



國立高雄應用科技大學
企業管理系碩士班
碩士論文

利害關係人壓力、企業綠色資源、綠色供應鏈管理與組織
績效之關聯研究：以台灣電機電子產業為例

The relationship among stakeholder pressure, green resource,
green supply chain management, and organizational
performance: An empirical study on electrical and electronic
industries in Taiwan.

研究生：勞家緯

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利害關係人壓力、資源基礎觀點、綠色供應鏈管理與組織績效之關聯研究：以台灣電機電子產業為例

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摘要

現今環境議題廣受國際的關注，驅使越來越多企業採行綠色供應鏈管理，同時，綠色供應鏈管理的相關研究也逐漸增加；而回顧以往綠色供應鏈管理的研究中，國內文獻大多都僅從體制面的角度切入，較少文獻用廣泛的利害關係人角度做探討，本研究欲回答不同利害關係人之壓力對公司採納綠色供應鏈管理與組織績效之影響，同時，也以資源基礎觀點來衡量企業內部能力與資源對綠色供應鏈管理之影響。

本研究以台灣電機電子產業為研究對象，根據台灣地區電機電子工業同業協會的會員廠商，以問卷調查法發放 1000 份問卷，回收 194 份有效問卷，其中，考量到綠色供應鏈管理所需要的成本，因此排除資本額 1000 萬以下之公司，並利用 SPSS 21.0 與 AMOS 18.0 對樣本群體做一分析，結果發現，法規型與市場型利害關係人與綠色供應鏈管理皆呈正向影響，內部與市場型利害關係人會透過企業綠色資源來影響綠色供應鏈管理，企業綠色資源會正向影響綠色供應鏈管理，而綠色供應鏈管理會影響環境與經濟績效，同時環境績效也會正向影響經濟績效。

關鍵字：利害關係人、綠色供應鏈管理、資源基礎觀點、組織績效

The relationship among stakeholder pressure, green resource, green supply chain management, and organizational performance: An empirical study on electrical and electronic industries in Taiwan.

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Abstract

The environment issue has been concerned by many international enterprises in these years. A lot of companies adopted green supply chain management (GSCM). In addition, the relative literatures of GSCM are increased, too. Most of the researches discussed about the institutional theory rather than the stakeholder theory. In this study, we'd like to reply the relationship among stakeholder pressure, GSCM and performance. Meanwhile, we used RBV to measure the resource in company and saw if they affected GSCM.

Our sample was electrical and electronic industries in Taiwan. We used quantitative method and released 1,000 questionnaires, the 194 valid were turned. Also, we got rid of the respondents that the capital is low than NT\$ 10,000,000. This study used the AMOS and SPSS software and got the follow finding. The regulatory stakeholder and market stakeholder have the significant positive effect on GSCM. The green resource has a significant positive effect on the GSCM. The green resource has a partial mediation effect on the relationship between the GSCM and stakeholder pressure. GSCM has a significant positive effect on the environment performance and economic performance. The environment

performance has a significant positive effect on the economic performance.

Keyword: Stakeholder, green supply chain management, resource based view, organizational performance.



第一章 緒論

本研究主要在探討台灣電機電子產業，在利害關係人之壓力、資源基礎觀點、綠色供應鏈管理與組織績效之關聯性研究。本章共分為四節，第一節說明本研究之相關背景，第二節說明研究動機，第三節說明本研究之目的，而第四節則說明本研究架構以及流程。

