

以新興國家和已開發國家觀點探討科技創新對組織績效的影響：組織國際化程度為干擾因素

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摘要

本研究對象為，以美國(Compustat)和台灣(TEJ)電子相關產業分別取444與314家公司作為研究樣本。以結合橫斷面與時間序列所構成的Panel Data進行研究分析。研究顯示，科技創新對組織績效呈顯著負向關係；國際化程度對組織績效則呈不顯著關係；此外組織國際化干擾程度越強，科技創新與組織績效的關係越弱。由此結果發現，科技創新對於公司而言並非一本萬利，其必須付出相當多代價，而這些風險更可能左右公司在營運績效上的收入；相對的，在國際化策略上，不同國家皆面臨不同的經濟、文化環境與政府的法規政策，企業必須審慎評估所屬地區各種潛在影響因素的成熟度，來決定是否進行此一策略。最後，雖然此二策略已長時間被企業用來增加各種營運表現，但結果顯示此二策略在採行的過程中，會因為彼此間的消漲效果而影響其對公司績效的表現。因此本研究建議，組織宜妥善分析其優劣勢及所擁有的資源，以此作為選擇科技創新或是國際化策略的基石，才能讓策略有加乘效果，使公司的營運績效正面成長。

關鍵詞：科技創新、組織國際化、組織績效

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參考文獻

- Afuah, A. (1998). *Innovation management: Strategies, implementation, and profits*. New York: Oxford University Press.
- Andrews, K. (1987). *The concept of corporate strategy* (3rd ed.). Homewood, Illinois: Irwin.
- Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 791-800.
- Bernstein, L. A., & Wild, J. J. (1998). *Financial statement analysis: Theory, application, and interpretation* (6th ed.). Boston, Massachusetts: Irwin.
- Betz, F. (1998). *Managing technological innovation: Competitive advantage from change*. New York: Wiley.
- Buckley, P. J., Dunning, J. H., & Pearce, R. B. (1977). The influence of firm size, sector, nationality, and degree of multinationality in the growth and profitability of the world's largest firms. *Weltwirtschaftliches Archiv*, 114, 243-257.
- Buhner, R. (1987). Assessing international diversification of west German corporations. *Strategic Management Journal*, 8(1), 25-37.
- Burgelman, R. A., & Maidique, M. A. (1989). *Strategic management of technology*. Homewood, Illinois: Irwin.
- Chan, S. H., Martin, J. D., & Kensinger, J. W. (1990). Corporate research and development expenditures and share value. *Journal of Financial Economics*, 26, 255-276.
- Chatterjee, S. (1986). Types of synergy and economic value: The impact of acquisitions on merging and rival firms. *Strategic Management Journal*, 7(2), 119-139.
- Chatterjee, S., & Wernerfelt, B. (1991). The link between resources and type of diversification: Theory and evidence. *Strategic Management Journal*, 12(1), 33-48.
- Collins, J. M. (1990). A market performance comparison of U.S. firms active in domestic, developed and developing countries. *Journal of International Business Studies*, 2, 271-287.
- Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of Management Journal*, 34, 555-590.
- Daniels, J. D., & Bracker, J. (1989). Profit performance: Do foreign operations make a difference? *Management International Review*, 29(1), 46-56.
- Dunning, J. H. (1985). *Multination, enterprise, economic structure, and international competitiveness*. New York: Wiley.
- Elango, B. (2000). An exploratory study into the linkages between corporate resources and the extent and form of internationalization. *American Business Review*, 18(2), 12-26.
- Eppink, D., Van Rhijin, B. (1988). The internationalization of the Dutch industry. *Long Range Planning*, 21(5), 54-60.
- Foster, R. N. (1982). A call for vision in managing technology. *Business Week*, 4, 24-33.
- Gaynor, G. H. (2002). *Innovation by design: What it takes to keep your company on the cutting edge*. New York: AMACOM.
- Geringer, J. M., Beamish, P. W., & DaCosta, R. C. (1989). Diversification and internationalization: Implication for MNE performance. *Strategic Management Journal*, 10, 109-119.
- Gomes, L., & Ramaswamy, K. (1999). An empirical examination of the form of the relationship between multinationality and performance. *Journal of International Business Studies*, 30(1), 173-188.
- Grant, R. M. (1987). Multinationality and performance among British manufacturing companies. *Journal of International Business Studies*, 18(3), 79-89.
- Grant, R. M., Jammine, A. P., & Thomas, H. (1988). Diversity, diversification and profitability among British manufacturing companies (1972-84). *Academy of Management Journal*, 31(4), 771-801.
- Greve, H. R. (2003). A behavioral theory of R & D expenditures and innovations: Evidence from shipbuilding. *Academy of Management Journal*, 46(6), 685-702.
