

REPORT

RUSSIAN AGGRESSION IN UKRAINE: HOW DO UKRAINIAN STARTUPS SURVIVE



Created by



POLISH – UKRAINIAN
STARTUP BRIDGE

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INTRODUCTION

As indicated by the "Polish Ukrainian Startup Bridge" study conducted in 2021, Ukraine was a region of dynamic development of start-ups. The development of this area of the Ukrainian economy in recent years has given grounds for optimism and the perception of the start-up segment as a lever for the development of the entire country. The stimulus for development coming from start-ups would be particularly valuable, because by their nature they support the development of modern technologies and are conducive to building international relations.

The tragic day of February 24, 2022, extinguished these hopes and set Ukrainians with challenges that most of the inhabitants of Europe had never faced. Russian aggression and the conflict that has been going on for many months have changed the development priorities of the country as well as the life goals of many ordinary people.

Despite this, the Ukrainian economy functions, and within it a number of companies that manage to maintain their activity. This study showed that despite a number of challenges and an extremely difficult economic and political situation, Ukrainian business leaders believe in the victory and success of their business initiatives.

In the report, the reader will find information about the needs, challenges and development opportunities of Ukrainian startups. It will be a story about companies and people who, despite the war, decided to preserve, develop, give hope and support Ukraine during the war and during reconstruction after defeating the aggressor.

A WORD FROM POLISH-UKRAINIAN STARTUP BRIDGE

Almost a year ago, we handed over to you the first report comprehensively dealing with the condition of the Ukrainian start-up industry entitled "UKRAINIAN STARTUP ECOSYSTEM: Facing the challenges, seizing the opportunities." This publication received a very positive response in Poland and Ukraine. The discussion on the potential of Polish-Ukrainian cooperation in the field of innovation could be based on reliable data.

The report that you have in your hands today - "RUSSIAN AGGRESSION IN UKRAINE: How do Ukrainian startups survive", is about challenges that no entrepreneur can predict and which can undermine the foundations of even the most promising ventures.

The publication is an expression of appreciation for all Ukrainian entrepreneurs who have come to struggle with the most destructive adversities. The study we sent to startup teams took shape in very difficult conditions. Suffice it to say that we collected half as many responses as in the previous year. We were hampered by devastating Russian bombings in key Ukrainian cities, constant power and internet outages, and the fact that our respondents are widely dispersed almost all over the world

As the team responsible for editing the report, we would like to thank the Ukrainian founders and members of startup teams who shared their needs and dilemmas in 84 surveys; but also boasted about the successes they managed to achieve against all odds.

We leave in good memory all those who will no longer return to their projects, offices, and laboratories, to their families and friends. With their loss, great ideas, challenges, and solutions that save the environment and build a great future will have to wait for new talented and brave ones. We pay tribute to all those who died fighting for Ukraine.

The first important mission of the report is to constantly remind you that many Ukrainian startups are still operating in the country and abroad, and work not only for themselves but also for the goal of victory.

The second overtone that we would like for you to stay is to encourage you to use the services of Ukrainian entrepreneurs, who still have the opportunity to send their products, solutions, and intellectual property around the world. Every euro spent on the Ukrainian products is one small step towards Ukraine's victory.

And the last most important message is that the war will end and we should do everything to ensure that Ukraine is not drained of its greatest talents. Respect for the Ukrainian intellectual achievements and the society's struggle for freedom should be reflected in helping to rebuild and strengthen the Ukrainian elites on the ground and trying to ensure that as much capital as possible flows back to Ukraine.



**Łukasz
Wawak**
Manager,
Polish-Ukrainian
Startup Bridge

A WORD FROM UKRAINIAN STARTUP FUND

The war has become the toughest possible test of the flexibility of the innovation industry: whether the ecosystem can withstand, whether it will be resilient enough. And most importantly, whether it will be possible to reform the work in such a way as to help overcome the enemy.

During the first 2-3 weeks of the war, it was difficult to understand where to move, but our team united and everyone decided for themselves how they could be useful to the state. Now we are all faced with new, difficult times in our country and have to adjust, be flexible and prepared for the new reality to make an innovative ecosystem survive and become even stronger. Ukraine's tech sector has had to adapt to the realities of war but continues to operate at almost full capacity despite the extraordinary conditions, demonstrating colossal resilience.

USF has been successfully operating for almost three years. During this time, it has become the largest angel investor in Ukraine and Eastern Europe and gained a reputation as an ecosystem builder, bringing the community of innovative entrepreneurs to the national level. Before the war started, USF provided more than 250 grants worth more than \$6.3 million to Ukrainian startups. 37 pitch days were held, in which 413 startups took part. And the number of applications submitted exceeded 4.5 thousand. During the grant program of the Fund, every second startup-winner has already attracted additional investments.

We provide opportunities for Ukrainian startups to participate in the largest technological events in the world: South by Southwest (SXSW) in the USA, Viva Technology in France, Collision in Canada, Startup Grind Global in Silicon Valley, TechBBQ in Denmark, Web Summit in Portugal, TechCrunch in San Francisco, CES in the USA, etc. This November, 70 Ukrainian startups and scale-ups have made the journey to the Web Summit and Web.3.0. Our organization together with partners brought the biggest Ukrainian delegation of 24 startups to participate there. At least 30,000 people visited the national stand of Ukraine with over 2000 Ukrainians visiting the event.

But now the whole country is holding the defense. Someone is on the front line, someone is a volunteer, someone is working to ensure the lives of people, someone is with their children and loved ones.

The war has made its adjustments in all areas of social life and business is no exception. Someone relocated, someone decided to stay, sources of funding have changed. Someone lost business, and someone started a new one. Due to the research made together with Polish-Ukrainian Startup Bridge, we have the opportunity to understand the key needs, barriers and gaps, and therefore find the most relevant solutions to make an ecosystem not only survive, but continue to grow.



**Pavlo
Kartashov**
CEO
Ukrainian Startup Fund

A WORD FROM WARSAW STOCK EXCHANGE

The economic crisis caused by the outbreak of COVID-19, exacerbated by high inflation and the war in Ukraine, has altered the way businesses operate, particularly their funding. Despite the fact that many Ukrainian startups seek to achieve greater efficacy on capital raised by verifying their investments and financial policies, VC funds remain more cautious than ever before.

Especially these days, we observe a lack of competencies among startups in investment financing, which was articulated by founders interviewed in this report as the second-biggest competence deficit observed in their teams. As a response, we are currently undertaking a number of measures to address this problem. With our current training offer for future issuers regarding business funding, we are planning to expand this offer for startups in the near future.

We believe that, in light of current events, there is a need to consider how we can support collaboration between Polish and Ukrainian businesses, as well as the startup ecosystem, thus, we aim to act as an intermediary that links startups with big corporations, for instance in our WSE incubator. Under the WSE incubator launched in cooperation with HugeTech in Poland, we act as the potential receiver of your technology or even serve as your first customer or investor. We can help accelerate your startup under the Poland Prize program if half of the owners are not Polish citizens and at least one board member is not a Polish citizen.

