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**Female and male entrepreneurs in Germany:
How did the coronavirus pandemic affect their businesses?**

Rosemarie Kay and Friederike Welter

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Female and male entrepreneurs in Germany: How did the coronavirus pandemic affect their businesses?

Rosemarie Kay* & Friederike Welter**

Restrictions in the wake of the coronavirus pandemic have affected and continue to affect the operations of entrepreneurs. A wide range of support measures were designed to mitigate their consequences. This paper traces the economic development in the various sectors and provides an overview of the support measures. Based on the specifics of women's businesses, first answers will be given to the question whether women entrepreneurs and the businesses they run are particularly affected by the coronavirus crisis and whether they are supported in an appropriate way in overcoming the crisis.

Keywords: Entrepreneurs, gender, coronavirus pandemic, turnover development, support measures

JEL: E60, J16, O10

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1 Introduction

The measures imposed at federal, state and municipal level as a reaction to the coronavirus pandemic affected and still affect all areas of society, in particular the economy and thus persons engaged in business. Although there was no general closure of businesses in Germany, in a number of sectors entrepreneurs and freelancers were temporarily banned from carrying out their activities or only allowed to do so under strict conditions. At the same time, policy-makers at federal, state and municipal level took a variety of support measures and subsequently supplemented them. However, these measures were and are not equally accessible to every business and every self-employed person.

Thus, there are considerable differences in the extent to which the effects of the coronavirus pandemic are felt on the one hand and in the possibilities of access to support measures on the other. These differences would be insignificant from a gender perspective if there were no differences between women-owned and men-owned companies. However, this is still not the case. Companies run by women have a different sector focus than those run by men, and they are on average smaller and younger (e.g. Pahnke et al. 2017; Kay et al. 2018). The latter tends to make them more susceptible to crises (Stinchcombe 1965; Aldrich/Auster 1986).

Moreover, all schools, childcare and daycare facilities had been closed at the start of the coronavirus pandemic. Reopening was initially very limited, and not until the end of the summer holidays in 2020 most facilities were available again. From December 2020, however, this has been restricted once more. These restrictions also affected self-employed with children or other relatives in need of care. However, childcare and caring for relatives is not taken on by men and women to the same extent (Boll 2016).

Against this background, the question arises as to whether the coronavirus pandemic has affected female entrepreneurs and their companies in the same way as it has affected male entrepreneurs and their companies. This is directly linked to the question of whether they benefited in the same way from the support measures or whether they would have needed further aid. The answers to these questions can only be provisional in the midst of the coronavirus pandemic because the full impact of the pandemic is only gradually emerging.

2 Being affected by the coronavirus pandemic

Despite numerous surveys, empirical evidence is preliminary and fragmented. We can only approximate the extent to which female and male entrepreneurs or their businesses have been affected by the coronavirus pandemic through examining which sectors and enterprise sizes have suffered economic losses and comparing this with the extent to which women and men entrepreneurs are represented within these sectors and enterprise sizes. This allows us to draw cautious conclusions about any gender-specific differences.

2.1 Economic losses because of the coronavirus pandemic

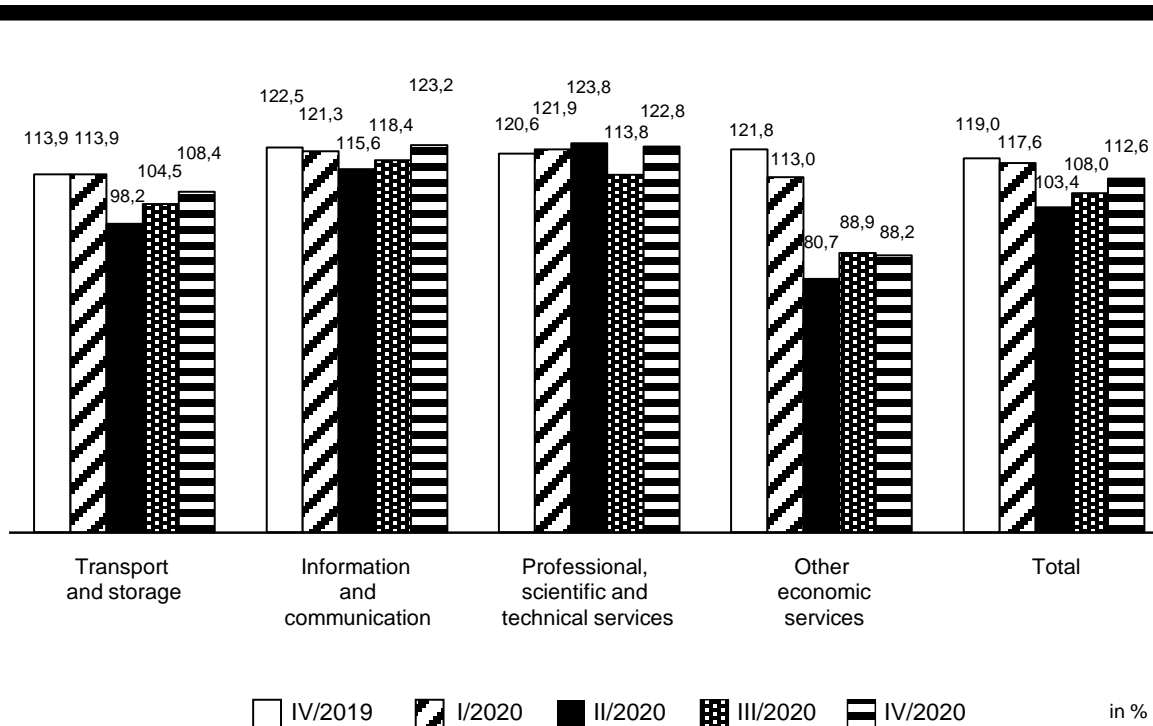
Regardless of data uncertainties, all indicators show unanimously that the economic activity in Germany collapsed from March 2020, reached its low point in April 2020 and has been recovering since then. The gross domestic product (GDP) fell by 2.0 per cent in Q1 2020 and by 9.7 per cent in Q2 (Federal Statistical Office 2020). In Q3 and Q4 2020, the GDP increased (significantly), so that its overall decrease was 4.9 per cent in 2020 (Federal Statistical Office 2021). For 2021, all economic research institutes expected significant growth (Projektgruppe Gemeinschaftsdiagnose 2020, p. 11). But due to the renewed lockdown from November 2020, expectations were lowered again (Projektgruppe Gemeinschaftsdiagnose 2021).

