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## **Imprint**

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# Start-up activity 2020: a rollercoaster of highs and lows. Coronavirus crisis brings new low in full-time business starters but also holds opportunities

## Number of business start-ups fell

Start-up activity in Germany dropped in 2020 as a result of the outbreak of the coronavirus crisis. The number of business starters decreased to 537,000. Full-timers and part-timers were equally affected. The number of part-time business start-ups dropped to 336,000, while the number of full-time start-ups slipped to 201,000, a new low.

## The crisis: an opportunity for many

The year of the coronavirus crisis saw a larger share of business starters seizing business opportunities. Their share rose to 80%, leaving the number of opportunity start-ups at a relatively steady 428,000 despite declining start-up activity.

## Coronavirus crisis hit self-employed women harder but number of female business starters keeps stable

The coronavirus crisis dealt a particularly heavy blow to self-employed women, given the sectors they tend to work in. Nevertheless, the number of female business starters in 2020 was only marginally below the previous year's level, at 205,000. Aspiring female entrepreneurs appear to have adapted to the new crisis conditions faster and ultimately realised their start-up plans more often than men. Thus, female business starters were more likely to adapt their business models in 2020 than their male counterparts.

## Fewer obstacles, poorer grades

Most of the (typical) obstacles to start-ups were perceived less frequently than usual in 2020. This is likely related to the coronavirus crisis, which posed challenges that overshadowed everything and deterred many aspiring entrepreneurs from the outset. People who already had clear ideas and, accordingly, perceived obstacles less often were therefore more likely to start a business. Still, business starters generally judged Germany more harshly as a start-up location than in previous years.

## Outlook for 2021

The forecast for the business cycle and labour market in 2021 is good and that should benefit start-up activity. Start-ups put off in 2020 are also likely to bolster activity.

## Coronavirus crisis ruined positive outlook for 2020

Start-up activity in Germany decreased in 2020. Compared with 2019, 68,000 fewer persons ventured into self-employment, launching 537,000 businesses – a drop of over 11%. The start-up rate fell to 104 business starters per 10,000 persons aged 18 to 64 years, after 117 in 2019 (Figure 1). Full-time and part-time start-up activity developed similarly in 2020 but the decline in full-time start-up activity was marginally stronger. The number of full-time business starters fell to 201,000 (-27,000 ≈ -12%) – a new low since the beginning of the time series. The number of part-time start-ups decreased to 336,000 (-41,000 ≈ -11%).

After the increase in start-up activity in 2019, the year 2020 actually showed promise of further growth. The rate of start-up plans, an early indicator of how start-up activity will develop in the subsequent year, grew significantly in 2019. The outlook for the economy and labour market also gave reason to hope for more vigorous start-up activity.

But the outbreak of the coronavirus crisis fundamentally changed the conditions. The first lockdown in the spring of 2020 made it clear that containing the pandemic would require tough measures that left little room for planning. That created a massive rise in economic uncertainty. According to our current snap poll on the 'Gründerplattform', an online platform for business starters<sup>1</sup>, more than one third of new business starts were postponed until later in the year as a result.

Figure 1: Start-up rate drops to 104

Start-up rate (business starters per 10,000 employable persons)



Employable persons: Population 18 to 64 years of age.

Source: KfW Entrepreneurship Monitor.

Despite an improved economic outlook in the course of the year, there was no tailwind for start-up activity. Price-adjusted domestic demand was ultimately down -4.1% for the year as a whole (2019: +1.2%)<sup>2</sup> and unemployment stood at 4.0% (2019: 3.0%)<sup>3</sup>, with an intense use of short-time work evidently putting the brakes on a stronger trend. Nevertheless, there was more 'pressure' from the labour market to seek self-employment.

**Coronavirus crisis as an opportunity**

Contrary to expectations, the weaker labour market did not lead to more 'necessity start-ups'. On the contrary, a larger number of business starters ventured into self-employment in response to emerging business opportunities. Their share climbed to 80% (Figure 2), leaving the number of 'opportunity start-ups' at a relatively steady 428,000 (2019: 439,000). For one thing, many appear to have had the perseverance to realise their start-up idea despite the coronavirus crisis. For another, coronavirus restrictions have been particularly tough for those sectors in which many necessity start-ups are typically launched, such as hospitality and retail. This appears to have deterred potential necessity entrepreneurs as well.

Certain forms of entrepreneurship are associated with economic expectations. Because of their proximity to new technologies, innovative and digital start-ups<sup>4</sup> take on the role of Schumpeter's 'creative destroyers'. They particularly target established markets or create entirely new ones, thereby driving structural change. Since growth entrepreneurs expect their business to grow 'as large as possible', their hope is that they will make a lasting contribution to sustainable employment.

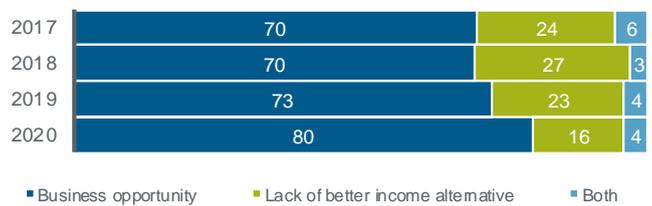
The shares of these business starters have changed little in the course of the year (Figure 3) and their number has thus dropped in line with the general decline. Innovative start-ups – business starters with R&D activities – accounted for 13% of start-up activity and 24% of them were growth-oriented business starters that intend to grow 'as large as possible'. Internet-based start-ups in which the internet is a core element of the business made up 31% and digital business starters whose offering can be used only through the use of digital technologies rose to 26%. Business starters can belong to several of the segments described here, with digital and internet-based start-ups overlapping more than any other segments.

**Box 1: The KfW Entrepreneurship Monitor**

The KfW Entrepreneurship Monitor is based on the information provided by 50,000 randomly selected persons domiciled in Germany. They are interviewed by telephone on an annual basis as part of a representative survey of the population. The survey covers a broad range of start-ups: full-time and part-time entrepreneurs, self-employed professionals and business owners, new businesses and takeovers. The KfW Entrepreneurship Monitor thus provides a comprehensive picture of entrepreneurial activity in Germany.

**Figure 2: Coronavirus as a business opportunity? – share of opportunity start-ups has grown**

In per cent of all start-ups

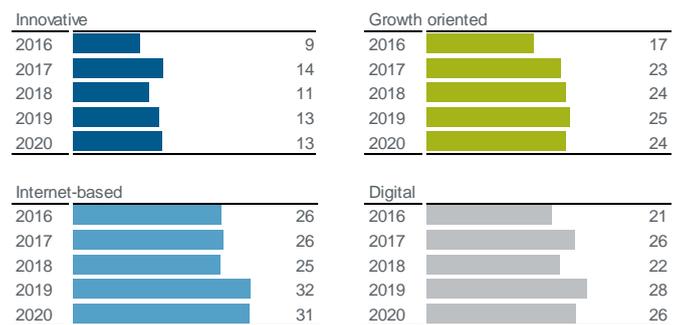


The question asked about the motive for self-employment was: 'Which statement would you rather agree with: You started your own business to seize an opportunity or you started your own business for lack of a better income alternative ('necessity')?'

Source: KfW Entrepreneurship Monitor.

**Figure 3: Three in ten business start-ups are internet-based, one in four digital**

In per cent of all start-ups



Note: The offering of digital start-ups is accessible only through the use of digital technologies; Fehler! Textmarke nicht definiert. in internet-based start-ups the internet is a core element of the business model; innovative start-ups perform research and development in order to make a technological innovation ready for the market; fast-growth start-ups aim to become 'as large as possible'. These groups can overlap, so their shares must not be added.

Source: KfW Entrepreneurship Monitor.

Start-ups that offer new-to-market innovations also have the potential to be ‘creative destroyers’. However, they comprise more than innovative start-ups, for example, which develop technological innovations. Most new-to-market innovations are offerings that already exist elsewhere and are brought to a market in a different area – from other regions into their own, or from other countries into Germany. On a long-term average, 16% of start-ups offer new-to-market innovations. Most of them are regional (9%) or national new-to-market innovations (4%). Worldwide new-to-market innovations, which are by definition indeed ‘unprecedented’, are least common at 3%.

