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# »»» KfW Start-up Report 2022

## After coronavirus slump, number of start-ups recovered in 2021

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## After coronavirus slump, number of start-ups recovered in 2021

The number of innovation- or growth-driven young enterprises in Germany has bounced back again. After the coronavirus-induced downturn in 2020, the number of start-ups grew to 61,000 in 2021. This was due in part to a revival in entrepreneurial activity. Another reason is that some founders of young enterprises are likely to have rediscovered their growth ambitions after digesting the shock of the coronavirus pandemic and therefore again fall under the start-up definition.

For start-ups with very high capital or growth needs, venture capital can be a method of financing that fits their cash flow and risk profile. It has been found that entrepreneurs wishing to use VC are more likely to have characteristics that make it easier for them to access VC. They are more likely to combine an orientation towards innovation and growth, more likely to have an academic background and much more likely to have digital offerings, internet-based business models and international target markets.

But it has also been found that female start-up entrepreneurs are less likely to seek VC finance and that young entrepreneurs are more likely than average to seek VC finance. Both can be a reaction to prejudices that appear to be widespread in the VC ecosystem.

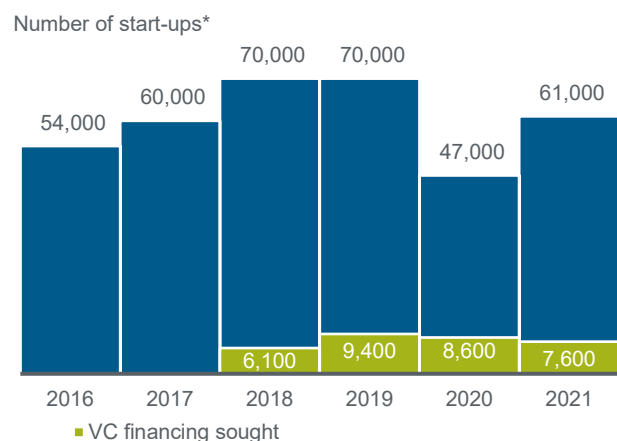
### Growing entrepreneurial activity has increased the number of start-ups

The number of innovation- or growth-oriented young enterprises, i.e. start-ups (see box 'What are start-ups?'), had dropped significantly in Germany as a result of the outbreak of the coronavirus pandemic. After this coronavirus slump, however, their number has now bounced back again to 61,000 in 2021 (Figure 1). The decline in 2020 was mainly explained by a sharp drop in entrepreneurial activity. Because of a lack of market entries, the high rates of closure (which were presumably even higher than normal as a result of the pandemic) could not be offset, so accordingly the number of start-ups fell noticeably. In 2021 the tide turned again with a revival of entrepreneurial activity. This occurred not just because more new businesses were founded overall and this base effect also lifts the number of start-ups but also because the structure of entrepreneurial activity changed. A significantly higher number of younger people (under-30s) founded a business.<sup>1</sup> This is also having a positive effect on the number of start-ups

because the projects of younger entrepreneurs are more likely to have start-up characteristics.

Start-ups hold great potential for renewal. In order to be able to realise it, however, they require suitable finance. That is because the more innovative and growth-driven they are, the less suitable traditional debt finance is for them. Loans are then a poor fit for both their cash flow profile and their risk profile.<sup>2</sup> Venture capital (VC), on the other hand, fits very well. Investors participate in start-ups with venture capital. The high risk therefore can potentially offer opportunities for high returns if the value of the start-up increases when it is successful. Without an active VC industry, many of the largest stock corporations would not exist in their current form.<sup>3</sup> More than 1,000 financing rounds were held in the past years. Since a start-up typically goes through several rounds of financing, this number in itself shows that few start-ups receive any VC at all. This is partly due to the fact that only a portion of start-ups seek to obtain VC finance. Of the 61,000 start-ups, only 7,600 wanted to finance their future growth this way in 2021. Unlike the total number of start-ups, however, this number is far less volatile. Thus, the number of start-ups that are open to VC remained relatively steady in 2020 despite the slump and did not change significantly now in the recovery either. The question that arises here is how those that are open to VC differ from other start-ups.

