

Factors Affecting Investments in Intangible Assets: Insights from Indian Companies

Aparna Bhatia, and Khushboo Aggarwal

DOI: <https://doi.org/10.62206/sajm.30.4.2023.7-29>

Abstract

The present study focuses on assessing the intangible assets of a business comprehensively and identifying the industry- and firm-specific factors influencing the investment in intangibles. Using a fairly large sample of 346 companies for a period of seventeen years from 2000-2001 to 2016-2017, various hypotheses were tested by applying the Generalized Method of Moments (GMM). The effect of firm-size, market-share and profitability were found to be positive and significant on the investment in intangible assets, while leverage, age and capital intensity were found to be negatively influencing the same. The findings of the study may help managers to re-direct the limited resources towards investment in intangible assets as their businesses grow in size, profitability and market-share. The new and young companies must make deliberate efforts to invest in intangibles in order to secure distinctive competencies and a sustainable competitive advantage. With respect to India, a majority of research studies have assessed the determinants of intangible assets in terms of R&D only. The present study contributes to the extant literature by measuring intangibles holistically including visible intangible assets like licenses, purchased goodwill, patents, copyright and other intangible assets and invisible intangible assets representing external Structure (brands, customer and supplier relations); internal structure (the organisation management, legal structure, manual systems, attitudes, R&D); and individual competence (education and experience).

Key Words

Determinants, Firm specific variables, Generalized Method of Moments (GMM), Intangible assets, Resource-based view

Author Biography

Aparna Bhatia

Associate Professor, University School of Financial Studies, Guru Nanak Dev University, Amritsar, India. E-mail: aparnamohindru@yahoo.co.in

Khushboo Aggarwal

Assistant Professor, Department of Commerce, Pt. Mohan Lal S.D. College for Women, Gurdaspur, India; and is the corresponding author. E-mail: khushboo9983@yahoo.co.in

References

1. AITwajry, A. (2009). Intangible assets and future growth: evidence from Japan. *Asian Review of Accounting*, 17(1), 23-39.
2. Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *The Review of Economic Studies*, 58(2), 277-297.
3. Arrighetti, A., Landini, F., & Lasagni, A. (2014). Intangible assets and firm heterogeneity: Evidence from Italy. *Research Policy*, 43(1), 202-213.
4. Austin, L. (2007). Accounting for intangible assets. *University of Auckland Business Review*, 9(1), 63-72.
5. Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17, 99-120.
6. Bhagat, S., & Welch, I. (1995). Corporate research & development investments international comparisons. *Journal of Accounting and Economics*, 19(2-3), 443-470.
7. Bharathi Kamath, G. (2008). Intellectual capital and corporate performance in Indian pharmaceutical industry. *Journal of Intellectual Capital*, 9(4), 684-704.
8. Bosworth, D., & Rogers, M. (1998). Research and development, Intangible Assets and the performance of Large Australian Companies (No. 03, pp. 1-38). Melbourne, Australia: Melbourne Institute of Applied Economic and Social Research.
9. Boujelben, S., & Fedhila, H. (2011). The effects of intangible investments on future OCF. *Journal of Intellectual Capital*, 12(4), 480-494.
10. . Chen, Y. (2011). Ownership structure, financial structure and R&D investments: Evidence from Korean firms (Doctoral dissertation, Singapore Management University (Singapore)).
11. Cumming, D. J., & MacIntosh, J. G. (2000). The determinants of R & D expenditures: A study of the Canadian biotechnology industry. *Review of Industrial Organization*, 17, 357-370.
12. Ehie, I. C., & Olibe, K. (2010). The effect of R&D investment on firm value: An examination of US manufacturing and service industries. *International Journal of Production Economics*, 128(1), 127-135.
13. El-Bannany, M. (2008). A study of determinants of intellectual capital performance in banks: the UK case. *Journal of Intellectual Capital*, 9(3), 487-498.
14. Erik Sveiby, K. A. R. L. (1997). The intangible assets monitor. *Journal of Human Resource Costing & Accounting*, 2(1), 73-97.
15. Fang, W. S., & Lin, H. K. (2010). Do R&D expenditure, royalty and technology licensing expenses increase operational performance of the biotech industry in Taiwan?. *Problems and Perspectives in Management*, 8(3), 80-91.
16. Firer, S., & Williams, S. M. (2003). Intellectual capital and traditional measures of corporate performance. *Journal of Intellectual Capital*, 4(3), 348-360.
17. García-Posada, M., Menéndez Pujadas, Á., & Mulino Rios, M. (2020), "Determinants of investment in tangible and intangible fixed assets", Unpublished Banco de Espana Occasional Working Paper. No. 2004.
18. Godfrey, J., & Koh, P. S. (2001). The relevance to firm valuation of capitalising intangible assets in total and by category. *Australian Accounting Review*, 11(24), 39-48.

