

ZEW policy brief

Dr. Maikel Pellens and Dr. Georg Licht

Business Angels: Crucial Elements of the European Financial Ecosystem

Europe faces a conundrum. Despite high levels of research investment and leading the market in many industries, disruptive and radical innovation typically does not come from European start-ups. One of the reasons for this is financial constraints: most innovative European start-ups do not manage to attract institutional funders or venture capitalists to invest in their growth, and hence do not fulfill their growth potential.

Business angels, individual investors who support early-stage firms with capital and experience, are believed to be able to fill this gap in the funding landscape and thus help boost European innovation. However, relatively little is known about business angel activities in Europe. In this policy brief, we summarize recent research conducted at the Centre for European Economic Research (ZEW), highlight trends in the German and European business angel markets, and discuss implications for the design of policies aimed at fostering the development of markets for business angel investment.

Essential issues

- ▶ Surveys of high-tech start-ups founded in Germany show that business angels are a notable source of funding for innovative firms. German high-tech start-ups founded between 2009 and 2012 were more likely to receive investments from business angels than from venture capitalists by 2013.
- ▶ Information on German financial transactions shows that business angel investment is becoming more common and accounts for a growing share of entrepreneurial financing. A recent survey shows that the majority of business angels in Europe expect to invest more of their wealth in the long run compared to current investment levels.
- ▶ The design and implementation of policies for the promotion of business angel investment is currently left up to the individual EU Member States, resulting in varying framework conditions and many different European business angel markets. Important policy questions include the extent to which these measures should be harmonized and coordinated towards the formation of a single European business angel market and which investors these policies should be targeting.

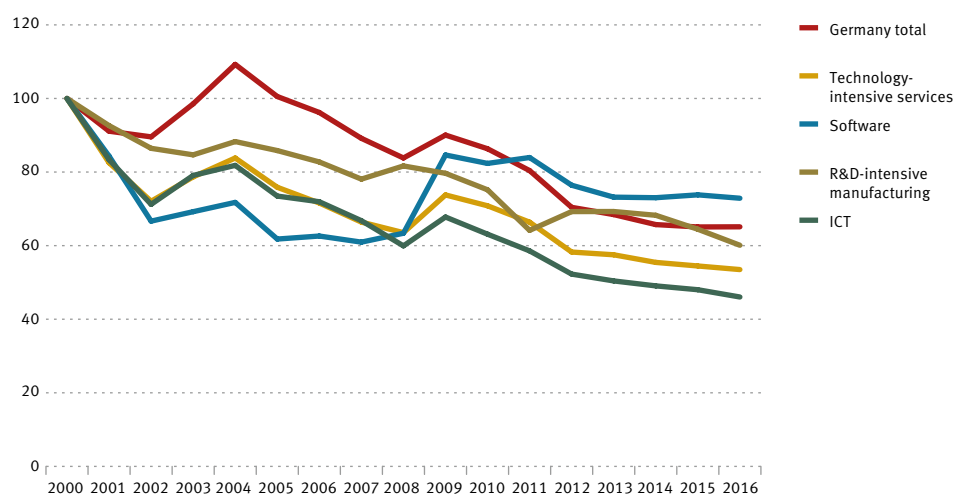
Key messages

Challenges for research and innovation in Europe

Research Question and Relevance

Research and innovation are key goals for Europe. Innovation brings new and improved products and services as well as more efficient production processes, encourages competition, and ultimately improves growth and welfare. Yet, although Europe invests a lot in research, new products and services, particularly those which can be labelled as radical or disruptive, are often implemented in other parts of the world. Furthermore, Europe faces the challenge of turning start-up activities into scale-up activities and gazelle companies. One of the ways in which European policymakers intend to tackle this issue is by strengthening Europe's financial ecosystem in order to encourage highly innovative young firms (European Commission, 2017). This is especially pertinent considering that start-up numbers seem to be dropping: in Germany at least, the number of start-ups has declined by 35% since 2000, with more than a 50% drop in the ICT industry (see Figure 1).

Figure 1: Development of start-up numbers in Germany



Annotation: The value of the year 2000 represents 100 per cent.

