



國立高雄應用科技大學  
企業管理系碩士班  
碩士論文

體制壓力、綠色資源對綠色產品創新與綠色產品創新成功  
關聯性之研究：以台灣電機電子產業為例

The Relationship among Institutional Pressure, Green Resources, Green  
Product Innovation and Green New Product Success : An Empirical Study  
on Electrical and Electronic Industries in Taiwan

研究生：陳葳凌

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## 摘要

在台灣，有關環保產業方面的研究，大多集中在策略行銷方面，極少探討企業為何與如何做一些採用綠色產品創新，先前的研究多為探討綠色創新，甚少對綠色產品創新及綠色產品創新成功這方面進一步深入研究，因此，本研究基於以上論點整合體制理論、資源基礎觀建立研究架構，探討對綠色產品創新及綠色產品創新成功的影響。

本研究以台灣電機電子產業為對象，以問卷調查法發放958份問卷，有效回收問卷為189份，經由AMOS統計軟體分析結果顯示：體制壓力對探索型與應用型綠色產品創新有正向影響，而企業之綠色資源對探索型與應用型綠色產品創新有正向影響，另外企業的綠色資源對綠色產品創新成功有正向影響，企業之探索型綠色產品創新與應用行綠色產品創新對企業的綠色產品創新成功有正向影響，最後，體制壓力與綠色資源透過探索型與應用型綠色產品創新間接影響綠色產品創新成功。

關鍵字：體制壓力、綠色資源、綠色產品創新、綠色產品創新成功

# The Relationship among Institutional Pressure, Green Resources, Green Product Innovation and Green New Product Success : An Empirical Study on Electrical and Electronic Industries in Taiwan

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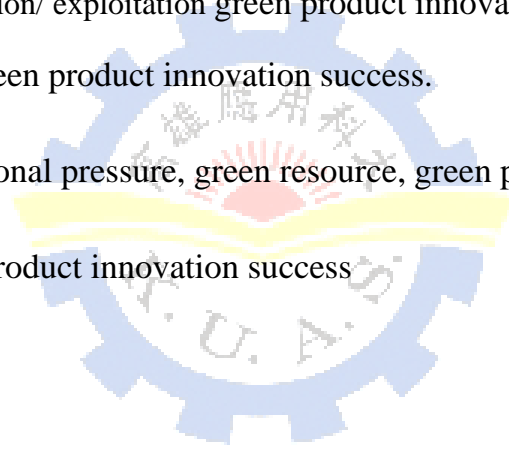
## Abstract

Reviewing prior studies on green innovation mainly focused on the strategic marketing. There is lack of comprehensive model to explore why and how do some firms adopt green product innovation that go beyond regulatory compliance. There is lack of comprehensive model to explore why and how do some firms adopt green product innovation. Therefore, this study applies multi-perspectives, i.e., institutional theory and resource-based view to build up the research frameworks and then to conduct empirical research.

This study adopts the method of questionnaire investigation for electrical and electronic industries in Taiwan. This study mails 958 questionnaires; the 189 valid questionnaires are turned. And using AMOS statistics software to

analysis the data, and there are main findings. The first, institutional pressure has a significant positive effect on the exploration/ exploitation green priduct innovation. The second, green resource has a significant positive effect on the exploration/ exploitation green product innovation. The third, green resource has a significant positive effect on the green product innovation success. The fourth, exploration/ exploitation green product innovation has a significant positive effect on the green product innovation success. The fifth, institutional pressure can through exploration/ exploitation green product innovation has a significant indirect effect on green product innovation success. The sixth, green resource can through exploration/ exploitation green product innovation has a significant indirect effect on green product innovation success.