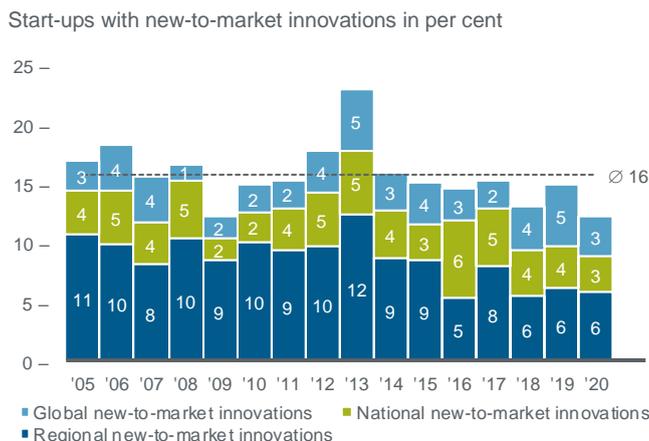
Since the extraordinarily high rate in the year 2013, when more than one in five business starters brought a novelty to market, a declining trend appears to have established which has now dropped to a new low (Figure 4). In 2020, the share of start-ups with new-to-market innovations fell to 12%.

**Takeovers and participations continue to lose appeal as pathways to self-employment**

Self-employment can be entered in different ways. By establishing a company from the ground up, i.e. putting in place initial business structures, for example for customer acquisition and sales, but also by taking over or participating in existing companies. Starting from the ground up is the most common form. Eight in ten business starters founded new businesses from the ground up. A long-term comparison shows a trend towards starting from the ground up. In the 2010s the share mostly remained below 70%. Given the high number of imminent successions in the SME sector, the fact that business starters are not showing a greater interest in takeovers as a pathway to self-employment is a critical development.<sup>5</sup>

A large portion of new businesses are solo start-ups. Unlike in team start-ups, these businesses are started by a single person without any co-starters. As in the previous year, solo start-ups accounted for 79% of all start-ups in 2020. However, the share of solo start-ups that have no employees dropped to 60%. That was the lowest rate since 2009.

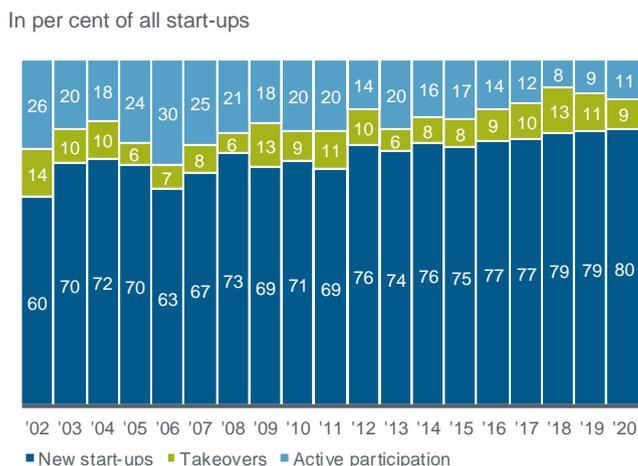
**Figure 4: Start-ups with new-to-market innovations are fewer than they have been in a long time**



Note: New-to-market innovations are products or services viewed by the surveyed start-ups as being new to either the regional, the national or the global market.

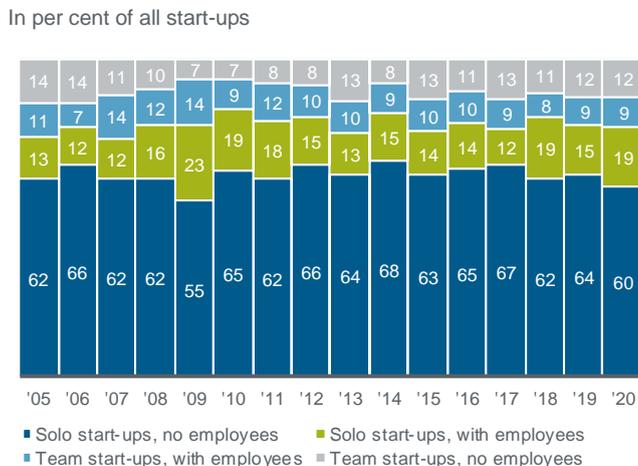
Source: KfW Entrepreneurship Monitor.

**Figure 5: New start-ups increasingly predominate**



Source: KfW Entrepreneurship Monitor.

**Figure 6: 10-year low in solo start-ups without employees**



Source: KfW Entrepreneurship Monitor.

**Coronavirus crisis has affected start-up activity differently in individual states**

In Berlin, 181 out of 10,000 employable persons started working for themselves each year on average for the years 2018 to 2020 (Figure 9). This puts Berlin clearly at the top of the list of federal states (Table 1). The above-average start-up activity in Berlin has recently radiated into its periphery in the past years, directly benefiting Brandenburg. Given the relatively small population, each business starter carries great weight. Brandenburg thus climbed to second place in the ranking but now slid back to 5th place as a result of the coronavirus-induced reduction in start-up activity. Hamburg is in second place with 129 business starters per 10,000 employable persons, ahead of third-placed Schleswig-Holstein with 120. Bavaria occupies fourth place with 109 business starters per 10,000 employable persons.

**Start-up activity is higher in conurbations**

Urban agglomerations are characterised by short distances and high population and business density. That benefits service providers and retailers most of all. These are precisely the sectors where self-employment is a more common form of economic activity.

**Table 1: Ranking by federal state is largely steady**

| Federal state ranking of start-up activity | New rank | Δ | Old rank |
|--|----------|---|----------|
| Berlin                                     | 1        | • | 1        |
| Hamburg                                    | 2        | ▲ | 3        |
| Schleswig-Holstein                         | 3        | ▲ | 10       |
| Bavaria                                    | 4        | • | 4        |
| Brandenburg                                | 5        | ▼ | 2        |
| Baden-Württemberg                          | 6        | • | 6        |
| Lower Saxony                               | 7        | ▼ | 5        |
| Hesse                                      | 8        | • | 8        |
| Saxony                                     | 9        | ▲ | 11       |
| North Rhine-Westphalia                     | 10       | ▼ | 7        |
| Thuringia                                  | 11       | ▲ | 14       |
| Saarland                                   | 12       | ▲ | 13       |
| Rhineland-Palatinate                       | 13       | ▼ | 9        |
| Saxony-Anhalt                              | 14       | ▼ | 12       |
| Mecklenburg-Western Pomerania              | 15       | • | 15       |
| Bremen                                     | 16       | • | 16       |

Rank by number of businesses founded per 10,000 employable persons in the periods from 2018 to 2020 (new ranking) and from 2017 to 2019 (old ranking).

Source: KfW Entrepreneurship Monitor.

So the higher population density of western German (non-city) states is probably one reason they typically follow the city states in the start-up ranking. However, the federal states' particular economic structure also plays an important role. Start-up activity in Hamburg and Berlin is strongly driven by the media and IT industries with their high shares of business starters. A manufacturing-based economy, in turn, tends to have less start-up activity. Large enterprises typically offer attractive jobs that are also of interest to potential business founders. The bottom of the ranking list is consistently populated by large eastern German states. Start-up activity there is hampered by lower average purchasing power. Their older population structure also has an adverse effect on start-up activity as the propensity to start a business usually declines with age.<sup>6</sup>

**Figure 7: Start-up activity in Germany**

Number of business starters per 10,000 employable persons between 2018 and 2020, Ø p. a.



Source: KfW Entrepreneurship Monitor.

### Start-ups with employees are up again slightly

Most business start-ups do not employ any workers. On a long-term average, only a good one quarter of business starters are also employers (26%, Figure 8). That proportion rose slightly to 28% in 2020. A look at new businesses – that is, not counting takeovers or active participations in companies where there were often already employees in the companies before the change of ownership due to the business start – shows that, on a long-term average, a good one fifth (21%) are also employers. That share also rose slightly to 22% in 2020.

On a long-term average, full-time start-ups more than twice as likely to have employees (37%) as part-time start-ups (17%). But a gap has opened up here since the year 2012. Part-time start-ups are employing increasingly fewer workers, while the trend is pointing slightly upwards for full-time start-ups. As a result of this trend, the shares drifted apart to 47% for full-time start-ups and 11% for part-time start-ups until 2020.

