

# Report on the survey of EU start-ups and the COVID-19 pandemic



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#### Introduction

This report describes the results of the work performed by the European Startup Network (ESN) in the framework of the contract GRO/SME/22/13030, awarded by the European Commission (EC) for a study to gather information about how the situation of start-ups has been evolving following the COVID-19 pandemic.

The study is composed of four sections. Section 1 summarizes studies conducted by ESN members to assess the impact of the COVID-19 pandemic on start-ups across the EU. Section 2 covers the profile of the start-ups that responded to the survey. Section 3 gives an overview of the findings from the survey linked to pandemic relief support. Section 4 covers the open questions that were posed to the respondents, asking them to elaborate their view on public support during crises, the lessons learnt, the current global situation and the challenges their start-ups face.

## **Executive summary**

The study provides a varied picture in terms of the impact that the COVID-19 pandemic had on EU start-ups and also provides some insights concerning the public support during the pandemic as well as the challenges that start-ups face.

Some interesting outcomes of the study, based on the replies of those who responded to the online survey, are:

- The two biggest problems faced by the start-ups are "Access to finance" and "Regulatory obstacles or administrative burden", pointed to by 68% and 52% of respondents respectively;
- A slight majority of respondents (54%) reported that their business experienced a negative development during the COVID-19 pandemic, while about a quarter of them (24%) experienced a positive development and about a fifth of them (19%) said they were unaffected by the pandemic;
- Among the start-ups who received pandemic-related public support, the two most prominent kinds of support received were "Additional credit lines" (43%) and "Salary subsidies for employees" (36%), which markedly outdistance the third most frequent kind of support "Compensation payments for foregone business revenue" (18%);
- Some respondents (15%) received public support from public authorities automatically, i.e. without requesting it;

- Nearly half of respondents (43%) reported their start-up did not request any public support, with among these the most prominent reasons being that the start-up "Did not need any public support" (30%) and that "Public support measures on offer were not useful" (27%), or "The application process was too bureaucratic" (17%), while 3% of these start-ups did not request public support because they received automatic support from public authorities and deemed it to be sufficient;
- Of the start-ups that requested public support, 28% did not obtain it. As for the reasons for not obtaining the support, the leading cause was "Did not fulfil the conditions" (44%). About one third (36%) of respondents mentioned "Other" reasons, which include, for example, the applicant not being a local citizen and the start-up having employees residing outside the country in which the support was requested;
- Nearly half (48%) of respondents claimed to be either satisfied or very satisfied with the COVID-19 support they received, while a quarter of them (25%) were either disappointed or very disappointed and 24% remained neutral on this, i.e. they were neither satisfied nor disappointed);
- Among those disappointed with the public support received, the most mentioned reasons for disappointment included explanations that "The measures were not appropriate for our business, thus the support did not address the main challenges we faced" (45%) and "The process was too bureaucratic" (24%), which were followed by "The process was too lengthy and therefore the support did not reach us at the right time" (22%);
- The start-up respondents were more likely to obtain public support if they had a higher number of employees and/or if they were rather older than younger;
- The majority of respondents (66%) reported the overall strength and performance of their regional business environment to be good, while the dimensions of business environment deemed to be poor are "Access to private and public finance" (58%), "Availability of support to help enterprises become more sustainable" (52%) and "Legal and administrative environment" (51%);
- The start-up respondents also pointed out that the public support during crises needs to be provided fast, as time really matters, and the lessons learnt need to be used in other crisis, such as related to the Russian war or aggression against Ukraine, which also affected start-ups to various degrees, as quite some of them prospered during the last couple of years while quite some others have struggled to survive.

# 1. Summary of the studies conducted by ESN members to assess the impact of the COVID-19 pandemic on start-ups across the EU

In most EU countries today, start-ups are significant drivers of economic growth and job creation. According to the research conducted by Dealroom and Sifted and supported by the EC, European start-ups have provided millions of jobs and have become a leading job growth engine<sup>1</sup>. Additionally, start-ups frequently act as a catalyst for ground-breaking innovation and sustainable economic growth. However, the COVID-19 pandemic has severely tested the adaptability of the entire European start-up ecosystem. The tremendous disruption brought on by the pandemic significantly decreased the revenue of many start-ups while putting venture capital investors on edge. Start-ups often experienced cash flow problems, which forced them to pause hiring activities and apply for support, such as for government-backed loans.

COVID-19 also created a new context for start-ups: it somehow split the businesses into "winners" and "losers", based on the availability of their goods or services during the pandemic restrictions and lockdowns. For instance, start-ups from travel, mobility, and real estate industries were negatively affected during the COVID-19 pandemic, while telemedicine, collaboration and streaming services prospered.

