exact lower bound.

A4 Gini Coefficient

A frequently used measure of income inequality is the Gini coefficient. The Gini coefficient is defined in terms of the proportion of the total income of the population (y axis) that is cumulatively earned by the bottom x% of the population, as shown by the so-called Lorenz curve in Fig. A4. The line at 45 degrees thus represents perfect equality of incomes. The Gini coefficient can then be thought of as the ratio of the area that lies between the line of equality and the curve (marked A in the diagram) over the total area under the line of equality (marked A and B in the diagram); i.e., $G = A / (A + B)$.

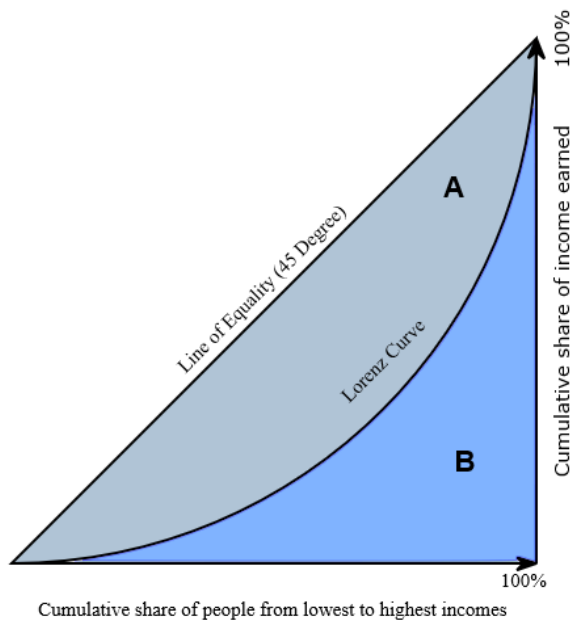


Figure A4 The Gini coefficient is defined as $A/(A+B)$. From Wikipedia.

The Lorenz curve is the integral of the income distribution function.

Gini Coefficient Based on Model A

In terms of the present income distribution in Fig. A1 (multiplied by 1/Q, as noted above), the Lorenz curve is shown in Fig. A5. The four values indicated in the figure are as follows:

$$\begin{aligned} a &= 0.1/(nQ) \\ b &= 0.1(1/n + 1/m)/Q \\ c &= 1 - 0.1(n+m)/Q \\ d &= 1 - 0.1n/Q \end{aligned}$$

The curve between points b and c is of the form $u \cdot (p-0.2) + v \cdot (p-0.2)^2$, with u and v determined by

$$u = 1/mQ ,$$

and

$$u + 1.2 v = m/Q ,$$

which gives

$$v = 0.833(m-1/m)/Q.$$

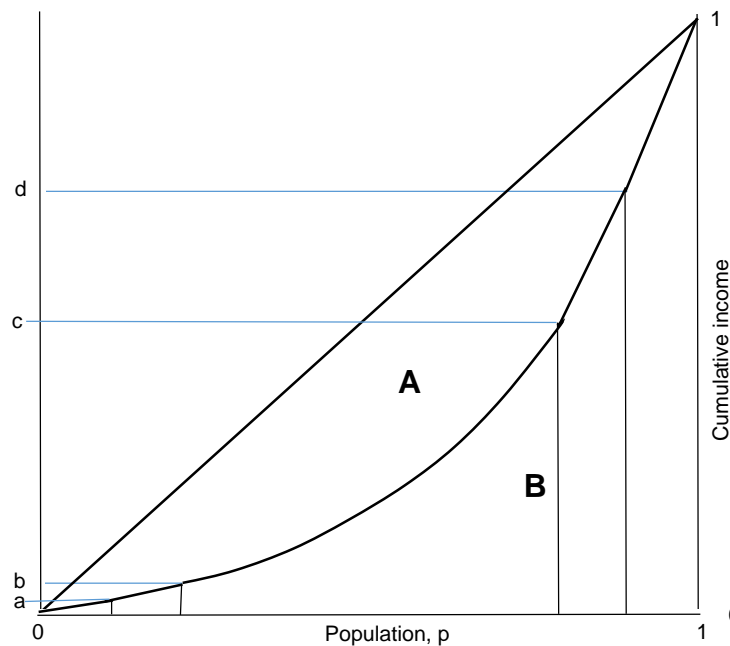


Figure A5 The curve is the Lorenz curve, defined as the integral of the income distribution function, and the Gini coefficient is defined as the ratio of the area A to the total area A+B. The area B is calculated as the sum of the five segments indicated.

The areas under the five segments of the Lorenz curve can then be determined as follows:

$$\begin{aligned} 0 - 0.1: & \quad 0.005/nQ \\ 0.1 - 0.2: & \quad 0.01/nQ + 0.005/mQ \\ 0.2 - 0.8: & \quad (0.06/n + 0.18/m + 0.06m)/Q \end{aligned}$$

$$\begin{aligned} 0.8 - 0.9: & \quad 0.1 - (0.01n + 0.005m)/Q \\ 0.9 - 1.0: & \quad 0.1 - 0.005n/Q \end{aligned}$$

and the total area, B in Fig. A5, is given by

$$\begin{aligned} B &= 0.2 + (0.075/n + 0.185/m - 0.015n + 0.055m)/Q \\ \text{or} \\ &= 0.2 + (0.075/F^{1/2} + 0.185F^{1/2}/G - 0.015F^{1/2} + 0.05G/F^{1/2})/Q \end{aligned}$$

The Gini coefficient calculated in this manner, as a function of F and G, is shown in Table A1. It is obvious that the values are smaller than the ones provided e.g. by the UN listing for large values of F and G (see Financial spreadsheet in Attachment 1), as is to be expected due to the fixed form of the central portion of the distribution function. However, a test of the applicability of the income distribution proposed in Fig.1 is now to see how well the Gini coefficient is reproduced for those countries where both F and G and the Gini coefficient are listed, and as documented in the Financial Restraint Spreadsheet, the current model has a rms error of 0.058 and underestimates the Gini coefficient by about 7.6 %, on the average.

G	F									
	5	10	15	20	25	30	35	40	45	50
5	0.293	0.308	0.317	0.323	0.327	0.331	0.333	0.335	0.337	0.339
10	0.332	0.360	0.381	0.399	0.413	0.424	0.434	0.442	0.450	0.456
15	0.337	0.363	0.385	0.404	0.420	0.434	0.447	0.458	0.468	0.477
20	0.336	0.360	0.380	0.398	0.414	0.429	0.442	0.453	0.464	0.474
25	0.336	0.356	0.374	0.391	0.406	0.420	0.433	0.445	0.455	0.465
30	0.335	0.353	0.369	0.384	0.399	0.412	0.424	0.435	0.446	0.456
35	0.334	0.350	0.365	0.379	0.392	0.404	0.416	0.426	0.436	0.446

Table A1 The Gini coefficient, as a function of F and G, as determined by the model distribution shown in Fig. A1.

Gini Coefficient Based on Model B

In the calculations of the Gini coefficient based on Model B, the division by Q is left to the end. The Lorenz curve, shown in Fig. A6, now consists of three segments – u, v, and w – each a quadratic function of p, as shown below.

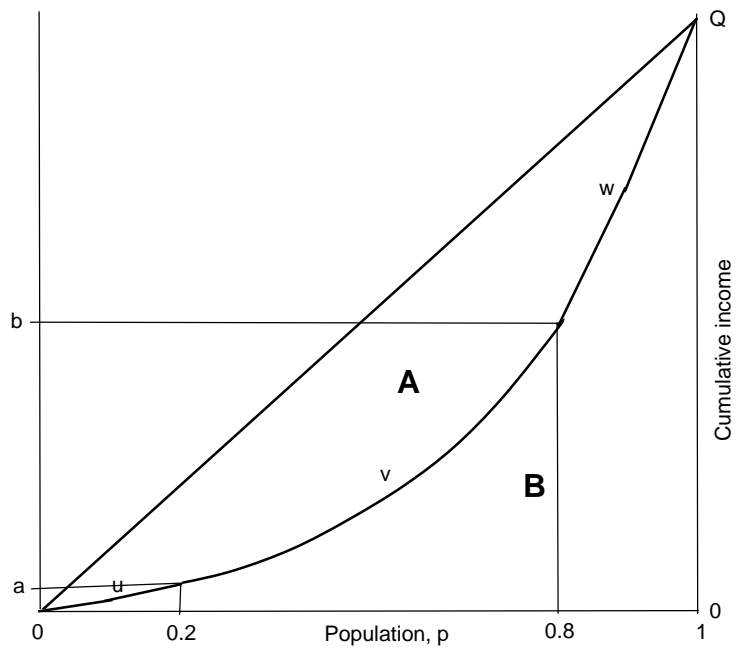


Figure A6 The curve is the Lorenz curve, defined as the integral of the income distribution function, and the Gini coefficient is defined as the ratio of the area A to the total area A+B. The area B is calculated as the sum of the three segments indicated.

$$u: (1.5/n - 0.5/m) \cdot p + 5(1/m - 1/n) \cdot p^2$$

$$v: 0.05m - 0.0167n - 0.25/m + 0.2167/n + (2/m - 0.667/n - 0.5m + 0.167n) \cdot p + (1.25m - 0.417n - 1.25/m + 0.417/n) \cdot p^2$$

$$w: -3.95m + 3.45n + 0.55/m - 0.05/n + (9.5m - 8.5n) \cdot p + 5(n - m) \cdot p^2$$

The boundary values (used to determine the integration constants) are as follows:

$$a: 0.1(1/m + 1/n)$$

$$b: 0.45m - 0.15n + 0.55/m - 0.05/n$$

The areas under each of the three segments are as follows:

$$U: 0.0033/m + 0.0167/n$$

$$V: 0.09m - 0.03n + 0.24/m$$

$$W: 0.107m - 0.027n + 0.11/m - 0.01/n$$

As a result, the Gini coefficient is given by

$$\text{Gini} = 1 - 2(U + V + W)/Q,$$

and the values, as functions of F and G, are shown in Table A2:

G	F									
	5	10	15	20	25	30	35	40	45	50
5	0.298	0.321	0.339	0.355	0.369	0.381	0.391	0.400	0.409	0.416
10	0.320	0.363	0.405	0.446	0.488	0.529	0.570	0.610	0.650	0.689
15	0.315	0.350	0.387	0.424	0.461	0.500	0.539	0.578	0.619	0.660
20	0.309	0.339	0.369	0.399	0.431	0.463	0.496	0.529	0.563	0.598
25	0.305	0.330	0.355	0.381	0.407	0.434	0.462	0.490	0.518	0.548
30	0.302	0.323	0.345	0.367	0.390	0.413	0.436	0.460	0.484	0.509
35	0.300	0.318	0.337	0.357	0.376	0.396	0.416	0.437	0.458	0.480

Table A2 The Gini coefficient, as a function of F and G, as determined by the model distribution shown in Fig. A2.

As with Model A, a test of the applicability of the income distribution proposed in Fig. A2 is now to see how well the Gini coefficient is reproduced for those countries where both F and G and the Gini coefficient are listed, and as documented in the Financial Restraint Spreadsheet in sec. A5, the current model has an rms error of 0.054 and underestimates the Gini coefficient by about 0.7 %, on the average. So although the rms error is about the same for both models, Model B is considerable better centred on the actual Gini coefficient values, so that model will be used as the basis for further work.

A5 Calculating the Financial Restraint

The income distribution function, $g(h)$, shown in Fig. A2 consists of three straight line segments, identified as a, b, and c in sec. A3. Consequently, the integral in Eq. 10 will consist of one or more integrals of the form

$$\int_k^l e^{-\frac{\alpha+\beta h-s}{q_0}} dh,$$

$$= \frac{q_0}{\beta} e^{-\frac{\alpha-s}{q_0}} \left[e^{-\frac{\beta k}{q_0}} - e^{-\frac{\beta l}{q_0}} \right],$$

where α and β depend on the segment, and the boundary values k and l depend on the segment and/or the value of p . There are two cases, $p < 0.2$ and $p \geq 0.2$ (p is never greater than 0.8), and in the first case the integral consist of three parts, in the second of two parts. The program module associated with the Financial spreadsheet evaluates the integral and determines the value of the financial restraint, r_1 . In that spreadsheet, the quantity $Q_{\text{mod}} = Q * \text{Global average income} / \text{National average income}$, reflecting the fact that q_0 is the average income for the whole society, i.e. in this case the world.