Source: ZEW, Mannheim Enterprise Panel

Lack of funds as a barrier to innovation

A strong financial ecosystem is an important precondition for innovation: R&D and innovation are expensive, so innovative firms have higher capital needs than others (Peters et al., 2017). Many firms indeed face financial bottlenecks in their innovative activities: Rammer and Weißenfeld (2008) report that for 20% of firms in the EU-16 a lack of financial resources presented a significant barrier to innovation. Neither banks nor venture capitalists – two major sources of finance for start-ups – are likely to pick up the slack. Banks are reluctant to issue loans to young innovative firms, because they are unwilling to deal with the risk that accompanies the long fruition times and low success probabilities associated with innovation. Venture capitalists typically only come into play when a firm has already developed a product or, in some cases, a proof of concept, since these investors generally need to be assured of substantial growth within a limited timeframe. Both of these types of investor therefore underinvest in early-stage innovative firms. On top of that, venture capital investment is far less developed in the European financial ecosystems than in the US or Israel. R&D-intensive firms, for their part, prefer equity investment over debt because they miss out on the tax-related benefits of debt while facing greater risk of not being able to repay said debt due to the uncertainty of R&D (Thakor and Lo, 2017).

Business angels can fill the gap left by banks and venture capitalists. As private investors, they can circumvent the limitations faced by banks and venture capitalists, make risky investments in early-stage firms and patiently wait for them to bear fruit. Additionally, business angels often have a background in industry and can use this experience to coach and guide investee firms to reach their strategic goals.

Because of this potential, business angels have received much attention in recent years. However, the fact that business angels are private persons means that there is a limited paper trail left by their investment, and therefore relatively little is known about them. Below we present the results of several studies conducted by ZEW in recent years to address this issue.

Business angels can fill the existing gap

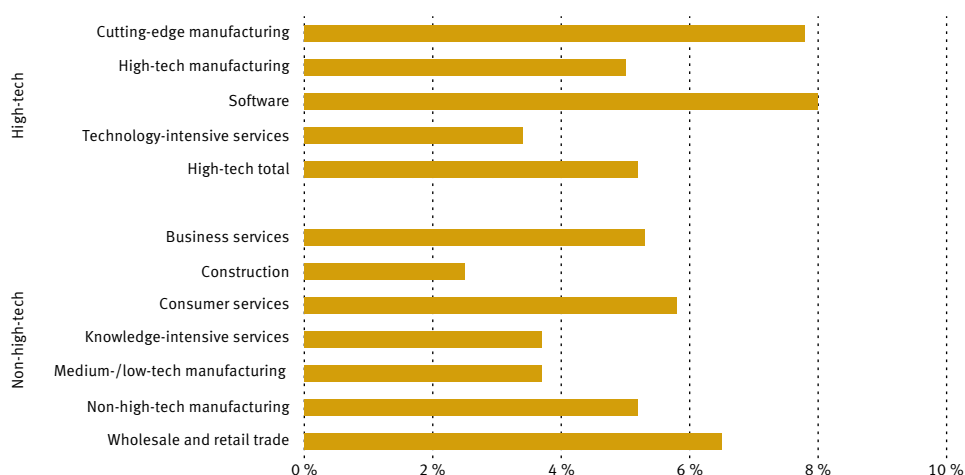
Research Results

A first study tested whether business angels actually do fund innovative firms. Based on surveys of German start-ups, Fryges et al. (2007) found that firms which attracted business angel investment are more likely to develop a technology, introduce a new-to-the-market innovation and continuously engage in R&D. They are also more likely to be academic spin-offs or to have founders with academic backgrounds. This could mean that business angel investment makes firms more innovative, but also that business angels have a preference for innovative firms when choosing where to invest their money (the analysis could not differentiate between the two).

Another question is in which sectors business angels support innovation. Egel and Gottschalk (2014) found that of all incorporated German firms founded between 2009 and 2012, software firms and cutting-edge manufacturing firms (which includes firms in industries such as pharmaceuticals, optics, and instruments) were the most likely to have received business angel investment by 2013. However, business angel investment is not limited to high-tech industries; significant shares of firms in non-high-tech industries also received investments from business angels, e.g. with up to 6.5% of wholesale and retail trade firms receiving business angel investment (see Figure 2). This is likely a consequence of the diffusion of new technologies (e.g. IT) among these firms, giving rise to new business models.