Key words: institutional pressure, green resource, green product innovation, green product innovation success



# 第一章 緒論

## 第一節 研究背景

環保議題日漸受到重視，企業面臨以下環保的挑戰：1.促進永續發展概念的興起：近年來全球環保意識高漲，企業為使其資訊透明、提高公司社會環境保護責任形象，發佈永續發展報告書已蔚為潮流。2.另一種非關稅貿易障礙：因應全球暖化，未來可能會出現碳關稅，台灣出口主力電子電機相關產品，都有可能受到減碳貿易障礙的衝擊。3.限用有害物質：隨著全球環保法規對有害物質的禁用與廢棄回收規定的實施，未來綠色環保系列產品將對以代工生產的台灣系統廠商及各零組件產業造成衝擊。4.包裝材料的要求：應因全球及歐盟RoHS環保指令，已持續推動、輔導相關產業，從設計階段研發易拆解、可回收、低污染及低耗能之產品。5.回收處理的成本與責任：對台灣而言，由於身為電子產品的主要製造國，在促進無毒化生產以及延伸生產者責任制更扮演關鍵角色。而全球環境過去因大量製造與消費的商業行為而受到嚴重破壞，此時也可能因為商業行為之導正而讓環境開始復原，但若企業無法認知並正面應對，便有可能在未來面臨生存危機。

有關電機電子產業歐盟電機電子環保指令規範WEEE、RoHs、EuP已陸續實施，不僅在歐洲，美國、日本等國，這對於以外銷為導向的台灣產生重大影響，產業界應重視此項國際環保趨勢，建構完整綠色供應鍊。在「永續發展」觀念下，各國環保法規與國際間環保貿易有愈來愈嚴苛之趨勢。為因應國際環保潮流，台灣產業不能置身事外，產業型態須做必要調整，生態製程必須考慮降低對環境的負擔、資源有效利用，在此趨勢下，「永續發展」可以說已經成為21世紀各國為確保國際競爭力的重要課題。

企業為因應環境所帶來的挑戰，所以在企業裡對績效最重要的新產品開發過程，加入符合環保的綠色設計指標，成為「為環境而設計」的新產品開發，因此，綠色產品創新因應而生。

而回顧近年國內有關電機電子產業環保議題的研究，有些研究體制壓力、高階回應、綠色創新的採行與組織績效之關聯性(林易詳，2009)；有些研究以利害關相關人為前因之綠色創新的採行與組織環境績效的關係(黃義俊、高明瑞，2003)有些研究探討學習導向、綠色知識能力和綠色創新表現與競爭優勢之關聯性(盧柏宏，2008)；有些研究策略導向、綠色創造力為前置變數探討整合能耐與綠色新產品競爭優勢關聯性(李依蓉，2008)。

許多文獻已探討環保對產業的重要性，電機電子產業為維持競爭力必須因應新的環保法規所產生綠色新產品(盧柏宏，2008)。在台灣，有關環保產業方面的研究，大多集中在策略行銷方面(溫家秀，2008；廖宗銘，2006；楊曉義，2005)，極少探討企業為何與如何做一些採用綠色產品創新，因此，本研究將探討影響綠色產品成功及其影響因素，並以電機電子產業為例。

## 第二節 研究動機

Paladino (2007) 定義新產品成功為一個新產品或創新的能力，以避免在市場上失敗，一些研究已經利用的成功案例證明，環境問題與調整新產品開發可以改善市場績效(Baumann, Boons and Bragd, 2002)，因此產品開發在企業競爭新市場和現有市場是非常重要的(Calantone, Vickery and Droge, 1995)。Hart (1995) 提出產品開發過程中採用生命週期分析方法，採取積極主動的姿態走向環保，以盡量減少對環境的影響，因此，本研究參考Paladino (2007)將綠色產品創新成功定義為綠色新產品或創新在市場上競爭的能力，然而綠色產品創新成功的因素有賴於企業的綠色產品創新，因此企業在這方面應採取積極的態度。

Porter and van der Linde (1995)認為綠色創新是廠商可以利用創新的技術，來應對環境法規的嚴格和高標準，且先推動的廠商會遊說政府提高環保法規標準以維持優勢。創新的範疇分為應用與探索；Baum, Li and Usher (2000)定義應用是指透過一些搜尋來學習，依經驗去改良並選擇和重新使用現有的程序；探索是指透過程序來學習，程序包含協調、計畫實驗和實施。黃義俊(2011)定義探索型綠色產品創新為組織著重於引進激進式綠色創新，擴大現有產品的競爭力。應用型綠色產品創新定義為一個組織強調行銷，逐步修改現有的產品或綠色產品，充分利用現有的產品競爭力。Katila and Ahuja (2002)研究同時實施探索與應用，實證提出探索與應用之間的互動對產品開發產生了正向影響，Kammerer (2009)探討嚴格的法規及顧客利益對綠色產品創新的影響，結果指出，顧客利益對綠色產品創新有關鍵作用，因此，本研究認為企業綠色產品創新的能力與其探索和應用會影響綠色產品創新成功。