Start-ups that ultimately emerged as "winners" responded to the pandemic quickly and flexibly and have supported the transition to fully digital work, education, and health services. A few examples<sup>2</sup> include introducing "no-contact" food delivery, launching a variety of digital health services, such as COVID-19 trackers, remote patient monitoring and remote consultations tools, and offering remote working tools, as well as online learning and entertainment platforms, in some cases for free.

Before being impacted by the crisis, the European start-up ecosystem was going through a positive evolution, as evidenced by the breakthrough of 2019, when European start-ups raised €38.8 billion in venture capital, up 42.6% from €27.2 billion in 2018, according to DIGITALEUROPE's study³. Therefore, with digital adoption accelerating, the ecosystem being well-capitalised, and government institutions in place to offer help when necessary, the European start-up ecosystem went into the crisis in a good shape - and numerous national start-up ecosystems are a great example of managing the crisis successfully - Austria, Estonia and France are among them.

<sup>&</sup>lt;sup>1</sup> https://europeanstartups.co/uploaded/2020/06/European-Startups-Launch-Report.pdf

<sup>&</sup>lt;sup>2</sup> https://sifted.eu/articles/startup-initiatives-coronavirus/

<sup>&</sup>lt;sup>3</sup> https://www.digitaleurope.org/events/european-start-ups-in-the-aftermath-of-covid-19-2/

According to the study conducted by the **Austrian Startups**<sup>4</sup>, the majority of start-ups in Austria initially experienced negative effects from COVID-19 in terms of turnover and growth. Most businesses saw a decline in their turnover compared to what they had anticipated; about 29% of start-ups reported sales losses of 50% or more. Austrian start-ups faced problems such as worsened access to finance and issues with intermediate inputs from non-EU suppliers. At the start of the crisis, it was expected that most start-ups would also have to either cut their staff or freeze hiring. The report from 2021, however, reveals that despite the COVID-19 pandemic, eight out of ten Austrian start-ups intended to increase their staff over the course of the following year, which would result in the creation of roughly 10,000 new jobs. The Austrian public authorities put in place several support programs. In 2021, the *Investitionsprämie* (a support to investments) was accessed by 27% of the start-ups that took part to the study, while the *Fixkostenzuschuss* (a subsidy covering fixed costs) was accessed by 16% of them and 38% of the respondents stated that the support on offer was unsuitable for them.

Estonian start-ups have done reasonably well during the pandemic, as reported by **start-up** Estonia, with 36% of them having seized the opportunity to grow their business during the crisis<sup>5,6</sup>. However, most of them still faced challenges such as the need to proceed with cutting costs (65%), decreasing salaries (34%), and laying people off (19%). Moreover, 40% of start-ups had difficulties with funding as a result of investors cancelling transactions and fundraising plans. Nevertheless, even though it has been difficult to match pre-crisis growth rates, Estonian start-ups have generally done very well in adjusting to the pandemic. The report of 2022 shows that the turnover of start-ups is marked by a robust 68% increase since mid-2021. Additionally, investments in Estonian start-ups have surpassed the benchmark of 1 billion euros, and these companies employ close to 10,000 people.

In **France**<sup>7,8</sup>, despite the pandemic, 2020 was a record year for digital start-ups. According to EY's annual barometer, mentioned by France Digitale, on the social and economic success of French digital start-ups, in 2020, they recorded nearly 7 billion euros in revenue. The report also revealed that, compared to 2019, French start-ups' global revenue increased by 15%. Concerning challenges, just over a third of entrepreneurs said that the pandemic had no impact on their financing. However, the survey revealed that 21% of the start-ups claimed they were expected to take out a loan within the next 12 months and 29% were "probably considering it". According to the survey, despite the COVID-19 crisis, a majority of start-ups expected revenue growth between 26% and 50% in 2022.

<sup>&</sup>lt;sup>4</sup> https://austrianstartups.com/think-tank/startup-monitor/

<sup>&</sup>lt;sup>5</sup> https://startupestonia.ee/blog/recap-of-the-third-quarter-of-the-estonian-startup-sector-growth-through-crisis

<sup>&</sup>lt;sup>6</sup> https://startupestonia.ee/blog/impact-of-covid-19-to-estonian-startups-a-survey

<sup>&</sup>lt;sup>7</sup> https://francedigitale.org/combat/covidtechtrends2020/

<sup>&</sup>lt;sup>8</sup> https://www.euronews.com/next/2021/09/23/record-year-for-french-start-ups-despite-covid-but-but-not-enough-women-at-the-top

In **the Netherlands**, funding became critical during the pandemic, as highlighted by 47% of respondents to Techleap's survey<sup>9,10,11</sup>. In 2020, 30% of Dutch start-ups had funding delayed or cancelled, showing that these high-potential companies were seen by investors as 'at risk of not reaching potential' due to COVID-19. Other challenges that Dutch start-ups had to face were intensive cost cutting, reduction in capacity and logistical issues. All the issues slowed down milestone delivery for 16% of companies. Regarding government support, most respondents pointed out that bridge loan funding and structural funding and liquidity were two kinds of support measures they needed the most. Every third start-up did not use any support options provided by the government.