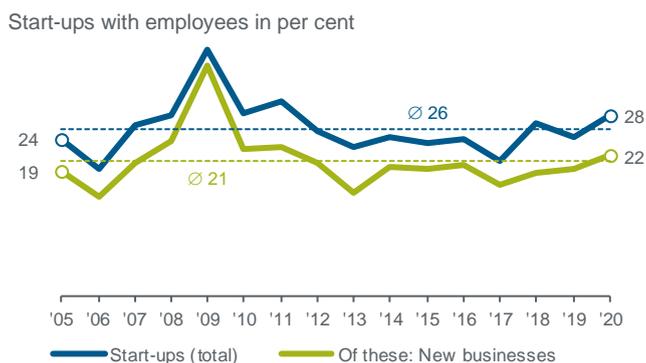
### Fewer business start-ups in the retail sector

The sectoral structure of start-up activity tends to be very stable over time. Most start-ups are founded in the services sector. Around two thirds of start-ups are usually service providers. Those with a focus on commercial customers (business services) are typically more common than service providers who focus on retail customers (personal services). Other services (the financial services, transport and communications sectors) accounted for only a relatively low share of services. However, two changes appeared in the typical sectoral structure in 2020, as was the case in 2015. First, the share of service providers was an above-average 74% and second, the share of retail start-ups was 13%, which is lower than usual (Figure 9). The share of start-ups in the manufacturing sector hardly changed at all (13%).

### Number of female business start-ups was steady

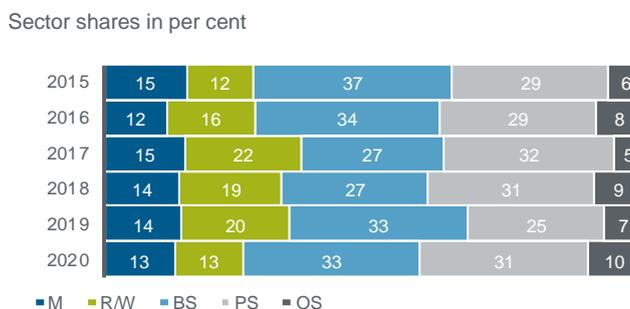
Just as the higher start-up activity in 2019 was due to a higher number of start-ups headed by men, men also led the decline in 2020 (Figure 10). The number of businesses started by men fell to 332,000 (-58,000), whereas the number of businesses started by women dropped by a relatively moderate -10,000 to 205,000, just slightly below the previous year's level. Thus, the share of women in all start-ups was 38% (2019: 36%).

Figure 8: Share of start-ups with employees rose again above the average



Source: KfW Entrepreneurship Monitor.

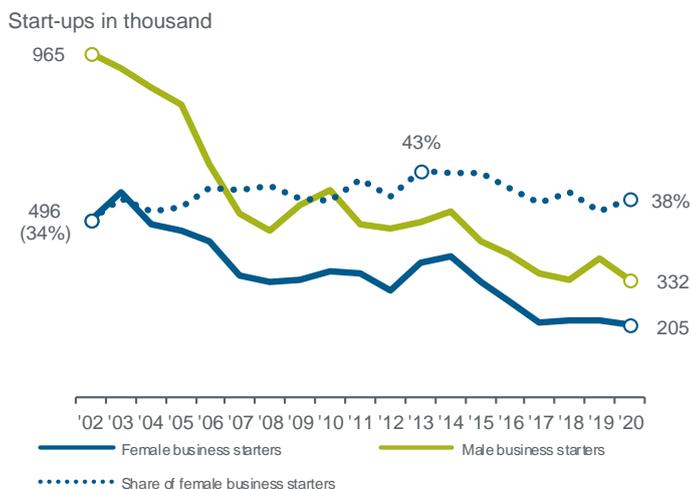
Figure 9: One third of start-ups are business service providers



Note: Start-ups were allocated to particular branches of economic activity in accordance with the 'Classification of Economic Activities' of the German Federal Statistical Office, Edition 2008, on the basis of project descriptions provided by the business founders. Sectors: Manufacturing (M); Retail/Wholesale (RW); Business services (BS); Personal services (PS); Other services (OS).

Source: KfW Entrepreneurship Monitor.

Figure 10: Number of female business starters nearly steady since 2017



Source: KfW Entrepreneurship Monitor.

Studies show that self-employed persons have been hit hard by the coronavirus crisis and that the crisis has dealt a particularly hard blow to self-employed women. They suffered more and higher losses in turnover and, as a consequence, were more likely to experience survival fear and reductions in living standards.<sup>7</sup> To be sure, this is closely related to sectoral effects but, given the situation for the number of female business starters, a significant decline was to be expected. Why has the number of female business starters remained so steady?

One possible explanation is that at least some of the aspiring female entrepreneurs adapted to the new crisis conditions faster and ended up realising their start-up plans more often than men. One indication that supports this explanation is the share of business starters who adapted their business model in response to the coronavirus crisis. It turns out that female business starters made adjustments more often (52%) than their male counterparts (39%, Figure 11). The difference is clearly driven by part-time start-ups, however. Thus, half each of full-time and part-time female business starters and full-time male entrepreneurs adapted their business model in response to the coronavirus. For part-time male business starters, however, that figure was only 28%. Overall, 43% of start-up entrepreneurs adapted their business model. Given the different behaviour of male entrepreneurs, there were altogether more business model adaptations in full-time start-ups (51%) than part-time start-ups (39%).

**Capital is an important start-up resource**

The resources needed to start a business depend on the entrepreneurs' motives and business models. Accordingly, their financing mix can be quite diverse. In general, however, most start-up businesses require financial resources – in a long-term comparison, 60–70% annually (Figure 12). The share was within this range in 2020 as well. Around two thirds of business starters employed financial resources.

As in the previous year 2019, however, an exceptionally large share of entrepreneurs started their business in 2020 using only their own funds. Fifty-five per cent of start-ups used own funds exclusively. The share of entrepreneurs who mobilised external funds from third-party capital providers, on the other hand, fell slightly again to 12%. Of these, 7% used external capital of up to EUR 25,000 and 5% external capital of more than EUR 25,000.

**Figure 11: A good one half of female business starters adapted their business model in response to the coronavirus crisis**

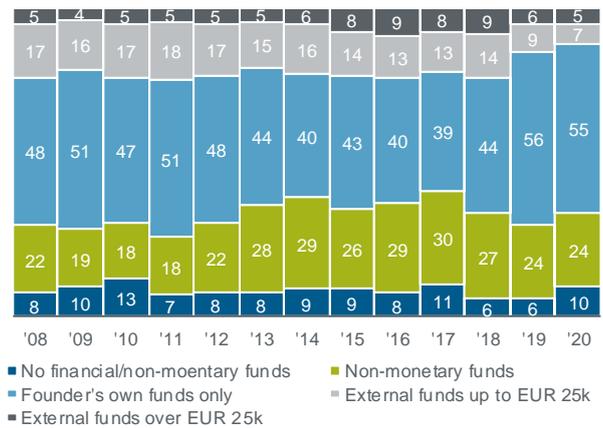
Business model adapted in response to the crisis, shares in per cent

|           | Total | Business starters (M) | Business starters (F) |
|-----------|-------|-----------------------|-----------------------|
| Total     | 43    | 39                    | 52                    |
| Full-time | 51    | 52                    | 49                    |
| Part-time | 39    | 28                    | 53                    |

Source: KfW Entrepreneurship Monitor.

**Figure 12: More than half of start-ups were funded exclusively from own resources**

Start-ups by use of resources in per cent



Note: Differences may be due to rounding.

Source: KfW Entrepreneurship Monitor.

Changes in the use of resources over time in start-up activity are usually due to changes in the composition of the start-up businesses. If more start-ups have employees, more start-ups require funds because most of them are reliant on start-up capital (2020: 77%). On the other hand, solo business starters, for example, can often start up without any funds at all. In 2020 that was the case for 40% of solo business starters (without employees). In cases where solo start-ups did require funds, the entrepreneurs' own funds were often sufficient. Thus, more than half the solo start-ups without employees (55%) were funded exclusively from their own resources.

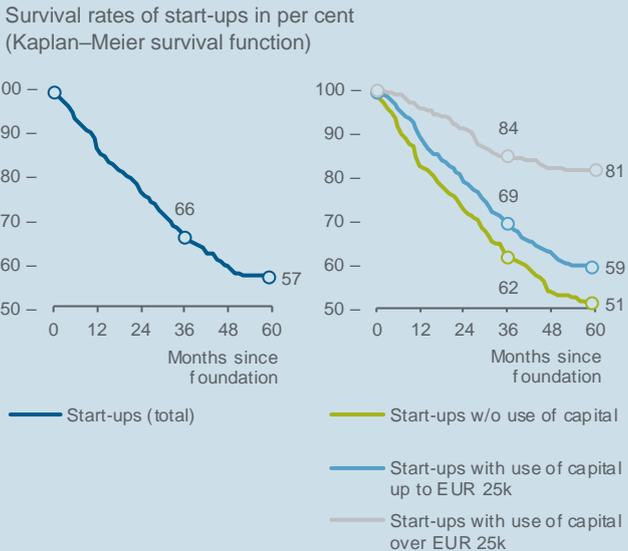
**Start-ups became more capital-intensive**

The average amount of capital used to start a business grew in recent years. However, this is because the use of funds by the most capital-intensive start-ups decoupled from the rest and grew significantly. Thus, the mean amount of capital used for all start-ups (that is, including those launched with no funds) hardly changed (Figure 16). Nor is there a lot to be seen yet in those start-ups that belong to the 25% deploying the highest amounts of capital.