Figure 1: Number of start-ups recovered again after coronavirus slump



\* For start-up definition see box 'What are start-ups?'. Extrapolation based on working age population and average team size.

Source: KfW Entrepreneurship Monitor

**Start-ups that are open to VC combine innovation and growth orientation much more often**

The more innovative and growth-oriented start-ups are, the riskier they become because the uncertainty around their innovation success and their future cash flow rises. Accordingly, traditional loans are less suitable as a form of finance, which is why VC moves more into focus. This is also evident in their quest for VC finance. On a long-term average, 13% of founders of start-ups that are only either innovation- or growth-oriented are open to VC, in other words, want to use VC for their future growth. In start-ups that are both innovation- and growth-oriented, 30% of founders have the desire to obtain VC finance.

**Female entrepreneurs are (even) less open to VC**

The share of female founders of start-ups is significantly lower than in overall entrepreneurial activity. The long-term average share of female entrepreneurs in the start-up ecosystem sits at 19%, half as high as in all newly founded businesses (39%). The definition of start-ups plays a role here. Since women are more likely to start a business as self-employed professionals, on a part-time basis, on their own and without any employees and as they are less likely to seek strong growth, conduct technological research and development or offer a supra-regional new-to-market innovation, only three of 100 businesses founded by women have start-up characteristics compared with nine in 100 for men. Therefore, the characteristics that define start-ups in their subset all occur less often among female entrepreneurs.<sup>4</sup> Gender stereotypes are one explanation that is regularly mentioned in the scientific literature for that finding.<sup>5</sup>

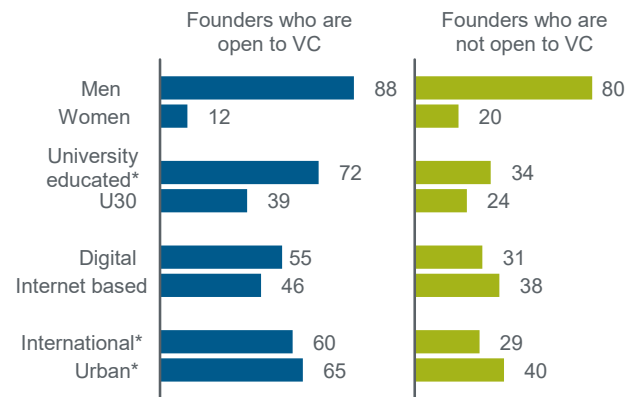
The share of female entrepreneurs among start-ups that are open to VC is even lower (12%, Figure 2) than among start-ups overall. This suggests that female start-up founders are less likely to seek VC than their male counterparts, which other surveys have confirmed.<sup>6</sup> Their lower receptiveness to VC can have different reasons. On the demand side, for example, it is possible that more of their business models, business goals or views about finance are less compatible with VC. It may also be a reaction to restrictions on the supply side. In fact, female founders have greater difficulty obtaining VC, for which (unconscious) bias on the part of VC investors evidently plays a role as well.<sup>7</sup>

**Box: What are start-ups?**

Start-ups are young commercial enterprises founded not more than five years ago (irrespective of their legal status) whose founders are **full-time** entrepreneurs, have a **team of founders or employees** and are **innovation- or growth-driven**, that is, conduct research and development in order to make a **technological innovation** market-ready or offer at least one **new-to-market innovation for Germany**.

**Figure 2: Different characteristics between founders of start-ups who are open/not open to VC**

Shares in per cent (average 2016–2021)



\* University educated: Individuals who already have or are still pursuing a university degree; International: Target market is the EU internal market or the global market; Urban: Domiciled in a city with district status.

Source: KfW Entrepreneurship Monitor.