Another example is **Germany.** About 72% of German start-ups in 2020 and 51.2% in 2021 responded that the pandemic had harmed them economically, even though it had contributed to improve the work environment<sup>12</sup>. The main problems for German start-ups were customer acquisition (65.3%), product development (47.6%) and capital raising (36.1%). Regardless of the fact that capital procurement continues to be an important obstacle, this problem is getting less problematic each year. In contrast, it is now reported to be harder to find employees than in 2021, with an increase from 17.0% to 26.6% in the percentage of respondents claiming this to be a problem. In 2021, 23.8% of German start-ups responded that they felt no impact of COVID-19 and 25.0% reported a positive development in business activity – almost twice as many as in the previous year.

The COVID-19 pandemic has also affected the regions outside the EU. According to the Peterson Institute for International Economics<sup>13</sup>, despite a health catastrophe and one of the worst economic downturns in modern history, the number of start-ups grew in the United States (US) – from 3.5 million in 2019 to 4.4 million in 2020, a 24% increase. This is the largest increase of any country in the Organization for Economic Cooperation and Development (OECD) or the G20 with available data. Significant increases in entrepreneurship were also recorded in Turkey (23%), Chile (14%) and the United Kingdom (9%). Other economies were not so vibrant, for example with new business formation declining by a quarter in Russia. Also, start-up activity in China barely budged during the first year of the pandemic, growing by 3% in the first three quarters of 2020 relative to 2019.

There are three hypotheses that have been suggested to explain the unequal growth of new businesses in the early stages of the pandemic-related economic recovery.

The *first one* is changing customer preferences during COVID-19 that created opportunities for some entrepreneurs. In the United Kingdom for example, 20% of new businesses created

<sup>&</sup>lt;sup>9</sup> https://www.techleap.nl/reports/the-dutch-tech-ecosystem-and-covid-19-impact-report

<sup>&</sup>lt;sup>10</sup> https://www.techleap.nl/reports/col-final-data-report-november-2021

<sup>&</sup>lt;sup>11</sup> https://www.techleap.nl/reports/col-impact-survey-report-june-2021

<sup>&</sup>lt;sup>12</sup> https://deutscherstartupmonitor.de/

<sup>&</sup>lt;sup>13</sup> https://www.piie.com/blogs/realtime-economic-issues-watch/startups-boom-united-states-during-covid-19

in the third quarter of 2020 were in retail. The growth in new retail businesses could reflect the increase in online shopping during COVID-19, when internet sales as a share of all retail in the United Kingdom jumped from 19% prior to the pandemic to 33% in May 2020. Besides retail, industries that are adaptable to remote work, such as back-office services, also represented a larger share of business formation in the United Kingdom in 2020 than before.

The *second hypothesis* is that economies with the simplest administrative processes for starting a business have the highest growth in terms of creating new companies. Businesses have been more likely to emerge and even prosper during the pandemic in countries with easier business registration procedures and lower administrative and regulatory burdens.

Finally, entrepreneurship out of necessity is a *third explanation* for why business formation increased in several economies during the pandemic. According to Fairlie<sup>14</sup>, higher local unemployment rates signalled an upcoming boost in the US entrepreneurship during previous downturns. It is possible that the shrinking of opportunities in the job market encouraged entrepreneurship out of need.

Anyway, we may conclude this general overview by acknowledging that the COVID-19 pandemic had quite varied impacts on start-ups across the globe, as quite some of them prospered during this period while quite some others struggled to survive.

<sup>&</sup>lt;sup>14</sup> Fairlie, R. W. 2013. Entrepreneurship, Economic Conditions, and the Great Recession. Journal of Economics & Management Strategy 22 (2): 207-231.

### 2. Survey and start-up profiles

#### 2.1 Survey approach

The data were collected through an online survey (using the EU Survey tool) aimed at any start-ups in the EU, hence those recently established and up to those that are already scaling-up. The survey opened in mid-July 2022 and the last entries were accepted in early December 2022. The survey collected 350 responses from 27 countries (the EU27 Member States). Certain limitations to the study must be taken into account when drawing conclusions from the findings. For example, this study did not have the ambition to have a full coverage of all the startups in Europe, which, needless to say, outsize the sample by at least one order of magnitude. The start-ups that participated in this study are presented in more detail in the next section of this report; they are up to 10 years old, their headcount does not exceed 250 employees and they are concentrated in some countries while mostly operating in the digital industrial ecosystem.

