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From State to Market: Private Participation in China's Urban Infrastructure Sectors, 1992–2008

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Summary. — Public–private partnership (PPP) has gained popularity during the market-oriented reforms in China's urban infrastructure sectors. This paper explores how city characteristics, spatial pressures, and other institutional forces condition the extent of liberalization reforms in local infrastructure markets. The findings advance the policy diffusion literature by suggesting that the different diffusion mechanisms not only function independently, but also moderate each other's effects under certain conditions. Specifically, this research finds that the effects of peer pressure undermine the effects of spatial exposure, and the influence of provincial government reduces the effectiveness of peer pressure and epistemic influences.

Key words — public–private partnership, liberalization, policy diffusion, infrastructure, Asia, China

1. INTRODUCTION

Over the past three decades the widespread liberalization of the formerly state-controlled infrastructure sectors has redefined the role of the state in many economies (Izaguirre, 2005). Influenced by neoliberal economics, which views markets as the crucial mechanisms for regulating both domestic and world economies (Campbell & Pedersen, 2001; Fourcade-Gourinchas & Babb, 2002), state monopolies in major infrastructure sectors have been abolished or restricted, and private capital is allowed or encouraged to own or participate in the management, maintenance, and construction of urban infrastructure projects through various types of partnerships between public and private entities (Grimsey & Lewis, 2004; Savas, 2005).

Like other transitional economies, China has gradually transformed its institutions that govern infrastructure provision over the past three decades. Beginning with the special economic zones and then moving on to other coastal provinces, local authorities began to open their infrastructure markets and allow the private sector to play a larger role in mobilizing financial resources for key urban services such as roads, metro, power, waste management, and water and sanitation (Su & Zhao, 2007). According to World Bank statistics, from 1990 to 2008 investments in private participated infrastructure sectors in China totaled 103.3 billion US dollars, which accounts for 48.3% of such investments in East Asia and Pacific regions or 9.1% of the world total (The World Bank, 2009).

Many policy makers regard private participation as a way to increase efficiency in service delivery, improve the quality of operation and management, facilitate the transfer of technology and management know-how from private parties to the public sector, and enable local governments to use private resources to meet the growing need for investments in infrastructure sectors (The State Council, 2010; Yusuf & Saich, 2008). As a result, cities jumped on the bandwagon of liberalization reforms one after another: urban infrastructure and utility sectors have been opened to nonstate investors; various utility services were unbundled from other public service functions; foreign and domestic investors are allowed to fully or partially own, lease, or invest in various infrastructure and utility programs; and local authorities use fiscal subsidies and favorable contract arrangements to attract private investments to rehabilitate existing facilities or construct new ones (Wu, 2010).

Although private-sector investments and expertise are highly attractive to local governments, successful implementation of public–private partnership depends on the proper allocation of rights between partners as well as a commensurate allocation of risks (Akintoye, Beck, & Hardcastle, 2003; Marques & Berg, 2011). Too many government rights will scare away potential private investors, but too few are likely to result in customers or taxpayers having to bail out unscrupulous private investors (Hammami, Ruhashyankiko, & Yehoue, 2006). Therefore finding a mutually acceptable contractual arrangement is important for both public and private entities. In a sense, this reflects the competition for control of the infrastructure industries between the public and private sectors.

Borrowing insights from the literature on policy innovation and policy diffusion, this study explores the determinants of the level of private involvement in local infrastructure sectors. It incorporates insights from major policy diffusion and innovation models such as internal determinants, spatial, and institutional models, and focuses on exploring the possible interactive relationships between different diffusion mechanisms. By doing so, it advances the existing literature by determining whether these mechanisms potentiate or undermine each other during the dissemination of market-oriented infrastructure policies. It therefore promotes a dialog between different theoretical camps and helps to clarify the boundary conditions of different explanations (Dobbin, Simmons, & Garrett, 2007). The next section introduces the research context and forms of private participation in infrastructure sectors, then develops testable hypotheses. A statistical test using panel data from 1992 to 2008 follows, and the findings and implications are discussed.

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2. RESEARCH CONTEXT AND FORMS OF PRIVATE PARTICIPATION

Fast economic growth over the past three decades has made China one of the most attractive destinations for private infrastructure investors. Since the early 1990s private investment has gradually become a significant source of finance for many urban infrastructure projects. The first private participated infrastructure project identified by the World Bank PPI team was the Guangzhou North Ring Road project. The project is governed by a BOT contract with a contract period of 33 years. The Hong Kong-based New World Development company provided 65.3% of the 173 million US dollar total project investment. The project reached financial closure in 1990, and in the subsequent few years a twenty-two-kilometer-long highway was built (The World Bank, 2009).

Figures 1 and 2 show the temporal distribution of PPI projects and investments. The investments from foreign and domestic private sectors account for a significant share of the total investment in urban infrastructure sectors during the eighth (1991–95) and ninth (1996–2000) Five-Year-Plan (20–40%) (Ministry of Housing & Urban-Rural Development of China, 2012). Although its share declines after 2001 (less than 20%) due to the dramatic increase of state investments in urban infrastructure sectors, the absolute number of projects and volume of private investments continue to grow. While the economically more advanced coastal regions such as Jiangsu and Guangdong provinces are the major recipients of private capital, the central and mid-western provinces were also exposed to private investments to varying degrees during this time (see Figure 3).