Technology and Evolution - Evaluation Model, version 1.0

Model parameters:

C1	2
C2	1
C3	1
C4	1

σ	50	0.239
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	r1	r2	r3	r4	w	x
Afghanistan	0.94	0.00	0.00	0.00	0.16	
Albania	0.74	0.30	0.00	0.34	0.24	
Algeria	0.70	0.70	0.72	0.00	0.29	
Angola	0.00	0.00	0.80	0.00	0.17	
Argentina	0.66	0.58	0.00	0.17	0.29	
Armenia	0.82	0.15	0.69	0.54	0.29	0.127
Australia	0.42	0.13	0.00	0.02	0.77	
Austria	0.36	0.15	0.00	0.02	0.68	
Azerbaijan	0.66	0.12	0.57	0.00	0.22	
Bahrain	0.00	0.36	0.76	0.00	0.44	
Bangladesh	0.90	0.78	0.95	0.42	0.21	0.025
Belarus	0.64	0.12	0.00	0.00	0.27	
Belgium	0.37	0.22	0.00	0.02	0.73	
Benin	0.94	0.88	0.00	0.25	0.25	
Bolivia	0.86	0.64	0.68	0.34	0.27	0.082
Bosnia/Herzegovina	0.76	0.45	0.00	0.36	0.34	
Botswana	0.77	0.00	0.00	0.29	0.56	
Brazil	0.73	0.67	0.54	0.20	0.36	0.205
Bulgaria	0.67	0.16	0.58	0.19	0.34	0.266
Burkina Faso	0.95	0.97	0.00	0.50	0.28	
Burundi	0.97	0.00	0.00	0.62	0.17	
Cambodia	0.91	0.77	0.83	0.00	0.20	
Cameroon	0.91	0.00	0.00	0.00	0.20	
Canada	0.48	0.10	0.00	0.02	0.79	
Central African Rep.	0.97	0.00	0.00	0.00	0.20	
Chad	0.00	0.95	0.00	0.00	0.18	
Chile	0.64	0.63	0.00	0.05	0.69	
China	0.68	0.37	0.00	0.79	0.31	
Colombia	0.83	0.50	0.60	0.38	0.30	0.124
Congo-Brazzaville	0.00	0.00	0.81	0.00	0.18	
Costa Rica	0.69	0.54	0.38	0.06	0.26	0.162
Côte d'Ivoire	0.92	0.00	0.00	0.59	0.38	
Croatia	0.61	0.66	0.00	0.13	0.28	
Cuba	0.00	0.63	0.00	0.00	0.40	
Czech Republic	0.56	0.12	0.00	0.06	0.42	
Dem Rep Congo	0.00	0.00	0.00	0.00	0.32	
Denmark	204.83	0.17	0.00	0.01	0.92	
Dominican Republic	0.61	0.70	0.00	0.27	0.23	
Ecuador	0.79	0.46	0.68	0.33	0.26	0.095

Egypt	0.67	0.00	0.77	0.68	0.27	
El Salvador	0.81	0.71	0.69	0.27	0.32	0.131
Eritrea	0.96	0.00	0.00	0.00	0.20	
Estonia	0.59	0.10	0.00	0.05	0.61	
Ethiopia	0.96	0.82	0.00	0.00	0.28	
Finland	0.44	0.15	0.00	0.01	0.88	
France	0.48	0.19	0.00	0.03	0.65	
Gabon	0.00	0.00	0.00	0.00	0.28	
Gambia	0.93	0.00	0.00	0.00	0.24	
Georgia	0.82	0.13	0.69	0.44	0.44	0.268
Germany	0.48	0.13	0.00	0.01	0.77	
Ghana	0.88	0.55	0.00	0.16	0.38	
Greece	0.47	0.26	0.00	0.19	0.36	
Guatemala	0.81	0.65	0.71	0.41	0.26	0.076
Guinea	0.96	0.00	0.00	0.62	0.20	
Guinea-Bissau	0.95	0.00	0.00	0.00	0.17	
Haiti	0.91	0.00	0.00	0.00	0.18	
Honduras	0.97	0.62	0.00	0.47	0.21	
Hong Kong	0.39	0.00	0.00	0.00	0.71	
Hungary	0.57	0.15	0.00	0.13	0.44	
India	0.85	0.00	0.85	0.29	0.28	
Indonesia	0.76	0.65	0.00	0.34	0.29	
Iran	0.70	0.47	0.67	0.00	0.23	
Iraq	0.00	0.00	0.00	0.00	0.17	
Ireland	0.46	0.22	0.00	0.02	0.70	
Israel	0.56	0.47	0.00	0.11	0.54	
Italy	0.44	0.28	0.00	0.06	0.37	
Jamaica	0.80	0.00	0.58	0.26	0.31	
Japan	0.43	0.24	0.00	0.05	0.73	
Jordan	0.74	0.35	0.00	0.00	0.41	
Kazakhstan	0.59	0.09	0.00	0.00	0.22	
Kenya	0.88	0.63	0.88	0.48	0.20	0.023
North Korea	0.00	0.00	0.00	0.00	0.15	
South Korea	0.49	0.52	0.00	0.17	0.47	
Kuwait	0.00	0.51	0.00	0.58	0.36	
Kyrgyzstan	0.91	0.13	0.66	0.60	0.20	0.040
Laos	0.87	0.00	0.00	0.00	0.21	
Latvia	0.62	0.12	0.00	0.17	0.45	
Lebanon	0.00	0.57	0.00	0.54	0.21	
Lesotho	0.90	0.71	0.00	0.30	0.42	
Liberia	0.00	0.00	0.00	0.41	0.26	
Libya	0.00	0.00	0.00	0.00	0.16	
Lithuania	0.59	0.13	0.00	0.05	0.47	
Macedonia	0.73	0.00	0.00	0.24	0.38	
Madagascar	0.95	0.00	0.00	0.54	0.24	
Malawi	0.98	0.91	0.91	0.42	0.26	0.038
Malaysia	0.65	0.28	0.00	0.47	0.45	
Mali	0.95	0.92	0.00	0.00	0.24	
Mauritania	0.90	0.00	0.00	0.00	0.24	
Mauritius	0.00	0.47	0.00	0.13	0.45	

Mexico	0.61	0.58	0.00	0.33	0.28	
Moldova	0.87	0.16	0.52	0.33	0.24	0.105
Mongolia	0.77	0.20	0.00	0.15	0.30	
Morocco	0.81	0.00	0.73	0.55	0.32	
Mozambique	0.97	0.00	0.47	0.44	0.25	
Myanmar					0.19	
Namibia	0.78	0.66	0.00	0.22	0.42	
Nepal	0.93	0.00	0.00	0.48	0.24	
Netherlands	0.70	0.19	0.00	0.01	0.81	
New Zealand	0.56	0.20	0.00	0.01	0.91	
Nicaragua	0.96	0.00	0.00	0.39	0.23	
Niger	0.97	0.00	0.00	0.43	0.27	
Nigeria	0.85	0.00	0.00	0.51	0.19	
Norway	0.50	0.16	0.82	0.01	0.86	0.626
Oman	0.00	0.46	0.00	0.00	0.39	
Pakistan	0.87	0.78	0.41	0.58	0.22	0.039
Palestine	0.00	0.52	0.00	0.00	0.18	
Panama	0.56	0.41	0.72	0.19	0.31	0.206
Papua New Guinea	0.93	0.00	0.66	0.35	0.20	
Paraguay	0.78	0.67	0.00	0.35	0.20	
Peru	0.75	0.64	0.52	0.26	0.30	0.145
Philippines	0.75	0.39	0.60	0.32	0.31	0.158
Poland	0.59	0.14	0.00	0.06	0.51	
Portugal	0.63	0.36	0.00	0.04	0.56	
Qatar	0.00	0.40	0.00	0.00	0.63	
Romania	0.65	0.20	0.35	0.19	0.35	0.315
Russia	0.61	0.12	0.00	0.66	0.21	
Rwanda	0.95	0.00	0.57	0.00	0.45	
Saudi Arabia	0.00	0.34	0.00	0.00	0.40	
Senegal	0.93	0.87	0.00	0.23	0.34	
Serbia	0.00	0.57	0.79	0.21	0.34	
Sierra Leone	0.89	0.00	0.00	0.00	0.22	
Singapore	0.45	0.25	0.00	0.41	0.82	
Slovakia	0.85	0.00	0.00	0.07	0.41	
Slovenia	0.54	0.74	0.00	0.04	0.51	
Somalia	0.00	0.64	0.00	0.00	0.15	
South Africa	0.75	0.00	0.00	0.24	0.36	
South Sudan	0.00	0.00	0.00	0.00	0.16	
Spain	0.55	0.33	0.85	0.04	0.52	0.412
Sri Lanka	0.77	0.00	0.00	0.53	0.33	
Sudan	0.00	0.47	0.00	0.00	0.15	
Swaziland	0.73	0.00	0.00	0.00	0.34	
Sweden	0.37	0.15	0.00	0.01	0.87	
Switzerland	0.42	0.12	0.00	0.01	0.85	
Syria	0.00	0.52	0.00	0.00	0.18	
Taiwan	0.00	0.00	0.00	0.00	0.52	
Tajikistan	0.92	0.17	0.00	0.00	0.19	
Tanzania	0.94	0.70	0.00	0.37	0.17	
Thailand	0.71	0.55	0.00	0.45	0.32	
Timor-Leste	0.00	0.00	0.00	0.00	0.22	

Togo	0.00	0.67	0.00	0.52	0.21	
Trinidad and Tobago	0.44	0.26	0.65	0.22	0.32	0.284
Tunisia	0.68	0.88	0.00	0.35	0.35	
Turkey	0.62	0.56	0.00	0.40	0.39	
Turkmenistan	0.72	0.00	0.00	0.00	0.17	
Uganda	0.95	0.70	0.70	0.61	0.20	0.021
Ukraine	0.78	0.16	0.00	0.40	0.20	
United Arab Emirates	0.00	0.39	0.00	0.00	0.65	
United Kingdom	0.57	0.11	0.00	0.02	0.75	
United States	0.51	0.10	0.71	0.03	0.66	0.570
Uruguay	0.00	0.53	0.54	0.05	0.68	
Uzbekistan	0.86	0.00	0.00	0.00	0.18	
Venezuela	0.49	0.60	0.00	0.60	0.17	
Vietnam	0.85	0.36	0.35	0.00	0.27	
Yemen	0.89	0.00	0.00	0.77	0.18	
Zambia	0.00	0.00	0.58	0.44	0.31	
Zimbabwe	0.00	0.58	0.91	0.00	0.17	

0	0
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0.414605	3.275
0	0
0	0
0	0
0	0
3.519733	142.319
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0	0
0	0
0.871684	10.624
0	0
0	0
39.47319	192.4
1.927217	7.245
0	0
0	0
0	0
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0	0
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0	0
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0	0
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0.501803	13.102
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0	0
0.374205	1.318
0	0
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0	0
0.68268	32.939
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0	0
180.6081	317
0	0
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0	0
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0	0
295.7633	1239.17

Financial restraint, v 1.0, 16.03.2015

End of list (row)

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Select	Country	Population	Input data				Poverty	Gini
			Per capita income	F	G			
2	Afghanistan	24.485	1,924	7.00	4.50		0.200	
2	Albania	2.832	10,596	7.20	4.80		0.290	
2	Algeria	37.100	13,788	9.60	6.10		0.353	
	Angola	20.609	7,978					
2	Argentina	42.700	22,363	31.60	17.80		0.436	
2	Armenia	3.275	7,034	8.00	5.00		0.303	
1	Australia	22.902	45,138	12.50	7.00	0.138	0.305	
1	Austria	8.452	44,402	6.90	4.40	0.090	0.260	
2	Azerbaijan	9.111	17,028	9.70	6.00		0.337	
	Bahrain	1.234	49,633					
2	Bangladesh	142.319	3,167	7.50	4.90		0.321	
2	Belarus	9.460	17,623	6.90	4.50		0.265	
1	Belgium	11.036	40,760	8.20	4.90	0.085	0.330	
2	Benin	10.300	1,793	9.40	6.00		0.435	
2	Bolivia	10.624	5,928	93.90	42.30		0.466	
2	Bosnia/Herzegovina	3.840	9,563	5.40	3.80		0.362	
2	Botswana	2.038	15,241	43.00	20.40		0.610	
2	Brazil	192.400	14,987	40.60	21.80		0.527	
2	Bulgaria	7.245	16,518	7.00	4.40		0.343	
2	Burkina Faso	17.400	1,638	11.60	6.90		0.398	
2	Burundi	10.200	877	19.30	9.50		0.333	
2	Cambodia	13.396	3,056	12.20	7.30		0.379	
2	Cameroon	19.406	2,861	15.70	9.10		0.389	
2	Canada	35.000	43,253	9.40	5.50		0.337	
1	Central African Rep.	5.000	604	69.20	32.70	0.117	0.563	
	Chad	11.274	2,432					
2	Chile	17.402	22,534	26.20	15.70		0.508	
1	China	1,347.350	11,868	21.60	12.20	0.178	0.370	
2	Colombia	47.015	12,776	60.40	25.30		0.535	
	Congo-Brazzaville	4.043	6,232					
2	Costa Rica	4.302	14,344	23.40	15.60		0.486	
2	Côte d'Ivoire	21.395	2,710	16.60	9.70		0.415	
2	Croatia	4.291	20,222	7.30	4.80		0.337	
	Cuba	11.241						
2	Czech Republic	10.512	27,347	5.20	3.50		0.260	
	Dem Rep Congo	65.966	655					
2	Denmark	5.580	43,080	8.10	4.30		0.240	