#### 2.2 Profile of the start-up respondents to the survey

As shown in Figure 1, around half of the surveyed start-ups are up to 4 years old and mostly located in Spain (24%), Belgium (15%) and Italy (11%).

Figure 1: Frequency distribution of the year of foundation and most frequent locations

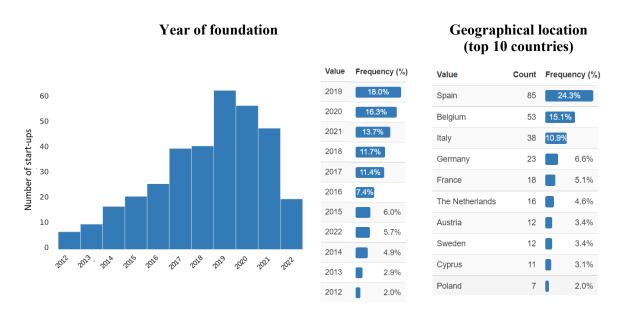
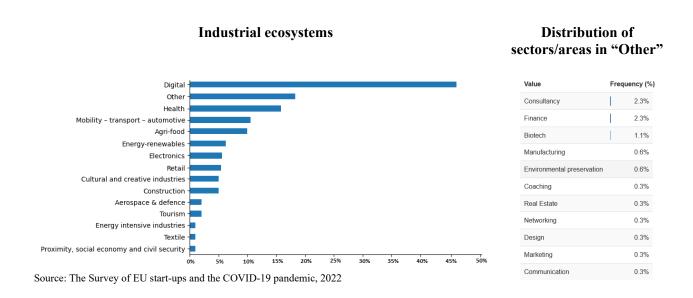


Figure 2 on the industrial ecosystems (with multiple replies possible, as some start-ups operate in more than one ecosystem) shows that the industrial ecosystem by far the most represented in the survey is the "Digital" ecosystem (46%). This is followed by Other" (18%), chosen by respondents who claimed their start-up does not pertain to any of the 14 EU industrial ecosystems, and "Health" (16%). As concerns "Other", this category includes a mix of sectors/areas stated by some of the start-ups concerned, and the three most mentioned are "Consultancy" (2.3%), "Finance" (2.3%) and "Biotech" (1.1%).

Figure 2: Share of start-ups per industrial ecosystem and list of "Other"



Nearly half of the respondents report that their start-up is not a member of any industry cluster or another SME business support organisation in the region (see Figure 3).

Figure 3: Share of start-ups being a member of an industry cluster or another SME business support organisation in the region

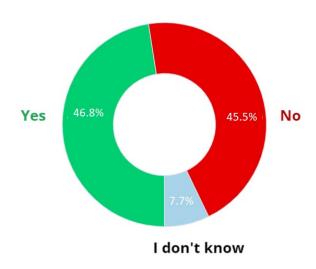
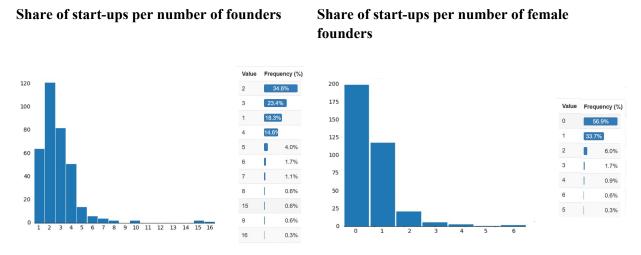


Figure 4 shows that founding a start-up is mostly a cooperative endeavour: only around 18% of the respondents reported that their start-up was founded by a single founder, with most of the start-ups founded by a group of two to four people. However, more than half of the start-ups do not have any female founders.