**Start-up discontinuation rates**

The survival rate of start-ups can be roughly determined with the KfW Entrepreneurship Monitor using the ‘3-30 rule of thumb’. It means that around 30% of businesses close again within the first three years. The survival rate is actually even lower: After the first 36 months, 66% of start-ups are still operating but after 60 months that figure is down to 57% (Figure 14, left). The reasons for aborting are diverse. By far the largest proportion of business starters discontinue their venture in the first five years for personal reasons, not because of immediate financial stress (Figure 15, right). Examples of personal reasons include family pressures, illness, dissatisfaction with income achieved or the emergence of a more attractive job alternative.<sup>8</sup> Besides, many start-ups are planned only for the short term to begin with, particularly part-time businesses.

**Figure 13: The more capital a business has, the longer it survives**



Source: KfW Entrepreneurship Monitor.

**Figure 14: Start-ups are usually discontinued for personal reasons**



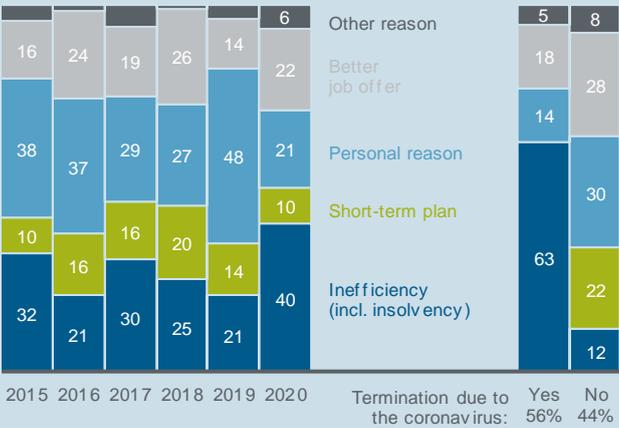
Source: KfW Entrepreneurship Monitor.

Only a small fraction of start-ups end because of insolvency. Discontinuation rates therefore cannot be equated to ‘default rates’. That would also be wrong because a large portion of businesses start without external capital input, so they would not be able to ‘default’ at all. By comparison, founders who employ larger sums in excess of EUR 25,000 (regardless of whether these are their own or borrowed funds) have significantly higher survival rates (Figure 14, right). Discontinuation rates are particularly high among entrepreneurs who start off without any financial capital at all. This has to do with the goal of their venture: such start-ups are more likely to be designed as a source of temporary income, whereas more highly capitalised businesses are designed for the longer term.<sup>9</sup>

The coronavirus crisis clearly affected the reasons for business closures in 2020. Thus, twice as many of the businesses started up to five years ago were closed in 2020 due to unprofitability as in 2019 (Figure 15). Overall, the coronavirus crisis was decisive in just over half (56%) of closures of young businesses in the year 2020.<sup>10</sup> Lack of profitability was the main reason for closure in 63% of these. A further 18% abandoned their self-employment in order to accept a more attractive job offering, for example because the broad business closures imposed on their sector to contain the coronavirus pandemic meant that they were no longer allowed to remain open. But personal reasons also played a role in coronavirus-induced closures (14%), for example as a result of a COVID-19 illness.

**Figure 15: Closures increased as a result of economic pressure from the coronavirus crisis**

Shares in per cent of all closures of businesses not more than five years old in each year



Source: KfW Entrepreneurship Monitor.

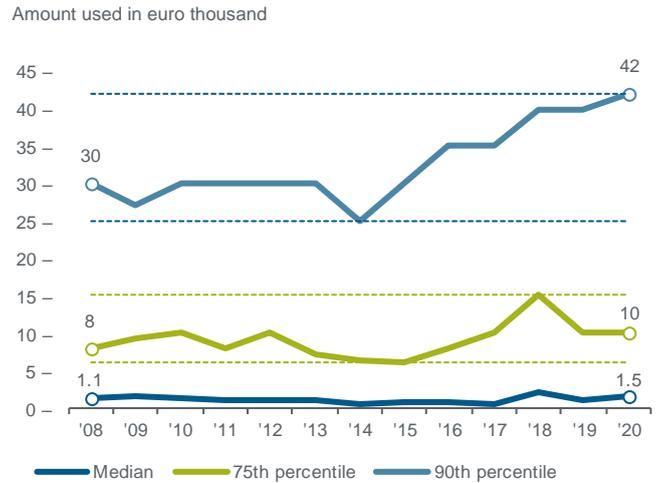
The minimum amount of capital they use (75th percentile) increased from EUR 8,000 to EUR 10,000 in the period under review. The trend becomes clearer in start-ups that belong to the top 10% using the highest amounts of capital. The minimum amount of capital they use (90th percentile) increased from EUR 30,000 to EUR 42,000 since 2008. This trend is driven by full-time start-ups. The capital used by the top 10% of them increased from EUR 50,000 in 2008 to just under EUR 90,000. However, it was not a steady increase but rather a sudden shift in levels. While the 90th percentile of capital deployed by full-time start-ups, that is, their minimum capital amount, was between EUR 30,000 and EUR 60,000 before 2015, the range between 2015 and 2020 was a significantly higher EUR 70,000 to EUR 110,000. This could be due to the fact that from 2015 the share of start-ups from unemployment fell substantially once again because of the labour market upswing.

**Financing problems affect only few business starters – but more start-up planners**

In the past two years, the share of start-ups using external funds was well below average. One plausible reason would be that more frequent financing difficulties have led to the lower shares. But that is not the case. In both years, the share of start-ups that ran into difficulties in obtaining finance was very low (2020: 11% and 2019: 12%, Figure 17).

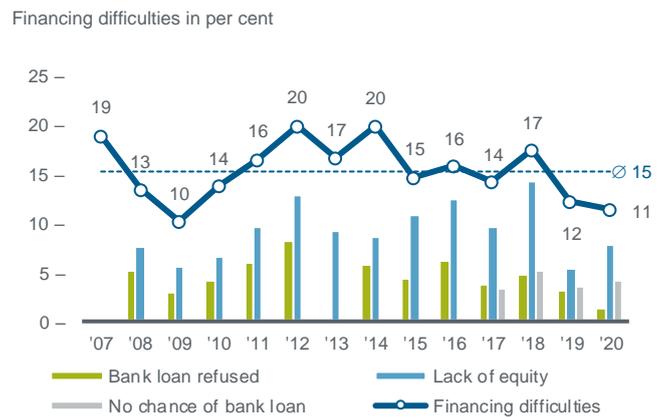
Financing difficulties occur when business starters cannot obtain start-up finance as expected. For example, their own funds may not be sufficient, they may have no or insufficient access to external capital, or they need to put in greater planning or persuasive effort vis-a-vis capital providers than anticipated. Business starters are systematically at a disadvantage compared with established entrepreneurs specifically when seeking external finance. They often lack confidence-building and risk-minimising elements such as a corporate history or collateral. Besides, they often have relatively low credit requirements. But lenders find it less attractive to extend small amounts to them because of the fixed costs involved. The effort required to secure entrepreneurial finance can therefore be substantial. That is why financing difficulties are also more common in years when more start-ups use external capital to finance themselves. The financing difficulties then reflect the acquisition effort.

**Figure 16: Development of funds used for the most capital-intensive start-ups has decoupled**



Source: KfW Entrepreneurship Monitor.

**Figure 17: Just over one in ten start-ups face financing difficulties**



Source: KfW Entrepreneurship Monitor.

On the other hand, the potentially substantial effort of arranging start-up finance is therefore a challenge that many fail to meet already during the planning stage. So in order to assess the impact of financing difficulties on start-up activity, the analysis needs to look at more than the impact on realised start-ups, as they eventually overcame the challenge successfully. The impact on start-up plans, especially the abandoned ones, must also be studied. On a long-term average, financing difficulties affected roughly half the abandoned plans. In 2020 the share was slightly lower, however, at 31% (Figure 18). But compared with 11% for realised start-ups, financing difficulties remain significantly more common for abandoned start-up plans and thus represent a high barrier to entrepreneurship.