Results of company surveys show a similar picture. According to the *KfW Mittelstand Panel*, SMEs were successively less affected by the coronavirus pandemic over the course of 2020. However, with the renewed lockdown the number of affected businesses rose again, although not to the extent of spring 2020. Moreover, the second lockdown dealt a severe blow to several SMEs: in January 2021 17 per cent of respondents said they would never again reach pre-crisis levels (Schwartz/Gerstenberg 2021, p. 2ff.), compared to only 9 per cent in June 2020 (Schwartz/Gerstenberg 2020, p. 1). The expected average duration to reach pre-crisis level also has increased from 8.5 months to 10.3 months.

58 and 61 per cent of SMEs suffered a decline in turnover in March and May 2020, respectively, by an average of 53 and 46 per cent, or 39,000 euros and 45,000 euros, respectively. Smaller enterprises with up to 10 employees suffered a decline in turnover more frequently than larger enterprises (with 11 and more employees). In May 2020, smaller enterprises achieved on average around 19,100 Euros less compared to their average monthly turnover before the pandemic, larger enterprises around 276,000 Euros less (Schwartz/Gerstenberg 2020, p. 3 f.). Companies in the construction industry in particular, but also in trade, were affected less frequently and to a lesser extent by turnover declines compared to companies in manufacturing, knowledge-intensive services or other services (Schwartz/Gerstenberg 2020, p. 3).

The extent to which a company is affected by the coronavirus pandemic thus depends, among other things, on its size, the sector and, due to the global nature of the crisis, also on its integration into international value chains and its own export activities. Since current data differentiating by company size are even rarer than sectoral data, we now focus on turnover development as an indicator of the impact in selected sectors (Figures 1 to 3).

Figure 1: Quarterly sales trend in selected service industries, 2020, 2015 = 100 (calendar and seasonally adjusted)

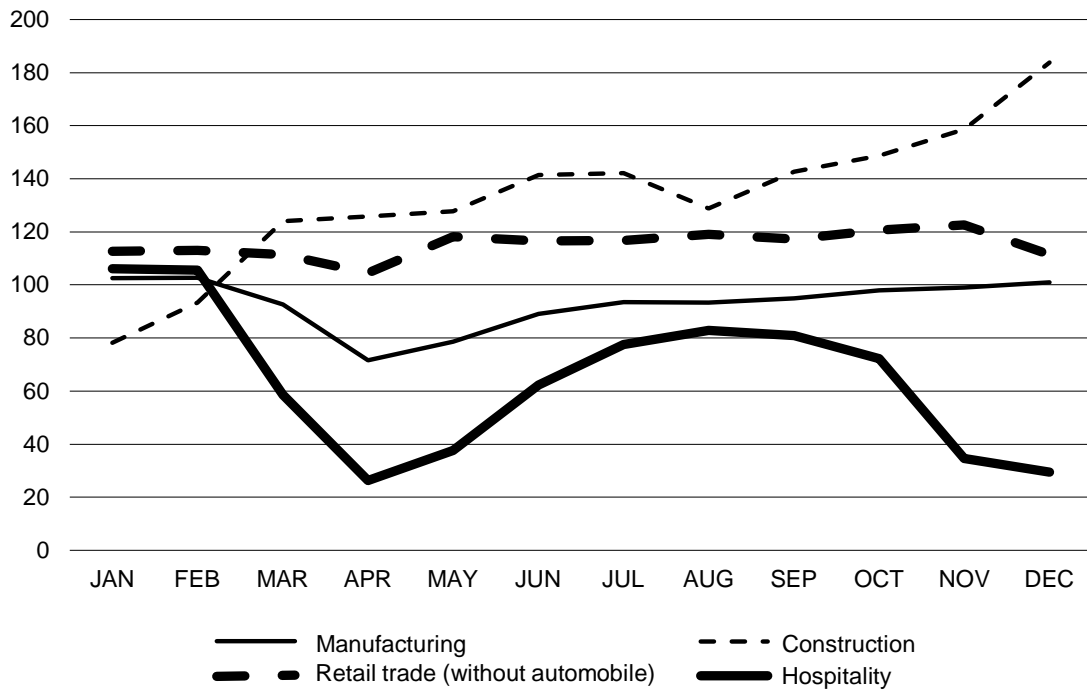


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Source: Federal Statistical Office 2021.

Even in this rather rough sectoral analysis, it becomes clear that the coronavirus pandemic has affected the sectors to very different degrees. Some sectors have initially even been able to increase their turnover (e.g. food retailing), in other sectors the restrictions hardly affected turnover (e.g. construction) and in yet other sectors the pandemic led to massive slumps in turnover (e.g. hospitality, retail with textiles, clothing and footwear or arts, entertainment and recreation). The data presented in Figures 1 to 3 also suggest that turnover is recovering at different rates in different sectors, either because they are heavily dependent on foreign trade (as in parts of manufacturing), because the restrictions have lasted longer (as in hospitality and parts of retail trade) or because the restrictions for economic activities are still ongoing (as in arts, entertainment and recreation).