1	Dominican Republic	9.379	12,173	25.30	14.30	0.059	0.457
2	Ecuador	14.483	10,908	35.20	17.30		0.466
1	Egypt	82.019	10,870	8.00	5.10	0.060	0.308
2	El Salvador	6.200	7,783	38.60	20.90		0.418
2	Eritrea	6.000	1,197	10.80	6.40		0.360
2	Estonia	1.318	26,052	10.80	6.40		0.298
2	Ethiopia	84.321	1,427	6.60	4.30		
2	Finland	5.408	40,045	5.60	3.80		0.269
2	France	65.350	39,813	9.10	5.60		0.327
	Gabon	1.505	20,520				
1	The Gambia	1.728	1,642	20.20	11.20	0.117	0.473
2	Georgia	4.469	7,156	15.40	8.30		0.413
2	Germany	80.500	43,475	6.90	4.30		0.306
2	Ghana	27.000	4,029	14.10	8.40		0.428
1	Greece	10.787	25,126	10.20	6.20	0.080	0.343
2	Guatemala	14.714	7,290	33.90	20.30		0.524
2	Guinea	10.537	1,321	10.50	6.60		0.394
2	Guinea-Bissau	1.521	1,411	19.00	10.30		0.355
1	Haiti	10.085	1,703	54.40	26.60	0.087	0.592
2	Honduras	8.385	4,592	59.40	17.20		0.574
1	Hong Kong	7.103	52,984	17.80	9.70	0.152	
2	Hungary	9.962	23,236	5.50	3.80		0.312
2	India	1,210.570	5,450	8.60	5.60		0.336
2	Indonesia	237.641	9,635	7.80	5.20		0.340
2	Iran	76.800	16,165	17.20	9.70		0.383
	Iraq	33.330	14,367				
2	Ireland	4.588	44,663	9.40	5.60		0.343
2	Israel	7.870	32,717	13.40	7.90		0.392
1	Italy	59.464	34,103	11.60	6.50	0.104	0.360
2	Jamaica	2.706	8,487	17.30	9.80		0.455
2	Japan	127.300	36,654	4.50	3.40		0.381
2	Jordan	6.297	11,639	11.30	6.90		0.354
2	Kazakhstan	16.734	23,038	8.50	5.60		0.290
1	Kenya	38.610	3,009	13.60	8.20	0.097	0.477
	North Korea	24.052				0.209	
1	South Korea	48.580	33,791	7.80	4.70	0.126	0.313
	Kuwait	3.328	70,785				
1	Kyrgyzstan	5.477	3,230	6.40	4.40	0.160	0.362
2	Laos	6.256	4,666	8.30	5.40		0.367
2	Latvia	2.070	22,832	11.60	6.80		0.366
	Lebanon	4.228	17,326				
2	Lesotho	2.171	2,765	39.80	44.20		0.525
	Liberia	3.477	887	12.80		0.146	
	Libya	6.400	20,681				
2	Lithuania	3.190	25,374	10.40	6.30		0.376
2	Macedonia	2.057	12,587	12.50	7.50		0.432
2	Madagascar	20.696	1,398	19.20	11.00		0.441
2	Malawi	13.102	748	10.90	6.70		0.390
2	Malaysia	30.017	23,160	22.10	12.40		0.462
2	Mali	14.528	1,493	12.50	7.60		0.330

2	Mauritania	3.341	3,187	12.00	7.40		0.405
	Mauritius	1.286	17,118				
1	Mexico	112.336	17,390	21.60	12.80	0.214	0.481
2	Moldova	3.560	4,666	8.20	5.30		0.330
2	Mongolia	2.780	9,293	8.20	5.40		0.365
2	Morocco	32.548	7,356	11.70	7.20		0.409
2	Mozambique	23.700	1,046	18.80	9.90		0.457
	Myanmar	47.963	4,345				
2	Namibia	2.283	10,234	106.60	56.10		0.613
2	Nepal	26.621	2,245	15.80	9.10		0.328
2	Netherlands	16.838	46,440	9.20	5.10		0.309
2	New Zealand	4.434	33,626	12.40	6.80		0.362
2	Nicaragua	6.071	4,593	31.00	8.80		0.405
2	Niger	16.275	984	46.00	20.70		0.346
2	Nigeria	177.500	5,746	17.80	9.70		0.488
2	Norway	5.009	64,363	6.10	3.90		0.258
	Oman	2.773	43,304				
2	Pakistan	184.000	4,574	6.50	4.30		0.300
	Palestine	4.293				0.078	
1	Panama	3.406	19,080	49.90	23.90	0.098	0.519
2	Papua New Guinea	7.014	2,290	23.80	12.60		0.509
2	Paraguay	6.382	8,064	38.80	25.70		0.480
2	Peru	30.135	11,557	26.10	15.20		0.453
1	Philippines	92.340	6,597	15.50	9.30	0.077	0.430
2	Poland	38.501	23,273	8.80	5.60		0.341
2	Portugal	10.487	25,643	15.00	8.00		0.385
	Qatar	1.792	145,894				
2	Romania	19.043	17,440	7.50	4.90		0.300
2	Russia	143.056	24,298	12.70	7.60		0.401
2	Rwanda	10.718	1,608	18.60	9.90		0.508
	Saudi Arabia	27.137	51,779				
2	Senegal	12.855	2,243	12.30	7.40		0.392
	Serbia	7.120	12,465			0.111	
1	Sierra Leone	5.400	1,924	87.20	57.60	0.111	0.425
2	Singapore	5.184	78,762	17.70	9.70		
2	Slovakia	5.445	26,616	6.70	4.00		0.260
2	Slovenia	2.057	28,512	5.90	3.90		0.312
	Somalia	9.797					
2	South Africa	54.000	12,507	33.10	17.90		0.650
	South Sudan	8.260	2,401				
2	Spain	46.185	31,942	10.30	6.00		0.347
2	Sri Lanka	20.653	9,583	11.10	6.90		0.364
	Sudan	30.894	4,429				
1	Swaziland	1.186	7,646	25.10	13.00	0.083	0.515
1	Sweden	9.490	43,407	6.20	4.00	0.089	0.250
2	Switzerland	7.952	53,977	9.00	5.50		0.337
	Syria	21.566	0				
	Taiwan	23.293	41,539				
1	Tajikistan	7.800	2,536	7.80	5.20	0.151	0.308
2	Tanzania	43.188	1,834	9.20	5.80		0.376

2	Thailand	65.500	14,136	12.60	7.70		0.400
	Timor-Leste	1.066	7,678				
	Togo	6.191	1,390				
1	Trinidad and Tobago	1.318	30,197	12.90	7.60	0.097	0.403
1	Tunisia	10.673	10,998	13.40	7.90	0.103	0.414
2	Turkey	74.724	18,874	6.60	4.60		0.390
2	Turkmenistan	5.105	12,863	12.30	7.70		0.408
2	Uganda	32.939	1,681	16.60	9.20		0.443
2	Ukraine	45.426	8,651	5.90	4.10		0.264
	United Arab Emirates	8.264	63,181				
2	United Kingdom	62.262	36,208	13.80	7.20		0.380
2	United States	317.000	53,001	15.90	8.40		0.411
	Uruguay	3.251	19,679	11.80			
2	Uzbekistan	29.123	5,176	10.60	6.20		0.367
1	Venezuela	27.150	18,453	18.80	16.00	0.192	0.448
2	Vietnam	87.840	5,295	6.90	4.90		0.356
2	Yemen	24.527	3,838	8.60	5.60		0.377
	Zambia	13.046	3,926				
	Zimbabwe	13.061	1,954				
						0.095	
	Total	6,901	15,525 Avg			0.174	

Calculate

Distribution selection based on Gini fit

Gini A	Variance	Ratio	Gini B	Variance	Ratio	Ind	Check
0.286	0.00746	1.432	0.293	0.00857	1.463	1	0.697
0.296	0.00003	1.019	0.303	0.00017	1.045	1	0.931
0.330	0.00053	0.935	0.344	0.00008	0.975	1	1.442
						0	
0.436	0.00000	1.000	0.489	0.00286	1.123	1	5.904
0.303	0.00000	0.999	0.312	0.00008	1.030	1	0.868
0.352	0.00222	1.155	0.376	0.00505	1.233	1	1.388
0.283	0.00053	1.088	0.289	0.00082	1.110	1	0.630
0.329	0.00007	0.975	0.343	0.00004	1.019	1	1.309
						0	
0.299	0.00049	0.931	0.307	0.00019	0.957	1	0.933
0.286	0.00045	1.080	0.292	0.00074	1.103	1	0.730
0.301	0.00086	0.911	0.310	0.00040	0.939	1	0.702
0.328	0.01153	0.753	0.341	0.00876	0.785	1	1.407
0.497	0.00097	1.067	0.619	0.02329	1.328	1	9.907
0.258	0.01071	0.714	0.261	0.01014	0.722	1	0.523
0.459	0.02267	0.753	0.546	0.00413	0.895	1	4.753
0.452	0.00565	0.857	0.518	0.00009	0.982	1	6.943
0.283	0.00358	0.826	0.289	0.00293	0.842	1	0.597
0.348	0.00251	0.874	0.368	0.00088	0.926	1	1.584
0.394	0.00373	1.183	0.441	0.01170	1.325	1	1.650
0.354	0.00060	0.935	0.376	0.00001	0.993	1	1.786
0.380	0.00008	0.978	0.411	0.00050	1.057	1	2.435
0.318	0.00035	0.944	0.332	0.00003	0.985	1	0.907
0.483	0.00642	0.858	0.585	0.00049	1.039	1	8.433
						0	
0.423	0.00718	0.833	0.466	0.00179	0.917	1	5.580
0.409	0.00152	1.105	0.452	0.00665	1.220	1	3.594
0.484	0.00264	0.904	0.608	0.00530	1.136	1	3.928
						0	
0.415	0.00507	0.853	0.446	0.00163	0.917	1	6.401
0.386	0.00083	0.931	0.419	0.00001	1.009	1	2.739
0.296	0.00170	0.878	0.303	0.00113	0.900	1	0.898
						0	
0.245	0.00023	0.941	0.245	0.00021	0.944	1	0.289
						0	
0.282	0.00174	1.174	0.287	0.00220	1.196	1	0.135

0.421	0.00127	0.922	0.468	0.00013	1.025	1	4.476
0.446	0.00040	0.957	0.520	0.00286	1.115	1	4.219
0.305	0.00001	0.991	0.315	0.00005	1.022	1	0.968
0.449	0.00095	1.074	0.512	0.00885	1.225	1	6.701
0.339	0.00046	0.940	0.357	0.00001	0.991	1	1.347
0.339	0.00164	1.136	0.357	0.00345	1.197	1	1.347
						0	0.629
0.259	0.00011	0.962	0.261	0.00006	0.971	1	0.458
0.319	0.00006	0.977	0.332	0.00003	1.016	1	1.106
						0	
0.403	0.00492	0.852	0.445	0.00081	0.940	1	3.054
0.374	0.00150	0.906	0.407	0.00003	0.986	1	1.733
0.280	0.00069	0.914	0.285	0.00045	0.930	1	0.530
0.370	0.00331	0.866	0.397	0.00096	0.928	1	2.261
0.334	0.00009	0.972	0.350	0.00005	1.020	1	1.344
0.438	0.00732	0.837	0.486	0.00143	0.928	1	7.647
0.340	0.00289	0.864	0.357	0.00136	0.906	1	1.645
0.397	0.00172	1.117	0.438	0.00681	1.233	1	2.549
0.471	0.01475	0.795	0.559	0.00107	0.945	1	7.202
0.492	0.00665	0.858	0.707	0.01769	1.232	1	-3.843
						0	2.344
0.259	0.00285	0.829	0.261	0.00258	0.837	1	0.490
0.318	0.00033	0.946	0.329	0.00004	0.980	1	1.271
0.307	0.00109	0.903	0.316	0.00056	0.930	1	1.134
0.388	0.00003	1.014	0.424	0.00165	1.106	1	2.541
						0	
0.320	0.00051	0.934	0.334	0.00008	0.974	1	1.007
0.364	0.00077	0.929	0.390	0.00001	0.994	1	1.991
0.343	0.00030	0.952	0.364	0.00001	1.010	1	1.184
0.389	0.00435	0.855	0.424	0.00094	0.932	1	2.608
0.240	0.01994	0.629	0.242	0.01935	0.635	1	0.420
0.347	0.00005	0.980	0.366	0.00015	1.034	1	1.682
0.318	0.00076	1.095	0.329	0.00150	1.134	1	1.303
0.367	0.01205	0.770	0.392	0.00717	0.822	1	2.226
						0	
0.294	0.00035	0.940	0.302	0.00012	0.965	1	0.634
						0	
0.282	0.00641	0.779	0.287	0.00557	0.794	1	0.794
0.313	0.00293	0.853	0.323	0.00189	0.881	1	1.169
0.347	0.00037	0.947	0.367	0.00000	1.004	1	1.484
						0	
0.412	0.01269	0.785	0.406	0.01406	0.774	1	29.606
						0	
						0	
0.336	0.00162	0.893	0.353	0.00055	0.938	1	1.378
0.357	0.00555	0.827	0.380	0.00269	0.880	1	1.888
0.399	0.00175	0.905	0.437	0.00002	0.991	1	3.183
0.343	0.00221	0.879	0.361	0.00083	0.926	1	1.614
0.411	0.00262	0.889	0.455	0.00006	0.984	1	3.629
0.358	0.00081	1.086	0.381	0.00258	1.154	1	1.987