In general, the more often a particular problem occurs with discontinuers compared with realised start-ups (balance), the more often this problem is likely to have posed a barrier and effectively prevented business foundation. Seen in this light, the financial risk poses the greatest barrier to start-up activity (balance: 32 percentage points), ahead of lack of finance (balance: 20 PP) and fear of social descent in case of failure (balance: 17 PP).

Strikingly, in 2020 most obstacles to start-ups and start-up plans were much less common than usual. This is likely due to the coronavirus crisis, which deterred many aspiring entrepreneurs even before they developed start-up plans. So 2020 was more likely to see those aspiring entrepreneurs forging and implementing start-up plans who had already taken a closer look at their potential venture and therefore were less likely to perceive obstacles.

### Business starters gave Germany a low score as a start-up location

Business starters gave Germany very steady scores as a start-up location. The quality of infrastructure, advisory services, protection of intellectual property, business founder image and free market access received average grades of 2 and 3 (good to satisfactory), with the latter factors given the best grades. The factors access to public promotional funds, availability of credit, access to venture capital, legal regulations, tax burden, commitment by policymakers, reporting duties and education system were regarded as satisfactory to sufficient (receiving average grades between 3 and 4 (Table 2)).

After a year of the coronavirus crisis, business starters now generally judged Germany harshly as a start-up location. The usual grades were given only to free market access (2.3), advisory services (2.6), access to public promotional funds (3.3) and credit availability (3.7). The grades given for other factors, on the other hand, were half to one and a half grades lower (0.4 to 1.3). Legal regulations (4.3; +1.3), bureaucratic information and reporting duties (4.6%; +1.2) and tax burden (4.4%; +0.8) received the steepest downgrades. Free market access and advisory services were now the only two remaining factors receiving grades better than satisfactory, while six factors were rated sufficient at best.

### Figure 18: Financial risk of abandoning start-up plans is main barrier

Frequency of obstacles in per cent

| Barriers                        | Start-ups |         | Start-up plans |    |  |
|---------------------------------|-----------|---------|----------------|----|--|
|                                 |           | Aborted | Still active   |    |  |
| Bureaucracy                     | 29        | 33      | 33             | 33 |  |
| Strain on family                | 23        | 31      | 27             | 27 |  |
| Customer access                 | 17        | 20      | 19             | 19 |  |
| Economy                         | 17        | 27      | 17             | 17 |  |
| Commercial know ledge           | 16        | 19      | 13             | 13 |  |
| Fear of social decline if fails | 13        | 30      | 18             | 18 |  |
| Opportunity risks               | 12        | 26      | 20             | 20 |  |
| Financial risk                  | 11        | 43      | 27             | 27 |  |
| Technical qualification         | 11        | 17      | 18             | 18 |  |
| Lack of finance                 | 11        | 31      | 22             | 22 |  |
| Lack of employees               | 11        | 15      | 19             | 19 |  |
| Incomplete business idea        | 11        | 24      | 22             | 22 |  |

Source: KfW Entrepreneurship Monitor.

### Table 2: After a year of coronavirus crisis, Germany is eyed more critically as a start-up location

Average score is given by business starters using customary German school marks of 1 (very good) to 6 (insufficient)

|  | 2015 | 2017 | 2018 | 2019 | 2020 |
|--|------|------|------|------|------|
| Free market access                         | 2.5  | 2.5  | 2.4  | 2.2  | 2.3  |
| Advisory services*                         | 2.6  | 2.7  | 2.8  | 2.7  | 2.6  |
| Business founder image                     | 2.4  | 2.5  | 2.5  | 2.4  | 3.1  |
| Protection of intellectual property        | 2.9  | 2.9  | 2.8  | 2.7  | 3.1  |
| Quality of public infrastructure           | 2.3  | 2.7  | 2.6  | 2.7  | 3.2  |
| Financing with promotional loans           | 3.3  | 3.4  | 3.4  | 3.1  | 3.3  |
| Financing with bank loans                  | 3.7  | 3.6  | 3.7  | 3.7  | 3.7  |
| Financing with venture capital             | 3.3  | 3.4  | 3.3  | 3.1  | 4.0  |
| Legal regulations*                         | 3.2  | 3.3  | 3.1  | 3.0  | 4.3  |
| Tax burden*                                | 3.6  | 3.8  | 3.6  | 3.5  | 4.4  |
| Policymakers' commitment**                 | 3.6  | 3.9  | 3.8  | 3.4  | 4.5  |
| Educational system**                       | 3.9  | 4.2  | 3.9  | 3.9  | 4.5  |
| Bureaucracy (information/reporting duties) | 3.5  | 3.7  | 3.6  | 3.3  | 4.6  |

\* Pertaining to concerns of business founders, self-employed persons and entrepreneurs

\*\* With respect to the teaching of business knowledge and skills

Source: Years 2015–2019 follow-up interviews to the KfW Entrepreneurship Monitor<sup>11</sup>, year 2020 snap poll on 'Gründerplattform'<sup>1</sup>, unweighted score given by respondents.

When assessing how business starters rate the enabling environment, it must be taken into account that some factors are more difficult for them to judge than others. For example, a large percentage of business starters does not need loans and only a very small portion relies on venture capital. How these factors are rated therefore often has nothing to do with their experience of starting a business but is based on general information such as media reports or even their gut feeling. Business starters therefore typically rate the

enabling conditions more critically than experts who deal with start-ups or start-up activity on a daily basis as part of their work. Rating discrepancies are apparent in 2020 as well (Figure 19) and some are very significant. For example, policymakers' commitment (3.6; -0.9), tax burden (3.5; -0.8), the availability of advisory services (1.8; -0.8) and the possibility of obtaining promotional loans (2.6; -0.7) scored almost a full grade better with experts than with business starters.

Business starters rated policymakers' commitment sufficient to unsatisfactory. The impression of how they have managed the coronavirus crisis – with which many self-employed persons are unhappy – is likely to play a significant role in this rating. Experts, on the other hand, presumably take into account in their assessment as a positive the fact that entrepreneurial topics have clearly moved up in the economic policy agenda in the past years, as shown by the 'GO!' start-up campaign<sup>12</sup> that was launched in 2018. This campaign encompasses the expansion of certain instruments that promote start-up finance but also more challenging undertakings such as strengthening start-up culture in Germany.

Business starters regard financing opportunities using promotional loans as just barely satisfactory, while experts clearly rate them better, giving them scores of good to satisfactory. As already mentioned, this may have to do with the fact that it is difficult for business starters with no experience of their own to rate this factor. Thus, 45% were candid enough to admit that they were unable to assess this factor (with 50 and 67%, this applies even more to financing options using bank loans and venture capital)<sup>13</sup>. Experts, on the other hand, have a broader overview of existing offerings and some of them know from their day-to-day work where and how to apply for promotional loans. In an international comparison of public promotion, experts see no country that would perform significantly better than Germany. The country's official promotional infrastructure appears to set international standards.<sup>14</sup> This suggests that efforts to provide business starters with a better overview of the broad range of promotional offerings should be intensified even more.

The availability of advisory services was also rated very differently. To be sure, business starters gave advisory