第一節 研究背景

隨著科技的日益發展，科技就是人性這句話更映證在環境上，人們在滿足自身無窮欲望的同時，所付出的代價很有可能就是環境的汙染、氣候的非自然變化、人體的危害等。因此，在國際上已經有越來越多的環境法規產生，例如蒙特利爾協議、巴塞爾公約、京都議定書，及歐盟三大環保指令(WEEE、RoHS、EuP)等，在環境議題備受國際關注外加資源短缺的情況下，許多公司面臨著各方的環境壓力，包括了政府、非政府與企業內外部利害關係人等，在利益、環境及利害關係人需求的考量上，企業未來的策略要如何規劃及發展是許多企業面臨的問題之一。一些公司逐漸意識到環境管理是對組織中績效影響相當大的一項策略(Diabat & Govindan, 2011; Huang, Ding & Kao, 2009; Huang & Wu, 2010)，將對環境影響的最小化視為是企業本身的責任(Hart, 1995; Christmann, 2000)，比如國外的 Sony、Dell、IBM、HP 皆已採用綠色標準在其製程上(Huang, Ding & Kao, 2009; Lee, 2009)；而台灣因為電子產品外銷量極為驚人，國際性公約對台灣的影響也很大，其中 ASUS 更成為第一個獲得了環境產品聲明(EPD)和碳足跡認證的筆記型電腦製造商；各國致力於透過相關法規的制定，來減少電子廢棄物的產生，並將環境的傷害降至最低。

當組織在規劃如何回應環境挑戰時，綠色供應鏈管理扮演著相當重要的角色(Azevedo, Carvalho & Machado, 2011; Kumar, Teichman & Timpernagel, 2012; Rao & Holt, 2005; Walker, DiSisto & McBain, 2008; Zhu, Geng, Sarkis & Lai,

2011)，綠色供應鏈管理為整合環境因素到組織內外部生產的管理，此管理方式已經在環境管理上被公認。而綠色供應鏈管理主要透過減少廢氣、廢水、有毒廢棄物的排放及相關能源的消耗來達到環境績效，進而使企業市佔率與利益等經濟績效提升(Zhu & Sarkis, 2004; Green, Zelbst, Meacham & Bhadauria, 2012)。

近年來，因應環境保護的風潮，現在不只政府對環保有一定的要求及規定，企業內部的股東及外部的消費者等對環境保護之共鳴也相當大，造成綠色產品的需求增加，對於綠色的生產更是由政府、環保團體及消費者等一起來監視，同時，公司面對外部及內部利害關係人的壓力及挑戰，企業經理人更是要能從產品設計、採購、生產過程到產品終期都加入環保的概念並發展出新的策略來回應環境議題，並維持一定的競爭優勢，因此，本研究即是探討此被公認的環境管理方式－綠色供應鏈管理之議題。



第二節 研究動機

台灣經濟快速發展，許多企業在獲取最大利益的過程中，往往傷害了人體健康及環境生態，近期所發生的多起食安問題即是案例之一，其可能造成的原因為整條供應鏈完全沒有受到謹慎的審查，更沒有將環境的概念加入供應鏈當中，導致許多下游零售業及最無辜的消費者都遭受到波及，當然，不只是食品業，日月光半導體也在先前爆出排廢水事件，破壞環境生態，種種有關環境之議題及負面新聞，在國內累積的數量已經相當多；而在台灣電機電子製造產業，也因為該產業的環境的因素，例如技術替代率太高，導致產品汰換速度及生命週期都很短，所產生的電子廢棄物對環境生態及人體都造成一定程度的威脅，因此，在每個企業中落實環境管理是非常重要的。

由於環境議題逐漸受到重視，而在環境管理中，綠色供應鏈為現今產業最為重視的議題，其環保的永續性甚至已成為近年來政府與產業號召的重點之一 (Zhu, Sarkis & Lai, 2008)。企業受到外部及內部利害關係人之壓力是否會影響其內部資源與綠色供應鏈實踐產生影響，是本研究的重點。

Freeman(1984)定義利害關係人為能影響組織或被組織影響而達成目標之群體或個人。許多的環境管理相關文獻從多理論化或者是利用一般的解釋性理論觀點來探討利害關係人理論之具體現象(Sarkis, Gonzalez-Torre & Adenso-Diaz, 2010; Tate, Ellram & Kirchoff, 2010)；然而，利害關係人理論在綠色供應鏈管理上的進展卻還尚未足夠成熟，相關文獻也尚未充足，因此在綠色供應鏈管理上，利害關係人之壓力與公司內部資源之運用仍然具有研究之價值。

綜合上述，本研究整合了利害關係人與綠色供應鏈管理之議題，並用企業綠色資源來解釋利害關係人之壓力與綠色供應鏈管理的關聯，並探討執行綠色供應鏈管理之後對於組織績效的相關性。

