

[Home](#) > [The Journal of Technology Transfer](#) > Article

Governmental venture capital for innovative young firms

| Published: 06 December 2014

| Volume 41, pages 10–24, (2016) [Cite this article](#)



[The Journal of Technology Transfer](#)

[Aims and scope](#) →

[Submit manuscript](#) →

Massimo G. Colombo¹, Douglas J. Cumming² & Silvio Vismara ³

7193 Accesses 183 Citations 10 Altmetric [Explore all metrics](#) →

Abstract

Governments around the world have set up governmental venture capital (GVC) funds, and are increasingly doing so, with the aims of fostering the development of a private venture capital industry and to alleviate the equity capital gap of young innovative firms. The rationale and the appropriateness of these programs is controversial. In this paper, we borrow from the recent literature on entrepreneurial finance to document the evolution and to compare the effects of the different types of governmental support. In contrast with a lack of success in some countries, there have been successful GVC initiatives, such as the Australian Innovation Investment Fund. Consequently, the proper design of the investment processes of GVC funds is an urgent topic for scholars and policy makers.



This is a preview of subscription content, [log in via an institution](#) to check access.

Access this article

[Log in via an institution →](#)

[Buy article PDF 39,95 €](#)

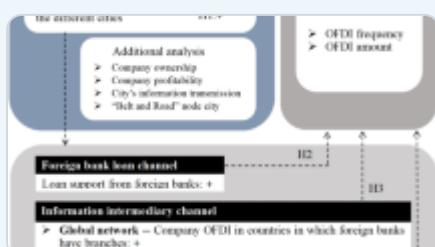
Price includes VAT (Poland)

Instant access to the full article PDF.

Rent this article via [DeepDyve](#) ↗

[Institutional subscriptions →](#)

Similar content being viewed by others



[Foreign bank entry and the outward foreign direct investment of companies: evidence from China](#)

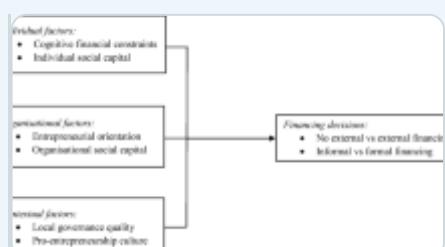
Article | 25 March 2024



[On the future of international joint venture research](#)

Article | Open access

27 February 2019



[Formal and informal financing decisions of small businesses](#)

Article | Open access

11 June 2020

Notes

- VC investors are typically classified on the basis of their ownership and governance structures. An independent VC is a limited partnership in which a management company raises capital from limited partners, often institutional investors. VC forms other than independent VCs are collectively known as *captive VCs*, which include *corporate VCs* (affiliated with a nonfinancial corporation), *bank-controlled VCs* (affiliated with a bank), and *governmental*

VCs (the focus of this paper). For an extended discussion of the rationale for the creation of GVC programs, see, e.g. Cumming and Johan (2013). Similar to GVC programs, in *guarantee systems*, the government commits to covering, totally or partially, potential losses of private VC funds, so a minimum return to private investors is warranted.

2. It is widely accepted that entrepreneurial ventures are a major source of innovation, employment, and growth. Market failures are related to the public good nature of innovation, which causes free-riding and insufficient incentives for investments, as well as to information asymmetries, which generate adverse selection and moral hazard problems.
3. “Addressing the SME Equity Gap: Support for Regional Venture Capital Funds”, URN 99/876. Small and Medium Enterprise Policy Directorate, DTI, Sheffield.
4. This study is based on the VICO database of young high-tech entrepreneurial companies operating in seven European countries (Belgium, Finland, France, Germany, Italy, Spain, and the UK). The dataset consists of 8,370 companies, 759 of which are VC-backed, and 1,125 VC investors.

References

- Alperovych, Y., Hubner, G., & Lobet, F. (2013). *How (In)efficient is public venture capital? Evidence from Belgium*, Working Paper, EMLyon.
- Armour, J., & Cumming, D. J. (2006). The legislative road to silicon valley. *Oxford Economic Papers*, 58, 596–635.
- Audretsch, D. (1995). *Innovation and industry evolution*. Cambridge, MA: MIT Press.

Audretsch, D. B. (Ed.). (2002). *Entrepreneurship: Determinants and policy in a European-US comparison* (Vol. 27). Berlin: Springer.

Audretsch, D. B., Thurik, A. R., Verheul, I., & Wennekers, A. R. M. (Eds.). (2002). *Entrepreneurship: Determinants and Policy in a European-US Comparison*. Boston/Dordrecht: Kluwer Academic Publishers.

Audretsch, D. B., Bönte, W., & Keilbach, M. (2008). Entrepreneurship capital and its impact on knowledge diffusion and economic performance. *Journal of Business Venturing*, 23, 687-698.