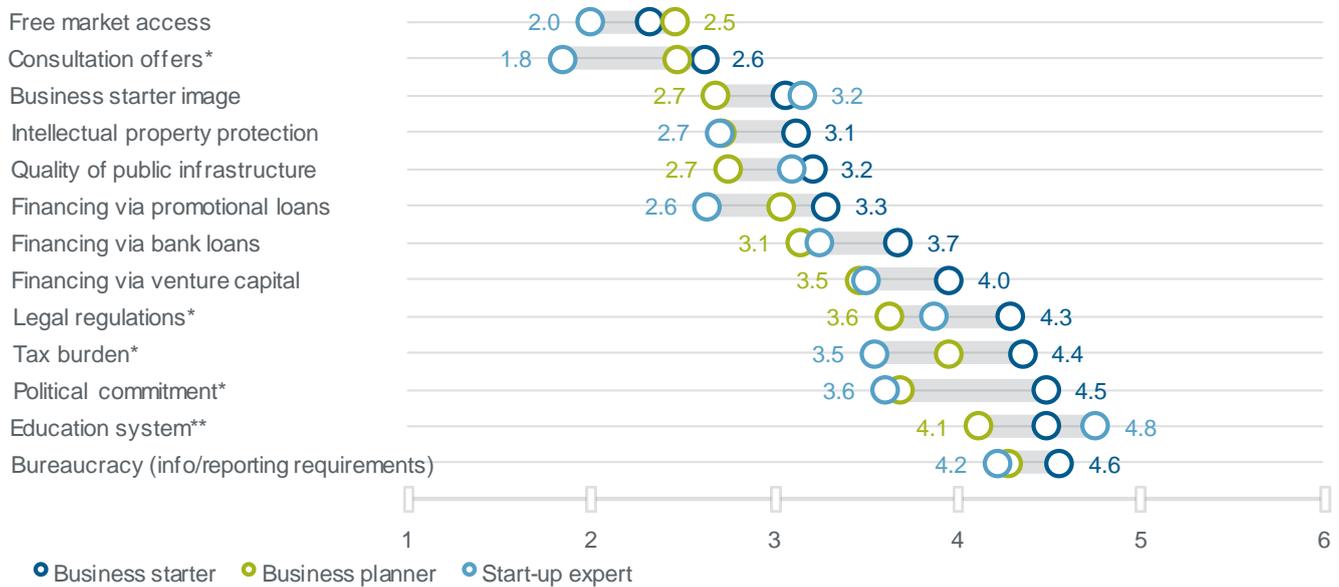
services the second-best score in 2020 but a grade of good to satisfactory means there is still room for improvement. Experts, on the other hand, regarded the availability of advisory services as 'very good'. One possible reason for this discrepancy may be that business starters are not familiar with all advisory services (including free ones) and therefore rate their availability poorer than it is.<sup>15</sup> Furthermore, entrepreneurial advice also forms part of the day-to-day work of many experts, so the rating given partly applies to their own work and therefore does not represent an entirely objective expert assessment.

Business starters and experts were in agreement about the image of entrepreneurs and the quality of public infrastructure, which they all regarded as satisfactory. What experts did rate much more poorly than business starters was how business knowledge and skills are taught in the education system. Experts rated these conditions 'unsatisfactory'. In the past, business starters rated this aspect satisfactory to sufficient – near the bottom end of the scoring range and it slipped again in 2020. Nevertheless, bureaucratic information and reporting duties replaced it for the lowest score, an aspect which experts also rated merely 'sufficient'. So there is a great need to bring more entrepreneurial content into German school curricula and to make bureaucratic processes and requirements more entrepreneur-friendly. There are already several initiatives aimed at arousing students' interest in entrepreneurial thinking and action.<sup>16</sup> In addition, thought should be given to firmly mainstreaming 'entrepreneurship education' in the curriculum.<sup>17</sup> But even ensuring that entrepreneurship and self-employment are presented in school-books in a balanced way would already be a quick win.<sup>18</sup> Extensive digitalisation of public administration (e-government) in particular provides potential for reducing bureaucracy.<sup>19</sup>

What is striking is that start-up planners have a significantly less critical view of the enabling conditions than entrepreneurs. They usually rate the individual factors in a similar way as experts, sometimes even better (Figure 19).

**Figure 19: Grades given to Germany as a start-up location – comparison between business starters, start-up planners and start-up experts**

Average scores using customary German school marks of 1 (very good) to 6 (insufficient)



\* To the concerns of business founders, self-employed persons and entrepreneurs  
 \*\* With respect to the teaching of business knowledge and skills

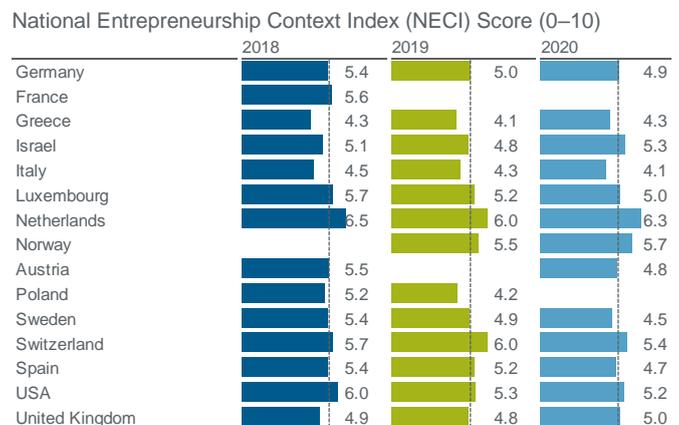
Source: Snap poll on Start-up platform and partner survey<sup>1</sup>, unweighted score given by respondents.

The poor scores given by business starters to the enabling conditions might be an expression of their anger about the (usually negative) impact of the crisis on business – a component that has not yet affected planners.

**Start-up location Germany in an international comparison – good with upside potential**

Without a doubt, several entrepreneurially relevant factors in Germany need to be improved. There should be no conditions rated merely sufficient – or even worse. From an expert perspective, however, Germany performs better in an international comparison than some of the poor grades suggest. The Global Entrepreneurship Monitor collects opinions given by experts on entrepreneurially relevant conditions in many countries, combines them into an index (score) and compares them. As many countries do not participate continuously, a ranking-based comparison and assessment of changes in rankings are not meaningful. The same applies to annual changes in scores, as the composition of the expert panels varies over time and this can lead to different assessments, particularly where panels are small.<sup>20</sup> Nevertheless, a benchmark comparison provides an impression of where Germany stands as a start-up location.

**Figure 20: In a benchmark comparison, Germany scores well as a start-up location**



Source: Global Entrepreneurship Monitor.<sup>21</sup>

In comparison with its European benchmarks and the US, the expert assessment for Germany is good (**Fehler! Verweisquelle konnte nicht gefunden werden.**). In the past three years the index values were in the vicinity of ‘start-up nations’ such as the US, the United Kingdom and Israel. Only in comparison with the Netherlands, Norway and, in part, Switzerland did Germany clearly and consistently lag behind and the goal should be to match the entrepreneur-friendly conditions of these countries.

### Start-up activity in 2021 will benefit from start-up plans put off in 2020 because of the coronavirus

As explained above in the discussion of start-up barriers, the existential threat which the coronavirus crisis created for many self-employed persons from the most varied sectors deterred many aspiring entrepreneurs before they even developed any start-up plans. Planning activity plummeted accordingly in 2020 (Figure 20). So as more determined potential entrepreneurs were rather more likely to forge start-up plans in 2020, the share of abandoned start-up plans dropped at the same time. Thus, the rate of existing start-up planners among employable persons dropped year on year from 6.4% in 2019 to 4.4%. That means the number of nascent entrepreneurs – those who were in the process of founding a business – fell significantly.<sup>22</sup>

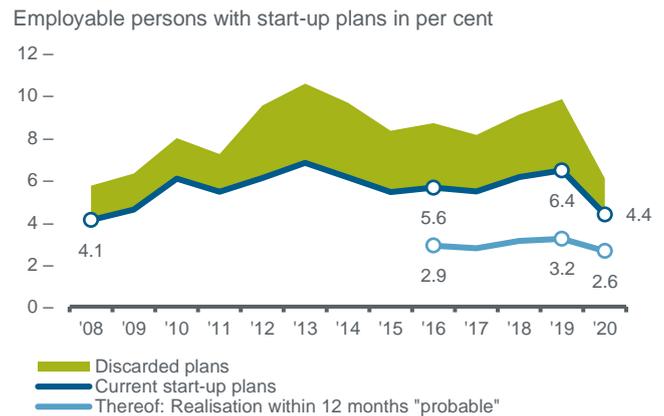
Another expression of start-up planners' increased determination in 2020 was that the share of those intending to start their business activity within the next 12 months only fell from 3.2% (2019) to 2.6% of the working age population, a smaller drop than overall planning activity.

The high planning rate compared with the start-up rate means that many start-up plans are never realised. Still, the movement in the planning rate is normally a good indicator of the development of the start-up rate in the following year.<sup>23</sup> This is because the process from the idea to implementation takes several months on average. But since the coronavirus crisis upended many start-up plans, the planning and start-up rates are currently less closely correlated. Therefore, it is only at first glance that the lower planning rate in 2020 seems to be a negative signal for start-up activity in 2021. After all, many of these start-up planners actually wanted to start their business already in 2020 but put their plans on hold because of the coronavirus crisis. So they are more advanced in their planning process than the planners of the previous years were at a comparable stage and therefore closer to realisation. That should benefit start-up activity in 2021. Furthermore, the business cycle and labour market in 2021 are forecast to improve, which should generally have a net positive effect on start-up activity as well.

