

工作者流動性與創新績效之研究

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摘要

本研究文題是美國的半導體企業的創新工作者，是否會在不同流動方式，對往後的產出的專利品質上所造成的影響，對於創新工作者的經歷、背景對其創新績效之間關係加以研究。本研究是使用蒐集專利資料進行研究，選擇美國上市半導體企業內的專利主發明人為本研究之研究對象，探討專利主發明人在不同層級的流動性對於專利質與量所造成之影響。本研究結果發現，創新工作者在公司間的流動對專利數呈現正相關且有顯著影響。區域移動對專利品質呈現負相關且有顯著的影響；在公司間的移動對於專利的品質呈現負相關且顯著影響；區域移動而對專利產出之品質呈現正相關卻不顯著的影響。

關鍵詞：創新績效、專利、流動性

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參考文獻

- 一、中文文獻 Drucker, P. F. (1997), 有效的管理者(許是祥譯), 台北:中華企管出版, (原文於1966年出版)。 Elias, M. A., & Hassan M. G. (2006), 知識管理(謝德鑫, 陳宏志, 邱柄儒, 李若愚, 朱文禎, 黃文聰, 劉建人譯), 台中市:滄海書局, (原文於2003年出版)。 Peter, M. S. (1994), 第五項修練(郭進隆譯), 台北:天下遠見, (原文於1990年出版)。 王騰坤(2005), 國際貿易原理與政策, 台北:三民書局。 王鴻柏(2001), 網絡關係、企業文化、激勵策略與產品創新績效關係之研究, 國立中正大學企業管理研究所出版之碩士論文。 周延鵬(2006), 虎與壺的智慧力:智慧資源規劃9把金鑰, 台北:天下文化。 林偉銓(2007), 產業群聚內知識流通與競爭優勢影響之研究 以台灣北部地區紡織業為例, 國立東華大學企業管理研究所出版之碩士論文。 吳思華(1998), 知識流動對產業創新的影響, 收錄於國立政治大學科技管理研究所研討會編, 產業科技研討會論文集(pp. 2-42), 台北市:國立政治大學科技管理研究所。 郭誌光(2002), 個人創造力、組織創新氣候、及組織創新績效之關係 - 台北市廣告公司的實證研究, 國立中正大學勞工研究所出版之碩士論文。 卓裕盛(2009), 以美國專

