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Research Notes and Commentary

## Exploration, exploitation, and financial performance: analysis of S&P 500 corporations

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### Abstract

The literature suggests that established firms need to balance their exploration and exploitation activities in order to achieve superior performance. Yet, previous empirical research has modeled this balance as the interaction of orthogonal activities. In this study, we show that there is a trade-off between exploration and exploitation and that the optimal balance between exploration and exploitation depends upon environmental conditions. Using a novel methodology to measure the relative exploration versus exploitation orientation, we find an inverted U-shaped relationship between the relative share of explorative orientation and financial performance. This relationship is positively moderated by the R&D intensity of the industry in which the firm operates. Copyright © 2008 John Wiley & Sons, Ltd.

### REFERENCES

Allen F. 1993. Strategic management and financial markets. *Strategic Management Journal*, Winter Special Issue 14: 11-22.

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Arellano M, Bond S. 1991. Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies* 58: 277-297.

 | [Web of Science®](#) | [Google Scholar](#) |

Arellano M, Bover O. 1995. Another look at the instrumental variable estimation of error-components models. *Journal of Econometrics* 68: 29-51.

 | [Web of Science®](#) | [Google Scholar](#) |

Audretsch DB, Feldmann MP. 1996. R&D spillovers and the geography of innovation and production. *American Economic Review* 86(3): 630–640.

[Web of Science®](#) | [Google Scholar](#)

---

Baltagi BH. 2005. *Econometric Analysis of Panel Data* ( 3rd edn). Wiley: Chichester, UK.

[Google Scholar](#)

---

Baysinger BD, Hoskisson RE. 1989. Diversification strategy and R&D intensity in multiproduct firms. *Academy of Management Journal* 32(2): 310–332.

[Web of Science®](#) | [Google Scholar](#)

---

Bebchuk L, Cohen A. 2005. The costs of entrenched boards. *Journal of Financial Economics* 78: 409–433.

[Web of Science®](#) | [Google Scholar](#)

---

Benner MJ, Tushman ML. 2002. Process management and technological innovation: a longitudinal study of the photography and paint industries. *Administrative Science Quarterly* 47(4): 676–706.

[Web of Science®](#) | [Google Scholar](#)

---

Benner MJ, Tushman ML. 2003. Exploitation, exploration, and process management: the productivity d  
*Econometric Analysis of Panel Data*. ilemma revisited. *Academy of Management Review* 28(2): 238–256.

[Web of Science®](#) | [Google Scholar](#)

---

Bierly P, Chakrabarti A. 1996. Generic knowledge strategies in the U.S. pharmaceutical industry. *Strategic Management Journal*, Winter Special Issue 17: 123–135.

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---

Blundell R, Bond S. 1998. Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics* 87: 115–143.

[CAS](#) | [Web of Science®](#) | [Google Scholar](#)

---

Brown LD, Caylor ML. 2006. Corporate governance and firm valuation. *Journal of Accounting and Public Policy* 25(4): 409–434.

[Google Scholar](#)

---

Cohen J. 1960. A coefficient of agreement for nominal scales. *Educational and Psychological Measurements* 20: 37–46.

Ghemawat P, Ricart i Costa JE. 1993. The organizational tension between static and dynamic efficiency. *Strategic Management Journal*, Winter Special Issue 14: 59–73.

[Web of Science®](#) | [Google Scholar](#)

---

Gompers P, Ishii J, Metrick A. 2003. Corporate governance and equity prices. *Quarterly Journal of Economics* 118(1): 107–155.

[Web of Science®](#) | [Google Scholar](#)

---

Gupta AK, Smith KG, Shalley CE. 2006. The interplay between exploration and exploitation. *Academy of Management Journal* 49(4): 693–706.

[Web of Science®](#) | [Google Scholar](#)

---

He ZL, Wong PK. 2004. Exploration vs. exploitation: an empirical test of the ambidexterity hypothesis. *Organization Science* 15(4): 481–494.

[Web of Science®](#) | [Google Scholar](#)

---

Holmqvist M. 2004. Experiential learning processes of exploitation and exploration within and between organizations: an empirical study of product development. *Organization Science* 15(1): 70–81.

[Web of Science®](#) | [Google Scholar](#)

---

Huselid MA. 1995. The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal* 38(3): 635–672.

[Web of Science®](#) | [Google Scholar](#)

---

Ito K, Pucik V. 1993. R&D spending, domestic competition, and export performance of Japanese manufacturing firms. *Strategic Management Journal* 14(1): 61–75.

[Web of Science®](#) | [Google Scholar](#)

---

Jansen JJP, Van den Bosch FAJ, Volberda HW. 2006. Exploratory innovation, exploitative innovation, and performance: effects of organizational antecedents and environmental moderators. *Management Science* 52(11): 1661–1674.

[Web of Science®](#) | [Google Scholar](#)

---

Kaplan SN, Zingales L. 1997. Do investment-cash flow sensitivities provide useful measures of financing constraints? *Quarterly Journal of Economics* 112(1): 169–215.

[Web of Science®](#) | [Google Scholar](#)

Katila R, Ahuja G. 2002. Something old, something new: a longitudinal study of search behavior and new product introduction. *Academy of Management Journal* 45(6): 1183–1194.