The coronavirus crisis has created much economic uncertainty and put pressure on start-up activity.<sup>24</sup> Once the crisis has been overcome, this uncertainty will decrease and the usual start-up barriers will come to the fore again. In order to stimulate start-up activity, these start-up barriers must be removed. For years, the most formidable start-up barrier has been financial risk (Figure 18). Another reform of insolvency legislation came into effect at the start of 2021: the shortening of

the residual debt discharge procedure.<sup>25</sup> Residual debt discharge means cancelling an insolvent debtor's residual debt after a certain period. The shortening of the proceedings is a measure that generally reduces the financial risk of entrepreneurs as they can become debt-free faster should they become insolvent and thus get a chance at a new financial beginning.

### Figure 20: Significantly fewer start-up plans – especially with a more distant time horizon



The shares are based on the responses given to the questions: 'In the past twelve months, have you ever given serious thought to self-employment – whether full-time or part-time?'; 'Have you given up these plans in the meantime?' and 'Do you expect your planned business to begin operating within the next twelve months?'

Source: KfW Entrepreneurship Monitor.

The question now is whether the reform will actually have a positive impact on start-up activity. Business founders – and self-employed persons overall – are rather sceptical in this regard. Fewer than one in five believe that the prospect of faster debt discharge will lead to more start-ups (Figure 21).

As explained above, however, business starters are only one side of the same coin in how start-up barriers are assessed. After all, they successfully overcame the barriers by starting their business. Assessments provided by start-up planners are therefore important. Twenty-eight per cent of planners are of the opinion that the prospect of quicker debt discharge will lead to more start-ups. That means they are more optimistic about the impact of the reform than founders, although sceptics are in the majority in this group as well.

The experience of previous insolvency law reforms in Germany supports the sceptics' view. After the introduction of the residual debt discharge procedure as well as after two reforms to shorten them (see Table 3), no significantly positive effects on start-up activity were discernible.<sup>26</sup>

Studies that compared the insolvency legislation of different countries have found a positive correlation between 'more debtor-friendly' legislation and stronger start-up activity.<sup>27</sup> But the fact that the German field test did not lead to such success may also have to do with the economic, demographic and geopolitical development of the past two decades. There was an extraordinary labour market upswing that 'absorbed' many potential entrepreneurs. Besides, the desire to be self-employed and, hence, entrepreneurial spirit wanes with the progressive ageing of the population.<sup>28</sup> Furthermore, economic uncertainty has increased around the world, negatively affecting entrepreneurial appetite.<sup>29</sup> The reform measures aimed at reducing financial risks could thus have been cancelled out by developments that have the opposite effect on entrepreneurial activity.

However, it cannot be ruled out that people are generally unaware of the successive easing of the residual debt discharge procedure. This is indicated by the high proportion of people who are unable to answer the question relating to residual debt discharge. That would mean that bureaucratic or legal relaxations need to be better communicated to the public so that they are aware that start-up barriers are being removed.

Scepticism regarding the stimulating effect of the insolvency law reform on start-up activity may also stem from the fact that the actual insolvency risk of a start-up project is not the decisive factor that makes 'financial risk' a start-up barrier. It might rather be an expression of personal uncertainty about financial matters.

### Figure 21: Does faster debt discharge mean more start-ups? Business starters are sceptical

Will the prospect of faster debt discharge lead to more start-ups? In per cent.

|                   | Yes | No | Do not know |
|-------------------|-----|----|-------------|
| Business starters | 19  | 55 | 26          |
| Self-employed     | 16  | 61 | 23          |
| Business planners | 28  | 48 | 24          |

Source: Start-up platform snap poll<sup>1</sup>, unweighted shares.

### Table 3: Legal reforms relating to residual debt discharge

| Year | Law   | Debt discharge normally   |
|------|---|---|
| 1999 | Insolvency Act  | 7 years <u>after closing</u> of an insolvency proceeding  |
| 2001 | Law Amending the Insolvency Law   | 6 years <u>after opening</u> of an insolvency proceeding  |
| 2014 | Law on shortening the residual debt discharge procedure and strengthening creditor rights | 5 years <u>after opening</u> of an insolvency proceeding or 3 years if procedural costs are covered and at least 35% of creditors' claims are satisfied |
| 2021 | Law on the further shortening of the residual debt discharge procedure                    | 3 years <u>after opening</u> of an insolvency proceeding  |

Source: own research.

This hypothesis is supported by the negative correlation between the financial literacy of business starters and aspiring entrepreneurs and their perception of financial risk as a start-up barrier. The lower the personal level of financial literacy, the more often financial risk is perceived as a problem.<sup>30</sup> In other words, financial risk correlates with (perceived and real) financial illiteracy. Thus, improved basic business education can actively reduce the perception of financial risk as a start-up barrier. And not only that: It can reduce fear of failure at the same time.<sup>31</sup> This is yet more evidence of how important entrepreneurship education is.

#### Box 2: Further analyses of start-up activity and access to data of the KfW Entrepreneurship Monitor

The Report of Tables and Methods to the KfW Entrepreneurship Monitor along with further information and publications from KfW Research on start-up activity in Germany can be found on our thematic page '[Innovations and Start-ups](#)'.

The KfW Entrepreneurship Monitor is scientific data compiled for the purpose of economic analysis of start-up activity in Germany. It is available to external researchers for empirical research work subject to certain access criteria.

<sup>1</sup> In cooperation with the key actors of entrepreneurship promotion, the German Federal Ministry for Economic Affairs and Energy, KfW and BusinessPilot developed the 'Gründerplattform' as a digital working environment for entrepreneurs. The platform makes it easier to start a business in Germany. Gründerplattform.de can be used free of charge to further develop initial ideas on a business model, draw up a business plan and contact potential support and funding partners. Tools from modern entrepreneurial advice and entrepreneurship teaching provide help in taking the next steps towards establishing a new business. An important aim of the platform is to involve start-up promoters with their offerings. The platform bundles the support expertise available in Germany and shows support offers exactly at the stages where they provide specific help in advancing the start-up process. At the beginning of February 2021 we conducted a snap poll among the platform users. The online survey received responses from 492 entrepreneurs (including 210 founders of the year 2020 and January 2021) and 218 aspiring entrepreneurs. The results of the flash poll are not representative because of the way the survey was designed, but they do paint an accurate picture of the prevailing sentiment. More findings of the snap poll can be found in Metzger, G. (2021), Junge Selbstständige: branchenbedingt trifft Corona-Krise Frauen härter als Männer (Young entrepreneurs: coronavirus crisis hits women harder than men due to sectoral structure – in German only), Focus on Economics No. 324, KfW Research. An online survey was also conducted in the partner network of the Start-up platform in the spring of 2021. The partner network comprises credit institutions, chambers of industry and commerce, chambers of skilled crafts, business development agencies and universities. The partner survey received responses from 34 experts.

<sup>2</sup> Federal Statistical Office (2021), Bruttoinlandsprodukt im Jahr 2020 um 5.0 % gesunken (Gross domestic products fell by 5.0% in 2020), press release No. 020 of 14 January 2021 (in German only).

<sup>3</sup> Own calculations on the basis of the national accounts, inhabitants and labour market participation (resident concept) of the Federal Statistical Office, as at 4 January 2021.

<sup>4</sup> Digital start-ups' product or service can be accessed only through digital technologies. The business models of digital start-ups are diverse: They can be purely digital, as in the case of app providers, operators of web portals or web hosting services; they can have a major digital component, as in the case of online traders or providers who sell products or services (they produce themselves) exclusively via online marketplaces ('gig economy'), or they comprise an activity that is essentially based on digital technology, such as that of software developers, web designers or IT consultants, or in online marketing or digital photography.

<sup>5</sup> Leifels, A. (2020), Status report on SME succession 2020: Well-prepared into the crisis – coronavirus exacerbates start-up downturn, Focus on Economics No. 308, KfW Research

<sup>6</sup> Metzger, G. (2015), Are start-ups the same throughout Germany? Hardly! A comparison of German states, Focus on Economics No. 111, KfW Research.

<sup>7</sup> Metzger, G. (2021), Junge Selbstständige: branchenbedingt trifft Corona-Krise Frauen härter als Männer (Young entrepreneurs: coronavirus crisis hits women harder than men due to sectoral structure – in German only), Focus on Economics No. 324, KfW Research; Graeber, D., Kritikos, A. S. and Seebauer, J. (2021), COVID-19: a crisis of the female self-employed, CEPA DP No. 27.