0.355	0.00253	0.876	0.376	0.00087	0.927	1	1.952
						0	
0.410	0.00511	0.851	0.448	0.00107	0.932	1	4.194
0.310	0.00038	0.941	0.321	0.00009	0.972	1	1.102
0.313	0.00275	0.856	0.323	0.00177	0.885	1	1.202
0.352	0.00329	0.860	0.372	0.00138	0.909	1	1.851
0.394	0.00392	0.863	0.437	0.00041	0.955	1	2.215
						0	
0.487	0.01579	0.795	0.574	0.00151	0.937	1	19.529
0.381	0.00277	1.160	0.412	0.00707	1.256	1	2.402
0.308	0.00000	0.998	0.320	0.00013	1.037	1	0.573
0.349	0.00016	0.965	0.373	0.00012	1.031	1	1.220
0.417	0.00013	1.028	0.533	0.01627	1.315	1	-2.899
0.465	0.01421	1.345	0.563	0.04716	1.628	1	4.066
0.390	0.00955	0.800	0.429	0.00353	0.878	1	2.344
0.263	0.00003	1.021	0.266	0.00006	1.031	1	0.393
						0	
0.279	0.00045	0.930	0.284	0.00026	0.946	1	0.662
						0	
0.467	0.00267	0.900	0.557	0.00146	1.074	1	5.983
0.416	0.00861	0.818	0.467	0.00174	0.918	1	3.270
0.440	0.00156	0.918	0.478	0.00000	0.997	1	11.435
0.423	0.00088	0.934	0.468	0.00024	1.034	1	5.113
0.381	0.00244	0.885	0.410	0.00041	0.953	1	2.701
0.318	0.00051	0.934	0.331	0.00011	0.969	1	1.205
0.370	0.00021	0.962	0.403	0.00032	1.046	1	1.565
						0	
0.299	0.00000	0.996	0.307	0.00005	1.024	1	0.933
0.359	0.00175	0.896	0.382	0.00035	0.953	1	1.922
0.394	0.01306	0.775	0.435	0.00533	0.856	1	2.281
						0	
0.356	0.00131	0.908	0.378	0.00020	0.964	1	1.853
						0	
0.464	0.00149	1.091	0.508	0.00691	1.196	1	27.411
						0	2.377
0.268	0.00007	1.031	0.271	0.00012	1.042	1	0.296
0.263	0.00239	0.843	0.266	0.00212	0.852	1	0.459
						0	
0.440	0.04412	0.677	0.499	0.02270	0.768	1	5.510
						0	
0.331	0.00027	0.953	0.347	0.00000	1.001	1	1.111
0.346	0.00032	0.951	0.365	0.00000	1.002	1	1.748
						0	
0.420	0.00895	0.816	0.475	0.00157	0.923	1	3.242
0.268	0.00031	1.070	0.271	0.00043	1.083	1	0.460
0.317	0.00040	0.941	0.330	0.00006	0.978	1	1.039
						0	
						0	
0.307	0.00000	0.997	0.316	0.00007	1.027	1	1.134
0.324	0.00275	0.860	0.337	0.00154	0.896	1	1.273

0.360	0.00163	0.899	0.382	0.00032	0.955	1	2.055
						0	
						0	
0.360	0.00186	0.893	0.384	0.00036	0.953	1	1.856
0.364	0.00248	0.880	0.390	0.00060	0.941	1	1.991
0.288	0.01031	0.740	0.295	0.00908	0.756	1	0.929
0.359	0.00244	0.879	0.380	0.00080	0.931	1	2.153
0.384	0.00349	0.867	0.419	0.00059	0.945	1	2.239
0.271	0.00005	1.026	0.275	0.00012	1.041	1	0.659
						0	
0.359	0.00045	0.944	0.388	0.00006	1.020	1	1.160
0.377	0.00118	0.916	0.412	0.00000	1.002	1	1.669
						0	
0.335	0.00104	0.912	0.352	0.00021	0.960	1	1.213
0.399	0.00242	0.890	0.410	0.00145	0.915	1	8.315
0.297	0.00345	0.835	0.305	0.00265	0.855	1	1.130
0.318	0.00350	0.843	0.329	0.00227	0.874	1	1.271
						0	
						0	

0.058

0.930

0.053

0.998

122

Qmod	Subsistence income	Financial restraint
8.938	962	0.940
1.668	5,298	0.744
1.341	6,894	0.702
1.128	11,182	0.656
2.482	3,517	0.815
0.404	18,365	0.419
0.384	18,872	0.359
1.070	8,514	0.664
5.570	1,584	0.905
0.980	8,812	0.642
0.420	15,962	0.373
10.285	897	0.943
5.335	2,964	0.858
1.783	4,782	0.758
1.581	7,620	0.766
1.778	7,494	0.727
1.028	8,259	0.666
11.381	819	0.948
21.467	439	0.971
6.217	1,528	0.908
7.011	1,431	0.912
0.403	21,627	0.478
48.324	68	0.967
1.103	11,267	0.636
1.845	3,597	0.680
1.901	6,388	0.826
1.831	7,172	0.689
7.588	1,355	0.916
0.870	10,111	0.612
0.606	13,674	0.564
0.373	21,540	204.829

1.908	1,730	0.614
2.117	5,454	0.790
1.625	3,570	0.670
3.381	3,892	0.809
15.227	599	0.961
0.700	13,026	0.590
11.981	714	0.955
0.421	20,023	0.444
0.448	19,907	0.482
12.816	415	0.927
2.635	3,578	0.825
0.388	21,738	0.484
4.914	2,015	0.882
0.726	7,987	0.473
3.782	3,645	0.806
14.254	661	0.957
14.337	706	0.954
16.050	182	0.914
3.658	2,296	0.973
0.375	18,155	0.387
0.730	11,618	0.566
3.346	2,725	0.848
1.872	4,818	0.761
1.251	8,082	0.702
0.395	22,332	0.464
0.591	16,359	0.562
0.525	12,365	0.440
2.395	4,244	0.797
0.464	18,327	0.434
1.619	5,820	0.739
0.795	11,519	0.591
6.565	840	0.877
0.503	16,590	0.490
5.415	1,700	0.907
3.869	2,333	0.866
0.808	11,416	0.622
20.262	1,383	0.900
0.722	12,687	0.590
1.523	6,294	0.729
15.207	699	0.953
25.051	374	0.975
0.948	11,580	0.650
12.970	747	0.951

6.064	1,594	0.903
1.314	5,565	0.605
3.841	2,333	0.867
1.952	4,647	0.769
2.603	3,678	0.810
18.826	523	0.965
3.897	5,117	0.777
8.908	1,123	0.929
0.362	23,220	0.699
0.534	16,813	0.562
3.143	2,297	0.959
23.862	492	0.966
3.461	2,873	0.849
0.259	32,182	0.505
3.756	2,287	0.869
1.353	2,472	0.565
9.351	1,145	0.928
4.010	4,032	0.780
2.090	5,779	0.746
3.112	1,495	0.754
0.777	11,637	0.593
0.724	12,822	0.634
1.012	8,720	0.646
0.791	12,149	0.612
12.309	804	0.948
8.524	1,122	0.930
24.284	90	0.894
0.253	39,381	0.454
0.617	13,308	0.846
0.590	14,256	0.535
1.976	6,254	0.750
0.557	15,971	0.546
1.981	4,792	0.769
2.799	1,447	0.733
0.387	19,580	0.370
0.328	26,989	0.418
7.113	1,176	0.917
9.915	917	0.942

1.378	7,068	0.706
0.633	9,074	0.440
1.758	3,303	0.676
0.941	9,437	0.621
1.531	6,432	0.719
11.725	841	0.946
1.996	4,326	0.777
0.493	18,104	0.571
0.354	26,501	0.512
3.474	2,588	0.858
1.641	2,724	0.491
3.432	2,648	0.850
4.752	1,919	0.887

Status	Country	Population	Primary	Secondary	Tertiary	Restraint	
0	Afghanistan	24.485				0.00	1.00
1	Albania	2.832	52.1	41.8	1.5	0.30	0.30
1	Algeria	37.100	38.8	7.6		0.70	0.70
0	Angola	20.609				0.00	1.00
1	Argentina	42.700	47.7		13.7	0.58	0.58
1	Armenia	3.275	16.3	61.2	20.4	0.15	0.15
1	Australia	22.902	23.4	35.2	41.3	0.13	0.13
1	Austria	8.452	23.0	59.0	18.0	0.15	0.15
1	Azerbaijan	9.111	9.8	63.6	25.1	0.12	0.12
1	Bahrain	1.234	30.7	38.4	11.2	0.36	0.36
1	Bangladesh	142.319	30.1		4.2	0.78	0.78
1	Belarus	9.460	13.8	32.3	50.2	0.12	0.12
1	Belgium	11.036	30.2	33.0	29.8	0.22	0.22
1	Benin	10.300	16.0		2.2	0.88	0.88
1	Bolivia	10.624	17.2		25.6	0.64	0.64
1	Bosnia/Herzegovina	3.840	41.6	26.6	6.2	0.45	0.45
0	Botswana	2.038				0.00	1.00
1	Brazil	192.400	36.1		11.4	0.67	0.67
1	Bulgaria	7.245	27.5	51.0	21.5	0.16	0.16
1	Burkina Faso	17.400	4.7	0.3	0.2	0.97	0.97
0	Burundi	10.200				0.00	1.00
1	Cambodia	13.396	29.3	6.3		0.77	0.77
0	Cameroon	19.406				0.00	1.00
1	Canada	35.000	17.3	35.1	47.7	0.10	0.10
0	Central African Rep.	5.000				0.00	1.00
1	Chad	11.274	3.0		3.2	0.95	0.95
1	Chile	17.402	31.7		18.0	0.63	0.63
1	China	1,347.350	71.1	18.7	3.6	0.37	0.37
1	Colombia	47.015	50.2		19.7	0.50	0.50
0	Congo-Brazzaville	4.043				0.00	1.00
1	Costa Rica	4.302	42.7		20.9	0.54	0.54
0	Côte d'Ivoire	21.395				0.00	1.00
1	Croatia	4.291	26.2		18.3	0.66	0.66
1	Cuba	11.241	45.6		9.4	0.63	0.63
1	Czech Republic	10.512	11.3	71.2	17.3	0.12	0.12
0	Dem Rep Congo	65.966				0.00	1.00
1	Denmark	5.580	23.1	42.2	31.1	0.17	0.17
1	Dominican Republic	9.379	32.0		10.8	0.70	0.70
1	Ecuador	14.483	38.9	21.4	11.6	0.46	0.46
0	Egypt	82.019				0.00	1.00
1	El Salvador	6.200	28.9		11.2	0.71	0.71
0	Eritrea	6.000				0.00	1.00
1	Estonia	1.318	12.7	51.2	36.0	0.10	0.10
1	Ethiopia	84.321	15.8	7.7	1.1	0.82	0.82
1	Finland	5.408	28.8	38.6	32.6	0.15	0.15

1 France	65.350	34.7	37.8	25.9	0.19	0.19
0 Gabon	1.505				0.00	1.00
0 The Gambia	1.728				0.00	1.00
1 Georgia	4.469	14.6	57.8	25.8	0.13	0.13
1 Germany	80.500	17.9	56.4	25.6	0.13	0.13
1 Ghana	27.000	44.1	17.4	3.1	0.55	0.55
1 Greece	10.787	39.7	33.6	20.0	0.26	0.26
1 Guatemala	14.714	38.5	13.1		0.65	0.65
0 Guinea	10.537				0.00	1.00
0 Guinea-Bissau	1.521				0.00	1.00
0 Haiti	10.085				0.00	1.00
1 Honduras	8.385	34.4	14.3	4.2	0.62	0.62
0 Hong Kong	7.103				0.00	1.00
1 Hungary	9.962	22.4	56.6	21.0	0.15	0.15
0 India	1,210.570				0.00	1.00
1 Indonesia	237.641	45.5		7.9	0.65	0.65
1 Iran	76.800	55.4		20.0	0.47	0.47
0 Iraq	33.330				0.00	1.00
1 Ireland	4.588	30.2	32.9	30.3	0.22	0.22
1 Israel	7.870	15.0		44.5	0.47	0.47
1 Italy	59.464	47.1	34.5	12.8	0.28	0.28
0 Jamaica	2.706				0.00	1.00
1 Japan	127.300	16.7	39.9	29.9	0.24	0.24
1 Jordan	6.297	43.8	25.2	16.2	0.35	0.35
1 Kazakhstan	16.734	3.7	70.8	25.5	0.09	0.09
1 Kenya	38.610	28.5	21.6		0.63	0.63
0 North Korea	24.052				0.00	1.00
1 South Korea	48.580	21.6		35.3	0.52	0.52
1 Kuwait	3.328	31.8	23.2	9.5	0.51	0.51
1 Kyrgyzstan	5.477	9.7	70.3	17.9	0.13	0.13
0 Laos	6.256				0.00	1.00
1 Latvia	2.070	13.6	58.9	27.2	0.12	0.12
1 Lebanon	4.228	45.4		15.3	0.57	0.57
1 Lesotho	2.171	27.1	11.9	1.9	0.71	0.71
0 Liberia	3.477				0.00	1.00
0 Libya	6.400				0.00	1.00
1 Lithuania	3.190	17.1	52.2	29.3	0.13	0.13
0 Macedonia	2.057				0.00	1.00
0 Madagascar	20.696				0.00	1.00
1 Malawi	13.102	14.6		0.5	0.91	0.91
1 Malaysia	30.017	40.3	34.5	16.4	0.28	0.28
1 Mali	14.528	8.4		3.2	0.92	0.92
0 Mauritania	3.341				0.00	1.00
1 Mauritius	1.286	23.1	37.8	5.2	0.47	0.47
1 Mexico	112.336	43.4		16.3	0.58	0.58
1 Moldova	3.560	24.5	55.7	18.9	0.16	0.16
1 Mongolia	2.780	27.9	43.9	23.7	0.20	0.20
0 Morocco	32.548				0.00	1.00
0 Mozambique	23.700				0.00	1.00
0 Myanmar	47.963				0.00	1.00