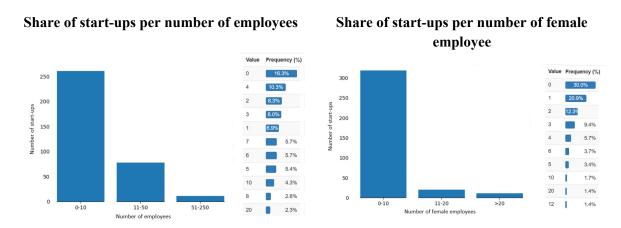
Figure 4: Frequency distribution of the total number of founders and of the number of female founders



Source: The Survey of EU start-ups and the COVID-19 pandemic, 2022

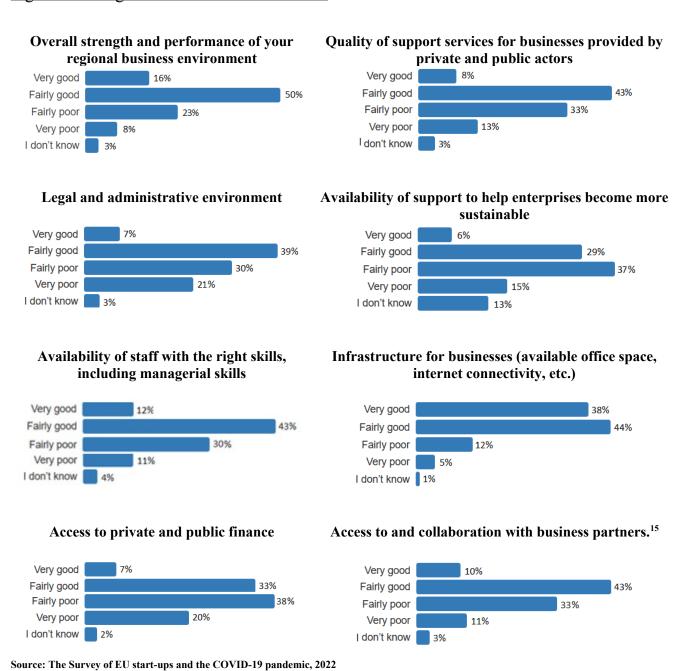
A large majority of respondents reported their start-up to be of a very small size in terms of headcount (see Figure 5), with the highest share (16%) reporting their start-up does not have any employee, and with a combined share of around 60% of respondents reporting their start-up has between one and ten employees. Furthermore, 30% of the start-ups report not to have any female employees.

Figure 5: Frequency distribution of the number of employees and female employees



The majority of respondents (66%) reported the overall strength and performance of their regional business environment to be either "Fairly good" (50%) or "Very good" (16%) (see Figure 6). As concerns the specific dimensions of the business environment that they were asked to rate, most of the dimensions showed the most frequent rating to be "Fairly good", with "Infrastructure for businesses" showing a large majority of respondents who rated this dimension either "Fairly good" (44%) or "Very good" (38%). The only two dimensions whose most frequent rating is "Fairly poor" are "Availability of support to help enterprises become more sustainable" and "Access to private and public finance".

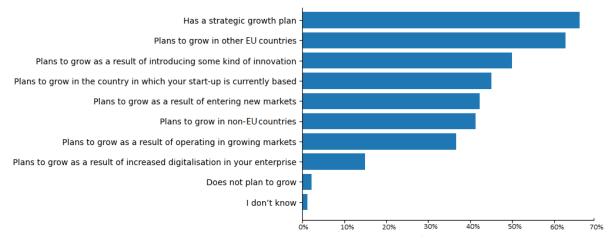
Figure 6: Rating of the business environment



<sup>15</sup> Such partners include other enterprises, public sector, educational institutions, research organisations, etc.

As concerns the growth plans, most of the respondents seem optimistic about the future, claiming their start-up plans to grow and/or has a growth plan, even though the specificity of these plans varies across respondents (see Figure 7, multiple replies were possible). For instance, not surprisingly, a smaller share of respondents reports to be planning to grow in non-EU countries (41%) than in the country in which the start-up is currently located (45%) or in other EU countries (61%). Only 2% of the start-ups in this survey said that they did not plan to grow.

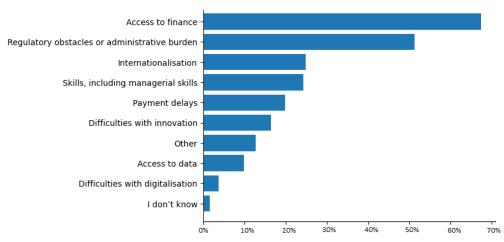
Figure 7: Growth plans



Source: The Survey of EU start-ups and the COVID-19 pandemic, 2022

Finally, with respect to the biggest problems the start-ups are facing, the two most prominent ones are by far "Access to finance" (68%) and "Regulatory obstacles or administrative burden" (52%) (see Figure 8, whereas up to three options were possible to be selected). In the category "Other", various issues such as concerning marketing and sales, the lack of appropriate support by public authorities and frictions in the supply chain were mentioned.