The Idea Global Poland Prize means:

- Up to PLN 250,000 grant,
- Up to 3 months of soft-landing phase,
- Up to 6 months of acceleration,
- Assistance in registering a company in Poland, workshops, and dedicated support under the non-EU visa program.
- Co-work space in WSE headquarter



**Ignacy
Bobruk**
Deputy director for
communication and
marketing, Warsaw
Stock Exchange;
Head of WSE
Venture Network

KEY RESULTS

#01

The outbreak of war significantly slowed down the development of the start-up market in Ukraine.

#02

The most popular form of running a business by start-ups is a limited liability company.

#03

Start-ups operate primarily in cities with over 100,000 inhabitants.

#04

Almost all respondents notice a definitely negative impact of warfare in the country on the possibility of running a business. Most startup leaders evaluate their situation, assess their current situation as bad. 12% of the surveyed companies closed their operations after the Russian invasion.

#05

The majority of start-ups operate in a global context - both on the Ukrainian market and abroad. Serving foreign customers is a chance to survive a very difficult economic, political and social situation in the country.

#06

The direct reasons for the closure of companies were: a decrease in sales of products and services on the Ukrainian market, the inability to travel outside the country (necessary to conduct business) and the loss of funds to maintain financial liquidity.

#07

65% of start-ups in the analyzed sample were not forced to make a decision to reduce employment after the outbreak of war . 35% of companies laid off some employees. At the same time, 48% of the surveyed companies had to significantly reduce the level of remuneration.

#08

After the outbreak of the war, almost 40% of start-ups did not undertake any activities related to trying to obtain financing for their operations and development. In 1/3 of the cases, companies tried to raise funds, but without success.

KEY RESULTS

#09

The majority of the report's respondents (61%) did not change the location of the company's headquarters after the outbreak of the war. Almost 1/3 of entrepreneurs had to change their location to a place outside Ukraine.

#10

Apart from financial resources, the competences of project teams are also crucial for the development of start-ups. The key competency gaps in the teams are: deficits in sales (44%), marketing and investment financing competencies (33% each).

#11

Respondents, employees and owners of Ukrainian start-ups are optimistic about the upcoming changes in the start-up ecosystem in Ukraine. For 75% of the respondents, the future of the Ukrainian market seems positive - they believe in the growth and development of their (and similar) activities. significantly reduce the level of remuneration.

SOCIO-ECONOMIC CONTEXT

The 2022 year began under a sign of **post-COVID economic recovery**: a vast majority of businesses had opened in full and began hiring activities to compensate for the cuts made in 2020 and “hiring freeze” in 2021. The aggregate GDP of Ukraine in 2021 was the highest since its independence (in dollar terms). Worrying signals about Russian troops massing near Ukrainian borders were still seen mostly as “muscle flexing”. **Then the world turned upside down at c.a. 4 AM CET on 24.02.2022.**

The following 11 months can arguably be divided into **3 main stages**:

- 24.02 to end-March: the first period was characterized by a **mass exodus** of women, children and foreigners studying, working and living in Ukraine from South and East to North-West/South-West of Ukraine or abroad. **Over 7M people have moved, either within Ukraine or abroad.** About 30% of surveyed in our research, startups had to partially re-locate their teams abroad.
- April - August: the beginning of the second period began after a **“goodwill act” on the outskirts of Kyiv** and lasted till the end of August. This stage can be viewed as stabilization: businesses partially re-started day-to-day operations, regular cross-border trade flows resumed (albeit nowhere close to a pre-war scale);
- September - December: the effects of macroeconomic slowdown are becoming more evident on an individual level. **Weekly prices of basic goods increase**, accompanied by constant air strikes on critical infrastructure, continue to depress economic and social activity. **By the end of 2022 an aggregate GDP is expected to fall by 35-40% compared to 2021.**

The steepest in aggregate was the fall during the first half of the year: despite the resuming of day-to-day operations on non-occupied territories, two out of three main “dollar-earning” export industries suffered a decline over 30% (aggregate for metal and agricultural exports). Since February 2022 exports of **IT have mainly been responsible for stable dollar inflows in Ukraine.** During the first 10 months in 2022 exports of IT services amounted to \$6bn, which makes a 10% increase compared to the same period of 2021. This trend is also applicable for the surveyed startups, as over 64% of them rely on clients outside Ukraine.

The dynamics of those IT service exports began to move south in October and November, as more and more air strikes hit critical infrastructure and blackouts became more common. The revised figure of IT services exports for 2022 is expected to reach \$7.1bn at most, lower than mid-year pessimistic projections of \$7.2bn-\$7.5bn. The projects that had been able to partially relocate their teams outside Ukraine are most fit to endure the next 3-6 months.

Shifting into deep winter and early spring 2023 **IT-related businesses are expected to increasingly prioritize survival by maintaining minimum viable levels of service and cost-containment measures**, such as staff reduction (already made by 35% of survey’s respondents) and reducing wages (already made by 48% of survey’s respondents).



