

Economic Catch-up. Institutions, and National Innovation Systems

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The process of economic catch-up involves innovation in an essential way. The innovations that drive the process differ in important respects from the innovations that have been the central focus of research on technological advance in advanced economies. First of all, the new technologies, practices more generally, that are being taken on board, while new to the country catching up, generally are well established in countries at the frontier. Second, much of the innovation that is required is organizational and institutional, rather than technological. But what is going on in catch-up most certainly is innovation in the sense that there is a break from past familiar practice, considerable uncertainty about how to make the new practice work effectively, and a high risk of failure, as well as major potential payoff from success.

The National Innovation System concept has been developed largely as a way of mapping out the institutions supporting technological innovation in advanced industrial nations. It is an open question whether the Innovation System concept is useful for study of the institutions in countries behind the frontier that influence their capabilities to catch-up. This essay aims to explore that question by focussing on the key mechanisms that seem to have been operative in countries that have managed to largely catch up, and considering the institutions that were important in the process.

Preliminary research flags the obvious. The processes of catch up have changed over the years, and so have the institutions that were important. And it is clear that the processes of catch up in the 21st century are going to have to be somewhat different than those that worked in the 20th. The WTO agreements, and TRIPs in particular, will make a difference. So will the fact that modern technologies are at once more complex and more codified than technologies of an earlier era, and thus high level technological training is both more needed and more effective. These changes will mean, I believe, that successful catch-up will require the development of considerable indigenous technological and scientific capabilities. National policies regarding their innovation systems need to recognize this..