Balboa, M., Martí, J., & Zieling, N. (2007). Is the Spanish public sector effective in backing venture capital? In G. N. Gregoriou, M. Kooli, R. Kräussl, & R. Kraeussl (Eds.), *Venture capital in Europe* (pp. 115-128). Oxford: Butterworth-Heinemann.

Bertoni, F., Colombo, M. G., & Grilli, L. (2011). Venture capital financing and the growth of high-tech start-ups: Disentangling treatment from selection effects. *Research Policy*, 40(7), 1028-1043.

Bertoni, F., Colombo, M. G., & Quas, A. (2014). *Patterns of venture capital investment in Europe*. Working Paper, EMLyon.

Bertoni, F., Ferrer, M. A., & Martí, J. (2013). The different role played by venture

capital and private equity investors on the investment activity of their portfolio firms. *Small Business Economics*, 40(3), 607–633.

Bertoni, F., & Martí, J. (2011). *Financing entrepreneurial ventures in Europe: The VICO dataset*. Available at SSRN: <http://ssrn.com/abstract=1904297>.

Bertoni, F., & Tykvova, T. (2012). *Which form of venture capital is most supportive of innovation?* ZEW. Discussion Papers, No. 12-018.

Black, B. S., & Gilson, R. J. (1998). Venture capital and the structure of capital markets: Banks versus stock markets. *Journal of Financial Economics*, 47(3), 243–277.

[Article](#) [Google Scholar](#)

Block, J., & Sandner, P. (2009). What is the effect of the financial crisis on venture capital financing? Empirical evidence from US internet start-ups. *Venture Capital An International Journal of Entrepreneurial Finance*, 11, 295–309.

[Article](#) [Google Scholar](#)

Bonardo, D., Paleari, S., & Vismara, S. (2011). Valuing university-based firms: The effects of academic affiliation on IPO performance. *Entrepreneurship Theory and Practice*, 35(4), 755–776.

Brander, J. A., Du, Q., & Hellmann, T. (2014). The effects of government-sponsored venture capital: International evidence. *Review of Finance*. doi:[10.1093/rof/rfu009](https://doi.org/10.1093/rof/rfu009).

Brander, J. A., Egan, E., & Hellmann, T. (2008). Government sponsored versus private venture capital: Canadian evidence. In J. Lerner, A. Schoar (Eds.),

Buzzacchi, L., Scellato, G., & Ughetto, E. (2013). The investment strategies of publicly sponsored venture capital funds. *Journal of Banking & Finance*, 37(3), 707-716.

[Article](#) [Google Scholar](#)

Carpenter, R., & Petersen, B. (2002). Is the growth of small firms constrained by internal finance? *Review of Economics and Statistics*, 84, 298-309.

[Article](#) [Google Scholar](#)

Chemmanur, T. J., Krishnan, K., & Nandy, D. (2011). How does venture capital financing improve efficiency in private firms? A look beneath the surface. *Review of Financial Studies*, 24, 4037-4090.

[Article](#) [Google Scholar](#)

Colombo, M. G., & Grilli, L. (2010). On growth drivers of high-tech start-ups: Exploring the role of founders' human capital and venture capital. *Journal of Business Venturing*, 25(6), 610-626.

[Article](#) [Google Scholar](#)

Colombo, M. G., Grilli, L., & Verga, C. (2007). High-tech start-up access to public funds and venture capital: Evidence from Italy. *International Review of Applied Economics*, 21, 381-402.

[Article](#) [Google Scholar](#)

Criscuolo, C., Gal, P. N., & Menon, C. (2014). *The dynamics of employment growth: New evidence from 18 countries*. OECD Science, Technology and Industry Policy Papers. No. 14, OECD Publishing. doi:[10.1787/5jz417hj6hg6-en](https://doi.org/10.1787/5jz417hj6hg6-en)

Croce, A., Martí, J., & Murtinu, S. (2013). The impact of venture capital on the productivity growth of European high-tech firms: 'Screening' or 'Value Added' effect? *Journal of Business Venturing*, 28(4), 489–510.

[Article](#) [Google Scholar](#)

Croce, A., & Ughetto, E. (2014). *Dumping or taking on entrepreneurial ventures: The dynamics of switching between governmental and independent venture capitalists*. Working Paper, Politecnico di Milano.

Cumming, D. J. (2007). Government policy towards entrepreneurial finance: Innovation investment funds. *Journal of Business Venturing*, 22, 193–235.

[Article](#) [Google Scholar](#)

Cumming, D. J. (2011). Misinforming the public about public policy towards venture capital. *Venture Capital An International Journal of Entrepreneurial Finance*, 13(1), 99–102.