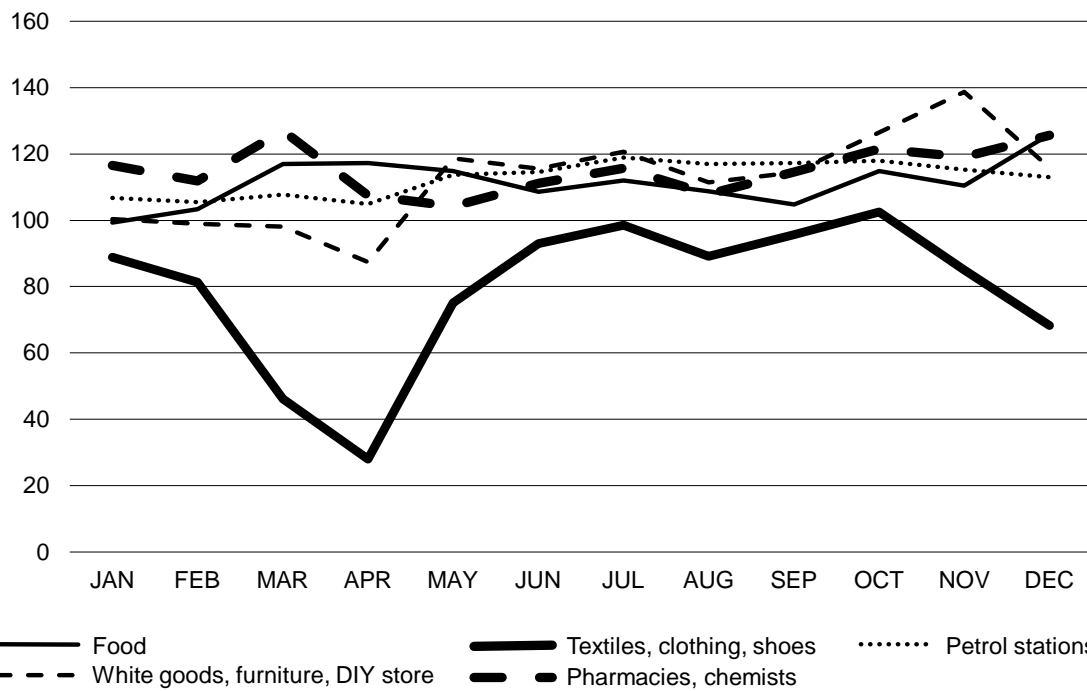
Figure 2: Monthly turnover development in selected industries, 2020, 2015 = 100



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Calendar and seasonally adjusted values (except construction).
Source: Federal Statistical Office 2021.

Figure 2: Monthly turnover development in selected retail sectors, 2020, 2015 = 100



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Source: Federal Statistical Office 2021.

First survey data are also available at the level of the self-employed. A special survey conducted within the *German Socio-Economic Panel* between April and July 2020 shows income reductions for 56 per cent of the self-employed respondents, as a result of the coronavirus pandemic, whilst 57 per cent reported a decrease in turnover. On average, self-employed respondents achieved about 40 per cent of their pre-crisis turnover. Female self-employed are not affected more often or more strongly by turnover losses, but their incomes have fallen more frequently and more strongly than those of male self-employed (Graeber et al. 2020, p. 8 f.).

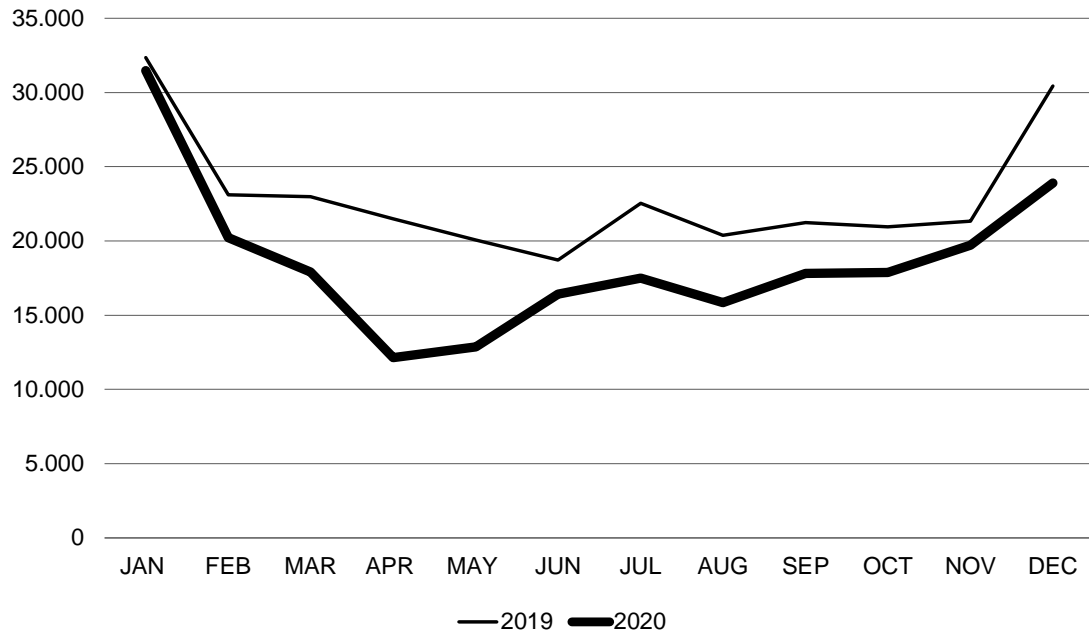
Since the global financial crisis of 2008/2009, the number of corporate insolvencies in Germany has been declining. This trend continued in 2020. By November 2020, the number of corporate insolvencies had fallen by 15.9 per cent compared to the same period in 2019 (Federal Statistical Office 2021b). However, without doubt the number of corporate insolvencies will increase as a result of the coronavirus pandemic although it is not yet clear when this will be the case and also be reflected in insolvency statistics.¹

Only about one in ten enterprise liquidations ends in insolvency.² The number of liquidations has also been declining steadily since 2009 and continued to do so until May 2020 (Figure 4). Since then, it has increased again, but remained steadily below the previous year's level until the end of 2020. Overall, it fell by 18.9 per cent compared to 2019 (Kay/Kranzusch 2021, p. 2). Also, women-owned sole proprietorships did not close down more frequently in 2020 than previous years: Their share amounted to 30.7 per cent in 2020, thus being only slightly higher than in previous years (2019: 29.4 per cent (IfM Bonn 2021)).

¹ The manifold support measures (Chapter 3.1) on the one hand and the obligation to file for insolvency, which has been suspended since March 2020 until April 2021, on the other hand, are currently delaying the closure of companies.

² Based on data from the business notification statistics.