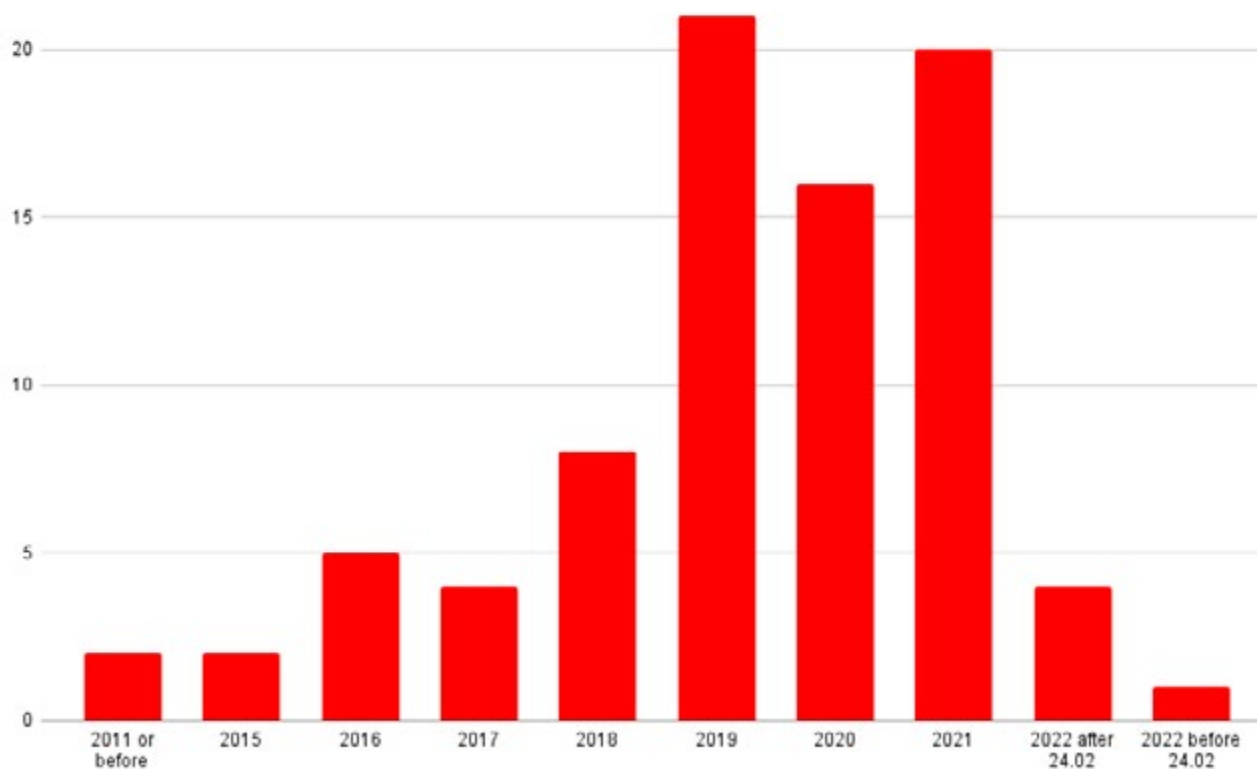
**Mykhailo
Khaletskyi**

External Expert and
Jury Member,
Ukrainian Startup Fund

UKRAINIAN STARTUP ECOSYSTEM

On the Ukrainian market, shortly before the outbreak of the war and in comparison to previous years, a "boom" of business initiatives in the form of newly established start-ups could be observed. In 2019-2021, significantly more entities entered the market than in 2011-2018. Among the 83 surveyed companies, as many as 57 (more than half) were founded in this period. This positive and developmental trend was quickly stopped due to the armed conflict. In 2022, only 5 companies were established, 4 of which before the outbreak of war.

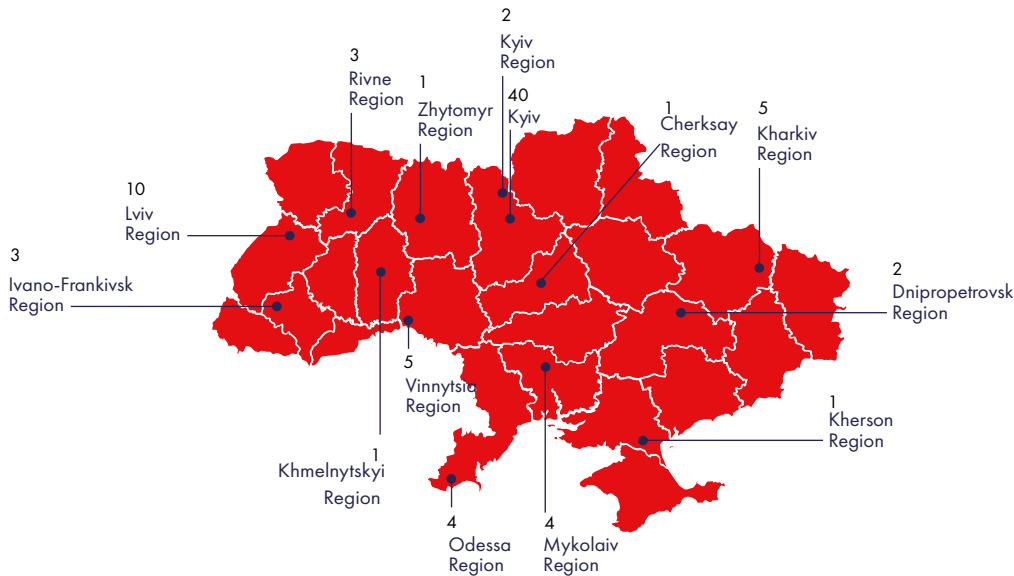
Startup year



Before the war broke out, the start-ups that took part in the study had had their headquarters in 14 Ukrainian oblast's/regions, with 48.2% of them located in the Kiev region¹. Every second surveyed company was located in the capital city, which makes Kyiv not only the largest industrial, cultural and scientific center of the country, but also the central place of the Ukrainian start-up ecosystem.

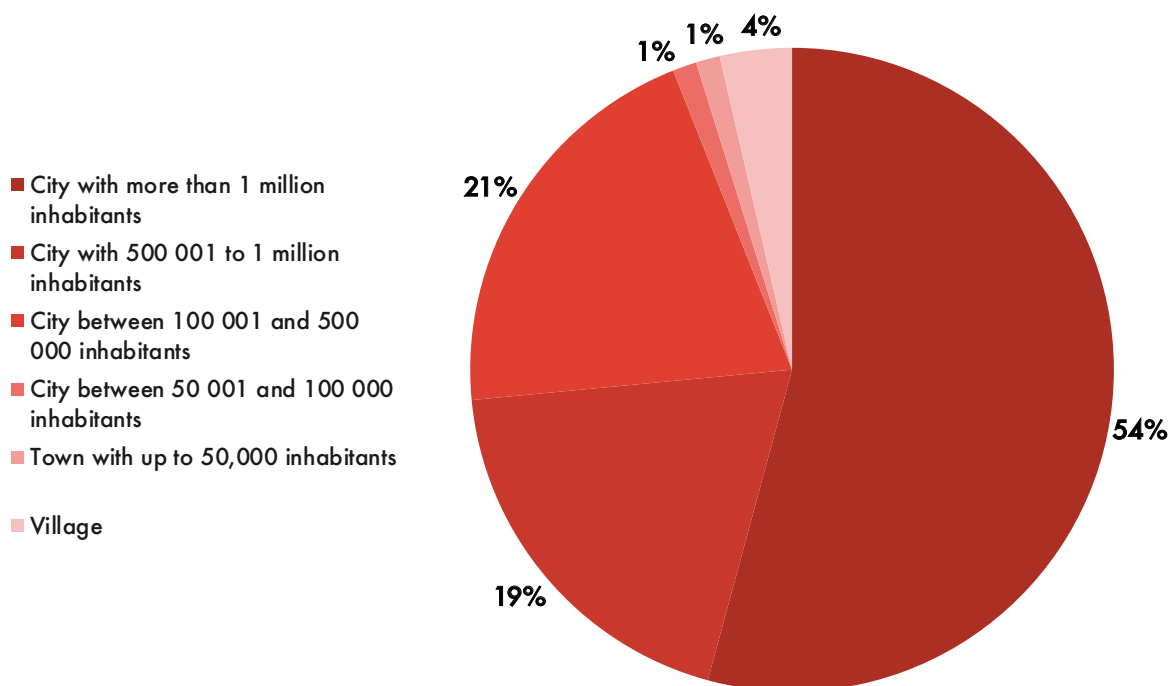
¹ One company declared its headquarters in the United States in New York

Number of start-up headquartered in each region before February 24, 2022



The Lviv Oblast ranks second in terms of the number of startups on the Ukrainian market. 12% of all surveyed companies fall within this district. The Kharkiv and Vinnitsya regions are the third in order, with 5 companies each. It can be seen that, apart from Kharkiv Oblast, start-ups on the Ukrainian market are mainly scattered in the central and western part of the country, which may be related to the instability on the border with Russia even before the outbreak of the war (it should be noted that most start-ups were created in the years 2019-2021).