1 Namibia	2.283	31.5	14.8	2.2	0.66	0.66
0 Nepal	26.621				0.00	1.00
1 Netherlands	16.838	31.0	37.5	29.0	0.19	0.19
1 New Zealand	4.434	29.5	30.9	34.8	0.20	0.20
0 Nicaragua	6.071				0.00	1.00
0 Niger	16.275				0.00	1.00
0 Nigeria	177.500				0.00	1.00
1 Norway	5.009	23.4	42.6	31.4	0.16	0.16
1 Oman	2.773	24.9	27.4	14.0	0.46	0.46
1 Pakistan	184.000	24.2		7.4	0.78	0.78
1 Palestine	4.293	18.7	13.2	24.8	0.52	0.52
1 Panama	3.406	30.2	21.5	21.3	0.41	0.41
0 Papua New Guinea	7.014				0.00	1.00
1 Paraguay	6.382	38.4		10.4	0.67	0.67
1 Peru	30.135	23.5		22.1	0.64	0.64
1 Philippines	92.340		40.6	24.2	0.39	0.39
1 Poland	38.501	16.6	60.3	21.8	0.14	0.14
1 Portugal	10.487	58.3	15.1	15.4	0.36	0.36
1 Qatar	1.792	33.7	20.5	20.9	0.40	0.40
1 Romania	19.043	32.7	52.6	13.3	0.20	0.20
1 Russia	143.056	14.4	21.9	60.1	0.12	0.12
0 Rwanda	10.718				0.00	1.00
1 Saudi Arabia	27.137	32.4	27.9	21.0	0.34	0.34
1 Senegal	12.855	16.2		3.0	0.87	0.87
1 Serbia	7.120	42.7		17.3	0.57	0.57
0 Sierra Leone	5.400				0.00	1.00
1 Singapore	5.184	16.7	28.1	39.6	0.25	0.25
0 Slovakia	5.445				0.00	1.00
1 Slovenia	2.057	14.4		17.2	0.74	0.74
1 Somalia	9.797	20.5		23.7	0.64	0.64
0 South Africa	54.000				0.00	1.00
0 South Sudan	8.260				0.00	1.00
1 Spain	46.185	19.3	54.3	6.4	0.33	0.33
0 Sri Lanka	20.653				0.00	1.00
1 Sudan	30.894	65.0		14.1	0.47	0.47
0 Swaziland	1.186				0.00	1.00
1 Sweden	9.490	20.7	48.3	29.4	0.15	0.15
1 Switzerland	7.952	16.7	48.1	34.8	0.12	0.12
1 Syria	21.566	45.6	15.7	6.2	0.52	0.52
0 Taiwan	23.293				0.00	1.00
1 Tajikistan	7.800	18.2	68.3	10.6	0.17	0.17
1 Tanzania	43.188	47.2	0.7	0.9	0.70	0.70
1 Thailand	65.500	33.0	15.2	11.8	0.55	0.55
0 Timor-Leste	1.066				0.00	1.00
1 Togo	6.191	41.1	6.2	2.6	0.67	0.67
1 Trinidad and Tobago	1.318	37.7	46.9	9.6	0.26	0.26
1 Tunisia	10.673			12.5	0.88	0.88
1 Turkey	74.724	52.3		12.9	0.56	0.56
0 Turkmenistan	5.105				0.00	1.00
1 Uganda	32.939	33.5	7.7	2.9	0.70	0.70

1 Ukraine	45.426	22.8	36.0	38.0	0.16	0.16
1 United Arab Emirates	8.264	27.3	29.1	18.0	0.39	0.39
1 United Kingdom	62.262	13.8	53.0	33.1	0.11	0.11
1 United States	317.000	11.1	47.0	40.7	0.10	0.10
1 Uruguay	3.251	60.8		10.9	0.53	0.53
0 Uzbekistan	29.123				0.00	1.00
1 Venezuela	27.150	39.7		15.9	0.60	0.60
1 Vietnam	87.840	67.6	19.0	6.7	0.36	0.36
0 Yemen	24.527				0.00	1.00
0 Zambia	13.046				0.00	1.00
1 Zimbabwe	13.061	54.7	8.8	1.5	0.58	0.58

6,901.461

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3.643

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10.958
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2.302

2.833
7.114
1.240

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6.636

4.430

0.135
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0.832

12.562

0.600
10.385
14.773
2.791
9.577

5.217

1.455

154.033
35.913

1.004
3.663
16.594

30.818
2.197
1.434
24.498

25.129
1.682
0.711

0.241
2.428
1.544

0.427

11.891
8.513
13.332

0.603
64.792
0.581
0.558

1.497

3.139

0.875

0.810

1.287

143.731

2.237

1.404

4.248

19.205

36.233

5.370

3.778

0.725

3.770

16.489

9.346

11.225

4.068

1.301

1.526

6.271

15.336

14.495

1.397

0.944

11.281

1.322

30.275

35.861

4.154

0.338

9.341

41.606

23.065

7.235
3.257
6.825
32.827
1.711

16.367
31.317

7.535

2030.167

Information, v. 1.01, 23.03.2015

Country	Population	Freedom	Literacy	Households		
				Radio	TV	Internet
Afghanistan	24.485	37.36	38.2	0.0	0.0	0.0
Albania	2.832	30.88	97.6	0.0	0.0	13.7
Algeria	37.100	36.54	80.2	59.6	98.1	10.0
Angola	20.609	6.82	71.1	47.8	38.5	5.7
Argentina	42.700	37.80	98.1	0.0	0.0	47.5
Armenia	3.275	25.67	99.7	3.6	98.7	22.2
Australia	22.902	28.04	0.0	0.0	0.0	82.7
Austria	8.452	15.24	0.0	0.0	0.0	80.9
Azerbaijan	9.111	47.73	99.8	99.6	100.0	46.8
Bahrain	1.234	62.75	95.7	23.0	98.9	79.0
Bangladesh	142.319	42.01	61.5	11.0	32.2	2.8
Belarus	9.460	48.35	99.7	0.0	98.8	51.9
Belgium	11.036	12.94	0.0	0.0	0.0	80.0
Benin	10.300	28.33	38.4	0.0	25.4	1.4
Bolivia	10.624	32.80	95.7	74.7	67.2	7.4
Bosnia/Herzegovina	3.840	26.86	98.5	0.0	97.4	0.0
Botswana	2.038	22.91	88.5	0.0	0.0	0.0
Brazil	192.400	32.75	92.6	85.6	98.1	39.6
Bulgaria	7.245	28.58	98.4	27.6	97.9	53.7
Burkina Faso	17.400	23.70	36.0	0.0	18.4	2.0
Burundi	10.200	38.02	85.6	0.0	0.0	0.1
Cambodia	13.396	41.81	77.2	43.7	62.4	5.5
Cameroon	19.406	34.78	75.0	0.0	33.1	1.9
Canada	35.000	12.69	0.0	0.0	98.9	81.5
Central African Rep.	5.000	26.61	36.8	0.0	0.0	0.0
Chad	11.274	34.87	40.2	0.0	0.0	0.0
Chile	17.402	26.24	97.5	0.0	0.0	40.9
China	1,347.350	73.07	96.4	0.0	0.0	23.7
Colombia	47.015	37.48	94.7	77.0	91.1	35.7
Congo-Brazzaville	4.043	28.20	79.3	54.3	46.8	1.0
Costa Rica	4.302	12.08	97.8	72.6	96.9	46.7
Côte d'Ivoire	21.395	29.77	43.1	0.0	0.0	1.1
Croatia	4.291	26.61	99.3	0.0	97.1	64.6
Cuba	11.241	71.64	99.8	0.0	0.0	3.4
Czech Republic	10.512	10.17	0.0	0.0	0.0	72.6
Dem Rep Congo	65.966	41.66	63.8	0.0	0.0	0.6
Denmark	5.580	7.08	0.0	0.0	97.9	92.7
Dominican Republic	9.379	28.34	91.8	0.0	86.0	19.6
Ecuador	14.483	34.69	94.5	38.2	86.8	28.3
Egypt	82.019	48.66	73.8	48.9	96.9	34.5
El Salvador	6.200	22.86	88.0	39.1	85.3	12.7
Eritrea	6.000	84.83	73.8	0.0	0.0	1.2
Estonia	1.318	9.26	99.8	0.0	98.9	80.3
Ethiopia	84.321	39.57	49.1	0.0	0.0	0.0
Finland	5.408	6.38	0.0	0.0	0.0	89.2
France	65.350	21.60	0.0	0.0	98.6	81.7

Gabon	1.505	28.69	83.2	0.0	0.0	6.0
The Gambia	1.728	45.09	55.5	0.0	76.0	0.0
Georgia	4.469	30.09	99.8	3.5	95.6	34.6
Germany	80.500	10.24	0.0	0.0	95.0	87.7
Ghana	27.000	17.27	76.6	0.0	51.0	11.0
Greece	10.787	28.46	97.7	0.0	100.0	56.3
Guatemala	14.714	29.39	81.5	72.4	71.4	8.6
Guinea	10.537	28.49	30.4	0.0	0.0	1.0
Guinea-Bissau	1.521	28.94	59.9	0.0	0.0	0.0
Haiti	10.085	24.09	60.7	0.0	0.0	0.0
Honduras	8.385	36.92	88.5	0.0	69.4	6.8
Hong Kong	7.103	26.16	0.0	0.0	0.0	79.9
Hungary	9.962	26.09	99.1	0.0	99.2	71.5
Iceland	0.320	8.49	71.2	19.9	47.2	3.1
India	1,210.570	41.22	93.9	0.0	71.6	5.7
Indonesia	237.641	41.05	86.8	56.4	98.7	35.8
Iran	76.800	73.40	79.7	0.0	0.0	0.0
Iraq	33.330	44.67	0.0	0.0	0.0	82.4
Ireland	4.588	10.06	0.0	0.0	89.4	70.3
Israel	7.870	32.97	99.2	0.0	0.0	68.9
Italy	59.464	26.11	88.7	85.1	87.9	21.3
Jamaica	2.706	9.88	0.0	0.0	0.0	86.2
Japan	127.300	25.17	95.4	0.0	97.6	35.4
Jordan	6.297	38.47	99.8	0.0	86.8	49.4
Kazakhstan	16.734	55.08	78.0	74.0	28.0	3.4
Kenya	38.610	27.80	0.0	0.0	0.0	0.0
North Korea	24.052	83.90	0.0	0.0	98.8	98.1
South Korea	48.580	0.00	96.3	0.0	0.0	62.0
Kuwait	3.328	28.28	99.5	37.4	98.5	7.2
Kyrgyzstan	5.477	32.20	79.9	0.0	0.0	3.4
Laos	6.256	67.99	99.9	0.0	0.0	71.6
Latvia	2.070	22.89	93.9	0.0	0.0	61.8
Lebanon	4.228	30.15	79.4	0.0	0.0	0.0
Lesotho	2.171	28.36	47.6	49.9	8.6	0.0
Liberia	3.477	29.89	91.0	0.0	0.0	0.0
Libya	6.400	37.86	99.8	0.0	99.0	64.7
Lithuania	3.190	7.35	0.0	0.0	0.0	58.3
Luxembourg	0.512	18.24	64.7	15.2	38.9	0.0
Macedonia	2.057	34.27	65.8	45.6	8.7	5.5
Madagascar	20.696	28.62	94.6	0.0	0.0	64.7
Malawi	13.102	28.18	38.7	0.0	31.3	2.0
Malaysia	30.017	42.73	94.4	0.0	99.3	78.8
Mali	14.528	30.03	52.1	0.0	25.1	0.0
Mauritania	3.341	26.76	90.6	0.0	97.4	39.2
Mauritius	1.286	26.47	95.1	79.3	94.9	30.7
Mexico	112.336	45.30	0.0	73.0	93.0	27.0
Moldova	3.560	26.01	98.4	9.2	89.3	14.0
Mongolia	2.780	29.93	98.7	77.2	98.9	55.0
Morocco	32.548	39.04	58.8	0.0	0.0	0.0
Mozambique	23.700	28.01	93.1	0.0	0.0	0.0

Myanmar	47.963	44.71	81.9	0.0	41.8	10.0
Namibia	2.283	12.50	63.9	0.0	38.6	3.3
Nepal	26.621	34.61	0.0	0.0	99.2	94.6
Netherlands	16.838	6.48	0.0	0.0	96.9	76.8
New Zealand	4.434	8.38	82.8	0.0	65.6	2.0
Nicaragua	6.071	28.31	19.1	0.0	0.0	0.0
Niger	16.275	23.08	59.6	68.7	40.0	6.1
Nigeria	177.500	34.11	0.0	0.0	0.0	94.3
Norway	5.009	6.52	91.1	35.7	93.9	77.6
Oman	2.773	41.51	57.9	0.0	68.0	0.0
Pakistan	184.000	51.31	96.5	51.3	96.7	30.4
Palestine	4.293	43.09	95.0	73.3	85.5	30.5
Panama	3.406	32.95	64.2	0.0	0.0	0.0
Papua New Guinea	7.014	22.97	95.6	81.4	89.4	25.1
Paraguay	6.382	28.78	94.5	80.3	77.2	20.2
Peru	30.135	31.87	96.3	0.0	73.6	10.1
Philippines	92.340	43.11	99.8	0.0	0.0	71.9
Poland	38.501	13.11	95.7	0.0	0.0	62.3
Portugal	10.487	16.75	97.3	48.4	95.3	96.4
Qatar	1.792	32.86	98.8	0.0	0.0	58.1
Romania	19.043	23.05	99.7	14.2	87.0	67.2
Russia	143.056	43.42	70.5	62.6	5.3	0.0
Rwanda	10.718	55.46	94.7	0.0	0.0	54.4
Sao Tome & Principe	0.165	23.84	57.7	78.5	62.0	4.5
Saudi Arabia	27.137	56.88	98.1	0.0	0.0	40.2
Senegal	12.855	26.19	0.0	86.7	94.6	34.0
Serbia	7.120	26.59	48.1	0.0	0.0	0.0
Sierra Leone	5.400	26.35	96.8	0.0	0.0	84.0
Singapore	5.184	43.43	0.0	0.0	0.0	77.9
Slovakia	5.445	13.25	99.7	0.0	0.0	75.6
Slovenia	2.057	20.49	0.0	0.0	0.0	0.0
Somalia	9.797	73.59	94.3	67.5	74.5	33.9
South Africa	54.000	24.56	0.0	0.0	0.0	0.0
South Sudan	8.260	36.20	98.1	0.0	0.0	69.8
Spain	46.185	20.50	92.6	0.0	0.0	5.9
Sri Lanka	20.653	56.59	0.0	0.0	86.4	34.9
Sudan	30.894	70.06	75.9	0.0	0.0	29.3
Swaziland	1.186	46.76	87.5	0.0	0.0	0.0
Sweden	9.490	9.23	0.0	0.0	0.0	92.6
Switzerland	7.952	9.94	0.0	0.0	92.7	80.7
Syria	21.566	78.53	86.4	0.0	0.0	35.2
Taiwan	23.293	23.82	0.0	0.0	0.0	0.0
Tajikistan	7.800	35.71	99.8	0.0	0.0	0.0
Tanzania	43.188	27.34	0.0	65.0	15.0	0.0
Thailand	65.500	38.60	96.7	58.1	98.1	23.2
Timor-Leste	1.066	0.00	67.5	0.0	0.0	0.0
Togo	6.191	28.45	66.5	0.0	0.0	1.0
Trinidad and Tobago	1.318	23.12	99.0	0.0	0.0	0.0
Tunisia	10.673	39.93	81.8	66.6	97.7	17.1
Turkey	74.724	46.56	95.0	0.0	0.0	49.1