第三節 研究目的

本研究以利害關係人理論為基礎探討綠色供應鏈管理與績效之影響，有學者認為，並非所有綠色供應鏈管理實務都產生利害關係者所需要的結果與優勢(Sarkis et al., 2010)，因此，本研究注重企業在實行綠色供應鏈管理之前回應利害關係人之需求以及實行綠色供應鏈管理之後利害關係人的需求是否被滿足，換句話說，本研究視利害關係人為企業綠色供應鏈管理的「驅動因素」，探討利害關係人之壓力與企業內部資源運用及綠色供應鏈管理之間的關聯性，最後再探討與組織績效之間的關聯。

本研究討論到資源基礎觀點，檢視利害關係人之壓力對企業內部資源的運用之影響，Wernerfelt(1984)認為，企業內部資源可轉換成獨特的能力，因此企業的任務即是創造與把握資源的運用，維持競爭優勢；企業如何有效創造發展或運用自身的綠色資源與能力，而此資源或能力的發展或運用與利害關係人這項驅動因素之影響性，以及與綠色供應鏈實務的採納之關聯皆是本研究探討之重點。

綠色供應鏈管理除了是公認的環境改善之管理方式，也是一個創新的概念，能達成經營利益與市場等目標，並能降低環境之衝擊(Zhu, Sarkis & Lai, 2007)；此外，Rao(2002)認為，綠色供應鏈管理可以改善環境績效與競爭力，進而影響經濟績效，Green et al.(2012)也認為綠色供應鏈管理的實踐可以改善環境績效與經濟績效，進而提升組織整體績效的表現。

由於國內針對電機電子產業研究綠色供應鏈管理的文獻仍相當缺乏，加上利害關係人之壓力尚有研究之缺口，因此綜合以上，提出以下五點為本研究之目的：

- 一、 探討利害關係人之壓力對綠色供應鏈管理之影響
- 二、 探討利害關係人之壓力對企業綠色資源發展與應用之影響
- 三、 探討企業綠色資源發展與應用對綠色供應鏈管理採納之影響

四、 探討利害關係人之壓力是否會透過企業綠色資源的發展及應用影響綠色供應鏈管理

五、 探討綠色供應鏈管理對組織績效之影響



第四節 研究流程

本研究所採取的研究流程，首先為確認研究動機，並訂定研究主題與目的，再來為蒐集以往文獻與相關資料，在一個個構面的文獻資料建立起研究之架構、決定研究方法及研究價說的推論，而問卷的設計則是參考以往文獻資料來進行。本研究針對台灣電機電子產業進行問卷調查，回收問卷後並加以分析，驗證假說。最後針對分析出的數據加以提出結論與相關之建議。其整理如圖 1-1。

