

[Home](#) > [Journal](#) > [Business & Economics](#) > [IB](#)
[Indexing](#) | [View Papers](#) | [Aims & Scope](#) | [Editorial Board](#) | [Guideline](#) | [Article Processing Charges](#)
[IB](#) > Vol.3 No.4, December 2011



The Impact of Technology Selection on Innovation Success and Organizational Performance

PDF (Size: 162KB) PP. 366-371 DOI : 10.4236/ib.2011.34049

Author(s)

Shengbin Hao, Bo Yu

ABSTRACT

This paper is to analyze the impact of a company's technology selection on its innovation success and organizational performance. Technological capability enables a company to add value to products and processes, and its impact on innovation success has been examined. Apart from technological capability, a company also needs technology management capability to manage technological resources effectively and efficiently. In this paper, we develop a theoretical model for implementation of technology selection, consisting of five elements: technology selection, technological capability, technology management capability, innovation success and organizational performance. The model is empirically tested using the data of 120 Chinese companies acquired by interviews and surveys. The results indicate that a company's technology selection has no direct impact on innovation success; technology selection has a significant positive impact on technological capability and technology management capability, which, in turn, have a significant positive impact on innovation success; innovation success has a significant positive impact on organizational performance.

KEYWORDS

Technology Selection, Technological Capability, Technology Management Capability, Innovation Success, Organizational Performance

Cite this paper

 S. Hao and B. Yu, "The Impact of Technology Selection on Innovation Success and Organizational Performance," *IBusiness*, Vol. 3 No. 4, 2011, pp. 366-371. doi: 10.4236/ib.2011.34049.

References

- [1] A. B. Assis, " External Linkages and Technological Innovation: Topical Issues," *International Journal of Entrepreneurship and Innovation Management*, Vol. 3, No. 2, 2003, pp. 151-175. doi:10.1504/IJEIM.2003.002226
- [2] B. Chakravorti, " The Role of Adoption Networks in the Success of Innovations: A Strategic Perspective," *Technology in Society*, Vol. 26, No. 2, 2004, pp. 469-482. doi:10.1016/j.techsoc.2004.01.007
- [3] C. C. Rogerio, M. G. Fabio and L. M. Gilnei, " Innovation Networks: From Technological Development to Business Model Reconfiguration," *Technology Innovation*, Vol. 27, No. 8, 2007, pp. 426-432. doi:10.1016/j.technovation.2006.08.003
- [4] W. G. Biemans, " *Managing Innovation within Networks*," Routledge, London, 1992.
- [5] J. A. Czepiel, " Patterns of Interorganizational Communication and Diffusion of a Major Technological Innovation in a Competitive Industrial Community," *Academy of Management Journal*, Vol. 18, No. 1, 1975, pp. 6-24. doi:10.2307/255621
- [6] C. DeBresson and F. Amesse, " Networks of Innovators: A Review and Introduction to the Issue," *Research Policy*, Vol. 20, No. 5, 1991, pp. 363-380. doi:10.1016/0048-7333(91)90063-V
- [7] H. G. Gemünden, T. Ritter and P. Heydebreck, " Network Configuration and Innovation Success: An

- [Open Special Issues](#)
- [Published Special Issues](#)
- [Special Issues Guideline](#)

[IB Subscription](#)
[Most popular papers in IB](#)
[About IB News](#)
[Frequently Asked Questions](#)
[Recommend to Peers](#)
[Recommend to Library](#)
[Contact Us](#)

Downloads:	172,097
------------	---------

Visits:	338,012
---------	---------

Sponsors, Associates, and Links >>

- [International Conference on Management and Service Science \(MASS 2013\)](#)
- [The 4th Conference on Web Based Business Management \(WBM 2013\)](#)

- Empirical Analysis in German High-Tech Industries," *International Journal of Market Research*, Vol. 13, No. 5, 1996, pp. 449-462. doi:10.1016/S0167-8116(96)00026-2
- [8] S. L. Brown and K. M. Eisenhardt, "Product Development: Past Research, Present Findings, and Future Directions," *Academy of Management Review*, Vol. 20, No. 2, 1995, pp. 343-378. doi:10.2307/258850
- [9] R. G. Cooper, "The Dimensions of Industrial New Product Success and Failure," *Journal of Marketing*, Vol. 43, No. 3, 1997, pp. 93-103. doi:10.2307/1250151
- [10] R. G. Cooper and E. J. Kleinschmidt, "Benchmarking the Firm's Critical Success Factors in New Product Development," *Journal of Product Innovation Management*, Vol. 12, No. 5, 1995, pp. 374-391. doi:10.1016/0737-6782(95)00059-3
- [11] K.-H. Tsai, "The Impact of Technological Capability on Firm Performance in Taiwan's Electronics Industry," *The Journal of High Technology Management Research*, Vol. 15, No. 2, 2004, pp. 183-195. doi:10.1016/j.hitech.2004.03.002
- [12] T. Ritter and H. G. Gemünden, "The Impact of a Company's Business Strategy on Its Technological Competence, Network Competence and Innovation Success," *Journal of Business Research*, Vol. 57, No. 5, 2004, pp. 548-556. doi:10.1016/S0148-2963(02)00320-X
- [13] B. Carlsson and G. Eliasson, "The Nature and Importance of Economic Competence," *Industrial Institute for Economic and Social Research (IUI)*, Stockholm, 1991.
- [14] G. Dosi and D. J. Teece, "Organizational Competencies and Boundaries of the Firm," *University of California at Berkeley, Berkeley*, 1993.
- [15] F. Malerba and L. Marengo, "Competence, Innovative Activities and Economic Performance in Italian High-Technology Firms," *International Journal of Technology Management*, Vol. 10, No. 4, 1995, pp. 461-477. doi:10.1504/IJTM.1995.025637
- [16] R. Sanchez, "Strategic Product Creation: Managing New Interactions of Technology, Markets, and Organizations," *European Management Journal*, Vol. 14, No. 2, 1996, pp. 121-138. doi:10.1016/0263-2373(95)00056-9
- [17] M. Torkkeli and M. Tuominen, "The Contribution of Technology Selection to Core Competencies," *International Journal of Production Economics*, Vol. 77, No. 3, 2002, pp. 271-284. doi:10.1016/S0925-5273(01)00227-4
- [18] J. Morone, "Strategic Use of Technology," *California Management Review*, Vol. 31, No. 4, 1989, pp. 91-110.
- [19] S. B. Hao and B. Yu, "Research on Impact Mechanism of Technology Strategy on Technology Innovation and Organizational Performance," *Studies in Science of Science*, Vol. 27, No. 8, 2009, pp. 1263-1270.
- [20] G. M. Bao and J. Yang, "The Role of Technological Management in Technological Innovation: Based on the Enterprises in Zhejiang," *Studies in Science of Science*, Vol. 22, No. 5, 2004, pp. 546-551.
- [21] D. Cetindamar, R. Phaal and D. Probert, "Understanding Technology Management as a Dynamic Capability: A Framework for Technology Management Activities," *Technovation*, Vol. 29, No. 4, 2009, pp. 237-246. doi:10.1016/j.technovation.2008.10.004
- [22] G. M. Scott, "Critical Technology Management Issues of New Product Development in High-Tech Companies," *Journal of Product Innovation Management*, Vol. 17, No. 1, 2000, pp. 57-77. doi:10.1016/S0737-6782(99)00012-0