

# Knowledge flows and networks in the ICT sector : the case of Pakistan

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## **Propositions**

accompanying the thesis

# **Knowledge flows and networks in the ICT sector: The case of Pakistan**

**Abdul Baseer Qazi**

1. Absorptive capacity and human capital are strongly related to productivity and innovativeness at a firm-level.
2. Labor mobility between firms is an important channel for information flows that are vital for innovation and productivity.
3. Firms which point to MNCs as their primary source for technology are more productive, corroborating the demonstration effect.
4. From a network perspective, though centrality doesn't influence a firm's innovative or economic performance, firms with structural holes outperform those with redundant ties.
5. In the ICT sector, where importance of information is paramount, frequent interaction between firms improves innovative and economic performance.
6. Studying the whole economy, structural changes contribute positively to productivity, but these contributions are mostly very small and the effect of productivity growth within sectors (intra effect) is the dominant contributor towards productivity growth.
7. For the manufacturing sector it can be safely concluded that within this sector there has been growth reducing structural change, except for the 1996-01 period. Though an average productivity growth of 3.1 percent from 1986 to 2005 is reasonable, productivity growth would have been much higher in the absence of negative shift and interaction effects.
8. The ICT sector of Pakistan has the potential of giving the economy the required impetus for growth.
9. Structural change is important for productivity enhancement, but estimates from shift and share analysis should be seen as the lower-bound of the positive effects of structural change.
10. Given the contribution of foreign qualified and experienced staff, policies encouraging brain-gain and reversing the brain drain are crucial for economic growth of a developing country.

Maastricht, December 2015