Business angels fund innovative firms

Figure 2: Share of incorporated German firms founded between 2009 and 2012 which received business angel investment by 2013, by sector



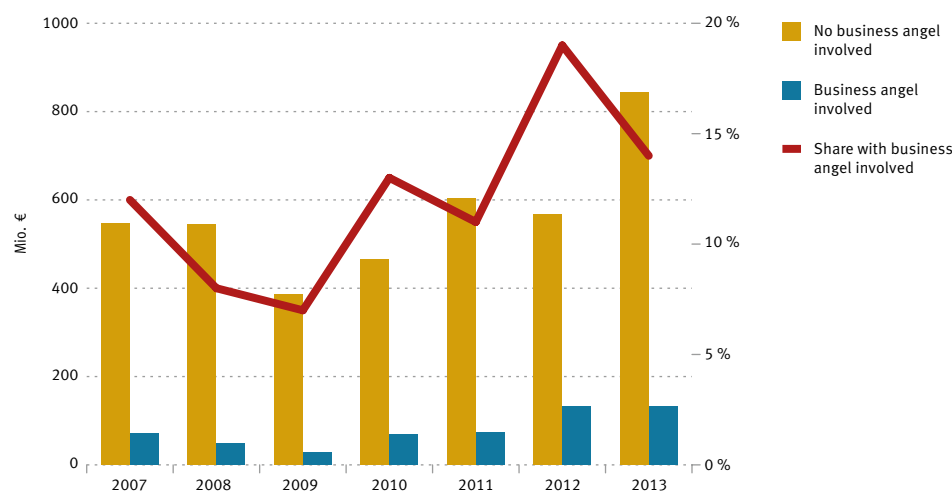
Source: Egel and Gottschalk (2014)

Increasing prevalence of business angel funding

Even though the share of business angel funded firms is lower in many non-high-tech industries, the number of firms being funded by business angels is much higher, as many more firms are active in non-high-tech industries. Egelin and Gottschalk find that for every firm receiving business angel investment in high-tech sectors, eight firms in non-high-tech sectors received business angel investment.

Another important question is the size of the business angel market. One way to study this is through the use of financial transaction records. Gottschalk et al. (2016) show that in 2013, 132 million EUR worth of investment in young German firms that could be tracked in such records included at least one business angel in the transaction, compared to 844 million EUR worth of investment that did not (see Figure 3). There is a clear upward trend in the volume of transactions involving business angels, having almost doubled compared to the 72 million EUR invested in 2007. This analysis is, however, limited to those transactions which can be observed publicly and hence does not include small investments, which are particularly important for business angels. Gottschalk et al. (2016) were also unable to differentiate between the volume invested by business angels and that invested by venture capital organizations and could only compare transactions involving a business angel with those who do not. Based on firm ownership information, Egelin and Gottschalk (2014) show that business angels are a more common source of funding for high-tech firms than venture capitalists: 5.2% of young German high-tech firms founded between 2009 and 2012 had received business angel funding by 2013, compared to only 2.3% that had received funding from a venture capitalist. The contradiction between the higher transaction volume and lower prevalence of venture capital investments can be explained by the observation that the typical investment from a venture capitalist is much larger than the typical business angel investment.

Figure 3: Volume of financial transactions of capital organizations and business angels in young firms



Source: Gottschalk et al. (2016)

Optimistic growth expectations

Apart from size, there is the question of growth potential. 60% of the respondents to a survey of business angels in Europe expect the share of their wealth invested through business angel investment to increase by at least five percentage points compared to the share currently being invested. (Ali et al., 2017).¹

¹ Based on comparison of self-assessed share of wealth currently invested through business angel investment and foreseen share to be invested

The actual growth potential in the business angel market is, however, likely to be even larger as this measure only takes active angels into account whilst ignoring other private persons who might potentially turn to angel investment.

Lastly, what do business angels contribute beyond money? Along these lines, Fryges et al. (2007) show that business angels appear to be important sources of informal advice and also establish new contacts for their investee companies. Other contributions, such as formal advisory positions, infrastructure, or operational contributions, proved less important.