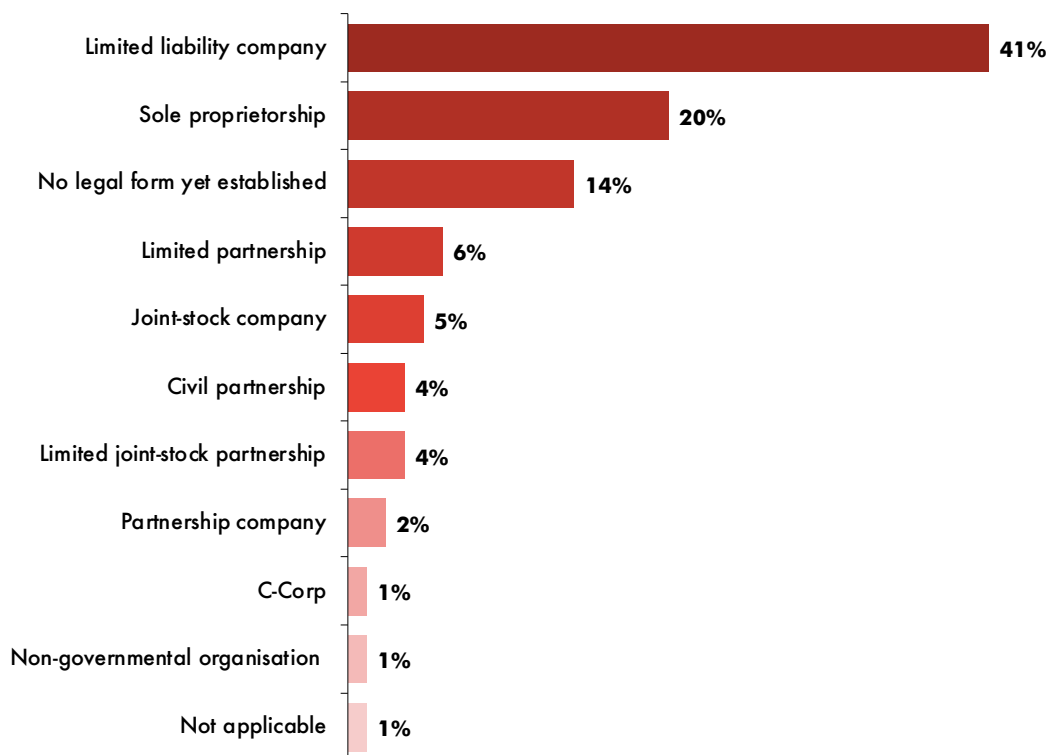
Location of the start-ups in terms of size



Start-ups operate primarily in cities with over 100,000 inhabitants, i.e. in large urban centers in the aforementioned regions. It should be remembered that almost half of the analyzed companies are located in Kiev, which is confirmed by the chart above. Only 6% of the analyzed enterprises were located in small towns, interestingly more often in rural areas than in small towns.

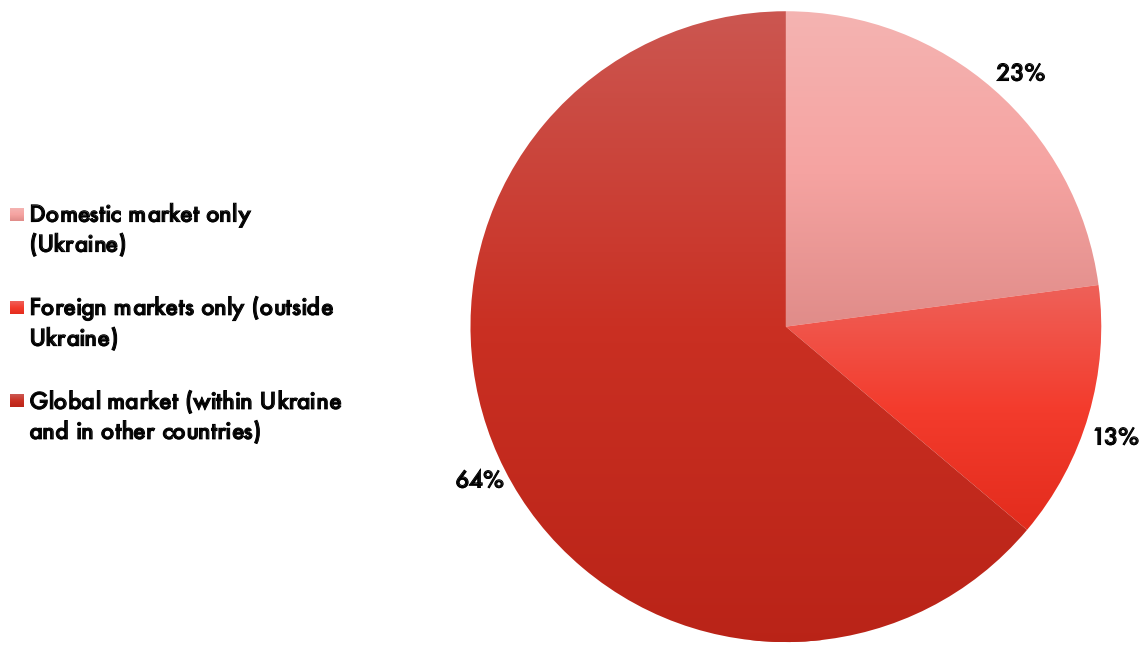
Slightly more than 40% of the analyzed enterprises are limited liability companies - this legal form dominates among Ukrainian start-ups in the analyzed sample. Less common are companies in the form of sole proprietorship - this type of activity is conducted by 1/5 of organizations. Quite often, in almost 15% of cases, companies do not yet have a legal form, which may be due to the early stage of activity and the selection of the optimal form of activity. There are as many as 7 other solutions used by entrepreneurs - from limited partnerships to non-governmental organizations. In total, as much as ¼ of the sample represents a different legal form of activity than the main solutions listed above.