Turkmenistan	5.105	79.14	99.7	0.0	0.0	0.0
Uganda	32.939	31.69	78.4	0.0	6.4	0.0
Ukraine	45.426	36.79	99.8	5.2	95.8	35.6
United Arab Emirates	8.264	33.49	93.8	52.9	94.6	72.0
United Kingdom	62.262	16.89	0.0	0.0	0.0	88.4
United States	317.000	18.22	0.0	0.0	0.0	71.7
Uruguay	3.251	15.92	98.5	90.9	97.0	48.4
Uzbekistan	29.123	60.39	99.6	0.0	0.0	0.0
Venezuela	27.150	34.44	96.3	72.5	96.3	28.6
Vietnam	87.840	71.78	94.5	4.6	87.8	12.5
Yemen	24.527	69.22	70.1	0.0	0.0	2.9
Zambia	13.046	27.93	63.4	58.3	30.7	1.3
Zimbabwe	13.061	38.12	86.5	37.9	36.3	4.8

	Access		Restraint
0	0.000	0.0	0
0	0.000	0.0	0
0.448312	16.632	37.1	0.715501
0.218166	4.496	20.6	0.796713
0	0.000	0.0	0
0.41355	1.354	3.3	0.692609
0	0.000	0.0	0
0	0.000	0.0	0
0.819867	7.470	9.1	0.571455
0.640891	0.791	1.2	0.761268
0.09437	13.431	142.3	0.945275
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.476023	5.057	10.6	0.680113
0	0.000	0.0	0
0	0.000	0.0	0
0.689131	132.589	192.4	0.536559
0.58771	4.258	7.2	0.580257
0	0.000	0.0	0
0	0.000	0.0	0
0.287132	3.846	13.4	0.832918
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.643163	30.238	47.0	0.597895
0.269922	1.091	4.0	0.806196
0.70449	3.031	4.3	0.380613
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.482665	6.990	14.5	0.684771
0.443248	36.355	82.0	0.772436
0.402105	2.493	6.2	0.689816
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0

0	0.000	0.0	0
0	0.000	0.0	0
0.444601	1.987	4.5	0.689179
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.414256	6.095	14.7	0.707494
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.166692	0.053	0.3	0.847461
0	0.000	0.0	0
0.552635	131.329	237.6	0.674221
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.574416	34.157	59.5	0.575564
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.273917	4.584	16.7	0.876956
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.474715	1.580	3.3	0.659534
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.13115	0.270	2.1	0.913795
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0	0.000	0.0	0
0.649827	0.836	1.3	0.522182
0	0.000	0.0	0
0.36894	1.313	3.6	0.727021
0.760568	2.114	2.8	0.46707
0	0.000	0.0	0
0	0.000	0.0	0

0	0.000	0.0	0
0	0.000	0.0	0
0.454262	20.635	45.4	0.712861
0.686566	5.674	8.3	0.543365
0	0.000	0.0	0
0	0.000	0.0	0
0.775738	2.522	3.3	0.347759
0	0.000	0.0	0
0.633785	17.207	27.2	0.584491
0.330459	29.028	87.8	0.906745
0	0.000	0.0	0
0.190764	2.489	13.0	0.862517
0.22779	2.975	13.1	0.859044

725.374 1478.404
0.490647

Process restraint, v. 1.01, 23.03.2016

0.36

Country	Population	Political Rights	Civil Liberties		Democracy		Process restraint
Afghanistan	24.485	6	6	0.17			0.00
Albania	2.832	3	3	0.67	55.40	0.67	0.34
Algeria	37.100	6	5	0.25			0.00
Angola	20.609	6	5	0.25			0.00
Argentina	42.700	2	2	0.83	68.50	0.83	0.17
Armenia	3.275	5	4	0.42	45.90	0.42	0.54
Australia	22.902	1	1	1.00	78.90	1.00	0.02
Austria	8.452	1	1	1.00	79.40	1.00	0.02
Azerbaijan	9.111	6	6	0.17			0.00
Bahrain	1.234				38.70		0.00
Bangladesh	142.319	3	4	0.58	49.30	0.58	0.42
Belarus	9.460	7	6	0.08			0.00
Belgium	11.036	1	1	1.00	79.80	1.00	0.02
Benin	10.300	2	2	0.83	48.90	0.83	0.25
Bolivia	10.624	3	3	0.67	55.40	0.67	0.34
Bosnia/Herzegovina	3.840	3	3	0.67	49.17	0.67	0.36
Botswana	2.038	3	2	0.75	53.27	0.75	0.29
Brazil	192.400	2	2	0.83	62.81	0.83	0.20
Bulgaria	7.245	2	2	0.83	63.94	0.83	0.19
Burkina Faso	17.400	5	3	0.50	43.02	0.50	0.50
Burundi	10.200	5	5	0.33	41.04	0.33	0.62
Cambodia	13.396	6	5	0.25			0.00
Cameroon	19.406	6	6	0.17			0.00
Canada	35.000	1	1	1.00	78.20	1.00	0.02
Central African Rep.	5.000	7	7	0.00			0.00
Chad	11.274	7	6	0.08			0.00
Chile	17.402	1	1	1.00	70.90	1.00	0.05
China	1,347.350	7	6	0.08	39.24	0.08	0.79
Colombia	47.015	3	4	0.58	58.04	0.58	0.38
Congo-Brazzaville	4.043	6	5	0.25			0.00
Costa Rica	4.302	1	1	1.00	70.24	1.00	0.06
Côte d'Ivoire	21.395	5	4	0.42	34.03	0.42	0.59
Croatia	4.291	1	2	0.92	66.45	0.92	0.13
Cuba	11.241	7	6	0.08			0.00
Czech Republic	10.512	1	1	1.00	69.50	1.00	0.06
Dem Rep Congo	65.966	6	6	0.17			0.00
Denmark	5.580	1	1	1.00	84.80	1.00	0.01
Dominican Republic	9.379	2	3	0.75	57.91	0.75	0.27
Ecuador	14.483	3	3	0.67	57.39	0.67	0.33
Egypt	82.019	6	5	0.25	39.31	0.25	0.68
El Salvador	6.200	2	3	0.75	59.40	0.75	0.27
Eritrea	6.000	7	7	0.00			0.00
Estonia	1.318	1	1	1.00	72.60	1.00	0.05
Ethiopia	84.321	6	6	0.17			0.00

Finland	5.408	1	1	1.00	85.50	1.00	0.01
France	65.350	1	1	1.00	77.70	1.00	0.03
Gabon	1.505	6	5	0.25			0.00
The Gambia	1.728	6	6	0.17			0.00
Georgia	4.469	5	3	0.50	56.89	0.50	0.44
Germany	80.500	1	1	1.00	81.02	1.00	0.01
Ghana	27.000	1	2	0.92	57.20	0.92	0.16
Greece	10.787	2	2	0.83	64.29	0.83	0.19
Guatemala	14.714	3	4	0.58	51.23	0.58	0.41
Guinea	10.537	5	5	0.33	40.40	0.33	0.62
Guinea-Bissau	1.521	6	5	0.25			0.00
Haiti	10.085	4	5	0.42			0.00
Honduras	8.385	4	4	0.50	49.23	0.50	0.47
Hong Kong	7.103				74.61		0.00
Hungary	9.962	1	2	0.92	66.82	0.92	0.13
India	1,210.570	2	3	0.75	53.13	0.75	0.29
Indonesia	237.641	2	4	0.67	53.57	0.67	0.34
Iran	76.800	6	6	0.17			0.00
Iraq	33.330	5	6	0.25			0.00
Ireland	4.588	1	1	1.00	80.13	1.00	0.02
Israel	7.870	1	2	0.92	71.71	0.92	0.11
Italy	59.464	1	1	1.00	69.86	1.00	0.06
Jamaica	2.706	2	3	0.75	59.68	0.75	0.26
Japan	127.300	1	1	1.00	73.03	1.00	0.05
Jordan	6.297	6	5	0.25			0.00
Kazakhstan	16.734	6	5	0.25			0.00
Kenya	38.610	4	4	0.50	46.10	0.50	0.48
North Korea	24.052	7	7	0.00			0.00
South Korea	48.580	2	2	0.83	69.30	0.83	0.17
Kuwait	3.328	5	5	0.33	49.00	0.33	0.58
Kyrgyzstan	5.477	5	5	0.33	45.70	0.33	0.60
Laos	6.256	7	6	0.08			0.00
Latvia	2.070	2	2	0.83	69.71	0.83	0.17
Lebanon	4.228	5	4	0.42	47.00	0.42	0.54
Lesotho	2.171	2	3	0.75	51.64	0.75	0.30
Liberia	3.477	3	4	0.58	51.67	0.58	0.41
Libya	6.400	4	5	0.42			0.00
Lithuania	3.190	1	1	1.00	71.13	1.00	0.05
Macedonia	2.057	1	3	0.83	52.45	0.83	0.24
Madagascar	20.696	5	4	0.42	45.19	0.42	0.54
Malawi	13.102	3	4	0.58	48.62	0.58	0.42
Malaysia	30.017	4	4	0.50	50.09	0.50	0.47
Mali	14.528	5	4	0.42			0.00
Mauritania	3.341	6	5	0.25			0.00
Mauritius	1.286	1	2	0.92	66.65	0.92	0.13
Mexico	112.336	3	3	0.67	56.57	0.67	0.33
Moldova	3.560	3	3	0.67	57.12	0.67	0.33
Mongolia	2.780	1	2	0.92	61.76	0.92	0.15
Morocco	32.548	5	4	0.42	42.93	0.42	0.55
Mozambique	23.700	4	3	0.58	44.01	0.58	0.44

Myanmar	47.963	6	6	0.17			0.00
Namibia	2.283	2	2	0.83	56.04	0.83	0.22
Nepal	26.621	4	4	0.50	46.81	0.50	0.48
Netherlands	16.838	1	1	1.00	82.60	1.00	0.01
New Zealand	4.434	1	1	1.00	81.27	1.00	0.01
Nicaragua	6.071	4	3	0.58	54.88	0.58	0.39
Niger	16.275	3	4	0.58	46.61	0.58	0.43
Nigeria	177.500	4	4	0.50	39.89	0.50	0.51
Norway	5.009	1	1	1.00	87.84	1.00	0.01
Oman	2.773	6	5	0.25			0.00
Pakistan	184.000	4	5	0.42	35.90	0.42	0.58
Palestine	4.293						0.00
Panama	3.406	2	2	0.83	64.83	0.83	0.19
Papua New Guinea	7.014	3	3	0.67	52.32	0.67	0.35
Paraguay	6.382	3	3	0.67	53.14	0.67	0.35
Peru	30.135	2	3	0.75	61.71	0.75	0.26
Philippines	92.340	3	3	0.67	59.20	0.67	0.32
Poland	38.501	1	1	1.00	69.66	1.00	0.06
Portugal	10.487	1	1	1.00	73.90	1.00	0.04
Qatar	1.792						0.00
Romania	19.043	2	2	0.83	63.27	0.83	0.19
Russia	143.056	6	5	0.25	44.41	0.25	0.66
Rwanda	10.718	6	5	0.25			0.00
Saudi Arabia	27.137	7	7	0.00			0.00
Senegal	12.855	2	2	0.83	53.55	0.83	0.23
Serbia	7.120	2	2	0.83	60.20	0.83	0.21
Sierra Leone	5.400	3	3	0.67			0.00
Singapore	5.184	4	4	0.50	65.32	0.50	0.41
Slovakia	5.445	1	1	1.00	67.20	1.00	0.07
Slovenia	2.057	1	1	1.00	73.85	1.00	0.04
Somalia	9.797	7	7	0.00			0.00
South Africa	54.000	2	2	0.83	53.01	0.83	0.24
South Sudan	8.260						0.00
Spain	46.185	1	1	1.00	74.29	1.00	0.04
Sri Lanka	20.653	5	4	0.42	48.81	0.42	0.53
Sudan	30.894	7	7	0.00			0.00
Swaziland	1.186						0.00
Sweden	9.490	1	1	1.00	85.79	1.00	0.01
Switzerland	7.952	1	1	1.00	85.91	1.00	0.01
Syria	21.566	7	7	0.00	28.32		0.00
Taiwan	23.293	1	2	0.92			0.00
Tajikistan	7.800	6	6	0.17			0.00
Tanzania	43.188	3	3	0.67	48.13	0.67	0.37
Thailand	65.500	4	4	0.50	54.01	0.50	0.45
Timor-Leste	1.066				53.16		0.00
Togo	6.191	4	4	0.50	38.27	0.50	0.52
Trinidad and Tobago	1.318	2	2	0.83	57.13	0.83	0.22
Tunisia	10.673	3	3	0.67	51.47	0.67	0.35
Turkey	74.724	3	4	0.58	53.63	0.58	0.40
Turkmenistan	5.105	7	7	0.00			0.00