[Article](#) [Google Scholar](#)

Cumming, D. J. (2014). Public economics gone wild: Lessons from venture capital. *International Review of Financial Analysis*. doi:[10.1016/j.irfa.2013.10.005](https://doi.org/10.1016/j.irfa.2013.10.005).

Cumming, D. J., Grilli, L., & Murtinu, S. (2014). Governmental and independent venture capital investments in Europe: A firm-level performance analysis. *Journal of Corporate Finance* (forthcoming).

Cumming, D. J., & Johan, S. A. (2008). Information asymmetries, agency costs and venture capital exit outcomes. *Venture Capital An International Journal of Entrepreneurial Finance*, 10, 197–231.

[Article](#) [Google Scholar](#)

Cumming, D. J., & Johan, S. (2009). Pre-seed government venture capital funds. *Journal of International Entrepreneurship*, 7, 26-56.

[Article](#) [Google Scholar](#)

Cumming, D. J., & Johan, S. A. (2010). Venture capital investment duration. *Journal of Small Business Management*, 48, 228-257.

[Article](#) [Google Scholar](#)

Cumming, D. J., & Johan, S. A. (2013). *Venture capital and private equity contracting*, 2nd edn. Amsterdam: Elsevier.

Cumming, D. J., & Johan, S. A. (2014). Venture's economic impact in Australia. *Journal of Technology Transfer*. doi:[10.1016/j.jcorpfin.2014.10.016](https://doi.org/10.1016/j.jcorpfin.2014.10.016).

Cumming, D. J., & MacIntosh, J. (2006). Crowding out private equity: Canadian evidence. *Journal of Business Venturing*, 21, 569-609.

[Article](#) [Google Scholar](#)

Cumming, D. J., & MacIntosh, J. (2007). Mutual funds that invest in private equity? An analysis of labour sponsored investment funds. *Cambridge Journal of Economics*, 31, 445-487.

[Article](#) [Google Scholar](#)

Cumming, D. J., Siegel, D., Sapienza, H., & Wright, M. (2009). International entrepreneurship: Managerial and public policy implications. *Strategic Entrepreneurship Journal*, 3, 283-296.

[Article](#) [Google Scholar](#)

Florida, R., & Kenney, M. (1988). Venture capital, high technology and regional development. *Regional Studies*, 22(1), 33-48.

[Article](#) [Google Scholar](#)

Gao, X., Ritter, J. R., & Zhu, Z. (2013). Where have all the IPOs gone? *Journal of Financial and Quantitative Analysis*, 48(6), 1663-1692.

Gompers, P., & Lerner, J. (2001). The venture capital revolution. *Journal of Economic Perspectives*, 15, 145-168.

[Article](#) [Google Scholar](#)

Grilli, L., & Murtinu, S. (2014a). Government, venture capital and the growth of European high-tech entrepreneurial firms. *Research Policy*, 43(9), 1523-1543.

Grilli, L., & Murtinu, S. (2014b). New technology-based firms in Europe: Market penetration, public venture capital and timing of investment. *Industrial and Corporate Change*. doi:[10.1093/icc/dtu025](https://doi.org/10.1093/icc/dtu025).

Hall, B. H., & Lerner, J. (2010). The financing of R&D and innovation. In B. H. Hall, & N. Rosenberg (Eds.), *Handbook of the economics of innovation* (pp: 610-38). Amsterdam: Elsevier.

Hood, N. (2000). Public venture capital and economic development: The Scottish experience. *Venture Capital*, 2(4), 313-341.

[Article](#) [Google Scholar](#)

Jääskeläinen, M., Maula, M., & Murray, G. (2007). Profit distribution and compensation structures in publicly and privately funded hybrid venture capital funds. *Research Policy*, 36, 913-929.

[Article](#) [Google Scholar](#)

Jeng, L. A., & Wells, Ph C. (2000). The determinants of venture capital funding: Evidence across countries. *Journal of Corporate Finance*, 6(3), 241-289.

[Article](#) [Google Scholar](#)

Johan, S., Schweizer, D., & Zhan, F. (2014). The changing latitude: Labor-sponsored venture capital corporations in Canada. *Corporate Governance an International Review*, 22, 145-161.

[Article](#) [Google Scholar](#)

Keuschnigg, C., & Nielsen, S. B. (2001). Public policy for venture capital. *International Tax and Public Finance*, 8, 557-572.

[Article](#) [Google Scholar](#)

Keuschnigg, C., & Nielsen, S. B. (2003). Tax policy, venture capital and entrepreneurship. *Journal of Public Economics*, 87, 175-203.

[Article](#) [Google Scholar](#)

Knockaert, M., Lockett, A., Clarysse, B., & Wright, M. (2006). Do human capital and fund characteristics drive follow-up behaviour of early stage high-tech VCs? *International Journal of Technology Management*, 34, 7-27.

