

RECENT DOCTORAL DISSERTATIONS

**World Port Institutions and Productivity: Roles of Ownership, Corporate Structure, and Inter-port Competition**

**SangHyun Cheon Spring 2007**

**Abstract**

This dissertation conducts comprehensive analyses on global seaport institutions and port infrastructure productivity. It also examines the determinants of port output and the roles port institutions play in driving port infrastructure productivity. Specifically the dissertation analyzes the roles of macro-, meso-, and micro-levels of institutional features of ports (inter-port competition, corporate structure, and port asset ownership practice). They are evaluated to understand why ports have become productive over the last decade and how those factors yield better opportunities for ports to prosper. While influences from external environments are still one of the important factors in shaping port efficiency, the roles of institutions play an increasingly important role, especially in the management of ports over the medium-long term. Furthermore, port efficiency has been shaped not only by macro-level market institutions (i.e. inter-port competition) but also by the capacity of port authorities to implement innovative institutional practices for port ownership and capital asset management.

While port managing institutions maintain a close relationship with their own historical trajectories, global container ports in the contemporary era search for a strategic flexibility with institutional bindings to respond to external challenges and to overcome their limitations. This strategic flexibility can be partly achieved by "vertical unbundling" of container terminal operation functions from the government's hand and by private sector participation for investment in port assets, i.e. concessions or leases - institutional bindings based on neoclassical contracts.

From the view of regulators and policy makers, they should focus their policy making on environmental, safety, and customs regulations. They also need to create a competitive market to reduce oligopoly in the port sector by adopting diverse policy mechanisms. Given the competitive market structure, the business aspects of port operation can be better

secured through diverse institutional mechanisms of private sector participation.

From the view of planners in port authorities facing global competition, the capacity of strategic planning to increase strategic flexibility of ports based on medium- or long-term scenarios is essential to achieve this institutional flexibility, thereby contributing to a higher productivity level of leading ports. This is a critical time for port authorities, managers, and policy makers to understand that they have a choice in what roles to play with what kinds of policy tools under the global pressure and rapidly transforming environments.

## **Internationalization of Research and Development: Evidence from the Semiconductor and Wireless Telecommunications Industries**

**Alberto Di Minin**

**Fall 2006**

### **Abstract**

Economic and regional literature have questioned the extent to which Research and Development (R&D) activities of Multinational Corporations (MNCs) have globalized, which types of R&D are offshored, and how this internationalization is shaped by, but also shapes the R&D strategies of companies and their home countries. My research contributes to this debate, by providing evidence and argument that reaffirms the importance of the domestically performed tasks.

This dissertation examines, empirically, the location, and locational dynamics of strategic R&D in two truly global industries: semiconductors and wireless telecommunications. Two different mixes of data assess the following research questions: (1) is it possible to find new and convincing evidence of R&D internationalization in two industries that share evident signs of global sourcing of both production and demand? (2) What are still today the constraints, or forces, that keep technology activities homebound, and what are the forces that pull them globally?

Contrary to expectations, the results clearly support the case for "non-globalization", and suggest that in spite of growing internationalization of operations, there is no convincing evidence to reject the hypothesis that core technology activities remain homebound.

These empirical findings are robust, but should be tagged with some caution. They are fixed in time, and may therefore change. Interviews with R&D managers, as well as the secondary evidence gathered and presented here, suggest that a more international distribution of R&D operations is likely in the years to come, when MNCs will learn how to better "appropriate" results of their foreign technological activities, as they will mature strategies to absorb and capture value from their offshored R&D.

## **At the Doors of Legality: Planners, *Favelados*, and the Titling of Urban Brazil**

**Michael G. Donovan**

**Fall 2007**

### **Abstract**

Urban land policy design and administration are undergoing a profound democratization throughout the developing world where many housing systems operate outside planning codes and "lawyers' law." City planners have emerged as gatekeepers of legal property when only a generation ago federal agencies controlled most land reform programs. Simultaneously, legislation such as Brazil's Statute of the City, has accommodated adverse possession and a wider gamut of tenure that individual titling programs often discredited. To date, however, there has been little agreement on what interventions enable planners to incorporate a continuum of land rights.

This dissertation examines the emergence and implementation of three flexible models of property legalization in Brazilian informal settlements. These include community-designed zoning on municipal land (Recife's PREZEIS), regularization of individual plots on unauthorized subdivisions (Rio de Janeiro's *Nucleo de Regularizagao de Loteamentos / Morar Legal* Program), and a program sponsored by Brazil's Ministry of Cities that offers leasehold to residents on federal property (*Papel Passado*). This research addresses how property markets are formed through interaction between titling logics from above and individual motivations of residents (*favelados*) from below. It identifies which communities are being legalized, which are being excluded, and the processes responsible for these patterns.

This project applied a mixed methods framework. Semi-structured interviews with residents were used to probe incentives for land

formalization while multiple regression and spatial analysis were utilized to estimate the association between titles awarded and contextual variables, including location and public investment in the community. The coding of transcripts from public hearings between residents and planners involved in legalization illuminated the conversation between customary land tenure and planning regulations.