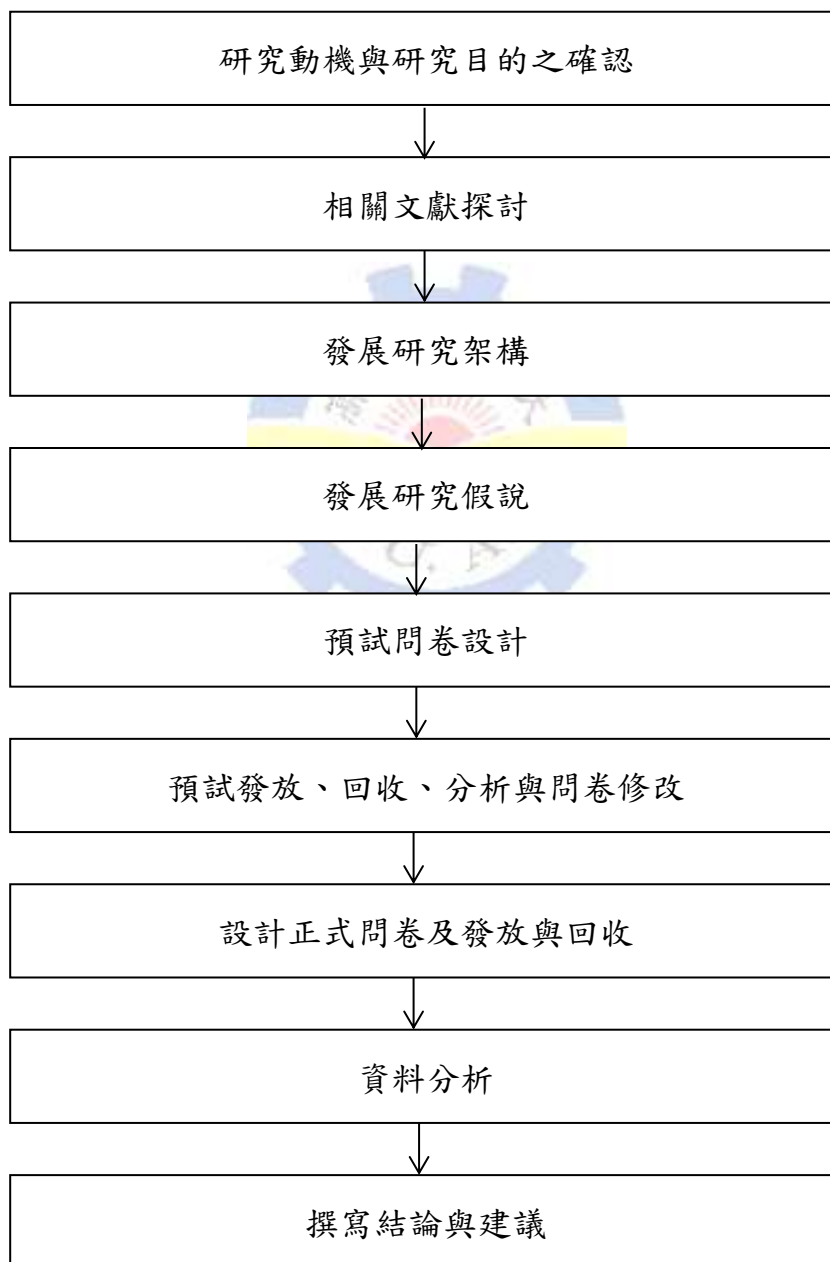


圖 1-1 研究流程

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三、網路文獻

1. 台灣電機電子同業公會
<http://www.teema.org.tw/about-teema.aspx?unitid=95>
2. 經濟部工業局
<http://www.moeaidb.gov.tw/>
3. 產業永續發展聯合資訊網
<https://proj.ftis.org.tw/isdn/>

附錄

親愛的業界先進您好：

本研究試圖以台灣電機電子產業為對象，進行台灣企業的利害關係人之壓力、企業綠色資源、綠色供應鏈管理與組織績效之學術的研究，非常冒昧的請求您的協助，期望能歸納出珍貴的意見與經驗，以提供給實務界與學術界作參考。

本問卷為雙面列印，採取不記名填答，所得資料僅用於學術之用，個別資料絕對不對外公開，請您放心填答，希望務必由企業主管或了解企業經營全貌者作答。您的支持與協助將是本研究成功與否的關鍵，期待您在十天內回函，在此先向您致上萬分感謝！

敬頌

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【第一部分】利害關係人之壓力 請依據 貴公司的實際狀況，勾選下列陳述中最為接近的語句。	非常 同意	同 意	有 點 同 意	普 通	不 太 同 意	不 同 意	非 常 不 同 意
1. 立法者對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
2. 執法者(政府機構)對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
3. 最高主管對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
4. 中階主管對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
5. 員工對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
6. 股東對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
7. 綠色消費者對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
8. 國內購買者對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
9. 國外購買者對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
10. 供應商對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
11. 潛在的競爭者對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1
12. 媒體對 貴公司的綠色供應鏈管理具影響力	7	6	5	4	3	2	1