Figure 8: The biggest problems faced by start-ups



## 3. Findings from the survey linked to pandemic relief support

As shown in Figure 9, the impact of the pandemic varied a lot across start-ups. A slight majority of respondents (54%) reported that their business experienced a negative development (to different degrees) and ascribed this to several different reasons, with - among these - "Change in customers' behaviour" being the most prominent (26%), followed by "Lack of access to capital" (17%) and "Forced closure of operations" (16%). Around a quarter (24%) of the respondents reported either a positive or a very positive development of their business during the pandemic, with - among these - the most prominent reasons being "Increased demand" (29%), "Increased digitalisation" (21%) and their "Adjustment to market needs" (21%). About one fifth (19%) said they were largely unaffected by the pandemic and able to achieve their objectives.

How has your start-up developed during Reasons for (very) positive Reasons for (very) negative development the COVID-19 pandemic? development 29% - Increased demand Change in customers' behaviour - 26% I don't Insolvency 21% - Increased digitalisation know Lack of access to capital financing - 17% Very 21% - Adjustment to market needs Very negatively positively 18% - Increased productivity Lack of inputs or raw materials - 10% Pandemic-induced absence of staff - 8% 3% - Reduced price of inputs **Positively** 16% Lack of access to loan financing - 8% Payment delays - 7% Negatively Issues with teleworking - 3% Unaffected Issues with transitioning to further environmental sustainability - 1%

Figure 9: Start-ups' development during the COVID-19 pandemic<sup>16</sup>

Source: The Survey of EU start-ups and the COVID-19 pandemic, 2022

Overall, 15% of the start-up respondents received automatically (i.e. without requesting it) some public support from public authorities (see Figure 10).

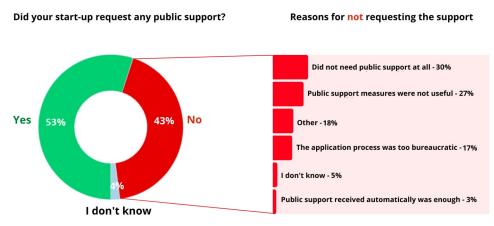
Figure 10: Frequency of respondents having received automatic public COVID-19 support, without requesting it

Value	Count	Frequency (%)
No	281	80.3%
Yes	54	15.4%
I don't know	15	4.3%

<sup>&</sup>lt;sup>16</sup> The percentages reported in the bar graphs refer to the frequency of that reply over the total of replies for that question, and the respondents could choose more than one reply.

With respect to the requests for public support during the pandemic, 43% of respondents reported their start-up did not request any public support, with – among these – the most prominent reasons being that the start-up "Did not need any public support" (30%) and that "Public support measures on offer were not useful" (27%), or "The application process was too bureaucratic" (17%), while 3% of these start-ups did not request public support because they received automatic support from public authorities and deemed that enough to weather the storm (see Figure 11).

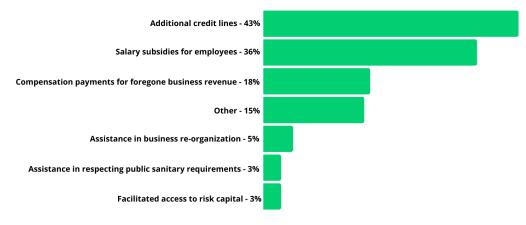
Figure 11: Reasons for not requesting public support



Source: The Survey of EU start-ups and the COVID-19 pandemic, 2022

As for the nature of support received (both by those that requested it and by those that received it automatically), the two most prominent kinds of support received were "Additional credit lines" (43%) and "Salary subsidies for employees" (36%), which markedly outdistance the third most frequent kind of support "Compensation payments for foregone business revenue" (18%) (see Figure 12).

Figure 12: Nature of public support received<sup>17</sup>

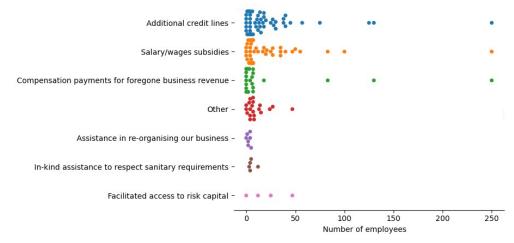


The "Assistance in re-organising our business" and "In-kind assistance to respect sanitary

<sup>&</sup>lt;sup>17</sup> The percentages in the bar graph show the proportion of respondents that chose that specific reply, and respondents could choose more than one reply.

requirements" were obtained mainly by smaller start-ups (see Figure 13). However, this could be due to several reasons, for example these specific kinds of support being available just for smaller (or younger) companies, or smaller companies being the only ones to need them. It is worth noting that "Facilitated access to risk capital", while being a kind of support rarely obtained, was obtained by start-ups of different sizes, up to about 50 employees.