**University educated entrepreneurs are more open to VC**

Some of the founders of business start-ups who are open to VC are structurally very different from those who seek no VC finance (Figure 2). They are more than twice as likely to have an academic background, that is, they have a degree or are still studying to earn one. One explanation for this is that a person’s educational background influences not just what they know but who they know (keyword: networking). Academic establishments are often formally or informally connected to the VC ecosystem. Connecting with VC investors through the institution or fellow classmates and alumni is therefore likely to be easier. It is plausible that this has a positive effect on the desire to receive VC. Start-up entrepreneurs who are open to VC are also likely to be younger, that is, under the age of 30. Contrary to what may be assumed, this is unrelated to the stronger academic background. In other words, these are not primarily tertiary students or graduates. On the contrary, most individuals with a tertiary degree

are 30 years old or older. Instead, what likely plays a role is their own financial resources, which grow as they get older and reduce the need to seek VC (for example from business angels).<sup>8</sup> It may also be a reaction of older individuals to the myth that young entrepreneurs in particular hold more promise, which also appears to be widespread among VC investors.<sup>9</sup> Empirically, however, the opposite has been revealed to be the true.<sup>10</sup>

Start-up entrepreneurs who are open to receiving VC are also significantly more likely to have digital offerings, internet-based business models and international target markets. These characteristics typically make their start-ups more scalable, in other words, they enable them to increase turnover faster than fixed costs. The level of scalability is known to be relevant for VC investors' decision on whether or not to invest. So it is understandable that business founders who have the attention of VC investors are also more inclined to seek VC finance. Good physical proximity is helpful for founders to shine more brightly on the radar of VC investors. Thus, VC investors are more likely to invest in start-ups that are domiciled in the vicinity of their own branch offices.<sup>11</sup> Entrepreneurs who are open to VC are therefore more likely to be found in cities. Networking effects are also likely to play a role here.

### Removing investors' prejudices can increase entrepreneurs' desire for venture capital

The number of start-ups in Germany recovered again slightly in 2021. This was due in part to a revival in entrepreneurial activity. Furthermore, a number of founders of young businesses are also likely to have rediscovered their growth ambitions after digesting the shock of the coronavirus pandemic and are now counted as start-ups again after falling out of the definition in 2020. For start-ups with very high capital or growth requirements, venture capital is a form of finance most suited to their cash flow and risk profile. The founders appear to anticipate this, too, because those who wish to use VC are also more likely to have characteristics that give them easier access to it.

However, it has also become evident that adapting to investor behaviour may also go too far, namely that female and older founders are less likely to want to use VC because it is in fact harder for them to access in the real world of business investment – also because of prejudices prevailing among investors. Raising awareness of existing prejudices alone can help investors adopt a more balanced attitude toward their investment choices.

<sup>1</sup> Metzger, G. (2022): [Start-up activity returned to pre-crisis level in 2021: More female, young and opportunity business starters](#), KfW Entrepreneurship Monitor 2022, KfW Research.

<sup>2</sup> Hall (2002), Start-ups and their financing in Europe, EU Monitor Global Financial Markets, Deutsche Bank Research.

<sup>3</sup> Gornall, W. and Strebulaev, I. A. (2015), [The Economic Impact of Venture Capital: Evidence from Public Companies](#).

<sup>4</sup> Metzger, G. (2019), [KfW-Start-up-Report 2019: Number of start-ups in Germany continues to grow](#), KfW Research

<sup>5</sup> Metzger, G. (2021), [KfW-Start-up-Report 2021: Coronavirus crisis weighs on start-up numbers – minor impact on start-ups that are open to VC](#), KfW Research.

<sup>6</sup> Hirschfeld, A., Gilde, J. and Wöss, N. (2021), [Female Founders Monitor 2020](#).

<sup>7</sup> Lo, V., Metzger, G. and Viete, S. (Forthcoming), [KfW Female Entrepreneurship Study](#), KfW Research.

<sup>8</sup> Azoulay, P., Jones, B. F., Kim, J. D. and Miranda, J. (2020), [Age and High-Growth Entrepreneurship](#), American Economic Review: Insights, Vol. 2, Nr. 1.

<sup>9</sup> Scheiber, N. (2014), [The Brutal Ageism of Tech](#): Years of experience, plenty of talent, completely obsolete, The New Republic, March 23, 2014.

<sup>10</sup> Azoulay et al. (2014), see endnote 8.

<sup>11</sup> Lutz, E., Bender, M., Achleitner, A.-K. and Kaserer, C. (2013), [Importance of spatial proximity between venture capital investors and investees in Germany](#), Journal of Business Research, Vol. 66, No. 11.