

# Dynamic Political Institutions and Water Policy in Central Arizona-Phoenix

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## Abstract

This poster gives preliminary results from a study of the impact of dynamic political institutions on Central Arizona-Phoenix's water policy. Our overarching goal is to relate change in water decision-making institutions to outputs (defined as what water goes where for what purpose). The study includes a qualitative component (in-depth interviews with prominent 'water experts' throughout the Valley) and a quantitative component (a compilation of data on water usage rates and trends from various agencies and cities). Here, we focus on one important water decision-making entity with a particularly rich history, the Salt River Project. We analyze qualitative and quantitative data gathered to date. The preliminary findings suggest a recursive relationship between institutional change and policy outputs. That is, the relationship between institutions and policy may not be a one-way street as many assume. It may be better described as a dance between the two.

## A Brief History of the Salt River Project

Over 100 years ago, Arizona settlers found out that life in the desert without a reliable and adequate source of water is impossible. "In 1903, [they] formed the Salt River Valley Water Users' Association, and pledged more than 200,000 acres of their land as collateral for a government loan to build a water storage and delivery system". The loan was made possible by the National Reclamation Act of 1902. The Salt and Verde Rivers are the source of the project water. Roosevelt Reservoir, Horse Mesa, Mormon Flat, Stewart Mountain, Bartlett and Horseshoe are all storage facilities on the Rivers that form a chain of lakes approximately 60 miles long (Salt River Project 2001).

In the first years after Roosevelt Dam was built, 55 percent of the lands in use grew alfalfa. In 1947, 16,000 farmers used farm irrigation, while municipal water customers totaled over one million. Today, it is easy to forget the struggles that created the water dependent culture of Arizona. "By the 1970's, 14,400 people, or less than four percent of the total number of Maricopa County's employed were making a living from agriculture". Ironically, the agricultural lifestyle that had once ignited the growth of Central Arizona is now often publicly perceived as an obstacle to growth (Salt River Project 2001).

"All this stuff, 17,000 acres, which is essentially all originally farm land, is now very urban." *John Keane, Salt River Project*

"SRP has a system of electing directors which is land-based, and so that you get one vote per acre, or partial acre, and it is gradually getting more (as the area urbanizes) urban-oriented directors." *Jack Pfister, Arizona State University*

## Theories of Institutional and Policy Change

SRP changed considerably over time and this evolution provides an ideal case test of theories of institutional change. Scholars posit two very different views of the disposition of political institutions and public policy—the first is an exogenous view, the second endogenous.

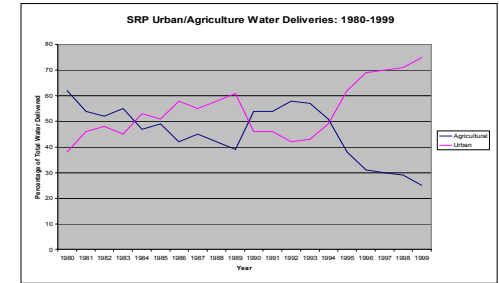
*Exogenous Institutions.* One school of thought considers political institutions to be *ex ante* bargains struck before the "game" begins (e.g. Krehbiel 1991). In this view, institutions are static, yet their particular design impacts the manner in which policy issues are processed and, therefore, the final form of policy outputs.

*Endogenous Institutions.* A second school of thought suggests that institutions themselves are endogenous objects of political choice (e.g. Riker 1981). The smoking gun question becomes "endogenous to what?" Three answers are possible. (1) Institutional change might be the handiwork of purposive political actors. Rational political actors realize the importance of institutional design. Hence, they try to craft political institutions to serve their political interests (Jenkins 1998). (2) A changing political environment might precipitate an adaptive response from institutions (Cooper 1977). (3) Perhaps markets affect the design of democratic political institutions.

While we favor the endogenous view, we find value in both theories. Each alone only shows part of the picture. Institutions impact policy and are, therefore, exogenous. However, institutions also evolve. We now focus on explanations of change in SRP.

## The Rest of the Project

SRP is only one water decision-making institution that is under study. The rest of our project also includes qualitative data (elite interviews) and quantitative data (water usage rates and trends) from CAP (Central Arizona Project), and ADWR (Arizona Department of Water Resources). In addition, we are currently in the process of creating a survey for all the cities in Central Arizona that encompasses water data from as far back as possible, focusing on each city's water source (e.g. groundwater, SRP, CAP), and purpose (e.g. agricultural, municipal, etc.) With this cumulative research, we hope to answer the following questions: (1) why do we have the water policy situation that we do? (2) What changed institutionally across time that produced water policy changes?



## SRP: Initial Evidence

*Change: Agricultural to Urban.* Our in-depth interviews with water policy experts and quantitative data suggest a major shift in SRP in the last two decades with regard to institutional structure and outputs related to water policy. The major change is the evolution of a water policy institution that served a primarily agricultural clientele and governed by a Board of Directors with a preponderance of members from the agricultural sector to one that serves primarily an urban clientele and is governed by a Board of Directors with a preponderance of non-agricultural members. The accompanying graph displays this change in water usage.

*Why?* The most persuasive explanation for institutional change in SRP is a market-based one. That is, the change from agricultural to urban service delivery was market-induced. Farmers sold their land (and water rights) to developers in the marketplace. Ultimately, individual homeowners bought parts of the former farms and along with it a part of the water right. SRP's Board of Directors reflects those persons who comprise its service delivery area, which is now mostly urbanized. In summary, the initial evidence from our study supports the endogenous theory of institutions and within that theory supports the market-based explanation of change.

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