Figure 4: Monthly number of business liquidations, 2019 and 2020

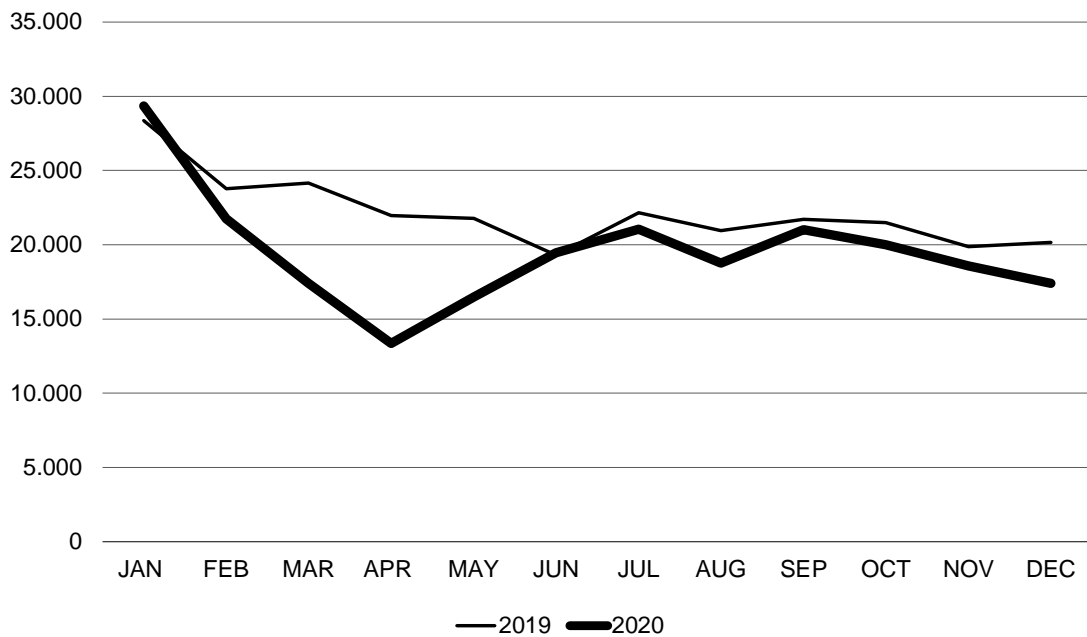


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Source: IfM Bonn (Basis: business notification statistics of the Federal Statistical Office).

The number of business start-ups has also been declining for many years. This trend has continued until April 2020 (Figure 5). Until summer 2020, the number of start-ups increased again, almost reaching the previous year's level. Since then, it has remained more or less slightly below this level. We cannot observe a withdrawal of women from starting-up businesses during the coronavirus pandemic: Their share of start-ups in the legal form of a sole proprietorship amounted to 30.1 per cent in 2020, slightly above the level of the previous years (IfM Bonn 2021).

Figure 5: Monthly number of business start-ups, 2019 und 2020



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Source: IfM Bonn (Basis: business notification statistics of the Federal Statistical Office).

2.2 Women as self-employed

Since no statistics provide information on the gender of enterprise owners and managers, in the following we refer to data on self-employed from the *Microcensus*³. One third of all self-employed are women (Table 1), although they are not equally represented in all sectors. They are strongly underrepresented in construction, transport and storage, financial and insurance services, agriculture and forestry, and manufacturing. In these sectors, at most every fifth self-employed is a woman. Women self-employed are strongly over-represented in the sectors households as employers, other services, health and social work, and education and training, where they account for more than half of all self-employed.

More than half of all self-employed have no employees (Table 1). With the exception of the health and social services sector, the other services sector and the information and communication sector in particular are characterised by solo self-employed. Whether a self-employed works alone or not depends on many factors, but also strongly on the specific field of activity. Another influencing factor is gender. Around two-thirds of female self-employed compared to half of the male self-employed have no employees (Federal Statistical Office 2019).

³ A nationwide representative survey of individuals and households.

Table 1: Self-employed by sector and gender, 2018

| Industry | Number of self-employed in 1,000 | Percentage of women | Proportion of solo self-employed in per cent |
|--|----------------------------------|---------------------|--|
| Agriculture, forestry and fishing | 189 | 18,0 | 58,7 |
| Production industries | 771 | 10,6 | |
| Mining | / | / | } 41,9 |
| Manufacturing | 287 | 20,2 | |
| Energy supply | 6 | / | } 46,7 |
| Water supply, waste disposal | 9 | / | |
| Construction | 467 | 4,7 | 47,1 |
| Trade, hospitality, transport and communications | 979 | 27,9 | |
| Trade, repair of motor vehicles | 501 | 29,5 | 43,9 |
| Transportation and storage | 68 | 13,3 | 41,8 |
| Hospitality | 197 | 35,5 | 25,4 |
| Information and communication | 183 | 23,0 | 75,4 |
| Other services | 2.069 | 45,5 | |
| Financial and insurance activities | 130 | 16,9 | 61,5 |
| Real estate activities | 50 | 34,0 | 62,0 |
| Professional, scientific, and technical activities | 586 | 32,8 | 61,9 |
| Other economic service activities | 239 | 28,5 | 56,5 |
| Education | 194 | 57,2 | 87,1 |
| Human health and social work activities | 436 | 61,5 | 48,6 |
| Arts, entertainment and recreation | 171 | 39,8 | 87,1 |
| Other service activities | 247 | 72,5 | 67,2 |
| Private households with domestic staff; etc. | 17 | 94,1 | 94,1 |
| Total | 4.009 | 33,2 | 55,6 |

Source: Federal Statistical Office: Results of the Microcensus 2018; calculations by IfM Bonn.

2.3 Are there gender differences in being affected?

Despite fragmentary data, we can provide preliminary responses as to whether the coronavirus pandemic and the accompanying restrictions have affected male and female entrepreneurs to different degrees. We simultaneously look at turnover development and the share of female self-employed in different sectors. In manufacturing, which has suffered considerable turnover losses, female self-employed are underrepresented. This also applies to construction, which has come through the crisis well so far. On the other hand, female self-employed could be more affected by the slump and slow recovery in the retail trade with textiles, clothing and shoes. The same applies to hospitality, where female self-employed are also overrepresented. No data is currently available for the service sectors with a very high proportion of female self-employed - but we assume that female self-employed were and continue to be affected more heavily.