Legal form of the company's operation



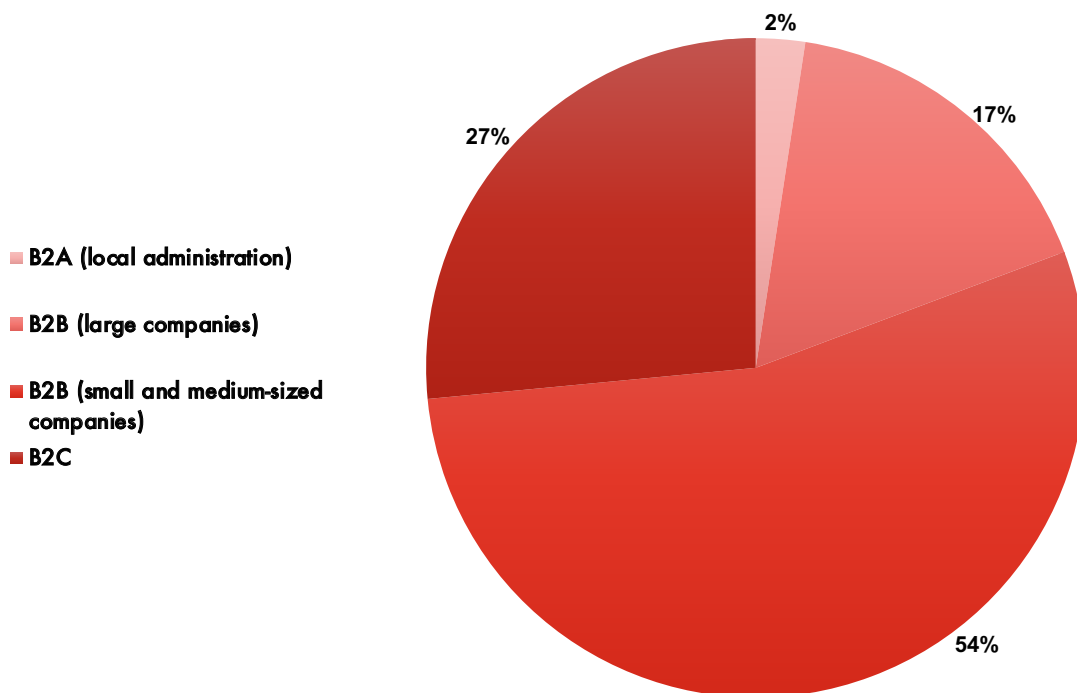
Looking at the range of activities of individual companies, it can be seen that less than a quarter of start-ups from Ukraine operate or have operated only on the local, national market. Most companies work globally (64% of respondents indicated the international nature of work), both on the Ukrainian market and abroad. 13% declared that they direct their services and products only to foreign markets, not including local ones. This means that problems in the operation of start-ups from Ukraine are reflected in markets far beyond the country's borders and constitute an obstacle for all entities cooperating with them or buying their services and products. At the same time, for some of the analyzed enterprises, the fact of working for foreign clients and cooperation with them is a chance to survive a very difficult economic, political and social situation in the country. These data also prove the great market potential of start-ups from Ukraine and the value/potential of the resources generated by them, which allow them to achieve the status of a company operating for international clients.

Scope of start-up activity



More than half of the surveyed entities provide services to small and medium-sized enterprises, and almost 1/5 to large enterprises. This confirms the earlier thesis that the damages and losses suffered by employees of start-ups in Ukraine also affect the activities of other organizations outside the country, besides the interested parties or end consumers/recipients of their products and services. It is a network of dependencies that goes far beyond the borders of the attacked country - taking into account the results presented in the previous graph. Among the analyzed start-ups, more than 1/4 of the companies provided services, the results of which were addressed directly to private clients. The public administration sector was definitely the least frequent recipient of the offer of the analyzed companies (only 2% of the sample).

Main clients of the company



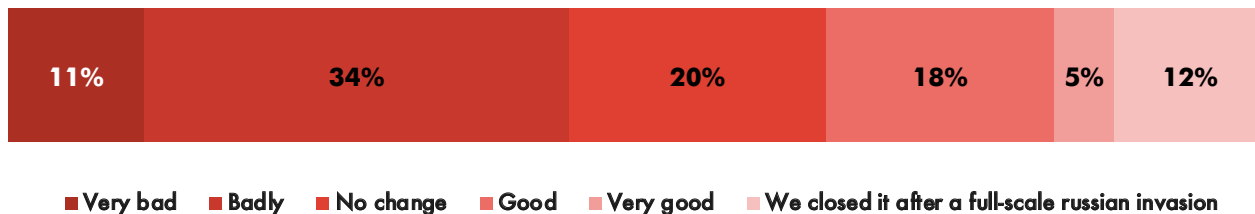
Industries served by start-ups

An industry supported by a startup	number of indications	% of entities	% of all indications
SaaS	15	18%	7%
IoT	14	17%	7%
agriculture	13	15%	6%
MedTech & healthcare	12	14%	6%
IT / Telecommunications	11	13%	5%
electronics	9	11%	4%
Marketplace	9	11%	4%
artificial intelligence	8	10%	4%
Engineering / Science	8	10%	4%
information technologies	8	10%	4%
Education / Courses / Training	7	8%	3%
Retail	7	8%	3%
Data & analytics	6	7%	3%
Ecommerce	6	7%	3%
Food & Beverage	6	7%	3%
Accounting/Auditing/Taxes	5	6%	2%
cleantech	5	6%	2%
Energy	5	6%	2%
Finance / Banking / Insurance / Economics	5	6%	2%
Transport / Logistics	5	6%	2%
Automotive	4	5%	2%
Industrial production / Industrial processing	4	5%	2%
Marketing & advertising	4	5%	2%
smart cities	4	5%	2%
biotech	3	4%	1%
Horeca (hotels, restaurants, catering companies)	3	4%	1%
manufacturing	3	4%	1%
Media & Entertainment / Information / Communication	3	4%	1%
Mobile	3	4%	1%
Recycling / waste management	3	4%	1%
aerospace	2	2%	1%
legal services	2	2%	1%
Trade / Sales (wholesale, retail)	2	2%	1%
Culture / entertainment / leisure / recreation / sports	1	1%	0%
Security & cybersecurity	1	1%	0%

The vast majority of respondents were also presidents of the companies they spoke about in the survey, 1 out of 10 respondents is a Technology Director, i.e. an employee with both extensive technical and business knowledge.