Findings confirm research from socio-legal studies that illustrate the construction of legality through subjective notions of property rights, but reject the notion that registration benefits communities uniformly. Legalization was found to occur selectively in older communities with active residents' associations and a high level of preexisting infrastructure. Conversely, the research describes cases where high registration costs, mobility, and violence impeded legalization. This dissertation suggests several courses of action for improved land policy formulation and advances theoretical debates on property theory and participatory planning.

## **Environmental Knowledge, Environmental Attitudes, and Vehicle Ownership and Use**

**Bradley John Flamm**

**Fall 2006**

### **Abstract**

Since the 1970s, significant majorities of Americans say they support protecting the natural environment, even if it involves some economic cost. Yet almost every year since the 1970s Americans have driven farther than the year before, owned more vehicles, used them for a larger percentage of all trips, and shared them with other passengers less often. Vehicles today are much cleaner and more fuel efficient than in the recent past, but many of the potential environmental benefits are offset by higher consumption. This dissertation explores this apparent contradiction by analyzing the relations between environmental knowledge, environmental attitudes, and vehicle ownership and use. The research relies on quantitative analysis of responses from 1,506 Sacramento, California area residents to a 37-question knowledge-attitudes-behavior survey (39.6% response rate). Hypotheses were tested concerning the bidirectional effects of environmental knowledge and environmental attitudes on each other and on number of household vehicles, fuel efficiency of household vehicles, estimated annual household miles driven, and estimated annual household fuel consumption.

Difference of means analyses, multiple regression equations, and structural equation modeling reveal that 1) respondents with pro- environmental attitudes know more about the environmental impacts of vehicle ownership and use, 2) the households of knowledgeable respondents own more fuel efficient vehicles and use less fuel, 3) the households of pro-environment respondents own fewer and more fuel efficient vehicles, drive them less, and consume less fuel, 4) vehicle ownership and use inversely affect environmental attitudes, but to a lesser extent than attitudes affect vehicle ownership and use, and 5) many respondents perceive constraints to making their vehicle ownership and use reflect their knowledge and attitudes.

These findings suggest that public education and social marketing campaigns focusing on the majority of Americans with pro-environmental attitudes, combined with policies to reduce barriers to less resource- intensive vehicle ownership and use, could encourage greater demand for more fuel efficient vehicles and lower levels of vehicle ownership and miles driven. They also highlight the research importance of effective survey design, appropriate measurement of latent variables, and the inclusion of knowledge and attitudinal variables in some travel and environmental behavior studies.

## **Global Companies, Local Innovations: Geography of Product Development by Japanese Firms**

**Yasuyuki Motoyama**

**Fall 2006**

### **Abstract**

This dissertation investigates why Japanese multi-national firms concentrate new product development activities geographically, particularly in high cost locations like Tokyo or Nagoya. This seems a puzzle because it is the age of globalization and information technology. Previous literature in regional economies would answer this puzzle by focusing on the roles played by intra-regional agglomeration factors. In short, the close linkage between rival firms, suppliers, and customers within the same region will prosper information flows, and hence generate innovation. However, an analysis at an aggregated regional level blurs the notion of innovation. Only after dissecting (1) who makes (2) what kind of innovation can we understand (3) how the process of generating innovation is organized and tied to geography. With an interdisciplinary

approach of integrating regional economies and business administration, this dissertation extends the analysis on the technical and organizational aspect of creating innovation in the spatial context.

This is an in-depth case study of three products developed by three internationally successful firms: Sony, Canon, and Toyota. Each case reveals three common features in the nature of innovation. First, a modern consumer product is complex and consists of hundreds to thousands of components. Development of a new product means simultaneous development of myriad components and coordination among them. Second, a technological advance often takes place with an interdisciplinary approach. In these cases of computers and automobiles, each firm has to integrate knowledge in the fields of electric, mechanical, software engineering, chemistry, and physics. This integration requires the presence and constant interaction among engineers and scientists, as well as marketing specialists and executives. Third, a product has a face orientation. Face-to-face communication is essential to share and transmit tacit knowledge. A product must be tested with a prototypes to meet the product concept, to confirm the functionality, and to improve the performance. With these three features in the process of generating innovation, it is most efficient for each firm to co-locate its development related divisions within two-hour distance. Because innovation is a complex, evolutionary, interactive process, firms have to plan, ironically, for unplanned, uncertain situations.

