

摘 要

有關既有廠商面對技術改變時為何會失去領導地位，現有文獻多以技術和廠商能耐互動的供給面切入討論，其原因可能是領導廠商無法及時轉換技術、調整能耐或組織惰性等因素；對於少數新興國家的後進廠商成功挑戰既有領導廠商，成為全球領導廠商的研究，也大多依循這種供給面觀點，認為建立並不斷提升技術能耐是成功的關鍵。

深入檢視既有廠商面對技術改變失去領導地位的原因，不完全是來自供給面的問題，市場需求面也是重要的影響因素。在討論市場需求面的相關理論中，斷裂性創新架構是最典型的觀點，該觀點認為新興廠商推動斷裂性創新會持續破壞現有市場遊戲規則，造成競爭基礎的改變與產業結構的變化，此觀點主要在說明市場顧客需求的變化對新舊廠商競爭的影響，並據以補充說明技術供給面的不足。

至今斷裂性創新研究並未發展出一個有系統的架構來檢測某種創新情境是否為斷裂性創新？因而，本研究根據斷裂性創新架構觀點及個案研究中描述性理論架構的要求，發展出斷裂性創新描述架構的相關特性要件，並用此架構來檢測台灣積體電路公司及其所促進高度發展的全球晶圓代工產業，檢測結果發現過程符合斷裂性創新的特性。後續研究將可由斷裂性創新的觀點切入，重新詮釋台積電成功成為全球領導廠商的原因。

本研究發展出來的描述架構是一個檢測斷裂性創新的良好基礎，可以作為測試其他產業是否存在斷裂性創新的參考。

Abstract

Why established incumbents loosed their leading positions facing the disruptive technology, explanation of current literatures tended to focus on the supply-side interaction of technologies and firms' capabilities. The research on latecomer firms catching up technological gap in newly development countries also focused on the supply-side perspective and argued that consecutive advancing technological capabilities was the key to success.

Closer examination of technology competition, however, reveals that technology or market transitions are not necessarily due to the supply-side difficulties, like incumbent technology's inherent limit, incumbents' inability to master new skill, or organizational inertness. The market demand-side is also an important factor offering a complementary set of explanations that highlight the influence of consumers' need on technology trajectory. The most influential expression of a demand side role in technology competition is the disruptive innovation that will break the market rule, shift the bases of competition and change the industry structure.

Current researches, however, did not develop systematically analytical tool or framework to identify disruptive innovation. This study followed the major perspectives of disruptive innovation and the rules of case study to develop the descriptive framework for testifying the phenomenon of disruptive innovation. The semiconductor industry development in Taiwan was identified and described under the conditions of this framework.

This descriptive framework is a systematic tool for testing disruptive innovation in any industry.