



## **If You Think Governments Are Too Large: Shrink Population**

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Right wingers frequently complain about the growth of government, while remaining enthusiastic proponents of growth elsewhere, especially of population and consumption. Here we urge that more attention be paid to the rarely discussed role of increasing population size as a driver of growth and complexity of government.

The importance of such an analysis is underscored by Joseph Tainter's classic work "The Collapse of Complex Societies,"<sup>1</sup> in which he assesses the many reasons that have been proposed to explain why civilizations collapse, as nearly all have throughout history. Tainter attributes a primary cause to diminishing marginal returns on effort as societies increase in complexity. Effort to mobilize against external aggressors, effort to feed and provide other resource-based amenities for the population, and effort to maintain domestic order and justice, are deftly shown by Tainter to be increasingly ineffective as civilizations age and expand.

We think it extremely likely that the relation between population size and the complexity of government is highly nonlinear, leading to the conclusion that the time left to avoid collapse shrinks very rapidly as populations grow. Unhappily, however, there has been no systematic work we have been able to find that documents the relationship between population size and government complexity in recent times. For such evidence scholars apparently must go to the records of such things as the hydraulic civilizations 5000 or more years ago, with the complexities introduced by population growth demanding complex systems of irrigation that, in turn, required the development of extensive bureaucracies to manage them.

Looking at more recent times would seem to us to provide a rich field of study for social scientists. One question that might be asked is what are the interesting variables related to increased scale of government that could be compared with population growth. Possible candidates include:

- Annual military budgets.

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<sup>1</sup> Tainter JA. 1988. *The Collapse of Complex Societies*. Cambridge, UK: Cambridge University Press.

- Annual cost to run government (compare U.S. Federal, various States, cities?)
- Number of government employees (compare U.S. Federal, various States, cities?)
- Total annual tax revenue (compare U.S. Federal and various States?)
- Annual cost of police, fire, regulatory agencies, prisons, drug and alcohol law enforcement (compare U.S. Federal, various States, cities?)
- Number of government agencies and number of workers per agency (compare U.S. Federal, various States, cities?)
- Size of prison populations (compare U.S. Federal and various States?)
- Similar comparisons for other countries and subnational units.

Another important question is how to assess the *complexity* and *dysfunctionality* of governments as population and consumption grow:

- Number of government committees needed to approve specified types of legislation
- Some measure of the number of steps in, and length of time for, hearings processes
- Some measure of the number of steps in, and length of time for, hiring personnel in private and public sectors
- Time and complexity of approving judges, treaties, and so on
- Complexity of forms (especially tax forms and code)
- Gini index – does inequality increase with government complexity?
- Measures of miscarriage of justice
- Measures of intrusion into the privacy of individuals

Whichever metrics are chosen, they should be plotted against at least two different measures of population and consumption: population size and either GDP, PPP, or better yet some measure of sales of goods.

With good data analysis in hand the time will be ripe to seek plausible causal mechanisms that would explain the identified relationships of growth of population and consumption to increasing size and complexity of government. If our initial assumption of a positive relationship is correct, the research could involve both verbal models and simple back-of-the-envelope models, feedback graphs, and so on to explain heuristically the relationship. Here are some connections/mechanisms that could be included in analysis:

**The entangling web.** Network analysis could reveal that a growing number of network nodes (people, communities, servers, etc.) entails nonlinear growth in the complexity of network linkages if the provisioning of needs is to be met. As an oversimplified example, the number of roads needed to link towns grows as the square of the number of towns. This should be the case whether the flow through the network is material or information. Regulations will likely also grow disproportionately to meet the need of maintaining the stability and fair access to the growing infrastructure, as well as keeping food, water, pharmaceuticals, and other amenities safe.

**Loss of low-hanging fruit.** Using accepted or at least reasonable shapes for resource depletion curves (M. K. Hubbert e.g.), a growing effort is needed to meet the marginal resource needs as society slides down the declining side of the curves. How does the necessary minimal size of government depend on the needed effort to extract resources and enforce more regulations to minimize the hazards of mobilizing lower grade resources in more dangerous situations? In short, how rapidly does government need to expand to deal with diminishing marginal returns?

Keeping to this theme, will conflicts both within and between nations over resources intensify? Partly due to increased population density will there be increased fights over land (think back to cattlemen vs sheepmen), housing, school board policies, etc. that will require more regulation and government intervention and policing. Is there an inevitable increase in inequality that results when people of varying capabilities compete for ever limited opportunities. Will governments need to grow even bigger bureaucracies in nations subject to increasing flows of environmental refugees? The number of issues is nearly endless...it is time that scholars devoted more attention to their analysis.

**Political deadlock.** More speculatively, the law of large numbers might suggest that elections become closer and closer (percentage-wise) as population grows, leading to more contentious and ineffective government. Moreover, as first envisioned by anti-Federalist founders of the US Government, representatives become less representative with growth.

We have only scratched the surface of possible researchable topics on this central theme and we urge readers to continue the process. If we are correct in our belief that there is a strong causal connection between the growth of population and of government, there is an irony that has surely not escaped you: the political forces most opposed to the growth of government are also opposed to the actions needed throughout the world to reduce growth of population and consumption. It is time to assess and publicize the linkages between the ever-bloating size of the human population and the ever-bloating and dysfunctional size of the governance structures needed to attempt to create peace, justice, and well-being for our growing numbers.

*MAHB-UTS Blogs are a joint venture between the University of Technology Sydney and the Millennium Alliance for Humanity and the Biosphere. Questions should be directed to [joan@mahbonline.org](mailto:joan@mahbonline.org)*

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