【第二部分】企業綠色供應鏈管理	非常 同意	同 意	有 點 同 意	普 通	不 太 同 意	不 同 意	非 常 不 同 意
請依據 貴公司的實際狀況，勾選下列陳述中最為接近的語句。							
1. 貴公司高階主管對綠色供應鏈管理做出承諾	7	6	5	4	3	2	1
2. 貴公司中階主管支持綠色供應鏈管理	7	6	5	4	3	2	1
3. 貴公司為改善環保，推動跨部門合作	7	6	5	4	3	2	1
4. 貴公司推動全面品質管理	7	6	5	4	3	2	1
5. 貴公司推動環境管理系統	7	6	5	4	3	2	1
6. 貴公司對供應的產品貼上生態標籤	7	6	5	4	3	2	1
7. 貴公司為環保的目的與供應商合作	7	6	5	4	3	2	1
8. 貴公司對供應商的內部管理做環境稽核	7	6	5	4	3	2	1
9. 貴公司要求供應商推動 ISO 14001 認證	7	6	5	4	3	2	1
10. 貴公司會對次一級供應商進行環保實務的評估	7	6	5	4	3	2	1
11. 貴公司提供設計規範給供應商，包括採購物料的環保要求	7	6	5	4	3	2	1
12. 貴公司與客戶合作推動環保而設計	7	6	5	4	3	2	1
13. 貴公司與客戶合作推動清潔生產	7	6	5	4	3	2	1
14. 貴公司與客戶合作推動綠色包裝	7	6	5	4	3	2	1
15. 貴公司與客戶合作在產品運輸時使用較少的能源	7	6	5	4	3	2	1
16. 貴公司產品的設計可降低材料/能源消耗	7	6	5	4	3	2	1
17. 貴公司產品的設計重複使用材料或零件	7	6	5	4	3	2	1
18. 貴公司產品的設計可減少有毒的材質使用	7	6	5	4	3	2	1
19. 貴公司投資回收以回收多餘的物料	7	6	5	4	3	2	1
20. 貴公司出售下腳料和使用過的物料	7	6	5	4	3	2	1
21. 貴公司出售多餘的資本設備	7	6	5	4	3	2	1
22. 貴公司運用綠色資訊系統，減少運輸成本	7	6	5	4	3	2	1
23. 貴公司運用綠色資訊系統，支持團隊合作及分布全球各地員工的視訊會議以縮減航空旅行	7	6	5	4	3	2	1
24. 貴公司運用綠色資訊系統，追蹤環保資訊 (如:具毒性物質、能源使用量、用水量、空氣汙染量等)	7	6	5	4	3	2	1
25. 貴公司運用綠色資訊系統，監控煙塵及廢棄物的產出	7	6	5	4	3	2	1
26. 貴公司運用綠色資訊系統，提供資訊鼓勵客戶選擇綠色生產	7	6	5	4	3	2	1
27. 貴公司運用綠色資訊系統，改善執行長對重要永續議題的決策	7	6	5	4	3	2	1
28. 貴公司運用綠色資訊系統，減少能源消耗	7	6	5	4	3	2	1
29. 貴公司運用綠色資訊系統，支持可再生能源的產出與配送	7	6	5	4	3	2	1
30. 貴公司運用綠色資訊系統，限制碳化物及其他物質的排放	7	6	5	4	3	2	1
31. 貴公司運用綠色資訊系統，確認資訊系統在能源政策角色	7	6	5	4	3	2	1