利侵權訴訟判決為基礎建構倒傳遞類神經網路專利鑑價模式之研究，私立中華大學科技管理研究所未出版之碩士論文。鉅亨網(2010)，半導體企業清單[線上資料]，來源：<http://www.cnyes.com/> [2010, February 4]。二、英文文獻 Adler, P. S., & Kwon, S. W. (2002). Social capital: Prosects for a new concept. *Academy of Management Review*, 27(1), 17-40. Agrawal, A., Cockburn, I., & McHale, J. (2006). Gone but not forgot-ten: Labor flows, knowledge spillovers, and enduring social capital. *Journal of Economic Geography*, 6(5), 571-591. Almeida, P. (1999). The exploration of technological diversity and the geographic localization of innovation. *Small Buss Econom.* 9(1), 21-31. Amabile, T. M. (1988). Organizational Behaviorists. In Greenwich (Eds.), *A model of creativity and innovation in organizations* (pp. 123-167). Connecticut: JAI Press. Amabile, T. M. (1997). Motivating creativity in organizations: On do-ing what you love and loving what you do. *California Man-agement Review*, 40(1), 39-58. Argote, L. (1999). *Organizational learning: Creating, retainingtrans-ferring knowledge*. Boston: Kluwer Academic Publishers. Audia, P. G., & Goncalo, J. A. (2007). Past success and creativity over time: A study of inventors in the hard disk drive industry. *Man-agement Science*, 53(1), 1-15. Aydogan, N. (2003). Individual Social Capital and Access to Venture Capital: Case of Indian IT Regions, Department of Organization and Strategy, University of Maastricht, mimeo. Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. New York: Prentice-Hall. Benzie, H. (1990). *Managing an ILC in course materials for masters in TESOL*. Australia: University of South Australia. Boeker, W. (1997). Executive migration and strategic change: The ef-fect of top manager movement on product entry. *Admin Sci. Quatr*, 42(2), 213-236. Brian, P. H. (2001). Value development and learning organizations. *Journal of Knowledge Management*, 5(1), 19-32. Broschak, J. (2004). Managers mobility and market interface: The ef-fect of managers career mobility on the dissolution of market ties. *Administrative Science Quarterly*, 49(4), 608-640. Coleman, J. (1990). *Foundations of social theory*. Massachusetts: Harvard University Press. Cortada, J. W. (1998). *Rise of the knowledge worker*. Boston: Butter-worth-Heinemann. Cummings, J. (2004). Work groups, structural diversity. And knowl-edge sharing in global organization. *Management Science* 50(3), 352-364. Davenport, T., & Prusak. L. (1998). *Working knowledge: How or-ganizations manage what they know*, Massachusetts: Harvard Business School Press. Drucker, P. F. (1965). *The effective executive*. New York: Harper-Collins Publishers Inc. Drucker, P. F. (1985). *Innovation and entrepreneurship: Practive and Principles*. London: Heinemann. Dove, R. (1998). The knowledge eorker. *Automtive Manufacturing and production*, 110(6), 26-28. Fleming, L., Chen, D., & Mingo, S. (2007). Collaborative brokerage, generative creativity, and creative creativity, and creative suc-cess. *Administration Science Quarterly*, 52(3), 443-475. Frese, M., Teng, E., & Wijnen, C. J. (1999). Helping to improve sug-gestion systems: Predictors of making suggestions in compa-nies. *Journal of Organizational Behavior*, 20(7), 1139-1155. George, J. M., & Zhou, J. (2001). When openness to experience and conscientiousness are related to creative behavior: An interna-tional approach. *Journal of Applied Psychology*, 86(3), 513-524. Greenberg, E. (1992). Creativity, autonomy, and evaluation of creative work: Artistic workers in organizations. *Journal of Creative Behavior*, 26(1), 75-80. Hagedoorn, J., & Cloudt, M. (2003). Measuring innovative perform-ance: Is there an advantage in using multiple indicators ? *Res. Ploicy*, 32, 1365-1379 Hall, B. H., Jaffe, A., & Trajtenberg, M. (2005). Market value and pa-tent citations. *The Rand Journal of Economics*, 36(1), 16-38. Hall, B. H., & Ziedonis, R. H. (2001). The patent paradox revisited: An empirical study of patenting in the U.S. Semiconductor In-dustry. *Journal of Economics*, 32(1), 101-128. Hansen, M. T., & Lovas, B. (2004). How do multinational companies leverage technological compensation? Moving from single to interdependent explanations. *Strategic Management Journal*, 25(8), 801-822. Hansen, M. T. (1999). The search-transfer problem: the role of weak ties in sharing knowledge across organization subunits. *Admin-istrative Science Quarterly*, 44(1), 82-111. Hendriks, P. (1999). Why share knowledge? The influence of ICT on motivation for knowledge sharing. *Knowledge and Process Management*, 6(2), 91-100. Horibe, F. (1999). *Managing knowledge workers*. Canada: John Wiley & Sons. Kanter, R. M. (1988). Organizational Behavior. In B. M. Staw & L. L. Cummings (Eds.), *When a thousand flowers bloom: Structural, collective, and social conditions for innovation organization*. (pp. 169-211). Connecticut: JAI Press. Katila, R., & Ahuja, G. (2002). Something old, something new: a lon-gitudinal study of search behavior and new product introduc-tions. *Academy of Management Journal*, 45(6), 1183-1194. Katila, R. (2002). New product search over time: Past ideas in their Prime? *Academy of Management Journal*, 45(5), 995-1010. Kogut, B., & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, 3(3), 383-397. London, M., & Smither, J. W. (1999). Empowered self-development and continues learning. *Human Resource Management*, 38(1), 3-15. Malecki, E. J. (1991). *Technology and economic development*. New York: John Wiley and Sons. Maureen, L. A., & Carol, T. K. (1999). Old Friends, New Faces: Mo-tivation Research in the 1990s. *Journal of Management*, 25(3), 231-292. Miller, D. (1990). Stales in the saddle: CEO tenure and the match be-tween organization and environment. *Management Science*, 37(3), 34-52. Moser, M. R. (1985). Measuring performance in R&D settubgs. *Re-search Management*, 28(5), 31-33. Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company: How Japanese companies create the dynamics of innovation*. New York: Oxford University Press. Oldham, G. R., & Cummings, A. (1996). Employee creativity: Per-sonal and contextual factors at work. *Academy of Management Journal*, 39(3), 607-634. Putnam, R. D. (1995). Bowling alone: America's declining social cap-ital, *Journal of Democracy*, 6(1), 65-78. Reagans, R., & Zuckerman, E. W. (2001). Networks, diversity, and productivity: The social structure of corporate R&D teams. *Or-ganization science*, 12(4), 502-517. Rodan, S., & Galunic, C. (2004). More than network strcture: how knowledge heterogeneity influences managerial performance and innovativeness. *Strategic Management Journal*, 25(1), 541-562. Rogers, E. M., & Larsen, J. K. (1984). *Silicon valley fever*. New York: Basic Books. Rosenkopf, L., & Almeida, P. (2003). Overcoming local search through alliances and mobility. *Management Science*, 49(6), 751-766. Sang, J. P., & Almeida, P. W. (2003). Learning by hiring: When is mo-bility more likely to facilitate interfirm knowledge transfer? *Management Science*, 49(4), 351-365. Saxenian, A. (1990). Regional networks and the resurgence of Silicon Valley. *California Management Rev*, 33(1), 89-112. Scarbrough, H. (1999). Knowledge as work: Conflicts in the man-agement of knowledge workers. *Technology Analysis & Strate-gic Management*, 11(1), 5-16. Schumpeter, J. A. (1934). *The theory of economic development*. Cam-bridge: Harvard University

