

Innovation determinants and innovation as a determinant: evidence from developing countries

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Summary (English)

The notion of technological innovation is largely established in developed countries, and a plethora of studies is available in the literature analyzing the innovation phenomenon in this region. The focus in developing countries is, however, still lacking. This thesis contributes to the literature by investigating, both theoretically and empirically, the innovation phenomenon in the developing world. The study first compares different innovation-related indicators across developing and developed countries, and comes to the conclusion that the developing world is the region which substantially lacks many of them as compared to the developed world.

The thesis further explores empirically two different aspects of innovation: which factors (determinants) induce the firm to innovate and what effects innovation has on the firm performance. The analysis on the innovation determinants is based on fourteen Latin American countries. We primarily analyze the effects of firm size and product market competition on both innovation input (R&D) and its output (product innovation), after including some control variables. The results are almost similar to what we have already observed empirically in the literature on the developed world. It means that the lower innovation intensity of the developing world is directly related to the indigenous insufficiency of these positive determinants, whose ratios, on the other hand, are higher for developed countries, as observed also in this thesis.

The second phase of the empirical analysis focuses on the productivity and employment impacts of innovation. This analysis is based on two South Asia economies: Bangladesh and Pakistan. Although it is generally believed that industrial innovation is not a significant notion in developing countries, the empirical analysis in this thesis concluded its positive influence on both productivity and employment increase. Hence, based on our empirical findings, we can argue that policy makers of this region should focus on those policies which in-

crease the innovation culture, in order to enhance this region's industrial productivity and to control unemployment.

Summary (Dutch)

Samenvatting

Het begrip technologische innovatie is grotendeels ontwikkeld in een context van ontwikkelde landen, en in de literatuur is een overvloed aan studies beschikbaar die innovatie analyseren vanuit het perspectief van ontwikkelde landen. De focus op ontwikkelingslanden ontbreekt echter nog grotendeels in de literatuur. Dit proefschrift draagt bij aan de literatuur door innovatie in ontwikkelingslanden te onderzoeken, zowel theoretisch als empirisch. De studie vergelijkt eerst de verschillende innovatie-indicatoren tussen ontwikkelingslanden en ontwikkelde landen, en komt tot de conclusie dat, ten opzichte van de ontwikkelde wereld, veel informatie voor verschillende indicatoren ontbreekt voor ontwikkelingslanden.

In de rest van het proefschrift wordt nader empirisch ingegaan op twee verschillende aspecten van innovatie: welke factoren (determinanten) leiden een bedrijf tot innoveren, en welke effecten innovatie heeft op de bedrijfsprestaties. De analyse van de innovatie determinanten is gebaseerd op veertien Latijns-Amerikaanse landen. Vooral de effecten van bedrijfsgrootte en concurrentie op de productmarkten op zowel innovatie-input (O & O) en de output (productinnovatie) worden onderzocht, inclusief een aantal controlevariabelen. De resultaten zijn redelijk sterk vergelijkbaar met wat al empirisch bekend is in de literatuur over de ontwikkelde wereld. Dit impliceert dat de lagere innovatie-intensiteit in ontwikkelingslanden rechtstreeks verband houdt met een onvoldoende niveau van de positieve determinanten (die in hogere mate aanwezig zijn in ontwikkelde landen, zoals ook waargenomen in dit onderzoek) in de ontwikkelingslanden.

De tweede fase van de empirische analyse richt zich op de effecten van innovatie op productiviteit en werkgelegenheid. Deze analyse is gebaseerd op twee Zuid-Aziatische economieën: Bangladesh en Pakistan. Hoewel algemeen wordt aangenomen dat industriële

innovatie geen belangrijke rol speelt in ontwikkelingslanden, laat de empirische analyse voor deze twee landen in dit proefschrift een positieve invloed op de productiviteit en de werkgelegenheid zien. Op basis van de empirische bevindingen kan gesteld worden dat beleidsmakers in deze landen zich moeten richten op beleidslijnen die de innovatiecultuur versterken, om zodoende in deze regio de industriële productiviteit te verhogen en de werkloosheid te verlagen.