Uganda	32.939	6	4	0.33	41.66	0.33	0.61
Ukraine	45.426	4	3	0.58	52.40	0.58	0.40
United Arab Emirates	8.264	6	6	0.17			0.00
United Kingdom	62.262	1	1	1.00	78.38	1.00	0.02
United States	317.000	1	1	1.00	76.88	1.00	0.03
Uruguay	3.251	1	1	1.00	72.60	1.00	0.05
Uzbekistan	29.123	7	7	0.00			0.00
Venezuela	27.150	5	5	0.33	45.50	0.33	0.60
Vietnam	87.840	7	5	0.17			0.00
Yemen	24.527	6	6	0.17	29.60	0.17	0.77
Zambia	13.046	3	4	0.58	44.40	0.58	0.44
Zimbabwe	13.061	5	6	0.25			0.00
	6,901.461			1.184	6531.827	77.333	30.52

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Will, as measured by corruption v. 1.01, 30.03.2015

Scale facto 50

Country	Population	Corruption score				w	0.34
		Transparency	WBC	Average	w		
Afghanistan	24.485	12	1.91	7.0	0.16	3.81	
Albania	2.832	33	25.84	29.4	0.24	0.69	
Algeria	37.100	36	38.76	37.4	0.29	10.60	
Angola	20.609	19	5.26	12.1	0.17	3.56	
Argentina	42.700	34	40.67	37.3	0.29	12.19	
Armenia	3.275	37	39.71	38.4	0.29	0.95	
Australia	22.902	80	93.78	86.9	0.77	17.62	
Austria	8.452	72	89.95	81.0	0.68	5.78	
Azerbaijan	9.111	29	18.66	23.8	0.22	1.99	
Bahrain	1.234	49	69.38	59.2	0.44	0.55	
Bangladesh	142.319	25	20.57	22.8	0.21	30.38	
Belarus	9.460	31	37.32	34.2	0.27	2.54	
Belgium	11.036	76	91.87	83.9	0.73	8.00	
Benin	10.300	39	22.01	30.5	0.25	2.57	
Bolivia	10.624	36	33.01	34.5	0.27	2.87	
Bosnia/Herz	3.840	39	52.15	45.6	0.34	1.29	
Botswana	2.038	63	79.43	71.2	0.56	1.15	
Brazil	192.400	43	55.02	49.0	0.36	69.40	
Bulgaria	7.245	43	49.76	46.4	0.34	2.48	
Burkina Faso	17.400	38	33.49	35.7	0.28	4.81	
Burundi	10.200	20	2.39	11.2	0.17	1.73	
Cambodia	13.396	21	16.27	18.6	0.20	2.63	
Cameroon	19.406	27	9.57	18.3	0.20	3.79	
Canada	35.000	81	95.22	88.1	0.79	27.59	
Central Africa	5.000	24	14.83	19.4	0.20	1.00	
Chad	11.274	22	6.22	14.1	0.18	2.02	
Chile	17.402	73	90.43	81.7	0.69	12.07	
China	1,347.350	36	46.89	41.4	0.31	417.71	
Colombia	47.015	37	42.58	39.8	0.30	14.10	
Congo-Brazzaville	4.043	23	5.74	14.4	0.18	0.73	
Costa Rica	4.302	54	10.53	32.3	0.26	1.11	
Côte d'Ivoire	21.395	32	71.77	51.9	0.38	8.17	
Croatia	4.291	48	23.44	35.7	0.28	1.19	
Cuba	11.241	46	61.24	53.6	0.40	4.45	
Czech Republic	10.512	51	62.20	56.6	0.42	4.41	
Democratic Republic of Congo	65.966	22	62.68	42.3	0.32	20.82	
Denmark	5.580	92	100.00	96.0	0.92	5.15	
Dominican Republic	9.379	32	21.05	26.5	0.23	2.16	
Ecuador	14.483	33	32.06	32.5	0.26	3.76	
Egypt	82.019	37	32.54	34.8	0.27	22.25	
El Salvador	6.200	39	48.33	43.7	0.32	2.01	
Eritrea	6.000	18	22.97	20.5	0.20	1.22	
Estonia	1.318	69	81.34	75.2	0.61	0.80	

Ethiopia	84.321	33	38.28	35.6	0.28	23.28
Finland	5.408	89	98.09	93.5	0.88	4.75
France	65.350	69	88.04	78.5	0.65	42.53
Gabon	1.505	37	36.36	36.7	0.28	0.42
The Gambia	1.728	29	26.79	27.9	0.24	0.41
Georgia	4.469	52	66.51	59.3	0.44	1.98
Germany	80.500	79	94.26	86.6	0.77	61.61
Ghana	27.000	48	56.46	52.2	0.38	10.39
Greece	10.787	43	55.50	49.3	0.36	3.91
Guatemala	14.714	32	33.97	33.0	0.26	3.85
Guinea	10.537	25	13.40	19.2	0.20	2.09
Guinea-Bissau	1.521	19	4.78	11.9	0.17	0.26
Haiti	10.085	19	11.00	15.0	0.18	1.84
Honduras	8.385	29	17.22	23.1	0.21	1.80
Hong Kong	7.103	74	92.34	83.2	0.71	5.07
Hungary	9.962	54	64.59	59.3	0.44	4.41
India	1,210.570	38	35.89	36.9	0.28	342.99
Indonesia	237.641	43	31.58	37.3	0.29	67.80
Iran	76.800	27	27.75	27.4	0.23	17.97
Iraq	33.330	16	7.18	11.6	0.17	5.69
Ireland	4.588	74	90.91	82.5	0.70	3.23
Israel	7.870	60	78.47	69.2	0.54	4.25
Italy	59.464	43	57.42	50.2	0.37	21.97
Jamaica	2.706	38	45.45	41.7	0.31	0.84
Japan	127.300	76	92.82	84.4	0.73	93.20
Jordan	6.297	49	60.77	54.9	0.41	2.55
Kazakhstan	16.734	29	20.10	24.5	0.22	3.70
Kenya	38.610	25	12.92	19.0	0.20	7.63
North Korea	24.052	8	3.35	5.7	0.15	3.65
South Korea	48.580	55	70.33	62.7	0.47	23.02
Kuwait	3.328	44	53.59	48.8	0.36	1.20
Kyrgyzstan	5.477	27	11.48	19.2	0.20	1.09
Laos	6.256	25	19.62	22.3	0.21	1.32
Latvia	2.070	55	64.11	59.6	0.45	0.92
Lebanon	4.228	27	18.18	22.6	0.21	0.90
Lesotho	2.171	49	63.64	56.3	0.42	0.91
Liberia	3.477	37	28.71	32.9	0.26	0.91
Libya	6.400	18	0.96	9.5	0.16	1.05
Lithuania	3.190	58	66.99	62.5	0.47	1.51
Macedonia	2.057	45	59.33	52.2	0.38	0.79
Madagascar	20.696	28	27.27	27.6	0.24	4.87
Malawi	13.102	33	31.10	32.1	0.26	3.37
Malaysia	30.017	52	68.42	60.2	0.45	13.54
Mali	14.528	32	25.36	28.7	0.24	3.49
Mauritania	3.341	30	28.23	29.1	0.24	0.81
Mauritius	1.286	54	65.55	59.8	0.45	0.58
Mexico	112.336	35	39.23	37.1	0.28	31.94
Moldova	3.560	35	23.92	29.5	0.24	0.87
Mongolia	2.780	39	40.19	39.6	0.30	0.83
Morocco	32.548	39	46.41	42.7	0.32	10.35

Mozambique	23.700	31	29.67	30.3	0.25	5.88
Myanmar	47.963	21	12.44	16.7	0.19	9.07
Namibia	2.283	49	65.07	57.0	0.42	0.97
Nepal	26.621	29	29.19	29.1	0.24	6.45
Netherland	16.838	83	96.17	89.6	0.81	13.67
New Zealar	4.434	91	99.52	95.3	0.91	4.03
Nicaragua	6.071	28	24.40	26.2	0.23	1.39
Niger	16.275	35	35.41	35.2	0.27	4.45
Nigeria	177.500	27	9.09	18.0	0.19	34.46
Norway	5.009	86	98.56	92.3	0.86	4.29
Oman	2.773	45	60.29	52.6	0.39	1.08
Pakistan	184.000	29	17.70	23.4	0.22	39.72
Palestine	4.293		26.32	13.2	0.18	0.76
Panama	3.406	37	45.93	41.5	0.31	1.06
Papua New	7.014	25	15.31	20.2	0.20	1.42
Paraguay	6.382	24	15.79	19.9	0.20	1.29
Peru	30.135	38	42.11	40.1	0.30	9.09
Philippines	92.340	38	43.54	40.8	0.31	28.24
Poland	38.501	61	70.81	65.9	0.51	19.47
Portugal	10.487	63	78.95	71.0	0.56	5.87
Qatar	1.792	69	84.69	76.8	0.63	1.13
Romania	19.043	43	52.63	47.8	0.35	6.71
Russia	143.056	27	16.75	21.9	0.21	29.99
Rwanda	10.718	49	72.25	60.6	0.45	4.88
Saudi Arabi	27.137	49	58.37	53.7	0.40	10.75
Senegal	12.855	43	50.24	46.6	0.34	4.42
Serbia	7.120	41	50.72	45.9	0.34	2.41
Sierra Leon	5.400	31	19.14	25.1	0.22	1.21
Singapore	5.184	84	96.65	90.3	0.82	4.27
Slovakia	5.445	50	59.81	54.9	0.41	2.21
Slovenia	2.057	58	73.68	65.8	0.51	1.04
Somalia	9.797	8	0.48	4.2	0.15	1.44
South Afric	54.000	44	54.55	49.3	0.36	19.58
South Suda	8.260	15	3.83	9.4	0.16	1.35
Spain	46.185	60	75.12	67.6	0.52	24.14
Sri Lanka	20.653	38	51.67	44.8	0.33	6.85
Sudan	30.894	11	1.44	6.2	0.15	4.73
Swaziland	1.186	43	48.80	45.9	0.34	0.40
Sweden	9.490	87	99.04	93.0	0.87	8.25
Switzerlanc	7.952	86	97.61	91.8	0.85	6.75
Syria	21.566	20	7.66	13.8	0.18	3.85
Taiwan	23.293	61	72.73	66.9	0.52	12.01
Tajikistan	7.800	23	10.05	16.5	0.19	1.47
Tanzania	43.188		22.49	11.2	0.17	7.32
Thailand	65.500	38	49.28	43.6	0.32	21.22
Timor-Lestu	1.066	28	21.53	24.8	0.22	0.24
Togo	6.191	29	14.35	21.7	0.21	1.29
Trinidad an	1.318	38	47.37	42.7	0.32	0.42
Tunisia	10.673	40	54.07	47.0	0.35	3.70
Turkey	74.724	45	61.72	53.4	0.39	29.40

Turkmenist	5.105	17	4.31	10.7	0.17	0.85
Uganda	32.939	26	13.88	19.9	0.20	6.64
Ukraine	45.426	26	11.96	19.0	0.20	8.99
United Aral	8.264	70	87.56	78.8	0.65	5.41
United King	62.262	78	93.30	85.7	0.75	46.73
United Stat	317.000	74	85.17	79.6	0.66	210.73
Uruguay	3.251	73	88.52	80.8	0.68	2.21
Uzbekistan	29.123	18	8.13	13.1	0.18	5.12
Venezuela	27.150	19	6.70	12.8	0.17	4.75
Vietnam	87.840	31	36.84	33.9	0.27	23.43
Yemen	24.527	19	8.61	13.8	0.18	4.37
Zambia	13.046	38	44.02	41.0	0.31	4.01
Zimbabwe	13.061	21	2.87	11.9	0.17	2.24
	6,901.461	41.36538	44.29827		0.000	2333.975

Income Distribution Program for Model B, v 1.0, 28.01.2015

General calculation parameters

Income limits:	a	3,000	int.\$	End-of-list
	b	12,000	int.\$	
	c	48,000	int.\$	

Select
all

Calcu

Input data

Select	Country	Population	Per capita income	F	G	Multi- plier	A
1	Afghanistan	24.485	1,924	7.00	4.50	1737	20.880
1	Albania	2.832	10,596	7.20	4.80	9307	0.065
1	Algeria	37.100	13,788	9.60	6.10	11576	0.581
0	Angola	20.609	7,978				
1	Argentina	42.700	22,363	31.60	17.80	13759	3.378
1	Armenia	3.275	7,034	8.00	5.00	6256	0.358
1	Australia	22.902	45,138	12.50	7.00	38389	0.000
1	Austria	8.452	44,402	6.90	4.40	40393	0.000
1	Azerbaijan	9.111	17,028	9.70	6.00	14513	0.000
0	Bahrain	1.234	49,633				
1	Bangladesh	142.319	3,167	7.50	4.90	2787	82.982
1	Belarus	9.460	17,623	6.90	4.50	15835	0.000
1	Belgium	11.036	40,760	8.20	4.90	36990	0.000
0	Belize	0.313	8,014				
1	Benin	10.300	1,793	9.40	6.00	1510	8.783
0	Bhutan	0.721	7,197				
1	Bolivia	10.624	5,928	93.90	42.30	2910	5.464
1	Bosnia/Herzegovina	3.840	9,563	5.40	3.80	8709	0.010
1	Botswana	2.038	15,241	43.00	20.40	9818	0.287
1	Brazil	192.400	14,987	40.60	21.80	8733	36.141
1	Bulgaria	7.245	16,518	7.00	4.40	15096	0.000
1	Burkina Faso	17.400	1,638	11.60	6.90	1364	15.008
1	Burundi	10.200	877	19.30	9.50	723	9.578
1	Cambodia	13.396	3,056	12.20	7.30	2497	8.868
1	Cameroon	19.406	2,861	15.70	9.10	2215	14.169
1	Canada	35.000	43,253	9.40	5.50	38494	0.000
0	Cape Verde	0.492	6,248				
1	Central African Rep.	5.000	604	69.20	32.70	321	4.866
0	Chad	11.274	2,432				
1	Chile	17.402	22,534	26.20	15.70	14078	1.106
1	China	1,347.350	11,868	21.60	12.20	8416	182.198
1	Colombia	47.015	12,776	60.40	25.30	8167	8.637
0	Comoros	0.735	1,617				
0	Congo-Brazzaville	4.043	6,232				
1	Costa Rica	4.302	14,344	23.40	15.60	8477	0.828
1	Côte d'Ivoire	21.395	2,710	16.60	9.70	2046	16.268
1	Croatia	4.291	20,222	7.30	4.80	17847	0.000