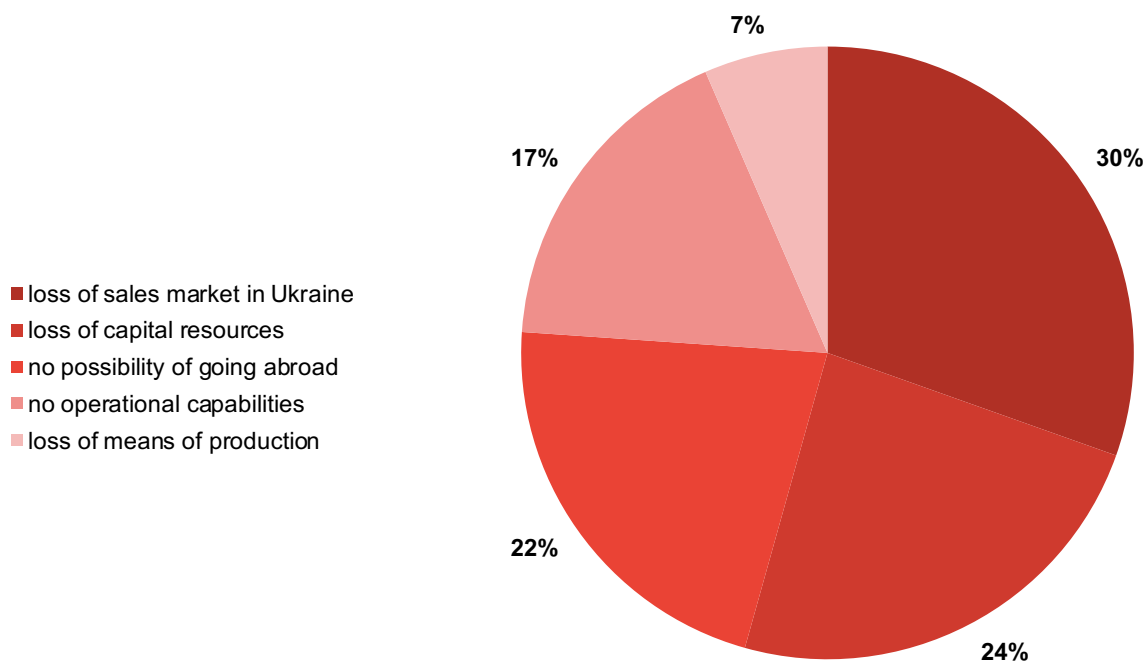
Answering the question about how start-ups cope with the current situation, the largest percentage of respondents (almost half - 45%) indicated that the situation was bad or very bad. It should be noted that another 12% of the surveyed companies closed their operations after the Russian invasion. A significant part of the surveyed companies find themselves in a situation that makes it difficult for them to conduct business precisely because of Russian aggression. This may also be related to the decline in interest of foreign investors in taking action in such an unstable and threatened area. As a result, not only companies from areas affected by military operations are affected by the war.

Evaluation of the company's situation after the outbreak of war

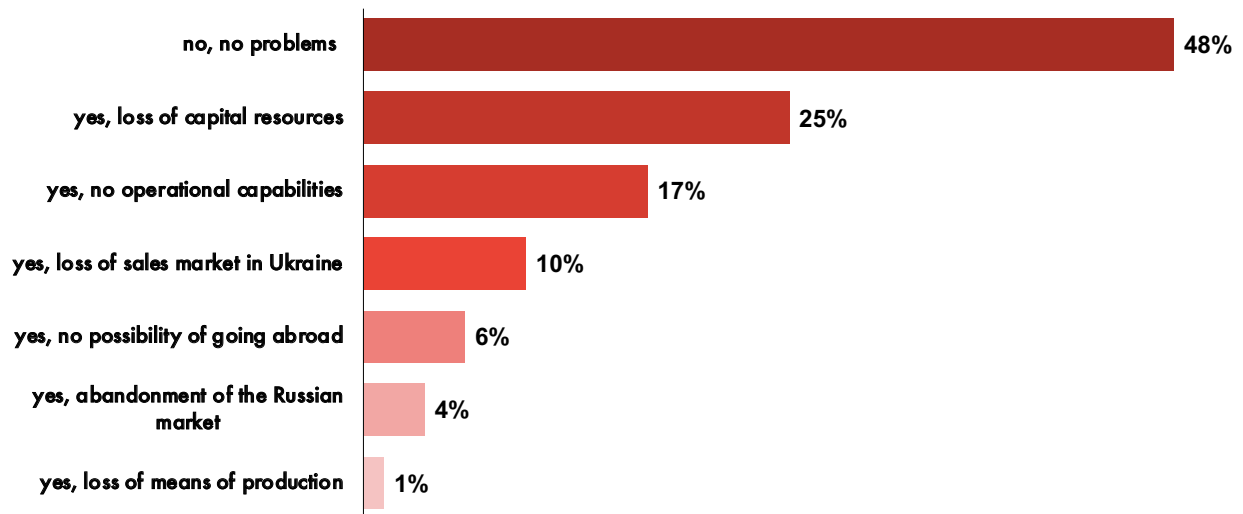


The reasons for the closure of start-up businesses in Ukraine are diverse - there are 4 most common reasons that result in the need to discontinue business or limit it. In the case of 1/3 of start-ups, the reason for withdrawing from operations was the decline in sales of products and services on the Ukrainian market. In the case of about 1/4 of the respondents, the termination of the activity was determined by the inability to travel abroad (which in their case was necessary to maintain the activity) and the loss of capital, which allowed the compa-

Reasons for closing the business



Almost half of the respondents, assessing the condition of their start-ups before February 24, 2022, declared that at that time they did not encounter any difficulties in conducting professional activity. For 1/4 of the respondents already before the outbreak of the war, the decrease in capital held for running a business was significant, and almost 1/5 pointed to the lack of operational possibilities to run a business. For 10% of the survey participants, a decrease in sales was also noticeable.

Evaluation of the condition of a start-up - have any difficulties been encountered?

EXPERT'S OPINION

Ukraine's startup ecosystem has shown an impressive leapfrog in recent years. This was proved by the dynamics of new projects emergence and development, variety of local and international startup support programs, the pace of attracting investments by Ukrainian founders, and overall ecosystem enhancement through various initiatives. Since 2017, Ukrainian combined ecosystem value increased **9.3x, reached €23.3B**, and became one of the fastest growing among CEE countries.

We have observed that the full-scale war provoked its negative impact, and the startup ecosystem sustained losses like any other area. According to the current report, 66% of respondents faced difficulties due to the situation. But even despite this, Ukrainian founders demonstrate resilience, and the IT sector still remains one of the growing domains in the country, **upheld 95% of contracts** and **increased export by 23% YoY** during the first six months of 2022. Moreover, during the wartime, 2 Ukrainian companies joined the unicorns list.

Local startups have no special fundraising conditions on the international market, so facing a competitive environment, Ukrainian teams need

to be adaptive and adjust to global focus even faster. We observe that in addition to investment requests, more often startups are also looking for new scaling and customer attracting opportunities. Exploring new growth ways efficiently and fast is definitely important for now. We cannot claim the lack of prospective startups or investment capital shortage. Still, the overall investment strategy, even if it remained the same in general, became more selective. Thus, consistent results as well as maintaining business resilience allow Ukrainian founders to attract investments and develop high-quality products no matter what.

