

Economics 7340 - Growth and Development I

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Irrigation Topic

There is a line of reasoning that the necessity or use of irrigation had significant effects on the political organization and/or the cultural values of different societies. The sophistication of this reasoning varies, as you'll see in these readings.

For this short paper, you should (1) provide a summary of the arguments for the relationship of irrigation and development, (2) provide summary statistics showing variation in irrigation either across ethnic groups, countries, or within countries, and (3) explain a research design you could use to find whether the summary stats in fact represent causal effects of irrigation on development.

Reading list

As you are thinking about hypotheses that might be testable, pay attention to variation in the *type* of irrigation done, and the different conditions under which irrigation arises. You should also pay attention to how existing literature measures irrigation or the capability for irrigation.

Reading list:

- R. C. Hunt et al. (1976). "Canal Irrigation and Local Social Organization [and Comments and Reply]". *Current Anthropology* 17.3, pp. 389–411
- R. C. Hunt (1988). "Size and the Structure of Authority in Canal Irrigation Systems". *Journal of Anthropological Research* 44.4, pp. 335–355
- D. H. Price (1994). "Wittfogel's Neglected Hydraulic/Hydroagricultural Distinction". *Journal of Anthropological Research* 50.2, pp. 187–204
- K. Wittfogel (1957). *Oriental Despotism: A Comparative Study of Total Power*. New Haven, CT: Yale University Press
- J. C. Buggle (2017). *Irrigation, Collectivism and Long-Run Technological Divergence*. Cahiers de Recherches Economiques du Département d'Econométrie et d'Economie politique (DEEP) 17.06. Université de Lausanne, Faculté des HEC, DEEP
- J. S. Bentzen, N. Kaarsen, and A. M. Wingender (2017). "Irrigation and Autocracy". *Journal of the European Economic Association* 15.1, pp. 1–53
- C. Geertz (1963). *Agricultural Involution: The Processes of Ecological Change in Indonesia*. Berkeley, CA: University of California Press

Data sources

To work on this topic, you'll have to combine some sort of information about water availability (precipitation, river flows, etc.) with ethnographic and/or cultural surveys. The following are a set of sources you can look at, and which may help you develop a hypothesis.

- U.S. specific datasets
- GRDC world river basins and discharge data
- WHYMAP datasets
- Global precipitation data
- Links to catalog of GIS datasets
- NOAA global datasets, includes paleoclimate