0	Cuba	11.241	0				
0	Cyprus	0.839	28,748				
1	Czech Republic	10.512	27,347	5.20	3.50	25640	0.000
0	Dem Rep Congo	65.966	655				
1	Denmark	5.580	43,080	8.10	4.30	41618	0.000
0	Djibouti	0.818	2,916				
1	Dominican Republic	9.379	12,173	25.30	14.30	8139	1.510
1	Ecuador	14.483	10,908	35.20	17.30	7334	2.721
1	Egypt	82.019	10,870	8.00	5.10	9555	2.486
1	El Salvador	6.200	7,783	38.60	20.90	4592	1.920
0	Equatorial Guinea	0.700	33,767				
0	Eritrea	6.000	1,197				
1	Estonia	1.318	26,052	10.80	6.40	22191	0.000
1	Ethiopia	84.321	1,427	6.60	4.30	1296	77.714
0	Fiji	0.861	7,838				
1	Finland	5.408	40,045	5.60	3.80	36866	0.000
1	France	65.350	39,813	9.10	5.60	34624	0.000
0	Gabon	1.505	20,520				
1	The Gambia	1.728	1,642	20.20	11.20	1211	1.467
1	Georgia	4.469	7,156	15.40	8.30	5893	0.745
1	Germany	80.500	43,475	6.90	4.30	40034	0.000
1	Ghana	27.000	4,029	14.10	8.40	3160	12.497
1	Greece	10.787	25,126	10.20	6.20	21371	0.000
1	Guatemala	14.714	7,290	33.90	20.30	4106	4.671
1	Guinea	10.537	1,321	10.50	6.60	1089	9.585
1	Guinea-Bissau	1.521	1,411	19.00	10.30	1083	1.324
0	Guyana	0.787	6,573				
1	Haiti	10.085	1,703	54.40	26.60	967	8.437
1	Honduras	8.385	4,592	59.40	17.20	4244	6.894
1	Hong Kong	7.103	52,984	17.80	9.70	41363	0.000
1	Hungary	9.962	23,236	5.50	3.80	21278	0.000
0	Iceland	0.320	41,001				
1	India	1,210.570	5,450	8.60	5.60	4640	271.391
1	Indonesia	237.641	9,635	7.80	5.20	8292	12.375
1	Iran	76.800	16,165	17.20	9.70	12414	3.862
0	Iraq	33.330	14,367				
1	Ireland	4.588	44,663	9.40	5.60	39313	0.000
1	Israel	7.870	32,717	13.40	7.90	26276	0.000
1	Italy	59.464	34,103	11.60	6.50	29581	0.000
1	Jamaica	2.706	8,487	17.30	9.80	6482	0.462
1	Japan	127.300	36,654	4.50	3.40	33473	0.000
1	Jordan	6.297	11,639	11.30	6.90	9588	0.366
1	Kazakhstan	16.734	23,038	8.50	5.60	19526	0.000
1	Kenya	38.610	3,009	13.60	8.20	2365	25.467
0	North Korea	24.052	0				
1	South Korea	48.580	33,791	7.80	4.70	30863	0.000
0	Kuwait	3.328	70,785				
1	Kyrgyzstan	5.477	3,230	6.40	4.40	2867	2.942
1	Laos	6.256	4,666	8.30	5.40	4012	1.861
1	Latvia	2.070	22,832	11.60	6.80	19209	0.000

0	Lebanon	4.228	17,326				
1	Lesotho	2.171	2,765	39.80	44.20	766	1.116
0	Liberia	3.477	887	12.80			
0	Libya	6.400	20,681				
1	Lithuania	3.190	25,374	10.40	6.30	21517	0.000
0	Luxembourg	0.512	0				
1	Macedonia	2.057	12,587	12.50	7.50	10191	0.115
1	Madagascar	20.696	1,398	19.20	11.00	1021	18.065
1	Malawi	13.102	748	10.90	6.70	620	13.102
1	Malaysia	30.017	23,160	22.10	12.40	16384	0.967
0	Maldives	0.330	11,903				
1	Mali	14.528	1,493	12.50	7.60	1197	12.723
0	Malta	0.418	30,567				
1	Mauritania	3.341	3,187	12.00	7.40	2560	2.014
0	Mauritius	1.286	17,118				
1	Mexico	112.336	17,390	21.60	12.80	11819	8.552
1	Moldova	3.560	4,666	8.20	5.30	4042	1.033
1	Mongolia	2.780	9,293	8.20	5.40	7955	0.182
0	Montenegro	0.620	14,666				
1	Morocco	32.548	7,356	11.70	7.20	5964	5.380
1	Mozambique	23.700	1,046	18.80	9.90	825	21.709
0	Myanmar	47.963	4,345				
1	Namibia	2.283	10,234	106.60	56.10	3984	0.717
1	Nepal	26.621	2,245	15.80	9.10	1743	21.731
1	Netherlands	16.838	46,440	9.20	5.10	42851	0.000
1	New Zealand	4.434	33,626	12.40	6.80	29072	0.000
1	Nicaragua	6.071	4,593	31.00	8.80	4939	0.877
1	Niger	16.275	984	46.00	20.70	651	14.514
1	Nigeria	177.500	5,746	17.80	9.70	4486	53.337
1	Norway	5.009	64,363	6.10	3.90	59981	0.000
0	Oman	2.773	43,304				
1	Pakistan	184.000	4,574	6.50	4.30	4133	43.201
1	Panama	3.406	19,080	49.90	23.90	11472	0.436
1	Papua New Guinea	7.014	2,290	23.80	12.60	1660	5.725
1	Paraguay	6.382	8,064	38.80	25.70	3871	1.951
1	Peru	30.135	11,557	26.10	15.20	7427	5.976
1	Philippines	92.340	6,597	15.50	9.30	4988	23.319
1	Poland	38.501	23,273	8.80	5.60	19986	0.000
1	Portugal	10.487	25,643	15.00	8.00	21445	0.000
0	Qatar	1.792	145,894				
1	Romania	19.043	17,440	7.50	4.90	15348	0.000
1	Russia	143.056	24,298	12.70	7.60	19617	0.000
1	Rwanda	10.718	1,608	18.60	9.90	1261	9.154
0	Sao Tome & Principe	0.165	0				
0	Saudi Arabia	27.137	51,779				
1	Senegal	12.855	2,243	12.30	7.40	1821	10.501
0	Serbia	7.120	12,465				
0	Seychelles	0.091	0				
1	Sierra Leone	5.400	1,924	87.20	57.60	639	4.339
1	Singapore	5.184	78,762	17.70	9.70	61322	0.000

1	Slovakia	5.445	26,616	6.70	4.00	25178	0.000
1	Slovenia	2.057	28,512	5.90	3.90	26312	0.000
0	Somalia	9.797	0				
1	South Africa	54.000	12,507	33.10	17.90	7858	10.309
0	South Sudan	8.260	2,401				
1	Spain	46.185	31,942	10.30	6.00	27863	0.000
1	Sri Lanka	20.653	9,583	11.10	6.90	7835	1.968
0	St. Lucia	0.167	11,150				
0	Sudan	30.894	4,429				
0	Suriname	0.525	16,080				
1	Swaziland	1.186	7,646	25.10	13.00	5546	0.286
1	Sweden	9.490	43,407	6.20	4.00	40142	0.000
1	Switzerland	7.952	53,977	9.00	5.50	47279	0.000
0	Syria	21.566	0				
0	Taiwan	23.293	41,539				
1	Tajikistan	7.800	2,536	7.80	5.20	2183	6.107
1	Tanzania	43.188	1,834	9.20	5.80	1566	36.724
1	Thailand	65.500	14,136	12.60	7.70	11263	2.714
0	Timor-Leste	1.066	7,678				
0	Togo	6.191	1,390				
1	Trinidad and Tobago	1.318	30,197	12.90	7.60	24546	0.000
1	Tunisia	10.673	10,998	13.40	7.90	8833	0.907
1	Turkey	74.724	18,874	6.60	4.60	16497	0.000
1	Turkmenistan	5.105	12,863	12.30	7.70	10141	0.287
1	Uganda	32.939	1,681	16.60	9.20	1324	28.012
1	Ukraine	45.426	8,651	5.90	4.10	7778	1.618
0	United Arab Emirates	8.264	63,181				
1	United Kingdom	62.262	36,208	13.80	7.20	31470	0.000
1	United States	317.000	53,001	15.90	8.40	43882	0.000
0	Uruguay	3.251	19,679	11.80			
1	Uzbekistan	29.123	5,176	10.60	6.20	4470	6.915
1	Venezuela	27.150	18,453	18.80	16.00	9462	5.567
1	Vietnam	87.840	5,295	6.90	4.90	4524	20.555
0	Palestine	4.293	0				
1	Yemen	24.527	3,838	8.60	5.60	3267	10.602
0	Zambia	13.046	3,926				
0	Zimbabwe	13.061	1,954				

6,910.875

1,284

19.8

late

B	C	D
3.605	0.000	0.000
2.072	0.695	0.000
18.923	17.596	0.000
13.196	20.282	5.845
2.830	0.087	0.000
1.452	16.941	4.509
0.096	6.554	1.802
3.420	5.384	0.308
59.337	0.000	0.000
2.613	6.793	0.054
0.435	8.549	2.051
1.517	0.000	0.000
3.518	1.642	0.000
3.120	0.710	0.000
1.138	0.413	0.201
76.144	64.784	15.330
2.226	5.019	0.000
2.392	0.000	0.000
0.622	0.000	0.000
4.528	0.000	0.000
5.237	0.000	0.000
1.532	26.713	6.755
0.134	0.000	0.000
5.291	8.685	2.320
763.575	401.577	0.000
38.104	-4.048	4.323
1.355	2.119	0.000
5.127	0.000	0.000
0.910	3.161	0.220

0.671	8.740	1.101
0.166	4.428	0.986
4.821	2.951	0.097
11.696	-0.365	0.430
60.452	19.081	0.000
3.186	1.093	0.000
0.215	0.927	0.176
6.607	0.000	0.000
0.008	4.373	1.027
3.743	49.157	12.450
0.261	0.000	0.000
3.779	-0.055	0.000
1.194	63.669	15.637
13.229	1.274	0.000
1.866	7.566	1.356
7.481	2.562	0.000
0.952	0.000	0.000
0.197	0.000	0.000
1.648	0.000	0.000
0.325	1.166	0.000
0.546	4.191	2.367
1.217	8.125	0.621
837.674	101.505	0.000
191.406	33.859	0.000
33.978	33.927	5.033
0.186	3.490	0.912
1.153	5.363	1.354
5.866	43.544	10.055
2.224	0.019	0.000
0.000	104.062	23.238
3.993	1.938	0.000
3.410	11.718	1.606
13.143	0.000	0.000
3.062	37.673	7.846
2.535	0.000	0.000
4.150	0.245	0.000
0.451	1.383	0.237

1.055	0.000	0.000
0.551	2.230	0.409
1.186	0.756	0.000
2.631	0.000	0.000
0.000	0.000	0.000
9.290	15.682	4.078
1.805	0.000	0.000
1.327	0.000	0.000
42.356	52.332	9.096
2.386	0.141	0.000
2.256	0.342	0.000
27.436	-0.268	0.000
1.991	0.000	0.000
1.110	0.422	0.034
4.890	0.000	0.000
0.526	13.087	3.225
0.466	3.225	0.743
5.290	-0.095	0.000
1.761	0.000	0.000
101.014	23.149	0.000
0.000	1.412	3.597
139.143	1.656	0.000
1.421	1.112	0.437
1.289	0.000	0.000
3.162	1.269	0.000
14.608	9.551	0.000
55.425	13.596	0.000
7.188	27.372	3.941
1.923	7.091	1.473
5.995	12.875	0.172
33.501	91.238	18.317
1.564	0.000	0.000
2.354	0.000	0.000
1.061	0.000	0.000
0.148	1.837	3.199

0.461	4.356	0.628
0.146	1.657	0.254

26.779	14.938	1.974
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4.772	33.979	7.434
16.671	2.014	0.000

0.701	0.199	0.000
0.033	7.592	1.865
0.099	4.391	3.462

1.693	0.000	0.000
6.464	0.000	0.000
32.178	30.609	0.000

0.209	0.897	0.212
7.267	2.499	0.000
19.928	54.328	0.468
2.704	2.114	0.000
4.927	0.000	0.000
37.722	6.087	0.000

5.942	45.533	10.786
19.060	210.805	87.135

19.522	2.687	0.000
5.037	16.546	0.000
63.190	4.095	0.000

13.925	0.000	0.000
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3,019	1,877	293	6,473.721
46.6	29.0	4.5	93.7