Whether the sectoral differences in being affected by the coronavirus pandemic have disadvantaged female entrepreneurs cannot yet be answered with the data currently available. The survey

data of Graeber et al. (2020) provide (statistically non-significant) indications that female self-employed have indeed suffered more frequently declines in turnover. This finding is supported by the non-representative results of a survey of young self-employed (Metzger 2021). Special surveys of established companies within the *KfW Mittelstand Panel*, on the other hand, do not identify any particular impact of the coronavirus pandemic on women-owned companies (Abel-Koch/Schwartz 2021). Also, the business liquidation figures do not indicate women-owned businesses as particularly affected. Solo self-employed in certain service sectors may take longer to give up their self-employment, especially if it hardly involves any costs. And if there are no alternatives in paid employment, psychologically, it makes sense to stick to self-employment in pandemic times.

2.4 Entrepreneurs as carers for children and others in need of care

We do not know how many entrepreneurs currently live with children in need of care.⁴ According to a business survey from 2002, this may apply to about one third of established entrepreneurs (Kay et al. 2003, p. 134). This proportion is somewhat higher among founders because they are younger on average than established entrepreneurs. About half of the established women entrepreneurs with children in need of care have taken over this care themselves, compared to only 10 per cent of the male entrepreneurs with children (Kay et al. 2003, p. 136). Female entrepreneurs were much less able to rely on the support of their partners for childcare than male entrepreneurs and were therefore more often dependent on the help of relatives/acquaintances, childminders or on public childcare services (Kay et al. 2003, p. 136). Since then, the childcare situation in Germany has improved considerably, which of course has also benefited entrepreneurs.

However, all schools and childcare facilities were closed in mid-March 2020 and only reopened gradually from June 2020 onwards. Parents of children in need of care were thus essentially dependent on themselves. Grandparents could not help in most cases because they often belong to those age groups particularly vulnerable to the coronavirus.

Data from the *Mannheim Corona Study* suggest that in April 2020, fathers spent on average an additional 2.3 hours on family and housework on a normal working day compared to 2018, whereas mothers spent only an additional 1.3 hours per week. However, mothers, with an average of 7.9 hours, spent much more time on family and housework duties than fathers (5.6 hours) during the peak of the coronavirus lockdown (Bujard et al. 2020, p. 37).⁵ Were these results transferable to female entrepreneurs, household and care burdens coming with the coronavirus

⁴ According to the PASS dataset, around 42 per cent of the self-employed live in a “community of need” (household) with children (cf. Pahnke et al. 2014, p. 25).

⁵ Zoch et al. (2020) also show that women bore the main burden of childcare during the daycare and school closures.

pandemic would not have disadvantaged female entrepreneurs any further. In any case, female self-employed did not restrict their working hours more frequently or more severely than male self-employed persons in the course of the coronavirus pandemic (Graeber et al. 2020, p. 8).

3 Use of economic policy support measures during the coronavirus pandemic

3.1 Overview of major economic support measures

Immediately after the imposition of the lockdown in March 2020, the federal government as well as the state governments enacted a number of economic policy measures that can be roughly divided into three categories: Liquidity assistance, assumption of personnel costs (short-time allowance) and income replacement benefits for entrepreneurs (basic income support for jobseekers [SGB II]). Table 2 provides an overview of the main liquidity assistance provided by the federal government, some of which has been supplemented by the Länder. We can distinguish between loans, guarantees and shareholdings as well as grants, all of which are used to finance investments and running costs (operating funds). The support is directed at all sectors of the economy, including the self-employed and members of the liberal professions. Conditions differ in part depending on enterprise age and size. Initially, only companies that were profitable in previous years were eligible for funding. Therefore, until the summer there was a funding gap for start-ups, which often only reach profitability after several years (Bijedić et al. 2020), unless they are financed by venture capital companies.

There is only scarce information on usage of support measures.⁶ The *Corona-Immediate Assistance*, which was granted for a maximum of three months from March 2020, the *Bridging Assistance* and the *November / December Assistance* were used most frequently,⁷ most likely because as non-repayable grants these measures are much more attractive than secured loans. These measures are directed exclusively or primarily at micro-enterprises (with up to ten employees), which account for 87.5 per cent of all enterprises in Germany (IfM Bonn 2020).

⁶ According to the BMWi (2021), a total of 88.0 billion euros in Corona aid had been approved as of 12 March 2021. *Immediate Assistance* accounted for 13.6 billion euros, *November and December Assistance* for 8.2 billion euros, and the KfW special programme for 48.6 billion euros.

⁷ In North Rhine-Westphalia alone, more than 430,000 enterprises were supported with *Immediate Assistance* (Landesregierung NRW 2020). That is more than two-thirds of all micro-enterprises in NRW to which this aid was directed. According to the BMWi (2021), as of 12 March 2021 there were 345,100 applications for *November Assistance*, 322,300 for *December Assistance* and 83,700 for *New Start Assistance*.

Table 2: Major liquidity support provided by the federal government during the coronavirus pandemic

| Programme | What is funded? | Who is supported? | What kind of support? |
|---|---|--|---|
| <i>KfW Instant Loan</i> for companies with more than 10 employees | Investments and running costs | Companies with more than 10 employees that have made a profit on average in the years 2017-2019 or in 2019 | KfW assumes 100 % of the risk, no risk assessment by the bank. |
| <i>KfW loan for companies</i> (more than 5 years on the market) | Investments and running costs | Companies that have been on the market for more than 5 years | KfW assumes 80 % of the risk, up to 90 % for SMEs |
| <i>KfW loan for young companies</i> (less than 5 years on the market) | Investments and running costs | Companies that have been active on the market for 3 or 4 years or can present at least 2 annual financial statements. | KfW assumes 80 % of the risk, up to 90 % for SMEs |
| KfW Special Programme - syndicate financing from EUR 25 million | Investments and running costs | Medium-sized and large companies | Direct participation for syndicate financing, 80 % risk assumption by KfW, but max. 50 % of total debt or 30 % of the balance sheet total of the corporate group. |
| <i>Corona-Immediate Assistance</i> for micro-enterprises and the solo self-employed (March until May 2020) | Running costs | Micro-enterprises, solo self-employed members of the liberal professions with up to 10 employees which are in economic difficulties as a result of Corona. | Taxable grant |
| <i>Corona-Bridging Assistance I, II, III</i> (I: June until August 2020; II: September until December 2020; III: November 2020 until June 2021) | Fixed operating costs (e.g. rents, leases, financing costs, costs for trainees, property taxes, personnel expenses) | Enterprises (including self-employed and professionals) whose sales I: in the months of April and May 2020 has decreased by at least 60 % compared to the same period of the previous year. II: slump by at least 50 % in two consecutive months between April and August 2020 or at least 30 % on average in the months April to August. III: slump by at least 30 % compared to the same period of the previous year. | Taxable grant |
| <i>November / December Assistance</i> | d.n.a. | Enterprises affected by the closures as of 2 nd November 2020. | Taxable grant: up to 75 % of the turnover in November and December 2020. |
| <i>New Start Assistance</i> | d.n.a. | Solo self-employed in all sectors. | Taxable grant: up to max. € 7,500. |

Source: Own compilation based on data from KfW Bankengruppe, the Federal Ministry for Economic Affairs and Energy and the Federal Ministry of Finance.