19. Goergen, M., & Renneboog, L. (2001). Investment policy, internal financing and ownership concentration in the UK. *Journal of Corporate Finance*, 7(3), 257-284.
20. Goldfinger, C. (1997). Intangible economy and its implications for statistics and statisticians. *International Statistical Review*, 65(2), 191-220.
21. Gonzales, M. (2013). Empirical determinants and patterns of research and development investment in Asia. *Asian Development Bank Economics Working Paper Series*, (364).
22. Gu, F., and Lev, B (2001), "Intangible Assets Measurement, Drivers, Usefulness", Unpublished Policy Research Working paper #2003-05. Boston University School of Management Accounting, Boston.
23. Gustavsson, P., & Poldahl, A. (2003). Determinants of Firm R & D: Evidence from Swedish Firm Level Data. FIEF.
24. Klock, M., & Megna, P. (2000). Measuring and valuing intangible capital in the wireless communications industry. *The Quarterly Review of Economics and Finance*, 40(4), 519-532.
25. Kumar, N. (1987). Technology imports and local research and development in Indian manufacturing. *The Developing Economies*, 25(3), 220-233.
26. . Kumar, N., & Aggarwal, A. (2005). Liberalization, outward orientation and inhouse R&D activity of multinational and local firms: A quantitative exploration for Indian manufacturing. *Research Policy*, 34(4), 441-460.
27. Kumar, N., & Saqib, M. (1996). Firm size, opportunities for adaptation and inhouse R & D activity in developing countries: the case of Indian manufacturing. *Research Policy*, 25(5), 713-722.
28. Kundu, A., Kulkarni, P., & Murthy, A. (2010). Advertising and firm value: Mapping the relationship between advertising, profitability and business strategy in India. *Middle-East Journal of Scientific Research*, 17(6), 650-658.
29. Lai, Y. L., Lin, F. J., & Lin, Y. H. (2015). Factors affecting firm's R&D investment decisions. *Journal of Business Research*, 68(4), 840-844.
30. Lau, J. P. (2003). Effects of intangible capital on firm performance. Unpublished Working Paper, University of York.
31. Lee, S. (2012). Financial determinants of corporate R&D investment in Korea. *Asian Economic Journal*, 26(2), 119-135.
32. Lev, B. (2000). *Intangibles: Management, Measurement, and Reporting*. Rowman & Littlefield.
33. Lev, B., & Radhakrishnan, S. (2005). The valuation of organization capital. In *Measuring Capital in the New Economy*, 73-110, University of Chicago Press.
34. Liu, L. (2011). Research on the determinants of R&D expenditures: An empirical study on listed Bio-pharmaceutical companies of US.
35. Lönqvist, A. (2004). Measurement of intangible success factors: Case studies on the design, implementation and use of measures. Tampere University of Technology.
36. . Madhani, P. M. (2010). Resource based view (RBV) of competitive advantage: an overview. Pankaj Madhani (ed.), *Resource Based View: Concepts and Practices*, 3-22.
37. Mishra, V. (2007). The determinants of R&D expenditure of firms: Evidence from a crossection of Indian firms. *Economic Papers: A Journal of Applied Economics and Policy*, 26(3), 237-248.

38. Neves, M., & Branco, J. (2020). Determinants of R&D on European high technology industry: Panel data evidence. *Management Research: Journal of the Iberoamerican Academy of Management*, 18(3), 285-305.
39. Nunes, P. M., Serrasqueiro, Z., & de Matos, A. F. (2017). Determinants of investment in fixed assets and in intangible assets for high-tech firms. *Journal of International Studies*, 10(1).
40. Pal, K., & Soriya, S. (2012). IC performance of Indian pharmaceutical and textile industry. *Journal of Intellectual Capital*, 13(1), 120-137.
41. Parameswaran, M. (2010). International trade and R&D investment: Evidence from manufacturing firms in India. *International Journal of Technology and Globalisation*, 5(1-2), 43-60.
42. Pradhan, J. P. (2003). Liberalization, firm size and R&D performance: A firm level study of Indian pharmaceutical industry. *Journal of Indian School of Political Economy*, 14(4), 647-666.
43. Rao, J., Yu, Y., & Cao, Y. (2013). The effect that R&D has on company performance: Comparative analysis based on listed companies of technique intensive industry in China and Japan. *International Journal of Education and Research*, 1(4), 1-8.
44. Sasidharan, S., Lukose, P. J., & Komera, S. (2015). Financing constraints and investments in R&D: Evidence from Indian manufacturing firms. *The Quarterly Review of Economics and Finance*, 55, 28-39.
45. Siddharthan, N. S. (1988). Inhouse R&D, imported technology, and firm size: Lessons from Indian experience. *The Developing Economies*, 26(3), 212-221.
46. Singh, M., & Faircloth, S. (2005). The impact of corporate debt on long term investment and firm performance. *Applied Economics*, 37(8), 875-883.
47. Su, W. H., & Wells, P. (2015). The association of identifiable intangible assets acquired and recognised in business acquisitions with postacquisition firm performance. *Accounting & Finance*, 55(4), 1171-1199.
48. Succurro, M. (2014). Intangible assets finance: A complementary or substitution effect between external and internal channels? Evidence from the Italian divide. *International Journal of Economics and Finance*, 6(12), 1-17.
49. Tsai, C. F., & Yen, D. C. (2010). Discovering important factors of intangible firm value by association rules. *The International Journal of Digital Accounting Research*, 10, 55-85.
50. Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, 105(3), 581-606.
51. Yang, S., Zhou, Y., & Song, L. (2018). Determinants of intangible investment and its impacts on firms' productivity: Evidence from Chinese private manufacturing firms. *China & World Economy*, 26(6), 1-26.
52. Zainol, A., Nair, M., & Kasipillai, J. (2008). R&D reporting practice: Case of a developing economy. *Journal of Intellectual Capital*, 9(1), 122-132.