

# Faculty Research

## Joint Projects

Raymond Burby, Edward Kaiser, Dale Whittington, Dana Weist, James Holway, Jack Kartez, and others are nearing completion of two National Science Foundation research projects about planning for natural hazards. In one project, the team is analyzing the impacts of floodplain management on floodplain development, land values, and decisions of developers and landowners. They are measuring changes between 1975 and 1985 in floodplain conditions in a sample of ten communities with hazard management programs and then seeking explanation through statistical analysis of parcel and related data as well as interviews with local officials and a survey of 300 land market decisionmakers. The study documents millions of dollars per year in flood losses averted through land use management programs, and shows that land use management can also result in significant environmental benefits for communities. A book manuscript, *Cities Under Water*, has been submitted to a publisher.

The other project is an exploratory study of risk management strategies to cope with the potentially huge costs of damages to public infrastructure from natural hazards. Nationwide, these losses amount to almost \$1 billion per year. Their research is focusing on methods of financing losses, such as loss reserve funds and insurance, as well as various loss prevention techniques. A book-length manuscript, *When Disaster Strikes*, is nearing completion.

Harvey Goldstein and Michael Luger are currently conducting a Ford Foundation-sponsored study of the regional economic development impacts of science and research parks in the U.S., such as Research Triangle Park, North Carolina. Millions of public and private dollars are being invested in the creation of science/research parks to attract technology-oriented businesses to a region and to lead to economic restructuring. Goldstein and Luger are assessing whether these investments do indeed lead to net economic development benefits which would not have occurred otherwise, and how the benefits are distributed among population and economic groups.

They have also recently completed a study of the determinants of local transit agencies' decisions to contract-out transit services to private vendors. A principal research and public policy question was whether federal government labor protection provisions given to local transit workers inhibits contracting out and cost savings. The study concludes that labor protection provisions are not an important barrier to contracting out. Instead, transit managers' attitudes toward innovation, their desire to keep control over a vital public service, and differences in labor costs between public agencies and private vendors are

among the most important factors influencing the decision.

Edward Kaiser is writing with David Godschalk what will become the fourth edition of *Urban Land Use Planning*. Stuart Chapin established this text for students and reference work for practitioners in 1958. The most recent edition was published in 1979. Kaiser and Godschalk plan to integrate the new technology and methodology of microcomputers and information systems, update the theoretical foundations and the standards, more closely relate the *Hypothetical City Exercise Workbook*, and provide more exercises.

Michael Stegman and William Rohe have been assessing HUD's Public Housing Home Ownership Demonstration, which is designed to test models and procedures for selling public housing units to existing tenants. Seventeen public authorities across the country are participating in the demonstration. A wide range of unit types (single family, townhouse, apartment), financing, and eligibility criteria are being examined. To date, site visits have been made to all 17 cities to interview program officials, collect information from program records and inspect the units being sold. Phone interviews with the new owners are currently underway. A second round of site visits and interviews is scheduled for the summer of 1989. The final report, due January 1990, will address two major issues: (1) what program characteristics and situational factors lead to effective programs; and (2) what effect home ownership has on the former public housing residents.

## Individual Projects

Edward Bergman is conducting research on a variety of topics related to regional economic restructuring and comparative European development. Based on a two-year grant from the Economic Development Administration to study industrial transitions, this project has expanded and now includes several related lines of investigation. First is an analysis of industrial transitions underway in urban and rural counties of 17 southern and midwestern states. This effort is intended to provide a thorough account of how local county economies in widely differing circumstances (e.g., urban versus rural, connection to Interstate Highway System, industrial mix) became restructured during the "neutral" business cycle period of 1977 to 1984. The following additional analyses were used to build upon this evidence: (1) the restructuring of state economies in the South Atlantic region from 1969 to 1985; (2) the effects of university research parks and interstate highway systems on the expansion of high-tech industry; (3) industrial and

spatial determinants of counties entering (or leaving) the national metropolitan system; and (4) the impacts of higher education and air service on economic prosperity of the Southern Growth Policy Board region.

These findings contribute to a long-term research program of study devoted to estimating reliable measures of economic development potential in local economies, particularly the individual components of entire metropolitan and peripheral regions. This long-run project is based on Bergman's five-year participation and membership on the National Rural Studies Committee, established with Kellogg Foundation funds to elevate the study of development in small towns and peripheral regions to the status attained in the 1960s by urban studies.

A second line of comparative European research follows from Bergman's 1985-86 Fulbright Fellowship and his direction of a USIA-funded faculty exchange program, which sponsors faculty exchanges between the Department of City and Regional Planning and faculty at the Vienna University of Economics. Comparative research studies underway are: (1) an examination of the views of development planning students at UNC and Vienna University of Economics concerning the ethics of professional planners; (2) an evaluation of the comparative urban innovations responsible for the economic restructuring of Durham City and County during the past two decades; (3) a comparison of U.S. and European experiences with successful economic development of formerly languishing local economies.

Raymond Burby is involved in two projects that focus on planning and financing water and sewer extensions. In an analysis of the "state of practice" in eight southeastern states, Burby found that considerable progress is being made in institutionalizing capital improvements planning among water and sewer agencies. Impact fees, administered through both water and sewer rates and land development ordinances, were prevalent among the techniques for financing water and sewer extensions. One disturbing finding was that the special district—an institutional device becoming increasingly popular among developers as a way of financing infrastructure—is much less likely than city or county water and sewer agencies to coordinate its action with local land use plans.

The second study—currently at the data analysis stage—is examining wastewater management problems faced by coastal localities in a string of states from Delaware to Mississippi. One preliminary finding is that a very high proportion of localities have discharged untreated or undertreated effluent since 1980, and most face very heavy capital investments to bring their systems into compliance with state and federal standards and to serve new growth in population and economic activity.

David Godschalk is currently involved in three research projects. First, he is preparing for the Triangle J Council of Governments a regional geographic information system as stage one of a regional plan. Second, he is preparing an introduction to teaching dispute resolution in planning curricula for the National Institute of Dispute Resolution. Third, he is researching for the Urban Land Institute critical issues and research needs for growth management in the U.S.

Shirley Weiss' research interests include: entrepreneurial decisions for developing the urban environment; the revitalization of central cities; and new town development, planning and implementation. Her latest project, funded by the University Research Council, is titled: "Housing in the Downtown Revitalization Plan: Selected Case Studies." An examination of downtown housing as a part of urban revitalization research is significant in light of the current concern with making cities more livable. New and rehabilitated housing in the central core may or may not be a key factor in restoring the vitality of older downtowns. Research on cities with downtown plans or special programs will reveal the potential for incorporating residential and related services into downtown plans. If housing proves to be a significant independent variable, cities may revise the planning, implementation and management of downtown development districts and thereby improve the livability of the inner city.

Dana Weist's current research focuses on the determinants of state and local government tax structures. Traditional evaluative criteria of public finance, such as equity, efficiency, elasticity, and stability, are considered, as well as the political and legal environments of state and local governments, in trying to explain the great variation in tax instruments used by state and local governments.