Announcement from APPAM

THE APPAM PH.D. DISSERTATION AWARD

Association for Public Policy Analysis and Management (APPAM) has established a Ph.D. Dissertation Award to honor the best Ph.D. dissertation in public policy and management submitted through an institutional member of APPAM. The award includes an honorarium of $1,500, a plaque, a poster display of the research at APPAM’s annual Fall Research Conference, and travel funding to attend the award presentation at the conference.

The selection committee for the 2012 award consisted of Melissa Kearney (Chair), University of Maryland—College Park, Brian Jacob, University of Michigan and Susanna Loeb, Stanford University.

APPAM presented the 2012 Ph.D. Dissertation Award at the November conference in Baltimore, MD to Daeho Kim, Cornell University. Kim was nominated for the award by Anna Aizer, Brown University. Kim graduated after defending his dissertation, Essays in Health Economics, in June 2012.

THESIS ABSTRACT

Essays in Health Economics

This dissertation examines the effects of health care policy on access to health care and health outcomes use of medical technology, and educational attainment.

The first chapter (co-authored with Kenneth Chay and Shailender Swaminathan) examines the impact of Medicare’s introduction on hospital insurance, utilization, and mortality rates. The analysis applies an “age discontinuity” design to data both before and after Medicare’s introduction. We find that Medicare: (i) increased hospital utilization and costs among the elderly, but at a lower rate than previously found; and (ii) significantly increased life expectancy in the eligible population. We estimate that Medicare’s introduction had a cost-per-life year ratio below $200 (in 1982 to 1984 dollars). In addition, we present evidence that the benefit-cost ratios of Medicare fell during the 1980s, partly due to changes in Medicare’s reimbursement formula.

The second chapter examines the impact of Medicare payment reform on hospital costs. Medicare’s Prospective Payment System (PPS) reform in 1983 tied hospital payments to the national average cost of each medical technology with the expectation of reducing health care costs. I show that an unintended consequence of PPS was to generate financial incentives for hospitals to expand treatments that had
average costs greater than marginal costs due to sizable fixed investments. In the context of cardiac treatments, coronary artery bypass graft (CABG) surgery has a greater average-to-marginal cost ratio than angioplasty. Exploiting the discontinuity in Medicare eligibility, I find a discontinuous change in CABG use at age 65 after the reform that implies an increase of 50 to 60 percent. Nearly all of the increase is driven by CABG use expanded to relatively healthier patients. I also present evidence that the increased CABG use was not cost-effective.

The third chapter explores the role of hospital desegregation on educational attainment. The racial integration of Southern hospitals during the mid- or late-1960s provided increased access to hospital care for Southern blacks who previously had limited access. Using a difference-in-differences approach, I document that the black–white gap in educational attainment decreased significantly more in the South than in the North among cohorts born after hospital desegregation.

THE APPAM AWARD FOR THE BEST DISSERTATION IN PUBLIC POLICY AND MANAGEMENT IN ASIA

With underwriting from the Lee Kuan Yew School of Public Policy, National University of Singapore, Association for Public Policy Analysis and Management (APPAM) has established an Award for the Best Dissertation in Public Policy and Management in Asia to reward and encourage quality research on practical public problems in Asia by emergent scholars. The award includes an honorarium of $1,500, a plaque, a display poster of the research at APPAM’s annual Fall Research Conference, and travel funding to attend the award presentation at the conference.

The selection committee for the 2012 award was Melissa Kearney (Chair), University of Maryland—College Park, Brian Jacob, University of Michigan and Susanna Loeb, Stanford University.

APPAM presented the 2012 award at the November conference in Baltimore, MD to Li Tang, Georgia Institute of Technology. She was nominated for the award by Philip Shapira, Georgia Institute of Technology. Li completed her dissertation, The Rise of China in Nanotechnology and the Role of U.S.–China Knowledge Moderation at the Georgia Institute of Technology in 2012.

THESIS ABSTRACT

The Rise of China in Nanotechnology and the Role of U.S.–China Knowledge Moderation

In the emerging knowledge economy, scientific pursuit in the form of international collaboration has escalated. Studies consistently report that such collaboration, which has been intensifying in the last several decades, is common among not only advanced economies but also in emerging scientific nations such as China, India, and Brazil. The emergence of a “new invisible college” of international knowledge exchange has aroused interest from social scientists and captured the attention of policymakers. Indeed, recognizing its importance as a means of monitoring and exploiting other countries’ R&D investment, more and more countries champion and participate in international joint research.

International collaboration between the United States and China is particularly interesting. The United States has been and will continue to be the leader in scientific development for the foreseeable future. However, as a rising scientific power, China is changing the global landscape of ideas and innovation along with other emerging countries. The growing significance of the U.S.–China relationship and worldwide interest in China’s development suggest that the characteristics of the scientific
collaboration of these two countries and its associated knowledge dissemination across national borders are timely topics to study.

Surprisingly, few studies have examined research collaboration between a scientific superpower and an emerging scientific power, particularly in the context of emerging state-of-the-art technology. This dissertation seeks to address this research gap by examining patterns of collaboration in the U.S.–China scientific community and its impact on China’s rapid knowledge accumulation in nanotechnology, if any, through Chinese knowledge moderators (CKMs)—Chinese scholars who bridge two otherwise distant scientific communities through intensive collaboration with both sides.

The research focuses on the following three aspects: first, built upon the notions of the boundary spanner and the structural hole, the study develops the concept of CKMs and uses it as an instrument to examine the relationship between international collaboration and knowledge spillover across national boundaries. Second, it operationalizes and tests the impact of U.S.–China collaboration using multiple methods. In addition to citation-based indicators, based on the turnover of nanotechnology keywords, the study investigates the impact of collaborating with U.S. scholars on CKMs’ research trajectory and the international knowledge spillover facilitated by CKMs. Third, utilizing a longitudinal publication data set of 77 CKMs and their CV data, this study is able to quantify the dynamic impact of U.S. collaboration on the quality of CKMs’ research over time. The combination of bibliometric analyses, empirical testing, and case studies allows for the development of a comprehensive blueprint of U.S.–China scientific collaboration in the field of nanotechnology.

This research yields several significant findings. First, the evolution of U.S.–China collaboration in nanotechnology has gone beyond quantitative growth, as qualitative and structural changes have begun to take place. Second, CKMs play a critical role in fostering China’s nanotechnology development, manifested in both knowledge creation and knowledge diffusion. The present study also reveals that U.S.–China collaboration has a diminishing effect over time on the research quality of CKMs at level of individual papers, but as pertaining to entire journals. Third, the case studies on the evolution of research streams suggest that U.S.–China collaboration influences the research trajectory of CKMs, who, as the conduits of knowledge, further disseminate it within the national boundaries of China.

The research also has policy implications for both sides. Chinese policymakers need to strengthen the mechanisms that encourage CKMs collaborating with the United States, and, in order to amplify international knowledge spillover, these mechanisms should further encourage more interactions between CKMs and their Chinese domestic colleagues. From the U.S. American perspective, given China’s scientific emergence in nanotechnology, the United States should direct its efforts to ensuring its ample access to exploiting the heavy R&D investment of this emerging scientific powerhouse by collaborating with top Chinese scientists.