Some of these subsidies would have been used more frequently if they could have been used to pay an entrepreneurial profit. In some service industries, for example, solo self-employed hardly

incur any running costs apart from entrepreneurial profit, so that it was hardly worthwhile for this group of companies to apply for a grant.

In order to secure the livelihood of self-employed, their access to basic income support for job-seekers (SGB II) was simplified for a period of six months, provided the application was submitted until the end of March 2021. Above all, an asset check was waived if there were no substantial assets.⁸ However, partners living in a community of need would initially have to step in, if their income permits. So far, not many self-employed people have claimed basic income support. The Federal Employment Agency (2020a) reports that 81,100 self-employed persons (2.0 per cent of all self-employed, 3.6 per cent of solo self-employed) have taken up basic income support for the period April to September 2020.

Companies have also benefited considerably from short-time allowances, as they were able to retain their staff and continue their economic activities without friction after the restart, or they only had to finance their employees to the extent that they were working. In 2020, short-time work was reported for around 14.4 million employees (Bundesagentur für Arbeit 2021a). How many actually received short-time allowance will only be known with some delay. Experience shows that their number will be much lower than the number of notifications for short-time work.⁹ Unlike in the past, short-time work was reported to the Employment Agency not primarily from the manufacturing sector, but from almost all sectors of the economy (Table 3). The tendency apparent from turnover development in the various economic sectors is also reflected in the short-time work reported: sectors are affected to different degrees by the coronavirus pandemic, thus also differently benefitting from the short-time allowance. Hospitality is in the lead, followed by arts, entertainment and recreation, manufacturing and other economic services (Table 3). In public administration, defence, social security, energy supply, and financial and insurance services, on the other hand, short-time work is of little significance.

⁸ Substantial assets exist if the first member of the community of need (household) has realisable assets of more than € 60,000. For each additional member, a maximum limit of € 30,000 applies. As a rule, owner-occupied residential property is not immediately realisable and is therefore not considered realisable assets. Assets used for old-age provision (especially in the form of endowment insurance or pension insurance) are also not considered realisable assets.

⁹ According to the Federal Employment Agency (2021c), of the 2.6 million and 8.0 million employees for whom short-time work was reported in March and April 2020, 2.6 million actually worked short time in March and 6.0 million in April. Many notifications are therefore made as a precautionary measure.

Table 3: Notified short-time work by economic sector, 2020

| Industry | Number of notifications | Number of persons named in the notifications | Persons named in notifications as percentage of all employees** |
|--|-------------------------|--|---|
| Agriculture, forestry and fishing | 5.038 | 27.615 | 12,2 |
| Production industries | 209.019 | 5.048.728 | |
| Mining | 588 | 13.678 | 21,3 |
| Manufacturing | 121.233 | 4.234.902 | 60,3 |
| Energy supply | 820 | 18.395 | 7,7 |
| Water supply, waste disposal | 2.856 | 45.446 | 17,5 |
| Construction | 83.522 | 736.307 | 38,9 |
| Trade, hospitality, transport and communication | 454.668 | 4.918.118 | |
| Trade, repair of motor vehicles | 210.230 | 2.368.158 | 51,7 |
| Transportation and storage | 42.959 | 787.910 | 42,2 |
| Hospitality | 176.667 | 1.463.753 | 134,6 |
| Information and communication | 24.812 | 298.297 | 25,7 |
| Other Services | 413.775 | 4.409.328 | |
| Financial and insurance activities | 14.809 | 88.843 | 9,1 |
| Real estate activities | 11.956 | 57.875 | 20,6 |
| Professional, scientific, and technical activities | 68.867 | 1.066.723 | 45,9 |
| Other economic service activities | 64.788 | 1.184.762 | 52,0 |
| Public administration, defence; social security | 2.852 | 57.184 | 3,1 |
| Education | 22.242 | 202.108 | 15,0 |
| Human health and social work activities | 101.140 | 930.407 | 18,4 |
| Arts, entertainment and recreation | 35.948 | 359.808 | 119,6 |
| Other service activities | 89.117 | 452.679 | 53,1 |
| Private households with domestic staff; etc. | 1.406 | 2.507 | 5,1 |
| Extraterritorial organisations and entities | 7 | 18 | 0,1 |
| Not specified | 643 | 6.414 | - |
| Total* | 1.082.500 | 14.403.789 | 42,7 |

* For reasons of data protection and statistical secrecy, the Federal Employment Agency anonymises some data so that the total across all economic sectors does not correspond to the total figure.

** Based on the number of employees subject to social security contributions on 31.12.2019.

Source: Federal Employment Agency (2020b); own calculations.

3.2 Gender differences in the availability of support measures?

In view of the abundance of support measures, it is difficult to identify groups of enterprises or self-employed who have not been offered aid. Many micro and small enterprises have benefited from *Immediate Assistance*, medium and large enterprises from, among others, subsidised loans and enterprises of all sizes from the short-time allowance scheme, *November / December Assistance* and *Bridging Assistance*. Despite the differences in company size and sector between women-owned and men-owned companies, it is not apparent at first glance that women-owned

companies had worse access to support measures.¹⁰ However, this warrants a closer look, although it is doubtful to what extent any available data will be disaggregated by gender. Therefore, we resort to an approximate qualitative assessment and cursorily check whether female self-employed and women-owned enterprises are generally excluded from support measures because of their company specifics. For example, all financial support designed as grants are only available to full-time self-employed, i.e. to those whose main income stems from their entrepreneurial activities. The growing group of part-time self-employed is thus relegated to income from other sources. At first glance, however, this does not discriminate against women, because they also are underrepresented among the part-time self-employed (Suprinovič/Norkina 2015, p. 20f.).

