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Innovation System and Competitive Advantage*

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Abstract

For centuries, the state has pursued policies to improve the innovative performance of domestic industries and to enhance the economic capability of domestic firms from newly-developed technologies. Nearly every contemporary policy contains a technological component. In fact, technological change has motivated several shifts in theoretical paradigms and has driven a vast amount of the scholarship in the field of global competition. In this paper, we will discuss the implications of technological advance on one important activity undertaken by industries and the state: innovation and the commercialization of a new technology. This paper suggests that characteristics of both industries and the state can improve the likelihood of success of industries in attempting to upgrade their innovative abilities and to commercialize a new technology. It proposes that industries that draw their resources from all over the globe will have a better

chance of success than industries that concentrate only on home country resources. It further suggests that states vary in the degree to which the innovative resources created within their borders are appropriable by foreign actors. In conclusion, this paper proposed that industry innovative performance is influenced by the degree to which an industry responds to the global innovation system, as well as the strength of the strategic national innovation system in the country in which the firm performs the bulk of its research.

Key Words: Competitive advantage, Global Innovation System (GIS), Innovation system, National Innovation System (NIS), Strategic National Innovation System (SNIS), Technology policy, The state.

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創新體系與競爭優勢

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摘要

長久以來，國家均透政策工具來增進國內產業的創業績效及藉由發展新科技來增強產業的競爭能力。晚進的政策或多或少均包含有某些"科技"的要素。事實上，科技的變遷刺激了科技典範的移轉及驅策著研究全球競爭領域內的學者。本文主要討論在國家與產業所從事的新科技的創新及商業化活動中對科躍進的含意。本文認為某些國家及產業的特色可使創新能力升級和將新科技商業化的成功可能性大大增加。本文也認為產業對其種種資源有著全球性規劃比其僅專注在國內更容易成功。最後，本文嘗試導出產業創新的績效是被產業對於全球創新體系的反應能力及產業在策略性國家創新體系中研發能力所深深影響。

關鍵詞：競爭優勢，全球創新體系，創新體系，國家創新體系，策略性國家創新體系，科技政策，國家。