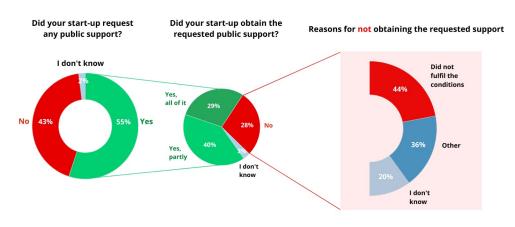
Figure 13: Nature of public support received per size of the start-up<sup>18</sup>



Source: The Survey of EU start-ups and the COVID-19 pandemic, 2022

Of the start-ups that requested public support, 28% did not obtain it (see Figure 14). As for the reasons for not obtaining the support, the leading cause was "Did not fulfil the conditions" (44%). About 36% of respondents mentioned "Other" reasons, which include, for example, the applicant not being a local citizen, the issuing authority estimating there was no need for support, and the start-up-up having employees residing outside the country in which the support was requested.

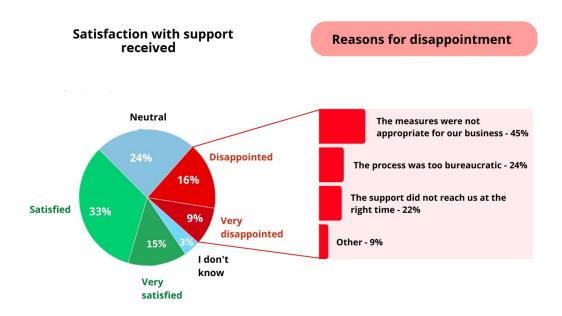
Figure 14: Request for public support and reasons for not obtaining it



<sup>&</sup>lt;sup>18</sup> Each point in the figure represents a received support of the corresponding nature (mentioned on the left) by a start-up of the corresponding size (mentioned below).

Of the start-ups that received public support (both those that requested it and those that received it automatically), 25% were disappointed or very disappointed about it (see Figure 15), while 48% of them were satisfied or very satisfied (and 24% remained neutral on this, i.e. they were neither satisfied nor disappointed). Regarding the reasons for disappointment, the most mentioned issues among the start-ups that obtained public support were "The measures were not appropriate for our business, thus the support did not address the main challenges we faced" (45%) and "The process was too bureaucratic" (24%), which were followed by "The process was too lengthy and therefore the support did not reach us at the right time" (22%). Among other reasons for disappointment, start-ups reported that the amount of the financing received from local authorities was lower than they expected.

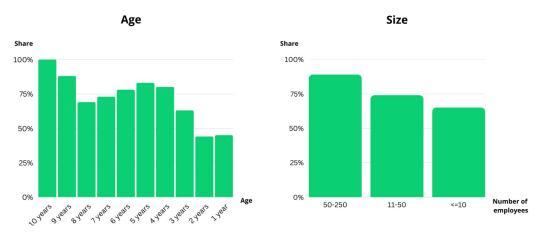
Figure 15: Reasons for disappointment with public support received<sup>19</sup>



<sup>&</sup>lt;sup>19</sup> The percentages reported in the bar graphs refer to the frequency of that reply over the total of replies for that question, and the respondents could choose more than one reply.

Finally, there seems to be a certain connection between the age and the size of the start-up and its chance of obtaining public support. Namely, older firms would tend to be bigger and we see that the start-up respondents were more likely to obtain public support if they had a higher number of employees and/or if they were rather older than younger (see Figure 16).

Figure 16: Relationship between age or size of a start-up and share of start-ups obtaining public support



## 4. Open questions

In the framework of the survey, four open questions were posed to the respondents, asking them to elaborate their views on public support during crises, the lessons learnt, the challenges their start-ups face and on the current global situation.

4.1 Question 1: "What suggestions do you have for improving public support measures for similar pandemic-related or other types of crises in the future? When possible, please clarify at which level (i.e. at local/regional, or at national, or at the EU institutions level) your specific suggestion should mainly be addressed."

Some respondents of the survey mentioned that the reason for not requesting public support was that they were unaware of its existence. It was thus suggested that extensive information about the available support should be given online, to make this support "more accessible", e.g. by creating a one-stop shop website to "gather all the possibilities" regarding the public support measures.

Some start-ups mentioned that they could not access public support as they did not fulfil the conditions for obtaining it. For example, a few start-ups mentioned that they were refused support on the grounds of them being "technological companies", which could in theory work remotely. Yet, their business activity was completely paralysed due to their customers being traditional economic actors who had to suspend all their activities. Thus, they wish that the criteria for obtaining the support would also allow including such specific cases.