Media reports indicate that the support offered has not always been taken up as intended by policy-makers. Specifically, this concerns the *Immediate Assistance* and the basic income support for jobseekers. Apparently, an unknown number of self-employed used *Immediate Assistance* to cover their own living expenses instead of resorting to the basic income support. There are probably various reasons for the reluctance to apply for basic income support. Many appear to refrain from turning to the employment agency, also because it does not correspond to one's own entrepreneurial identity. In addition, despite easier access, a considerable number of self-employed does not meet the eligibility criteria because their partners have a high income.¹¹ This could be particularly true for female self-employed who on average earn less income from self-employment than their male counterparts (e.g. Pahnke et al. 2014, p. 46).¹² They consequently contribute less to the household income anyway (Pahnke et al. 2014, p. 48).

4 Conclusion

The end of the coronavirus pandemic and the accompanying restrictions on economic activity is not yet in sight. The coronavirus pandemic has left considerable scars in the German economy. As far as can be empirically verified at present, female entrepreneurs and the businesses they run are not systematically more affected by the coronavirus pandemic than male entrepreneurs, if turnover development is used as an assessment criterion. However, female entrepreneurs may suffer income losses more frequently because they are more likely to be active in sectors that were more strongly affected by the restrictions imposed and in which income losses therefore occurred more frequently (Graeber et al. 2020). Although we cannot identify a glaring

¹⁰ In any case, female self-employed have made use of public support just as often as male self-employed (Graeber et al. 2020, p. 8).

¹¹ According to the PASS dataset, around three quarters of all self-employed live in a partnership (Pahnke et al. 2014, p. 25). Living in a partnership reduces the probability of receiving basic income support (Pahnke et al. 2014, p. 36f.).

¹² Because of smaller business sizes, lower weekly working hours, and overrepresentation in sectors with lower income opportunities.

gap in the coronavirus related support measures that would particularly affect women-owned businesses, there still remains the possibility that women-owned businesses have benefited to a lesser extent. This would explain why female self-employed differ only slightly in their turnover development from male self-employed, but nevertheless more often suffered income losses. In this context, future research could investigate, for example, whether female self-employed were actually less likely to be entitled to basic income support than male self-employed. If an entrepreneurial profit was included among the fixed business costs that can be financed with *Bridging Assistance*, as was discussed in autumn 2020, existing sector-specific hardships could have been mitigated that might particularly affect female self-employed.

Research on the resilience of companies in the greater Frankfurt area, conducted before the coronavirus pandemic, came to the conclusion that although women-owned companies were going through a crisis just as often as men-owned companies, the reasons for their crises differed to some extent, resulting in partly different measures taken to overcome the crisis. Although women-owned businesses took somewhat longer to fully recover from the crisis, female entrepreneurs showed the same individual resilience as male entrepreneurs (Dienes/Schlepphorst 2019). These findings as well as the current company closure rates (so far we do not observe higher closure rates among women-owned businesses than among men-owned businesses), give hope that women-owned businesses are coping with the crisis triggered by the coronavirus pandemic just as well as those owned by men - although it is still far too early to provide a conclusive answer to the questions guiding this paper.

References

Abel-Koch, J./Schwartz, M. (2021): Frauenquote im Mittelstand entwickelt sich in der Corona-Krise nur schleppend, KfW Research, Volkswirtschaft kompakt, No. 209, Frankfurt/M.

Aldrich, H. A./Auster, E. (1986): Even dwarf started small: Liabilities of size and age and their strategic implications, in: Research in organizational behavior, ed. by Staw, B./Cummings, L.L., Vol. 8, Greenwich, Conn., 165-198.

Bijedić, T./Löher, J./Nielen, S./Schlömer-Laufen, N./Herrmann, A.M./Zimmermann, M. (2020): Von der Idee bis zum Gewinn – eine empirische Analyse der Entwicklungsprozesse von Neugründungen, in: IfM Bonn: IfM-Materialien No. 281, Bonn

Boll, C. (2016): Die Arbeitsteilung im Paar. Theorien, Wirkungszusammenhänge, Einflussfaktoren und exemplarische Evidenz. Expertise für den Zweiten Gleichstellungsbericht der Bundesregierung, Hamburg.

Bujard, M./Laß, I./Diabaté, S./Sulak, H./Schneider, N.F. (2020): Eltern während der Corona-Krise. Zur Improvisation gezwungen, Wiesbaden.

Bundesagentur für Arbeit (2021a): Statistik der Bundesagentur für Arbeit. Tabellen. Auswirkungen der Corona-Krise auf den Arbeitsmarkt, September 2020, Nürnberg. https://statistik.arbeitsagentur.de/Statistikdaten/Detail/202011/arbeitsmarktberichte/monatsbericht-monatsbericht-d-0-202011-pdf.html?__blob=publicationFile, retrieved 16.3.2021.

Bundesagentur für Arbeit (2021b): Statistik der Bundesagentur für Arbeit. Tabellen. Kurzarbeit - angezeigte Kurzarbeit, Dezember 2020, Nürnberg. https://statistik.arbeitsagentur.de/Statistikdaten/Detail/202012/iiii7/kurzarbeit/kurzarbeit-d-0-202012-xlsx.xlsx?__blob=publicationFile&v=2, retrieved 16.3.2021.

Bundesagentur für Arbeit (2021c): Realisierte Kurzarbeit (Zeitreihe Monatszahlen). Deutschland, West/Ost, Länder, Kreise und Arbeitsagenturen. Februar 2021, Nürnberg. https://statistik.arbeitsagentur.de/Statistikdaten/Detail/Aktuell/iiii7/kurzarbeit-hr/kurzarbeit-hr-d-0-xlsx.xlsx?__blob=publicationFile&v=1, retrieved 16.3.2021.

Bundesministerium für Wirtschaft und Energie (BMWi) (2021): Corona-Hilfen für Unternehmen, <https://www.bmwi.de/Redaktion/DE/Infografiken/Wirtschaft/corona-hilfen-fuer-unternehmen.html>, retrieved 16.3.2021.