回顧近年來的綠色創新研究，有些研究從體制理論的觀點強調永續企業的體制力量，將促使企業採行環境管理(Delmas and Toffel, 2008; Clemens and Douglas,2006)；有些研究從資源基礎觀點強調企業的綠色核心競爭力、綠色創新能耐將能為企業帶來競爭優勢(Chen, 2008; Chen et al., 2006; Clemens and Douglas, 2006)；Huang et al. (2009)針對台灣電子電機產業研究利害相關者的壓力對採用綠色創新的影響，結果顯示，監管，內部因素和市場利害相關者與採用綠色創新有正相關；Kammerer (2009)的研究也顯示，客戶的利益、法規和綠色能力在綠色產品創新均發揮著重要作用。之前的研究多為單一探討體制理論對綠色創新或資源基礎觀對綠色創新的影響，較缺乏整合探討，另外，本研究也將進一步探討對綠色產品創新及綠色產品創新成功的影響，因此，本研究採用多觀點，即體制理論，資源基礎觀的角度建立研究架構，然後進一步進行實證研究在台灣的電器及電子產品（EEA）產業。

綜上所述，本研究動機之一為探討綠色產品創新是否影響綠色產品創新成功；動機二為探討體制理論與資源基礎觀點是否影響綠色產品創新與綠色產品創新成功之因素。

### 第三節 研究目的

在綠色行銷文獻指出，為了在商業上獲得成功，綠色產品需要能提供消費者個人利益和公共利益來改善環境，這些預期的客戶利益可以構成公司制定和實施綠色產品創新的動機，先前的研究多為探討綠色創新，甚少對綠色產品創新及綠色產品創新成功這方面進一步深入研究，因此，本研究將整合體制理論、資源基礎觀建立研究架構，探討對綠色產品創新及綠色產品創新成功的影響。

體制理論(Institutional Theory)是一個相當重要的組織理論，它認為組織除了處在一個由物質所組成的物理或有形環境以外，還有一個更重要的環境，就是由認知、觀念、文化、習俗、制度、社會價值觀等因素所構成的體制環境。學者認為，各種強制性因素可以推動企業走向自發性環保舉動(Clemens and Douglas, 2006; Hoffman, 1997; Majumdar and Marcus, 2001)。專業的組織應用規範性、市場領導者施加模仿壓力使企業改善環保績效(Wade-Benzoni et al., 2002)。Jennings and Zandbergen (1995) 是第一個應用體制理論來解釋公司的採用的環境管理做法。綠色體制理論提供了強制性、模仿和規範性對企業如何解決環保問題的影響力(Jennings and Zandbergen, 1995)。

資源基礎觀點理論的假設是指由於企業間具有不同的有形和無形資產，而這些資源可轉換成各自獨特的能力，因此企業的主要任務即是創造與把握資源使用的優勢情境(Wernerfelt, 1984)；Hart (1995)提出，未來企業受到自然環境的限制和依賴自然環境似乎是不可避免的，因此，策略和競爭優勢在未來幾年將深植於促進環境持續發展的經濟活動的能力。

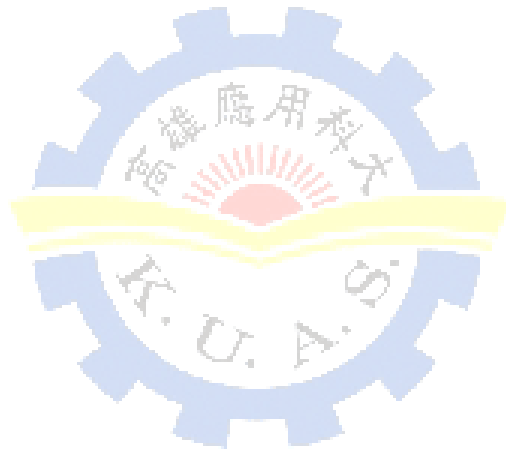
一些學者已經開始整合體制理論和組織的特性，探討組織在面臨不同體制壓力時的差異(Clemens and Douglas, 2006; Delmas and Toffel, 2008; Hoffman, 2001; Peng and Lin, 2008)，例如，Oliver (1997)整合制度和資源基礎觀點，著重在一個企業的可持續優勢是取決於在制度背景下資源決策的管理能力；Clemens and Douglas (2006)發現，強制力與VGIs (Voluntary Green Initiatives，自發性綠色舉動)正相關，這項研究發現，卓越的企業內部資源也與VGIs正相關。因此，本研究的主要研究目的如下：