Press. Shalley, C. E. (1995). Effects of coaction, expected evaluation, and goal setting on creativity and productivity. *Academy of Management Journal*, 38(3), 483-503. Shalley, C. E., Zhou, J., & Oldham, G. R. (2004). The effects of personal and contextual characteristics on creativity: Where should we go from here? *Journal of Management*, 30(6), 933-958. Simonton, D. K. (1977). Creative productivity, age and stress: A bio-graphical time-series analysis of 10 classical composers. *Journal of Personality and Social Psychology*, 35(3), 805-816. Singh, J. (2005). Collaborative networks as determinants of knowledge diffusion patterns. *Management Science*, 51(5), 756-770. Sorenson, O., Rivkin, J. W., & Fleming, L. (2006). Complexity, networks and knowledge flow. *Research Policy*, 25(4), 994-1017. Subramaniam, M., & Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management Journal*, 48(3), 450-463. Subramanyam, K. (1983). Bibliometric studies of research collaboration: a review. *Journal of Information Science*, 6(1), 33-38. Subramanyam, K., & Strphens, E. M. (1982). Research collaboration and funding in biochemistry and chemical engineering. *International Forum on Information and Documentation*, 7(4), 26-29. Teece, D. J. (1986). Transaction cost economics and multinational enterprise. *Journal of Economic Behavior and Organization*, 7(2), 21-45. Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Potential antecedents and relationship to creative performance. *Academy of Management Journal*, 45(6), 1137-1148. Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of traits and relationships. *Personnel Psychology*, 52(3), 591-620. Trajtenberg, M. (1990). A penny for your quotes: Patent citations and the value of innovations. *Rand Journal of Economics*, 21(1), 172-187. Williamson, O. E. (1985). *The economic institutions of capitalism*. New York: The Free Press. Woodman, R. W., & Schoenfeldt, L. F. (1990). An interactionist model of creative behavior. *The Journal of Creative Behavior*, 24(3), 279-290. Zack, M. H. (1999). Developing a knowledge strategy. *California Management Review*, 41(3), 125-145. Zhou, J. (1998). Feedback valence, feedback style, task autonomy, and achievement orientation: Interactive effects on creative performance. *Journal of Applied Psychology*, 83(2), 261-276. Zidle, M. (1998). Retention hooks for keeping knowledge workers. *Management Science*, 50(1), 21-22.