Dienes, C./Schlepphorst, S. (2019): Krisen von KMU: Herausforderungen, Verlauf und Resilienz frauen- und migrantengeführter Unternehmen, on behalf of J.P. Morgan Chase Foundation, Frankfurt/Main.

Graeber, D./Kritikos, A.S./Seebauer, J. (2020): COVID-19: a Crisis of Female Self-Employed, DIW Discussion Paper 1903, Berlin.

Kay, R./Kranzusch, P. (2021): Gewerbliche Existenzgründungen und Unternehmensaufgaben in 2020, in: IfM Bonn: Hintergrundpapier, Bonn.

Institut für Mittelstandsforschung Bonn (2021): Gewerbliche Existenzgründungen und Liquidationen von Einzelunternehmen nach Geschlecht, https://www.ifm-bonn.org/fileadmin/data/redaktion/statistik/gruendungen-und-unternehmensschliessungen/dokumente/Ge-wExGr_Li_MF_2010-2020.pdf, retrieved 16.3.2021.

Institut für Mittelstandsforschung Bonn (2020): Unternehmen lt. Unternehmensregister nach Unternehmensgröße – KMU-Definition des IfM Bonn, https://www.ifm-bonn.org/fileadmin/data/redaktion/statistik/mittelstand_im_einzeln/dokumente/Unt_2008-2018_D_KMU.pdf, retrieved 20.8.2020.

Institut für Mittelstandsforschung Bonn/Statistisches Bundesamt (Hrsg.) (2015): Der Selbstständigen-Monitor 2014, Bonn.

Kay, R./Günterberg, B./Holz, M./Wolter, H.-J. (2003): Unternehmerinnen in Deutschland, Gutachten im Auftrag des Bundesministeriums für Wirtschaft und Arbeit - Langfassung -, BWA-Dokumentation No. 522, Berlin.

Kay, R./Pahnke, A./Schlepphorst, S. (2018): Business transferability chances: Does the gender of the owner-manager matter?, in: Birkner, S./Ettl, K./Ebbers, I./Welter, F. (Eds.), Women's Entrepreneurship in Europe: Multidimensional Research and Case Study Insights, Wiesbaden, 39-64.

Landesregierung NRW (2020): Land setzt Verbesserungen bei der Abrechnung der NRW-Soforthilfe durch und nimmt das Rückmeldeverfahren zum Herbst wieder auf. Press release from 19. August 2020, <https://www.land.nrw/de/pressemitteilung/land-setzt-verbesserungen-bei-der-abrechnung-der-nrw-soforthilfe-durch-und-nimmt>, retrieved 24.8.2020.

Metzger, G. (2021): „Junge“ Selbstständige: branchenbedingt trifft Corona-Krise Frauen härter als Männer, KfW Research, Fokus Volkswirtschaft, No. 324, Frankfurt/M.

Pahnke, A./Ettl, K./Welter, F. (2018): Women-led enterprises in Germany: the more social, ecological and corporate responsible businesses?, in: Ratten, V.; Dana, L.-P.; Ramadani, V. (Eds.), Women entrepreneurship in family business, Routledge frontiers of management, Band 15, London, 46–62.

Pahnke, A./May-Strobl, E./Schneck, S. (2014): Die Einkommenssituation von Selbstständigen und die Inanspruchnahme staatlicher Leistungen auf Basis des SGB II, in: IfM Bonn: IfM-Materialien No. 226, Bonn.

Projektgruppe Gemeinschaftsdiagnose (Hrsg.) (2021): Stellungnahme der Projektgruppe Gemeinschaftsdiagnose zur Jahresprojektion 2021 der Bundesregierung, Essen.

Projektgruppe Gemeinschaftsdiagnose (Hrsg.) (2020): Gemeinschaftsdiagnose #2-2020: Erholung verliert an Fahrt – Wirtschaft und Politik weiter im Zeichen der Pandemie. Dienstleistungsauftrag des Bundesministeriums für Wirtschaft und Energie, Halle.

Schwartz, M./Gerstenberger, J. (2021): Zwar belastet die Corona-Krise den Mittelstand auch zu Jahresbeginn, allerdings bleibt die Lage trotz Lockdowns stabil, KfW Research, Fokus Volkswirtschaft, No. 315, Frankfurt/M.

Schwartz, M./Gerstenberger, J. (2020): Corona-Krise im Mittelstand: Rückkehr zu voller Wirtschaftsaktivität in weiter Ferne, aber Lockerungen entspannen Liquidität, KfW Research, Fokus Volkswirtschaft, No. 294, Frankfurt/M.

Suprinovič, O./Norkina, A. (2015): Selbstständigen-Monitor 2014: Selbstständige in Deutschland 2011 bis 2014, ed. by Institut für Mittelstandsforschung Bonn, Statistisches Bundesamt, Bonn.

Statistisches Bundesamt (2020): Volkswirtschaftliche Gesamtrechnungen. Inlandsproduktberechnung. Vierteljahresergebnisse. 2. Vierteljahr 2020, Fachserie 18, Reihe 1.2, Wiesbaden.

Statistisches Bundesamt (2021a): Volkswirtschaftliche Gesamtrechnungen: Wichtige gesamtwirtschaftliche Größen in Milliarden Euro, Veränderungsrate des Bruttoinlandsprodukts (BIP), <https://www.destatis.de/DE/Themen/Wirtschaft/Volkswirtschaftliche-Gesamtrechnungen-Inlandsprodukt/Tabellen/inlandsprodukt-gesamtwirtschaft.html>, retrieved 12.3.2021.

Statistisches Bundesamt (2021b): Unternehmen und Arbeitsstätten. Insolvenzverfahren, Fachserie 2, Reihe 4.1, Wiesbaden.

Stinchcombe, A.L. (1965): Social structure and organizations, in: March, J. (Ed.), Handbook of Organizations, Chicago, S. 142-193.

Zoch, G./Bächmann, A.-C./Vicari, B. (2020): Care-Arrangements and Parental Well-Being During the Covid-19 Pandemic in Germany, LIfBi Working Paper No. 91, Bamberg.