Relevant non-financial contributions

Policy Implications

As these studies show, the market for business angel investment is a notable source of funding for innovative firms. How, then, can governments best support it? A first question to ask is who should organize these support measures. Currently, Member States are responsible for coming up with their own policies, and the European Commission limits itself to disseminating good practice.² This makes sense as the majority of business angel investment occurs locally, often even within an hour of business angels' homes (Ali et al., 2017). On the other hand, this results in a fragmented landscape of policy measures (see Ali et al., 2017; Gottschalk et al., 2016 for overviews). As some are bound to be more effective than others, more harmonization and cross-border adoption of successful programmes might be desirable. The newly established European Innovation Council could play a key role in transforming Europe's landscape of multiple business angel markets into a single European business angel market.

A further question is who these support measures are aimed at. Should governments seek to increase the intensity at which current business angels are investing, or rather to attract new investors? The answer is not so obvious. On the one hand, experienced business angels possess stronger networks and are better prepared to support their investee businesses than new business angels (Gottschalk et al., 2016). On the other hand, the question then arises how much additional effort, especially in terms of time investment, can be expected from experienced angels.

How can governments best support business angel investment?

² https://ec.europa.eu/growth/access-to-finance/funding-policies/business-angels_en

References

- Ali, S., Berger, M., Botelho, T., Duvy, J. N., Frenchia, C., Gluntz, P., Delater, A., Licht, G., Losso, J. and Pellens, M. (2017). Understanding the nature and impact of business angels in funding research and innovation. Final Report. European Commission, Brussels.
- Egeln, J. and Gottschalk, S. (2014). Finanzierung von jungen Unternehmen in Deutschland durch Privatinvestoren. Auswertungen aus dem KfW/ZEW Gründungspanel. Centre for European Economic Research (ZEW), Mannheim.
- European Commission (2017). Open innovation, open science, open to the world – a vision for Europe. European Commission, Brussels.
- Fryges, H., Gottschalk, S., Licht, G. and Müller, K. (2007). Hightech-Gründungen und Business Angels. Endbericht für das Bundesministerium für Wirtschaft und Technologie. Centre for European Economic Research (ZEW), Mannheim.
- Gottschalk, S., Egeln, J., Hermann, F., Hupperts, S., Reuss, K., Köhler, M., Bersch, J. and Wagner, S. (2016). Evaluation des Förderprogramms „Invest – Zuschuss für Wagniskapital“. Projektbericht an das Bundesministerium für Wirtschaft und Energie (BMWi). Centre for European Economic Research (ZEW), Mannheim.
- Peters, B., Roberts, M. J. and Vuong, V. A. (2017). Dynamic R&D choice and the impact of the firm’s financial strength. *Economics of innovation and new technology* 26(1-2), 134-149.
- Rammer, C. and Weißenfeld, B. (2008). Innovationsverhalten der Unternehmen in Deutschland 2006, Aktuelle Entwicklungen und ein internationaler Vergleich, in: *Studien zum deutschen Innovationssystem*, 4-2008. Centre for European Economic Research, Mannheim.
- Thakor, R. T. and Lo, A. W. (2017). Optimal financing for R&D-intensive firms. MIT Sloan School Working Paper 5240-17.

Further Information

Contact

Dr. Maikel Pellens

Senior researcher in the ZEW Research Department “Economics of Innovation and Industrial Dynamics”, e-mail: maikel.pellens@zew.de, phone: +49 (0)621 1235-189

Dr. Georg Licht

Head of the ZEW Research Department “Economics of Innovation and Industrial Dynamics”, e-mail: georg.licht@zew.de, phone: +49 (0)621 1235-177

ZEW

Zentrum für Europäische
Wirtschaftsforschung GmbH
Centre for European
Economic Research

ZEW policy brief series

Publisher: Centre for European Economic Research (ZEW), Mannheim
L 7, 1 · 68161 Mannheim · P.O. Box 10 34 43 · 68034 Mannheim · Germany · Internet: www.zew.de · www.zew.eu
President: Prof. Achim Wambach, PhD · Director of Business and Administration: Thomas Kohl

Editorial responsibility: Prof. Achim Wambach, PhD

Quotes from the text: Sections of the text may be quoted in the original language without explicit permission provided that the source is acknowledged.

© Zentrum für Europäische Wirtschaftsforschung GmbH (ZEW), Mannheim, 2017 · Member of the Leibniz Association