[Article](#) [Google Scholar](#)

Knockaert, M., & Vanacker, T. (2013). The association between venture capitalists' selection and value adding behavior: Evidence from early stage high tech venture capitalists. *Small Business Economics*, 40, 493-509.

[Article](#) [Google Scholar](#)

Knockaert, M., Wright, M., Clarysse, B., & Lockett, A. (2010). Agency and similarity effects and the VC's attitude towards academic spin-out investing. *Journal of Technology Transfer*, 35(6), 567-584.

[Article](#) [Google Scholar](#)

Leleux, B., & Surlemont, B. (2003). Public versus private venture capital: seeding or crowding out? A pan-European analysis. *Journal of Business Venturing*, 18, 81-104.

[Article](#) [Google Scholar](#)

Lerner, J. (1999). The government as venture capitalist: The long-run effects of the SBIR program. *Journal of Business*, 72, 285-318.

[Article](#) [Google Scholar](#)

Lerner, J. (2012). *The boulevard of broken dreams: Why public efforts to boost entrepreneurship and venture capital have failed—And what to do about it.* Princeton: Princeton University Press.

[Google Scholar](#)

Luukkonen, T., Deschryvere, M., & Bertoni, F. (2013). The value added by government venture capital funds compared with independent venture capital funds. *Technovation*, 33(4-5), 154-162.

Meoli, M., Paleari, S., & Vismara, S. (2013). Completing the technology transfer process: M&As of science-based IPOs. *Small Business Economics*, 40(2), 227-248.

[Article](#) [Google Scholar](#)

Murray, G. C. (1998). A policy response to regional disparities in the supply of risk capital to new technology-based firms in the European Union: The European seed capital fund scheme. *Regional Studies*, 32(5), 405-419.

Puri, M., & Zarutskie, R. (2012). On the lifecycle dynamics of venture-capital and non-venture-capital-financed firms. *Journal of Finance*, 67(6), 2247-2293.

[Article](#) [Google Scholar](#)

Ritter, J. R., Signori, S., & Vismara, S. (2013). Economies of scope and IPO activity in Europe. In M. Levis, & S. Vismara (Eds.), *Handbook of research on IPOs* (pp. 11-34). Cheltenham: Edward Elgar.

Schäfer, D., & Schilder, D. (2006). *Informed capital in a hostile environment—The case of relational investors in Germany*. Unpublished manuscript.

Vanacker, T., Heughebaert, A., & Manigart, S. (2014). Institutional frameworks, venture capital and the financing of european new technology-based firms. *Corporate Governance An International Review*, 22, 199-215.

[Article](#) [Google Scholar](#)

Vismara, S., Paleari, S., & Ritter, J. R. (2012). Europe's second markets for small companies. *European Financial Management*, 18, 352-388.

[Article](#) [Google Scholar](#)

Wilson, K., & Silva, F. (2013). *Policies for seed and early finance: Findings from the 2012 OECD Financing Questionnaire*. OECD science, technology and industry policy papers, No. 9, OECD Publishing. doi:[10.1787/5k3xqsf00j33-en](https://doi.org/10.1787/5k3xqsf00j33-en).

Acknowledgments

We would like to thank Yan Alperovych, David A. Audretsch, Marina Balboa, Fabio Bertoni, Joern Block, Luigi Buzzacchi, Annalisa Croce, Luca Grilli, Alexander Groh, Marcel Hülsbeck, Sofia Johan, Erik Lehmann, Al Link, Mirjam Knockaert, Josè Martì, Michele Meoli, Samuele Murtinu, Jay R. Ritter, Giuseppe Scellato, Denis Schweizer, Donald Siegel, Elisa Ughetto, Tom Vanacker, and participants at the 2013 Technology Transfer Society conference in Bergamo.

Author information

Authors and Affiliations

Politecnico di Milano, Milan, Italy

Massimo G. Colombo

York University, Toronto, Canada

Douglas J. Cumming

University of Bergamo, Bergamo, Italy

Silvio Vismara

Corresponding author

Correspondence to [Silvio Vismara](#).

Rights and permissions

[Reprints and permissions](#)

About this article

Cite this article

Colombo, M.G., Cumming, D.J. & Vismara, S. Governmental venture capital for innovative young firms. *J Technol Transf* **41**, 10–24 (2016). <https://doi.org/10.1007/s10961-014-9380-9>

Published

06 December 2014

Issue Date

February 2016

DOI

<https://doi.org/10.1007/s10961-014-9380-9>

Keywords

[Entrepreneurial finance](#)

[Venture capital](#)

[GVC](#)

[IPOs](#)

[M&As](#)

JEL Classification

[G30](#)

Search

Search by keyword or author



Navigation

[Find a journal](#)

[Publish with us](#)

[Track your research](#)