Some respondents considered it erroneous to base support on decrease of sales against the previous year. Namely, many young start-ups did not have any sales during the previous year, and were consequently refused any kind of support, while their economic prospects had clearly worsened due to shrinking markets. Therefore, these respondents suggested taking their specific situation duly into account during the crisis, with adapted criteria for awarding public support to them as well. Essentially, they asked for a tailored support to start-ups, taking into account their specific needs and characteristics, which may differ from those of traditional small and medium-sized enterprises, and prioritize automatic allocations, as start-ups often have limited resources.

A complex and "highly-bureaucratic" application process has been a reason for some start-ups not to even bother requesting public support. They claimed that the application for support often required the intervention of external consultants who were able to navigate bureaucracy. These respondents said that requesting public support should be easier than it was the case during the COVID-19 pandemic - and many also said that public support during crises needs to be provided fast, as time really matters, in particular for start-ups.

Only few respondents clarified at which level (i.e. at local/regional, or at national, or at the EU institutions level) their specific suggestions should mainly be addressed. However, some praised the EU level approach, e.g. by writing: "We have excellent experience with the level of EU institutions, but the local level is inadequate." and "National financing programmes are user-unfriendly (unlike SME Instrument, H2020 or Digital Europe)" and "Lack of transparency when it comes to accessing local or regional funds." and also asked for a "Clearer communication at local/regional level."

# 4.2 Question 2: "What lessons do you draw for your own business in terms of the preparations for similar pandemic-related or other types of crises in the future?"

Most of the respondents reported that the COVID-19 pandemic was a period of intense learning, which taught them lessons that will be highly useful in the future. Many underlined how they are now accustomed to a fully digitised work environment, and how hybrid work (if not completely remote work) has become the norm, usually praising the flexibility it provides. However, some pointed out that remote work often resulted in a lack of work/life balance, which is a fundamental aspect to focus on in the future.

As concerns business opportunities, many reported that the pandemic pushed them to better explore new markets, but also to create better and more resilient value chains in order to be able to keep their business going through the crises. Furthermore, some stressed the importance of having a diversified customer base, as they found out how risky it is to grow reliant on few customers, even if they provide quick opportunities for growth.

As for the financial aspects of the business, many reported having learnt the importance of better cash flow management and of signing longer-term contracts. Furthermore, they emphasised the importance of building strong relationships with private funders, which proved fundamental to ensure the survival of some start-ups during tough periods. Finally, some stressed the importance of having sufficient financial runway to survive market slowdowns, suggesting a runaway of around twelve months to be on the safe side in their view.

# 4.3 Question 3: "What are the three top challenges for your business's future over the next 5 years (such as investment, talent, geopolitical situation, etc.)?"

Many respondents reported that a frequent challenge is finding the right skills/talent for their start-up, since on top of struggling to find them, it is also hard to offer them an attractive salary package due to inflation eroding purchasing power.

Another challenge exposed is access to financing. While some respondents await public financing support, others wish to wean themselves off such public support in favour of private funding, since they consider public support too complex to apply for. They also point to low success rates when asking for public support and some mention that local and national public support is easier to get but generally smaller in amount than the support available on the EU level.

Finally, also the importance of focusing more on the EU single market, both in terms of customers and in terms of suppliers, was mentioned. Start-ups understand that - no matter what may happen in the future - it is likely that EU Member States will strive to ensure a continuity in the flow of goods and services throughout the EU. However, some respondents stressed that growing their business within the EU is often hindered by differences in languages and regulatory frameworks, and they clearly pointed to the challenging administrative burdens.

# 4.4 Question 4: "How is the current global situation, in light of the Russian war of aggression against Ukraine, affecting your start-up's economic performance?"

Many start-ups reported that the Russian war or aggression against Ukraine is not affecting their "day-to-day" operations, but that it could soon become a problem since their clients' budgets have been shrinking and there is a risk of recession. Start-ups have already faced difficulties, in particular due to inflation, uncertainty, customers not proceeding with the envisaged projects and a big drop in readiness to invest by venture capital funds and angel investors.

Start-ups reported to be trying to help those affected by the war and also pointed out that the displacements as a consequence of the ongoing war made it easier to find workers in the EU equipped with the right technical skills.

Finally, respondents underlined the shortage of supplies, including raw materials that were expected to be coming from Ukraine (such as steel), which pushed them to look for replacements elsewhere, but inevitably causing longer lead times and thus delays.

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Overall, we can conclude that the COVID-19 pandemic, coupled with the consequences of the Russian war or aggression against Ukraine, has had a significant impact on European start-ups, resulting in various challenges and problems, but also presenting some opportunities, as the impacts on start-ups varied a lot. The lessons learnt shall be applied to future crises.