BACKGROUND NOTE

Competition Policy and Innovation

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DISCLAIMER

COMPETITION POLICY AND INNOVATION

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This note summarizes the role of competition policy on innovation using both theoretical and empirical literature. Since competition policy, such as merger and antitrust laws, yields competitive markets, they are used interchangeable in the literature. The box also outlines the policy prescriptions that may facilitate innovation under competition.

Existing theories contain mixed prediction on the relationship between competition and innovation. On the one hand, operating in a highly innovating industry may have the positive knock-on effect of forcing firms to innovate in order to survive. But more intense product market competition may also reduce the monopoly profits that reward innovation and, therefore, limit the resources that firms have for future innovation-related activities (Romer 1990 and Aghion and Howitt 1992). The relationship between competition (and policy that leads to it) and innovation may even be inverse U-shaped, with innovation rising initially as competition rises but falling when competition rises beyond a certain threshold (Aghion at al. 2005), perhaps combining features of both mechanisms outlined earlier. Smaller firms may also be at a natural disadvantage in a more competitive market since they do not have the resources to compete with larger firms for an extended duration. Adding to this complexity is the issue of firms in developing countries that are often far from the innovation frontier, and who may be forced to exit since they are unlikely to have the resources to invest in upgrading when faced with high competition from foreign firms.

The empirical literature, too, has presented mixed evidence on competition and innovation, relying on several layers of analysis, ranging from firm-level evaluations to cross-country regressions and case studies. The early empirical literature, inspired by Schumpeter (1943) find a negative relationship between competition and innovation; Nickell (1996) and Blundell, Griffith, and Van Reenen (1999) both find a positive linear effect of competition on innovation; Scherer (1967) revealed a significant inverted-U shape, with higher competition initially increasing then decreasing the rate of innovation, a finding confirmed in Aghion at al. (2005). Several case studies suggest that the impact of competition on upgrading differs according to distance from the frontier. Therefore, the impact of competition on emerging markets is harder to identify. More competition likely would force improvements in operations in large protected companies in many countries (Rijkers, Freund, and Nucifora 2014 on Tunisia, for example) but many small and medium-sized enterprises in Columbia found it difficult to innovate as international competition due to an increase in trade integration picked up.

These results can be synthesized to obtain broad lessons on competition policy and innovation. The policy prescriptions required to enable firms to successfully engage in innovation in competitive markets rest on several factors. First, by providing the necessary pre-requisite labor skills and incentives for upgradation, such as through higher levels of initial human capital that is technically adept and observes better managerial practices, combined with factors such as availability of financial resources, would enable firms of different sizes to compete with both local and foreign firms. At the same time, a conducive environment combined with good policy is also identified to be suitable for firms to engage in healthy competition. Other important policy aims should include facilitating stronger legal systems that enforce the rule of law,

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speedy judicial systems, merger and antitrust laws, and developing quality institutions that reduce red tape, especially in conflict resolutions among competing firms. In short, competition policy combined with the outlined policy changes yields more fruitful innovation outputs. Finally, while direct empirical evidence is harder to obtain (Aghion et al. 2005) report the inverse U-shaped impact of competition (privatization, trade liberalization) on innovation.

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