<sup>8</sup> See also Egel, Falk, Heger, Höwer and Metzger (2010), Ursachen für das Scheitern junger Unternehmen in den ersten fünf Jahren ihres Bestehens (Causes for the failure of young enterprises during the first five years), study commissioned by the Federal Ministry for Economics and Technology, Mannheim and Neuss, March 2010 (in German).

<sup>9</sup> For more on the influence of various business founder and project characteristics on the survival rates of start-ups see Metzger (2020), KfW Start-up Monitor 2020, Appendix of Tables and Methods, KfW Research, page 22.

<sup>10</sup> The information is based on responses by formerly self-employed persons to the question: 'Did the coronavirus crisis ultimately cause you to end your self-employment?'

<sup>11</sup> In the years 2015–2019 a follow-up interview was conducted for every main survey of the KfW Entrepreneurship Monitor in the spring of the following year. In these follow-up interviews, all business starters who had been identified in the respective main survey and had given their consent to a follow-up interview were contacted again with a handful of more detailed questions. The results of the follow-up interviews are not representative because of the way the survey was designed, but they do paint an accurate picture of the prevailing sentiment.

<sup>12</sup> The 'GO!' start-up campaign is an initiative of the Federal Ministry for Economic Affairs and Energy. Federal Ministry for Economic Affairs and Energy (2018), Gründungsoffensive: 10 Punkte für mehr Gründungen (Start-up campaign: 10 points for more start-ups – our title translation, in German only), November 2018.

<sup>13</sup> It is generally difficult for business starters to judge conditions that are directly relevant to only a fraction of them, even if they are economically very important. These include the protection of intellectual property with patents, copyrights, trademarks etc., which 44% of entrepreneurs were unable to judge. All other conditions received scores from 80 to 90% of entrepreneurs.

<sup>14</sup> Sternberg, R. and von Bloh, J. (2017), Global Entrepreneurship Monitor. Country Report Germany 2016, Hannover, June 2017, page 22. With respect to the indicator 'public promotion', Germany 'stands on the victory podium' as well; Losse, B., Die Angst vor dem Coronablues (Fear of the coronavirus blues – our title translation, in German only), in: WirtschaftsWoche No. 18 of 24 April 2020, p. 40.

<sup>15</sup> Metzger, G. (2013), Guter Rat hilft und muss nicht teuer sein (Good advice is helpful and does not have to cost much – in German only), Focus on Economics No. 28, KfW Research.

<sup>16</sup> The intention of the German Federal Ministry for Economic Affairs and Energy to bring entrepreneurial spirit into the schools is an important approach. 'Getting entrepreneurial spirit into our schools' is a group of initiatives brought together under the umbrella of the Ministry of Economic Affairs with the aim of helping young people to develop entrepreneurial skills.

<sup>17</sup> Bijedic, T. (2013) 'Unternehmerisch handeln macht Schule' Legitimation, Voraussetzungen und Ergebnisse einer Entrepreneurship Education in der Sekundarstufe II ('Teaching entrepreneurial action', Legitimation, conditions and results of entrepreneurship education in secondary level II' – our title translation, in German only), Zeitschrift für ökonomische Bildung ed. No. 01/2013, p. 44–72.

<sup>18</sup> Different studies show that German schoolbooks often present an unbalanced picture of an entrepreneur, for example by ignoring the role of the entrepreneur personality and emphasising possible harmful consequences of entrepreneurial action such as environmental pollution or exploitation, Schlösser, H. J. and Schuhen, M., 2017, Marktwirtschaft und Unternehmertum in deutschen Schulbüchern (Market economy and entrepreneurship in German schoolbooks – our title translation, in German only), Die Familienunternehmer e. V.

<sup>19</sup> Leifels, A. (2017), Existenzgründer und Bürokratie: für jeden dritten eine Schwierigkeit, aber selten ein Abbruchgrund (Entrepreneurship and red tape: a challenge for one in three start-ups but rarely a reason to give up – in German only), Focus on Economics No. 175, KfW Research.

<sup>20</sup> The expert assessments are based on the judgements made by at least 36 experts in each participating country. Recruiting this minimum number of experts for the National Experts Survey (NES) can be a challenge. Germany is one of the few countries in which a significantly larger number of experts participate each year in the NES.

<sup>21</sup> The NECI scores were taken from the Report of the Global Entrepreneurship Monitor: For 2018 from the '2018/2019 Global Report', for 2019 from the '2019/2020 Global Report' and for 2020 from the '2020/2021 Global Report'.

<sup>22</sup> 'Nascent entrepreneurs' are persons who are in the process of starting a business, meaning they have start-up plans. Information on start-up plans has been collected in the KfW Entrepreneurship Monitor since the year 2008. A very steady pattern has emerged since the year 2012: Around 45% of annual start-up plans are in the brainstorming phase, 30% in the phase of conceptual review or feasibility assessment, and 25% in the implementation phase with initial organisational stages.

<sup>23</sup> The planning rate is many times higher than the start-up rate. That means many start-up plans are never realised. Up to 2019, on average 46% of nascent entrepreneurs expected to start their business activity within 12 months. The more advanced the start-up planning, the higher its share: 26% in the brainstorming phase, 52% in the design phase and in 76% the implementation phase. As many start-up ventures were put on hold when the coronavirus crisis broke out, the share of start-ups planned for implementation within a 12-month horizon in 2020 rose to 56% (33% in the brainstorming phase, 62% in the design phase and 81% in the implementation phase). The postponed start-ups also mean that there are a greater number of advanced start-up plans that are already in the implementation phase. The drop in the planning rate in 2020 is therefore likely to be a predictor of rather weak start-up activity in 2021.

<sup>24</sup> Metzger, G. (2020), „Gründungsgeist“ bei Jüngeren gestiegen – Rücksetzer durch Corona-Krise absehbar ('*Entrepreneurial spirit of young people has grown – setback from coronavirus crisis is foreseeable* – in German only), Focus on Economics No. 307, KfW Research.

<sup>25</sup> German Federal Ministry of Justice and Consumer Protection, Reform des Insolvenzrechts tritt in Kraft: Verkürzte Restschuldbefreiung und Einführung neuer Sanierungsmöglichkeiten (*Reform of insolvency law enters into effect: shortened residual debt discharge and introduction of new settlement options – our title translation, in German only*), press release 30 December 2020.

<sup>26</sup> Metzger, G. (2015), Where there's a will, is there a way? Barriers to becoming self-employed, Focus on Economics No. 82, KfW Research.

<sup>27</sup> Lee S.-H. et al. (2007), Bankruptcy law and entrepreneurship development: A real options perspective, *Academy of Management Review* 32 (1), 257–272; Fan W. and White, M. (2004), Personal Bankruptcy and the Level of Entrepreneurial Activity, *Journal of Law and Economics* 46, 545–567.

<sup>28</sup> Metzger (2019), Wunsch nach beruflicher Selbständigkeit nimmt ab, Lichtblick durch Jüngere (*The drive for self-employment is slowing, younger entrepreneurs are a silver lining* – in German only), Focus on Economics No. 261, KfW Research. The desire for self-employment, however, decreases with age for various reasons. This likely has to do with the experience workers typically acquire during their working life. The longer a person works exclusively as a salaried employee, the more they are shaped by this form of work. They become so accustomed to it that they have no interest in entrepreneurship. Furthermore, as people grow older their personal network becomes less open, their own specialised knowledge grows, they become more financially dependent on a single employer, and they develop closer ties with their family. The literature also refers to this as 'career handcuffs', 'golden handcuffs' and 'family handcuffs' which deter older workers from entrepreneurship more effectively than younger ones; see Wasserman (2012), The founder's dilemmas: anticipating and avoiding the pitfalls that can sink a startup, Princeton University Press.

<sup>29</sup> Metzger, G. (2021), Enger Zusammenhang zwischen Risikobereitschaft und Selbstständigkeit (*Close correlation between risk appetite and self-employment* – in German only), Focus on Economics No. 317, KfW Research.

<sup>30</sup> Financial literacy was surveyed in the KfW Entrepreneurship Monitor in the year 2014. The correlation refers to the total group of entrepreneurs and plan discontinuers and is evident irrespective of whether a subjective or an objective measure of financial literacy is applied. For details on how the measures of financial literacy were constructed see Cf. Leifels, A. and Metzger, G. (2015), Financial literacy helps with business start-ups: easier, better funded, more competitive, Focus on Economics No. 107, KfW Research.

<sup>31</sup> Metzger, G. (2019), Start-up location Germany: fear of failure could be countered with better economic education, Focus on Economics No. 242, KfW Research.