- 1.探討體制壓力對綠色產品創新與綠色產品創新成功的影響
- 2.探討綠色資源對綠色產品創新與綠色產品創新成功的影響
- 3.探討綠色產品創新對綠色產品創新成功的影響



## 第四節 研究流程

本研究所進行的步驟是先確定研究主題與方向，再進行相關文獻蒐集與探討，進而從文獻探討中發展出理論架構與研究假說，確認研究對象後進行問卷發放與調查，最後進行回收問卷之分析工作，從分析資料中得到結論。



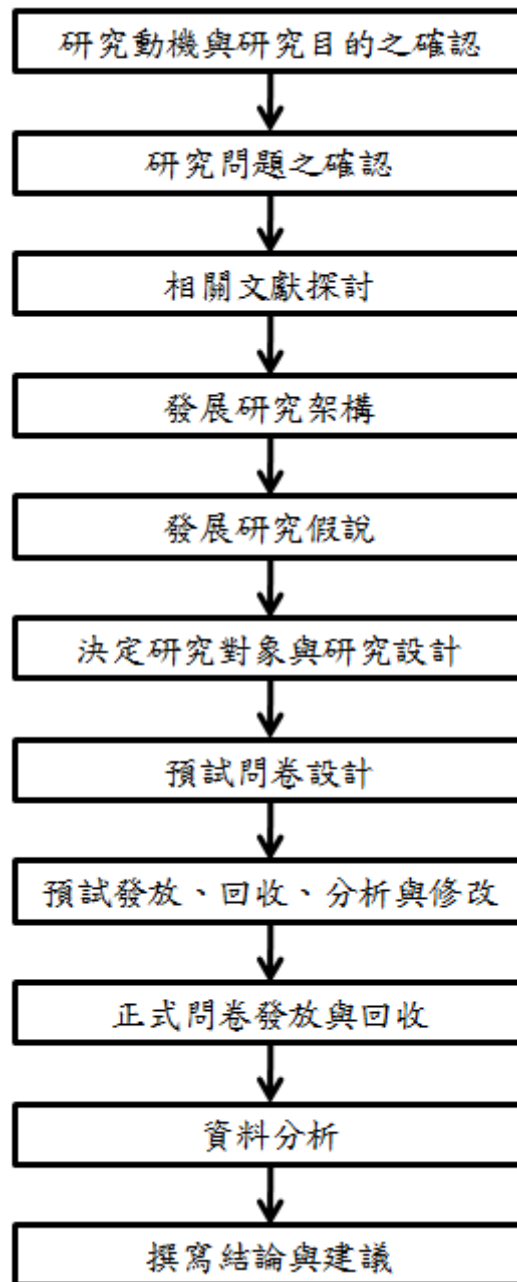


圖 1-1 研究流程

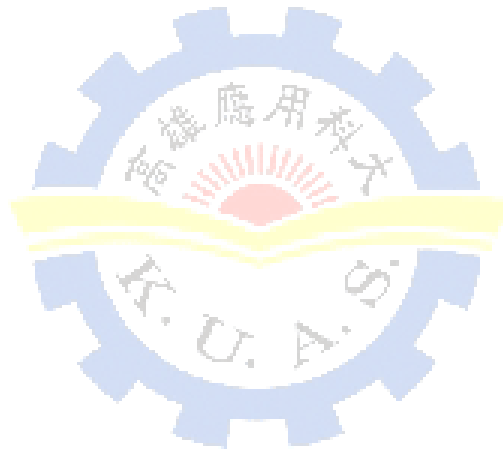
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