

Power Shifts in International Standardization: Explaining a Leading Standard Setter in Telecommunication

Ph.D. Thesis

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Abstract

Technical Standards have become a new arena of competition in the race for technological leadership since securing their control and ownership provides considerable economic and political advantages. Particularly telecommunication standards, which underpin global networks, can produce substantial economic and strategic benefits for the country and industry that largely shape their process and outcome. In light of these implications, new aspiring standard setters, such as China and South Korea, have actively increased their participation in international standards settings, challenging the predominant position of traditional standard setters such as the United States and European countries. The rise of new aspiring standard setters has provoked shifts in the power structures of international standardization regimes that had mostly reflected the preferences of traditional standard setters in the last decade, implying a redistribution of gains and costs among countries and industries. Despite this, only a few studies have focused on explaining power shifts in international standardization, drawing on IR/IPE theories. In addition, studies have only partially inquired about the political and economic of conditions that might explain such shifts. Against this background, this study aims to contribute to the literature focusing on power shifts in standardization by assessing under what conditions countries turn into leading standard setters. This is evaluated empirically by analyzing the capacity of six technological powers in shaping the three latest generations of telecommunication standards, namely 3G, 4G, and 5G. It deploys a multimethod approach to perform the analysis, combining a Qualitative Comparative Analysis (QCA) with a process tracing (PT) analysis. The study found that the combination of conditions composed of a great innovator, a large economic power, and a highly complementary domestic system resulted in the most consistent sufficiency path, suggesting that when countries hold roughly the same technological and economic capabilities, a complementary system conducive to a strong government-industry partnership proves crucial to shaping standardization. This interpretation calls for further research on the role and influence of governments in securing technological leadership by providing competitive advantages to industries contributing to global standards.

