
State Grid Corp: The emergence of a public intellectual monopoly underpinned by Chinese universities.

Cecilia Rikap^{*1,2}

¹Institut francilien recherche, innovation et société (IFRIS) – Université Paris-Est Marne-la-Vallée (UPEMLV) – IFRIS / UPEMLV Cité Descartes 5 boulevard Descartes Champs sur Marne 77454 Marne-la-Vallée Cedex 2, France

²Centre population et développement – Institut de Recherche pour le Développement, Université Paris Descartes - Paris 5 : UMR_D196 – *France*

Résumé

We explore Chinese State strategy for developing intellectual monopolies by looking at State Grid Corp's innovation networks, in particular the interactions between this corporation and Chinese universities. State Grid is the state-owned electric utility monopoly, world's largest utility company. Looking at a Chinese leader corporation is not only relevant considering the hegemonic place of China in the world economy and in innovation in particular. Indeed, there has been an explosive rise in Chinese patents (15.3% of average growth of its published patent applications) as part of a strategy that considers innovation as one of China's five key goals, as stated in its 13th Five-Year-Plan (2016-2020). Nevertheless, as we said, this is not the only reason for studying in-depth State Grid Corp's innovation networks. By this analysis we will also be able to further develop our behavioral model for intellectual monopolies. In a nutshell, our conceptual model explains that the wannabe Intellectual Monopoly does mainly in-house innovation, competing for technology with other wannabe or already incepted intellectual monopolies. Still, once it has become an intellectual monopoly, outsourcing stages of the innovation process to subordinated companies or academic research institutions is a feasible and, in fact, a convenient strategy due to its planning capacity together with knowledge modularity. Outsourcing will diminish risks, which are even higher for innovation than for reproducing already existent commodities (which are also outsourced forming Global Value Chains). Moreover, its planning capacity will entitle the intellectual monopoly to reap most of the innovation rents. Furthermore, both technological competition and technological cooperation are viable strategies among these leaders. For more generic knowledge modules, cooperation between them will reduce associated risks and increase chances of success.

State Grid's case will add a layer to that model showing how, during the formation of an intellectual monopoly, once a corporation starts accumulating innovative successes, outsourcing innovation will initially rely on the hands of closer institutions that the wannabe intellectual monopoly can easily control. We will argue that this has been the case of Chinese universities, making State Grid Corp the corporation with most co-owned patents with universities in 2017. Therefore, we could say that there is a stage during the process to become a global intellectual monopoly where the leader corporation consolidates locally, before

*Intervenant

extending its power globally. Therefore, our study case will show that even in a context of GVC and global innovation networks, geographical proximity still plays a role. In order to empirically depict our assertions, we use Web of Science and Derwent Innovation data. Empirically studying innovation networks would demand in depth knowledge of leader corporation's strategies. The lack of such a primary source leads us to use scientific publications and patents as imperfect approximations that can, nevertheless, provide vivid images of those networks. In the case of scientific publications, we study the co-occurrences of authors' affiliations, and we look at the co-occurrences of assignees, for the case of granted patents. Funding sources and main topics being published and patented will also be considered.

Mots-Clés: Intellectual Monopoly, University & Industry Innovation Networks, Outsourcing Innovation Modules, China.