As a result, private capital has gained considerable influence on China's urban infrastructure markets. For instance, in urban gas markets the state allowed nonstate investors to participate in 2002. Since then domestic private and foreign firms have acquired a significant market share. According to a report from the China Gas Association, as of 2011 domestic private companies controlled 29% of Chinas urban gas supply market, and foreign firms controlled 14% (China Gas Association, 2012). In particular, the Hong Kong-based Towngas (also known as The Hong Kong and China Gas Company) controlled 93 urban gas supply projects located in 17 provinces. These projects serve 11.88 million urban households or over 40 million urban residents. Xinao Gas Holdings also runs 90 urban gas supply projects in 16 provinces, which serve 46 million people. In addition, China Gas Holdings controls 121 urban gas supply firms and serves 60 million people (Tong, 2011).

In water supply markets, foreign water companies had invested in over 50 urban water supply facilities by 2001. Some international water giants have gradually established business networks that control water services for millions of people. As of June 2009 the French Suez Group had invested in over 22 water supply projects that serve 14 million urban residents. Another French water company, Veolia Environment, has invested in 21 companies located in 19 cities including Tianjin, Shanghai, Beijing, Chengdu, and Kunming. These facilities service a population of over 30 million (Li & Zhao, 2009; Su, 2009). The dramatic increase of private power in these sectors attracted the attention of the regulatory agencies. For example, in 2009 the Ministry of Housing and Urban–Rural Development launched an investigation into foreign water service companies to see whether they had acquired monopolistic positions in local water service markets or colluded during the recent wave of water price increases (Li & Zhao, 2009).

The notion of private participation encompasses many forms of contractual arrangements in which a government and a private entity, for profit or nonprofit, jointly perform or undertake an activity that is traditionally performed by public entities (Grimsey & Lewis 2004). This often involves at least one government unit and a few private firms. These entities jointly create or build large, capital-intensive public infrastructures such as seaports, airports, highways, water and sewage systems, and power plants (Savas, 2005). These arrangements differ significantly regarding the ownership of capital assets, responsibility of investments, operation and maintenance responsibilities, assumption of risks, and duration of contracts (see Table 1). Four major private participation models can be

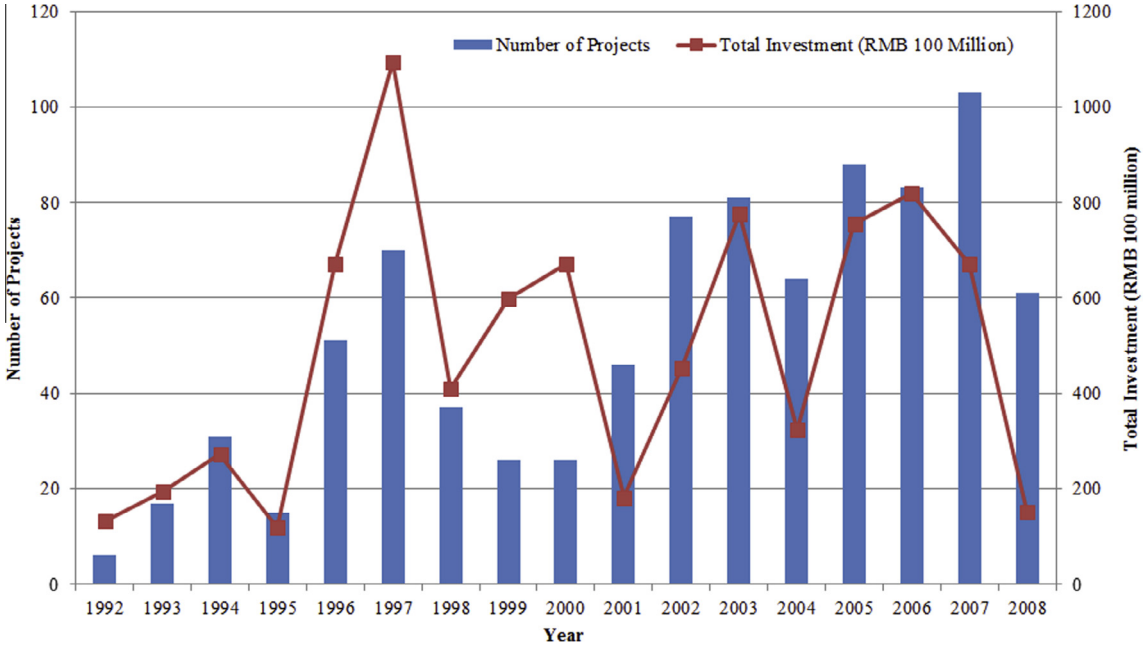

Figure 1. *Annual number of PPI projects and amount of investments. Source: World Bank PPI Project Database.*