

# 探索竹科廠商投入研究與發展的因素\*

## Exploring the factors affecting the HSP firms' decisions in R&D investment

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**摘要：**本文以問卷調查方式，估計累積科技知識、市場經濟誘因、區域研發基礎環境、外部資金制度、科學工業法規、和投資優惠等六類型變數，對竹科廠商投入研究和發展行爲的影響程度。結果發現市場經濟誘因是促使廠商投入於研究和發展的最重要因素，其次各別爲累積科技知識、外部資金制度、區域研發基礎環境、科學工業法規、和投資優惠。另外，研究結果顯示廠商對這六類型變數的看法，不會因爲其 R&D 強度不同而有顯著不同，但是却會因爲其公司規模和產業類別不同，而對某些類別的因素層面有顯著差異的需要程度。政府創新政策，若能善用市場經濟誘因，並考慮不同公司規模和產業類別對各因素層面的不同需要程度，則可更有效地鼓勵廠商投入於研究和發展。

**關鍵詞：**研究與發展、經濟誘因、制度環境、新竹科學園區、科技政策、因素分析

**Abstract:** We conducted questionnaires to measure the impacts of technological knowledge, economic incentives, regional R&D infrastructure, external financial resources, regulations and investment incentives on R&D investment behaviors of firms located in the Hsinchu Science Park. The results show that economic incentives are the most important factors affecting firms' R&D investment decisions. It follows cumulative technological knowledge, external financial supports for R&D, regional R&D infrastructure, regulations on scientific industry, and investment incentives, respectively. In addition, we found that firms with different R&D intensities do not have significantly different views on the six types of variables. However, a firm's size and the type of industry do significantly affect the firm's requirement on some of the variables. Thus, it is needed that the government well uses economic incentives and considers different research requirements according to firm size and industrial type in order to effectively promote R&D investment in the science park.

**Key words:** R&D; economic incentives; institutional factors; Hsinchu Science Park; technology policy; factor analysis.

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