On behalf of Sigma Software Labs, we believe in the Ukrainian startups' great potential and fully support local ecosystem growth on the ongoing basis. Using product and service businesses synergy, we scale innovative solutions through our network. But in current conditions, international partners' support is of particular importance, and programs such as Polish-Ukrainian Startup Bridge just can't be underestimated. Joint efforts do contribute to the overall ecosystem



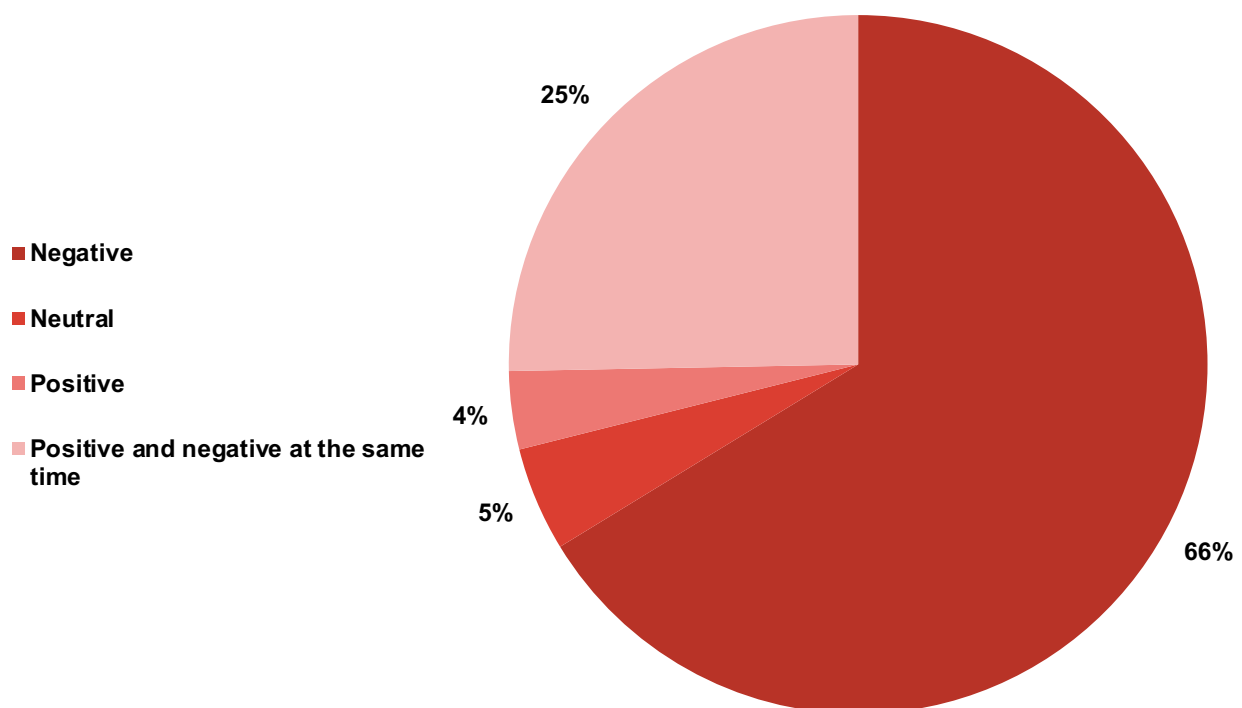
Dariia Yanieeva

Investment director
at Sigma Software Labs

DEVELOPMENT BARRIERS AND CHALLENGES AFTER THE RUSSIAN INVASION

Almost all respondents notice a definitely negative impact of warfare in the country on the possibility of running a business. 66% of respondents directly declare difficulties resulting from this situation. For ¼ of the respondents, the effects of this event are ambiguous - they brought both negative and positive changes. Potentially positive effects may result from the opening of new cooperation markets for Ukrainian entrepreneurs, from receiving foreign support for continuing operations, or from relocation to Western countries, which could open up new development opportunities for some companies.

Impact of the war on work and running a business



Out of 28 respondents who answered the question about the positive effects of the outbreak of war on the activities of their start-ups, 15 companies pointed to the possibility of operating on new markets and acquiring foreign customers. This is the most frequently cited reason for positive changes in business. Much less often there were voices saying that after the start of the war, new customers appeared and competition decreased, some people pointed to the fact that they received grants helped them. One respondent managed to find a new investor during this time. However, it is important to take a closer look at the answers that are more difficult to classify, which have been placed in the "other" category.

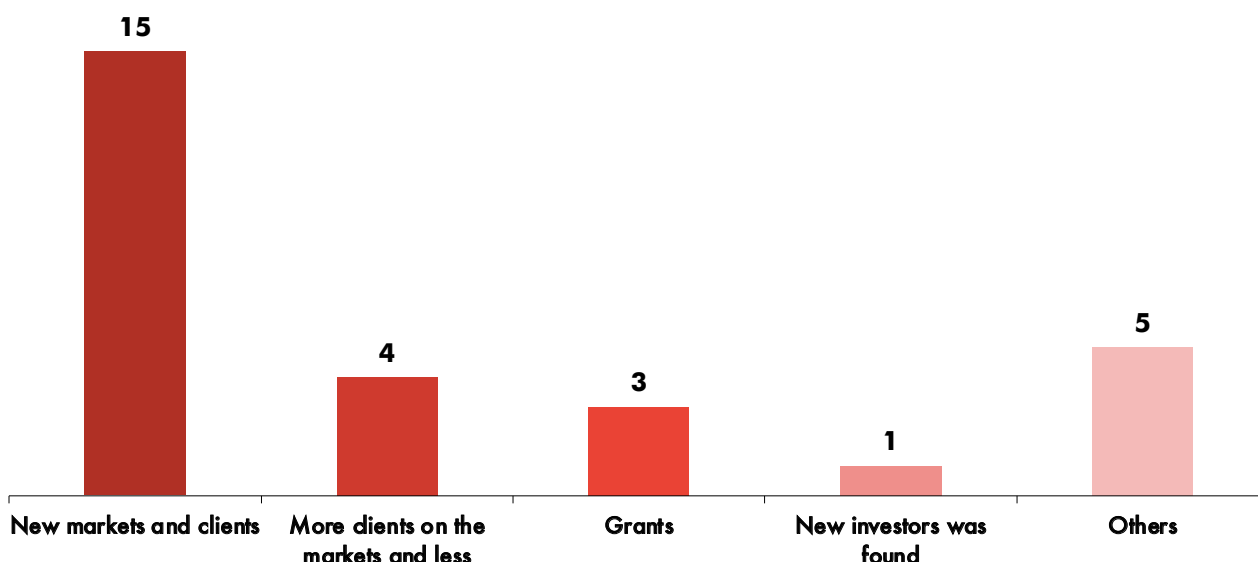
Two important quotes from the answers of open respondents are imposing here:

- "We have learned to conduct business in very critical conditions. We have learned to select quality clients and not be afraid to say NO to a client who does not fit us ideologically."
- "Understanding that we will win this war and the whole world will be free."

The first concern that takes place in teams working in these difficult conditions is the mental change - some of them have managed to adapt their way of working to the circumstances. That shows in rejecting customers who do not meet certain standards set by the organization and the ability to work under the pressure of difficult circumstances. One of the respondents noted positive changes in his start-up after February 24, 2022, which are certainly related to the optimization of activities and the need to focus on the most important projects, most suited to the company's needs.