- Haar, J. (1989). A comparative analysis of the profitability performance. *Management International Review*, 29(3), 5-19.
- Hambrick, D. C., & MacMillan, I. (1985). Efficiency of product R & D in business units: The role of strategic context. *Academy of Management Journal*, 28, 527-547.
- Hamel, G., & Prahalad, C. (1985, July - August). Do you really have a global strategy? *Harvard Business Review*, 63(4), 139-148.
- Hawkins, J. A. (1994). *A performance theory of order and constituency*. New York: Cambridge University Press.
- Hay, D. A., & Morris, D. J. (1979). *Industrial economics: Theory and evidence*. Oxford, UK: Oxford University Press.
- Hemmert, M. (2004). The impact of internationalization on the technology sourcing performance of high-tech business units. *Technol. Management*, 21, 149-174.
- Hill, C. W. L., Hitt, M. A., & Hoskisson, R. E. (1992). Cooperative versus competitive structures in related and unrelated diversified firms. *Organization Science*, 3, 501-521.
- Hitt, M. A., Hoskisson, R. E., & Ireland, R. D. (1994). A mid-range theory of the interactive effects of international and product diversification on innovation and performance. *Journal of Management*, 20, 297-236.
- Horst, T. E. (1973). Firm and industry determinants of the decision to invest abroad: An empirical study. *Review of Economics and Statistics*, 54, 258-266.
- Hoskisson, R. E., Hill, C. W. L., & Kim, H. (1993). The multidivisional structure: Organizational fossil or source of value? *Journal of Management*, 19, 269-298.
- Hughes, J., Logue, D., & Sweeney, R. (1975). Corporate international diversification and market assigned measures of risk and diversification. *Journal of Financial Quantitative Analysis*, 10, 627-637.
- Hymer, S. (1976). *The international operation of national firms: A study of direct foreign investment*. Ph.D. Thesis, Cambridge, Massachusetts: MIT Press.
- Irwing, J. G., Hoffman, J. J., & Geiger, S. W. (1998). The effect of technological adoption on organizational performance: Organizational size and environmental munificence as moderators. *The International Journal of Organizational Analysis*, 6(1), 50-64.
- Jayanthi, S., & Sinha, K. K. (1998). Innovation implementation in high technology manufacturing: A chaos-theoretic empirical analysis. *Journal of Operations Management*, 16, 471-494.
- Jung, Y. (1991). Multinationality and profitability. *Journal of Business Research*, 23, 179-187.
- Khanna, T., & Palepu, K. (1996). *Corporate scope and market imperfections: An empirical analysis of diversified business groups in an emerging economy*. Boston, Massachusetts: Harvard Business School.
- Khazanchi, S., Lewis, M. W., & Boyer, K. (2007). Innovation-supportive culture: the impact of organizational values on process innovation. *Journal of Operations Management*, 25(4), 871-884.
- Kotabe, M., Srinivasan, S. S., & Aulakh, P. S. (2002). Multinationality and firm performance: The moderating role of R & D and marketing capabilities. *Journal of International Business*, 33(1), 79-97.
- Kogut, B. (1985). Designing global strategies: Comparative and strategies groups. *Journal of International Business Studies*, 15, 151-168.
- Link, A. L., & Long, J. E. (1981). The simple economics of basic science research. *Journal of Political Economy*, 67, 297-306.
- Lu, J. W., & Beamish, P. W. (2001). The internationalization and performance of SMEs. *Strategic Management Journal*, 22, 565-586.
- Lu, J. W., & Beamish, P. W. (2004). International diversification and firm performance: The s-curve hypothesis. *Academy Management Journal*, 47(4), 598-609.
- Lumpkin, G. T., & Dess, G. G. (1996). Entrepreneurial strategy making and firm performance. *Strategy Management Journal*, 18(9), 677-693.
- Madura, J., & Whyte, A. (1990). Diversification benefits of

direct foreign investment. *Management International Review*, 30, 73-85.

Mahoney J. T., Pandian, R. J. (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal*, 13(5), 363-380.

McDermott, B., & Sexton, G. (1998). Showing the seeds of corporate innovation. *The Journal for Quality & Participation*, 21(6), 18-23.

