

Water: More Valuable than Diamonds

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A new study by University of Arkansas economists shows a strong relationship between economic freedom and access to water. David Gay and Charles Britton, economics professors in the Sam M. Walton College of Business, and Richard Ford, professor of economics at the University of Arkansas at Little Rock, compared data from two important international indices and found that greater economic freedom leads to economic development, which in turn decreases the amount of poverty associated with a nation's lack of access to water.

"When humans are free to improve their economic conditions, one of the conditions they choose to improve is their access to water," Gay said. "So, based on our findings, we conclude that one means of improving humanity's conditions with respect to access to water is to promote economic freedom on a global basis."

Gay, Britton and Ford have collaborated on several research projects on water poverty, water resources and the environment, and the economies of arid lands. When the United Kingdom's Centre for Ecology and Hydrology released the Water Poverty Index, a new interdisciplinary tool for measuring the world's water-scarcity problem, the Arkansas researchers wanted to examine the relationship between water and economic freedom, especially since those who developed the index acknowledged the connection between water use and economic development. The researchers' work was also motivated in part by the efforts of former U.S. Treasury Secretary Paul O'Neill and rock star Bono, who toured sub-Saharan Africa together and agreed on the critical importance of clean water to people in that region.

In determining whether a country is water poor, the Water Poverty Index considers five components: resources, access, capacity, use and environment. The researchers limited their analysis to the area of access, which focused on the percent of population with access to clean water, sanitation and irrigation.

"These areas are really about the 'affordability' of water, which is related to economic development in general," Britton said.

To compare water poverty to economic freedom, Gay and his colleagues used the Heritage Foundation's Index of Economic Freedom, which defines economic freedom as "the absence of government coercion or constraint on the production, distribution, or consumption of goods and services beyond the extent necessary for citizens to protect and maintain liberty itself." Stated differently, it is an economic system in which people are free to actively participate -- to work, produce, consume and invest in ways they think are most productive.

The index considers 10 factors -- trade policy, fiscal burden of government, government intervention in the economy, monetary policy, capital flows and foreign investment, banking and finance, wages and prices, property rights, regulation, and black market. These factors were used to determine the absolute level of economic freedom of 161 countries and to compare those countries to one another.

The researchers looked at gross domestic income per capita as a measurement of economic development and found a "statistically discernable" relationship between the variables of economic freedom and development. Their results demonstrated that as a country's economic freedom increased, there was a corresponding increase in gross domestic income per capita. Furthermore, as gross domestic income per capita increased, there was greater income per person in that country. Finally, the researchers found that as income levels increased

within a country, there was more access to water and less water poverty in general.

"We believe that markets, supported but not encumbered by excessive government activity, lead to better conditions for human population," Gay said. "As people are freer from their government, their income increases, and as economic conditions improve, poverty associated with lack of access to water decreases."

The researchers discussed their findings within the context of an economics puzzle known as the "paradox of values." Formulated by Adam Smith, the founding father of economics, in his influential book *Wealth of Nations*, "paradox of values" considers the question of why diamonds have a higher market value than water when the latter sustains life and former does not.

The researchers' study was published in the *Forum of the Association for Arid Lands Studies*.

Source: University of Arkansas

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