<p>【第三部分】企業綠色資源</p> <p>請依據 貴公司的實際狀況，勾選下列陳述中最為接近的語句。</p>	非常 同意	同 意	有 點 同 意	普 通	不 太 同 意	不 同 意	非 常 不 同 意
1. 貴公司寫出有用的手冊來說明公司綠色供應鏈管理的執行	7	6	5	4	3	2	1
2. 貴公司執行綠色供應鏈管理的過程，大部份都有具體且經公司修正後的標準形式的書面文件	7	6	5	4	3	2	1
3. 貴公司執行綠色供應鏈管理的過程，大部份都有撰寫具體的書面文件	7	6	5	4	3	2	1
4. 貴公司有廣泛的文件來說明執行綠色供應鏈管理的重要項目	7	6	5	4	3	2	1
5. 貴公司人員可以容易地與技術人員交談，學習如何執行有關綠色供應鏈管理	7	6	5	4	3	2	1
6. 貴公司人員可以容易地透過書面文件，學會如何執行有關綠色供應鏈管理	7	6	5	4	3	2	1
7. 教育和訓練公司的人員有關綠色供應鏈管理是容易的工作	7	6	5	4	3	2	1
8. 貴公司新進人員在經過學校訓練後，有足夠的知識執行公司的綠色供應鏈管理	7	6	5	4	3	2	1
9. 貴公司人員在經過在職訓練後，有足夠的知識執行公司的綠色供應鏈管理	7	6	5	4	3	2	1
10. 在同業中，貴公司實施綠色供應鏈管理是先進的	7	6	5	4	3	2	1
11. 在顧客或供應商眼中，貴公司實施綠色供應鏈管理是先進的	7	6	5	4	3	2	1
12. 在同業中，很少有其他公司與貴公司一樣實施綠色供應鏈管理	7	6	5	4	3	2	1
13. 在同業中，貴公司實施綠色供應鏈管理被視為有價值的	7	6	5	4	3	2	1
14. 在顧客或供應商眼中，貴公司實施綠色供應鏈管理被視為有價值的	7	6	5	4	3	2	1
15. 貴公司實施綠色供應鏈管理，可以改善貴公司的效率和效能	7	6	5	4	3	2	1
16. 貴公司實施的綠色供應鏈管理，不容易地找到其他替代方案	7	6	5	4	3	2	1
17. 在顧客或供應商中相信，貴公司實施的綠色供應鏈管理，不容易找到其他替代方案	7	6	5	4	3	2	1

【第四部分】企業組織績效	非常同意	同意	有點同意	普通	不太同意	不同意	非常不同意
請依據 貴公司的實際狀況，勾選下列陳述中最為接近的語句。 貴公司在執行綠色供應鏈管理後，							
1. 提升節約能源的績效	7	6	5	4	3	2	1
2. 提升原物料使用的績效	7	6	5	4	3	2	1
3. 改善水污染防治的績效	7	6	5	4	3	2	1
4. 改善廢棄物管理的績效	7	6	5	4	3	2	1
5. 改善毒化物管理的績效	7	6	5	4	3	2	1
6. 改善空氣污染防治的績效	7	6	5	4	3	2	1
7. 增加產品準時交運量	7	6	5	4	3	2	1
8. 改善產能利用率	7	6	5	4	3	2	1
9. 提升產品的品質	7	6	5	4	3	2	1
10. 提升銷售成長率	7	6	5	4	3	2	1
11. 提升市場占有率	7	6	5	4	3	2	1
12. 提升銷售獲利率	7	6	5	4	3	2	1
13. 提升公司的利潤	7	6	5	4	3	2	1

【第五部分】基本資料
請依序填答下列問題，並在題目後的 <input type="checkbox"/> 打「V」的記號，謝謝！
1. 性別 <input type="checkbox"/> 男性 <input type="checkbox"/> 女性
2. 年齡 <input type="checkbox"/> 40 歲以下 <input type="checkbox"/> 41歲~50歲 <input type="checkbox"/> 51 歲以上
3. 教育程度 <input type="checkbox"/> 高中/職、專科 <input type="checkbox"/> 大學 <input type="checkbox"/> 研究所以上
4. 職業年資 <input type="checkbox"/> 10年以下 <input type="checkbox"/> 11~20年 <input type="checkbox"/> 21年以上
5. 企業的股東成員中，同一個家族的權力至少占公司權益的10%，且至少占有一席董事職位 <input type="checkbox"/> 是 <input type="checkbox"/> 否
6. 企業的股東成員中，同一個家族的權力或其他企業的法定代表占有公司權益的50%以上 <input type="checkbox"/> 是 <input type="checkbox"/> 否
7. 貴公司目前由第幾代經營： <input type="checkbox"/> 第一代 <input type="checkbox"/> 第二代 <input type="checkbox"/> 第三代 <input type="checkbox"/> 專業經理人
8. 貴公司目前的員工人數約為： <input type="checkbox"/> 200 人以下 <input type="checkbox"/> 201~1000 人 <input type="checkbox"/> 1001~3000 人 <input type="checkbox"/> 3001 人以上

本問卷到此結束，感謝您撥冗填寫此份問卷。請您檢視本分問卷有無漏答之處！