[Web of Science®](#) | [Google Scholar](#)

---

King G, Lowe W. 2003. An automated information extraction tool for international conflict data with performance as good as human coders: a rare events evaluation design. *International Organization* 57(3): 617–642.

[Web of Science®](#) | [Google Scholar](#)

---

Koza MP, Lewin AY. 1998. The co-evolution of strategic alliances. *Organization Science* 9(3): 255–264.

[Web of Science®](#) | [Google Scholar](#)

---

Krippendorff K. 1980. *Content Analysis: An Introduction to its Methodology*. Sage: Newbury Park, CA.

[Web of Science®](#) | [Google Scholar](#)

---

Laver M, Benoit K, Garry J. 2003. Extracting policy positions from political texts using words as data. *American Political Science Review* 97(2): 311–331.

[Web of Science®](#) | [Google Scholar](#)

---

Levinthal DA, March JG. 1993. The myopia of learning. *Strategic Management Journal*, Winter Special Issue 14: 95–112.

[Web of Science®](#) | [Google Scholar](#)

---

Lewin A, Long C, Carroll T. 1999. The coevolution of new organizational forms. *Organization Science* 10(5): 535–550.

[Web of Science®](#) | [Google Scholar](#)

---

Lubatkin MH, Shrieves RE. 1986. Toward reconciliation of market performance measures to strategic management research. *Academy of Management Review* 11(3): 497–512.

[Web of Science®](#) | [Google Scholar](#)

---

Lubatkin MH, Simsek Z, Ling Y, Veiga JF. 2006. Ambidexterity and performance in small- to medium-sized firms: the pivotal role of top management team behavioral integration. *Journal of Management* 32(5): 646–672.

[Web of Science®](#) | [Google Scholar](#)

---

March J. 1991. Exploration and exploitation in organizational learning. *Organization Science* 2(1): 71–87.

[Web of Science®](#) | [Google Scholar](#)

---

McGrath RG. 2001. Exploratory learning, innovative capacity, and managerial oversight. *Academy of Management Journal* 44(1): 118-131.

[Web of Science®](#) | [Google Scholar](#)

---

Nerkar A. 2003. Old is gold? The value of temporal exploration in the creation of new knowledge. *Management Science* 49(2): 211-229.

[Web of Science®](#) | [Google Scholar](#)

---

Porac JF, Wade JB, Pollock TG. 1999. Industry categories and the politics of the comparable firm in CEO compensation. *Administrative Science Quarterly* 44(1): 112-144.

[Web of Science®](#) | [Google Scholar](#)

---

Richard OC, Murthi BPS, Ismail K. 2007. The impact of racial diversity on intermediate and long-term performance: the moderating role of environmental context. *Strategic Management Journal* 28(12): 1213-1233.

[Web of Science®](#) | [Google Scholar](#)

---

Roodman D. 2005. xtabond2: Stata module to extend xtabond dynamic panel data estimator. Center for Global Development, Washington, D.C. Available at: <http://econpapers.repec.org/software/bocbocode/s435901.htm> (accessed 11 September 2008).

[Google Scholar](#)

---

Rosenkopf L, Nerkar A. 2001. Beyond local search: boundary-spanning exploration, and impact in the optical disk industry. *Strategic Management Journal* 22(4): 287-306.

[Web of Science®](#) | [Google Scholar](#)

---

Rothaermel FT, Deeds DL. 2004. Exploration and exploitation alliances in biotechnology: a system of new product development. *Strategic Management Journal* 25(3): 201-221.

[Web of Science®](#) | [Google Scholar](#)

---

Sidhu J, Commandeur H, Volberda HW. 2003. Measuring exploration orientation and its impact on innovation. Best Paper Proceedings, Academy of Management Conference, Seattle, WA.

[Google Scholar](#)

---

Siggelkow N, Levinthal DA. 2003. Temporarily divide to conquer: centralized, decentralized, and reintegrated organizational approaches to exploration and adaptation. *Organization Science* 14(6): 650-669.

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---

Sørensen JB, Stuart TE. 2000. Aging, obsolescence, and organizational innovation. *Administrative Science Quarterly* 45(1): 81-112.

[Web of Science®](#) | [Google Scholar](#)

---

Tetlock PC, Saar-Tsechansky M, Macskassy S. 2008. More than words: quantifying language to measure firms' fundamentals. *Journal of Finance* 63(3): 1437-1467.

[Web of Science®](#) | [Google Scholar](#)

---

Volberda HW, van den Bosch FAJ, Flier B, Gedajlovic ER. 2001. Following the herd or not? Patterns of renewal in the Netherlands and the UK. *Long Range Planning* 34(2): 209-229.

[Web of Science®](#) | [Google Scholar](#)

---

Zahra SA. 1996. Governance, ownership, and corporate entrepreneurship: the moderating impact of industry technological opportunities. *Academy of Management Journal* 39(6): 1713-1735.

[Web of Science®](#) | [Google Scholar](#)

---

Zahra SA. 2008. The virtuous cycle of discovery and creation of entrepreneurial opportunities. *Strategic Entrepreneurship Journal* 2(3):in press.

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---

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