Michael, R. H., & Shaked, I. (1986). Multinational corporation vs. domestic corporation: Financial performance and characteristics. *Journal of International Business Studies*, 17(3), 89-106.

Morck, R., & Yeung, B. (1991). Why investors value multinationality. *Journal of Business*, 64(2), 165-187.

Olusoga, S. A. (1993). Market concentration versus market diversification and internationalization: Implications for MNE performance. *International Marketing Review*, 10(2), 40-59.

Peng, M. W., & Heath, P. (1996). The growth of firms in planned economies in transition: Institutions, organizations, and strategic choice. *Academy of Management Review*, 21(2), 492-528.

Porter, M. E. (1983). The technological dimension of competitive strategy. In R. Rosenbloom (Ed.), *Research on technological innovation, management and policy* (pp. 74-95). Greenwich, Connecticut: JAI Press.

Porter, M. E. (1985). *Competitive advantage*. New York: Free Press.

Porter, M. E. (1990). *The competitive advantage of nations*. New York: Basic Books.

Porter, M. E., & Stern, S. (2001). Innovation: location matters. *MIT Sloan Management Review*, 42(4), 28-36.

Powell, T. C. (2001). Competitive advantage: Logical and philosophical considerations. *Strategic Management Journal*, 22(9), 875-888.

Prahalad, C. K., & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79-91.

Priem, R. L., & Butler, J. E. (2001). Is the resource-based view a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22-40.

Qian, G. (1997b). Assessing product-market diversification of U.S. firms. *Management International Review*, 37(2), 127-149.

Ramaswamy, K. (1995). Multinationality, configuration, and performance: A study of MNEs in the U.S. drug and pharmaceutical industry. *Journal of International Management*, 1, 231-253.

Rogers, E. (1983). *Diffusion of innovations* (3rd ed.). New York: Free Press.

Rouse, M. J., & Daellenbach, U. S. (2002). More thinking on research methods for the resource-based perspective. *Strategic Management Journal*, 23(10), 963-967.

Rubin, P. H. (1973). The expansion of firms. *Journal of Political Economy*, 84, 936-949.

Rugman, A. M., Lecraw, D. J., & Booth, L. D. (1985). *International business, firm and environment*. New York: McGraw-Hill Inc..

Ruigrok, W., Amann, W., & Wagner, H. (2007). The internationalization-performance relationship at Swiss firms: A test of the S-shape and extreme degrees of internationalization. *Management International Review*, 47, 349-368.

Sapienca, H. J., Smith, K. G., & Gannon, M. J. (1988). Using subjective evaluation of organizational performance in small business research. *American Journal of Small Business*, 12(3), 45-53.

Sambharya, R. B. (1995). The combined effect of international diversification and product diversification strategies on the performance of US-based multinational corporations. *Management International Review*, 35(3), 197-218.

Schumpeter, J. A. (1934). *The Theory of Economic Development*. Cambridge: Harvard University Press.

Shaked, I. (1986). Are multinational corporations safer? *Journal of International Business Studies*, 17, 83-106.

Siddharthan, N. S., & Lall, S. (1982). Recent growth of the largest US multinationals. *Oxford Bulletin of Economic Statistics*, 44, 1-13.

Silveira, G. D. (2001). Innovation diffusion: research agenda for developing economies. *Technovation*, 21, 767-773.

Stacey, G., & Ashton, W. (1990). A structured approach to corporate technology strategy. *International Journal of Technology Management*, 5, 389-407.

Stopford, J. M., & Wells, L. T. Jr. (1972). *Managing the multinational enterprise: Organization of the firm and ownership of the subsidiaries*. New York: Basic Books.

Sullivan, D. (1994). Measuring the degree of internationalization of firm. *Journal of International Business Studies*, 25(2), 325-342.

Tallman, S., & Li, J. (1996). Effects of international diversity and product diversity on the performance of multinational firms. *Academy of Management*, 39, 179-196.

Thompson, J. D. (1967). *Organization in action*. New York: McGraw-Hill.

Utterback, J. (1982). Innovation in industry and the diffusion of technology. In M. Tushman & W. Moore (Eds.), *Readings in the management of innovation* (pp. 102-124). Marshfield, Massachusetts: Pitman.

Vernon, R. (1971). *Sovereignty at Bay: The multinational spread of U.S. Enterprises*. New York: Basic Books.

Wernerfelt B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.

Yoshihara, H. (1985). *Multinational growth of Japanese manufacturing enterprises in the postwar period*. Tokyo: University of Tokyo Press.