## **Catalytic Gaze: Co-evolutionary Adaptation In An Emerging New Mesoamerican Neighborhood In Los Angeles.**

**Gerardo Sandoval**

**Fall 2007**

### **Abstract**

Redevelopment in low income communities involves a contradiction in that trying to improve neighborhoods through changes in physical infrastructure and new economic investments has usually led to displacement of low income residents. This dissertation, by applying the concepts of complex adaptive systems, takes a new approach to a fundamental and paradoxical problem facing city planning: how to improve a marginal neighborhood without displacing its previous residents as new and wealthier people move in. Its core is a revelatory case study exploring how redevelopment efforts targeting MacArthur

Park, a low income immigrant neighborhood near downtown Los Angeles, contributed to a revitalization of its "immigrants' milieu" rather than to displacement of the population and disruption of its culture(s) and institutions. MacArthur Park's case is surprising and interesting because ten years after a subway was constructed and a local station opened in 1996, spearheading redevelopment, the Mesoamerican neighborhood was still very much intact and thriving. There had been important improvements in the area such as greatly reduced crime rates, increased formalization of certain previously informal services, enhanced local social services and education facilities, a shift to community policing, and obvious changes in the physical appearance of the park and the neighborhood. The neighborhood's "jungle" characteristics, dominant in the mid-1990s, had given way to "village" characteristics, while at the same time the neighborhood increasingly displayed traits of a "global ethnopole" with increasingly strong transnational links to the Mesoamerican homelands of many of its residents (especially Mexico, Guatemala and El Salvador).

Within its conceptual framework of complex adaptive systems, the research sought to answer the following question:

Was the Central American Community in MacArthur Park able to co-evolve with the city's public agencies and not be displaced by the large infrastructure redevelopment plans for the area? If so, how and why was this co-evolution possible? What were the mechanisms underlying this process?

To understand what led to MacArthur Park's perhaps unique outcome, I carried out an in-depth case study, exploring neighborhood change primarily through semi-structured open-ended interviews with over 30 key persons involved in the main neighborhood institutions (both endogenous and exogenous) and in related events and activities affecting that change. Analyses of documents (especially of the several specific plans serially proposed for redevelopment of the subway station area), of census and demographic data, and of local media coverage of neighborhood events and news provided additional background, timelines, context and triangulation that proved essential to interpretation of the interview data. Qualitative data analysis software (N-Vivo 7) proved invaluable not only in recording and managing the interview data but also in following up on hypotheses and perceived relationships that emerged in the course of iterative reviews of the data and of initial analytic findings.

Sartre's concept of "the gaze" was helpful in understanding the case, especially with regard to two matters - first, the neighborhood's attractiveness to elite downtown business interests seeking its redevelopment, and second, various community agents' responses to plans and initiatives.

Several forms of capital (social, political, financial, and cultural) present in immigrant neighborhoods may not only increase their attractiveness as targets for redevelopment but also help them sustain their immigrants' milieu in spite of such challenges. Endogenous neighborhood institutions respond to pressures from the city's exogenous institutions. Interactions among their varied agents within a complex system lead, through mechanisms of copying and selection of agents and strategies, to adaptation and in some cases to co-evolution of some of the agents and some of their agencies. Both adaptation and co-evolution took place in MacArthur Park. To sustain their community in the face of large scale top-down redevelopment, endogenous institutions and agents in MacArthur Park needed the help of local government, with important agents within local government also seeking to sustain the ethnic makeup of the neighborhood. The case study of MacArthur Park shows that the processes of adaptation and co-evolution between the neighborhood's endogenous organizations and city institutions could proceed because three critical factors - Immigrant capital, CBO grassroots network power, and Latino city-wide political power - converged to sustain the Mesoamerican immigrants' milieu.

## **Planning and Siting New Public Schools in the Context of Community Development: The California Experience**

**Jeffrey Michael Vincent**

**Fall 2006**

### **Abstract**

Unprecedented rates of public school construction across the United States have spawned a new vision for public school facilities. More frequently, they are being used as tools to support community development outcomes in urban neighborhoods. This dissertation argues that using new schools as a place-based community development strategy significantly changes the way school facilities are planned and poses new questions for the community development field. The argument is sustained by investigating school districts, which have traditionally operated autonomously from local governments and control their own capital planning, as land use planning institutions. This research asks: are new school facilities being planned and sited to support community development goals? How is this occurring? What planning strategies are school districts using to do so? And, what themes emerge relative to strategies, obstacles, and successes? To answer these questions, a mixed-method approach was

employed, including a survey questionnaire of California school districts and two case studies of new urban school facilities in the state. The survey revealed land use planning strategies and the types of schools being built in California. One case study focused on the San Diego, where the school district and the city joined to form the San Diego Model School Development Agency for a redevelopment project that includes a new elementary school, housing, and community services. The other study investigated Emeryville, where the city and the school district are collaborating to build the Emeryville Center of Community Life, a redevelopment project to include K-12 school facilities, community and recreational services, commercial uses, and housing. The findings reveal how school districts are forging new partnerships and processes to plan and site new schools - ones that are more open, participatory, and often characterized by nontraditional school designs such as joint-use recreation and community service facilities, adaptive reuse of non-school buildings, and schools built on urban infill sites. The result is a change from the silo planning tradition that has defined school facilities planning, led by entities within what I call the community-centered schools movement.