The second quote was extracted in order to show what ideals guide some of the Ukrainian entrepreneurs in the era of the threat of military aggression from Russia - the morale of employees of the analyzed companies and their "survival spirit" are perfectly noticeable in this one simple sentence.

Positive changes in activity after the outbreak of war



65% of start-ups in the analyzed sample did not have to make a decision to reduce employment after the outbreak of the war, and 35% laid off some employees.

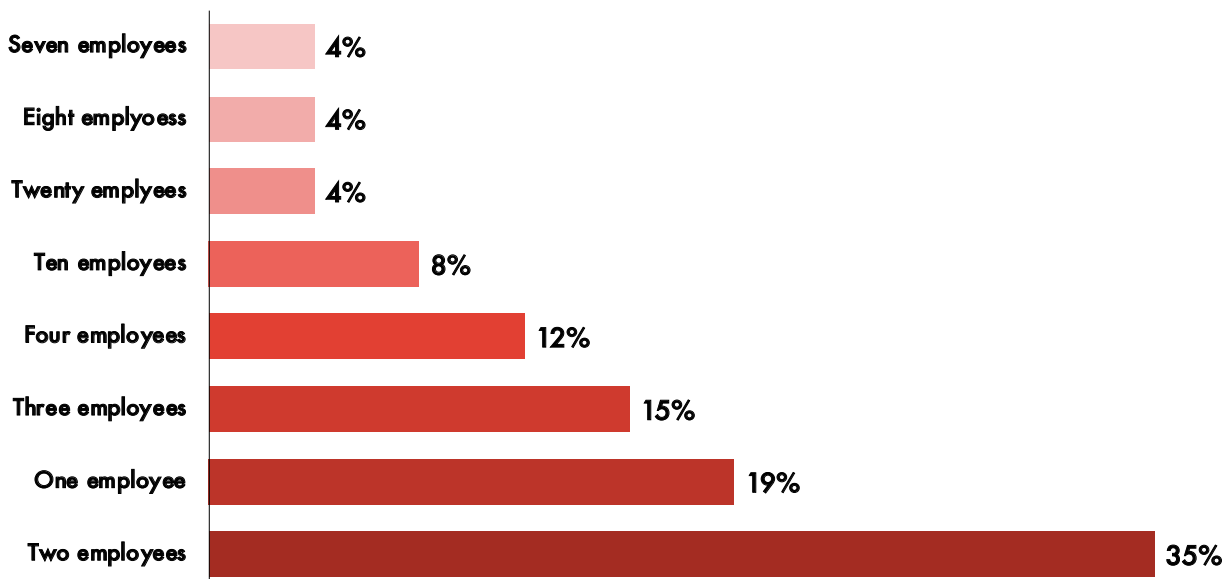
In the vast majority, the direct reason indicated by the respondents, which led to the decision to make redundancies, was the lack of funding. 1 in 5 respondents answered that in the company they represent, there was no need to maintain such a high level of employment as before.

Reasons for the reducing employment:

- 71% - lack of financing
- 21% - no need for such a quantity
- 9% - other reasons

The reduction of employment most often concerned a small number of employees - from one to two people. As many as 54% of the analyzed companies laid off so many people. Slightly more than 1/5 of the sample were respondents who indicated that 3-4 people had to be made redundant. Larger groups of employees were dismissed the least frequently, in an extreme case as many as 20 people were dismissed due to difficulties that appeared after the outbreak of the war.

Number of redundant employees



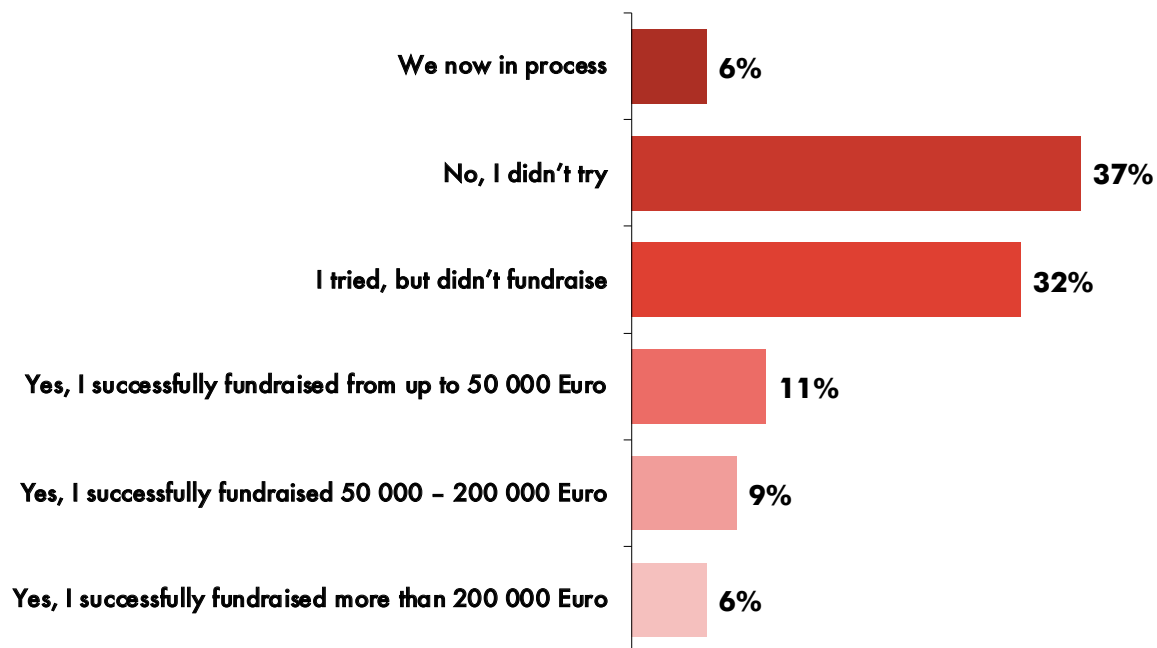
Unfortunately, almost half of the sample of the analyzed start-ups suffered from financial problems, which made it necessary to cut salaries (48%).

To sum up, there is a clear situation in which start-ups in Ukraine struggle with both the need to reduce costs and the specter of relocation (sometimes several times - inside or outside Ukraine), and are forced to make the difficult decision to lay off employees.

Due to the small size of the sample of people who declared the level of wage cuts (3 people and the analyzed subgroup did not answer this question), it is difficult to draw definitive conclusions based on the results presented below. With high probability, however, wages fell significantly. 30% (11 companies) had to cut back almost entirely on paying their employees (between 70 and 100 percent reduction). The second position reduced wages most often by about 50% (the range is wider, but it was 50% that was the most common answer). It can be concluded that this certainly translated into the financial situation of people working in the country, while the open questions in the survey show that there were situations when people involved in the life of start-ups decided to voluntarily participate in the life of these organizations.

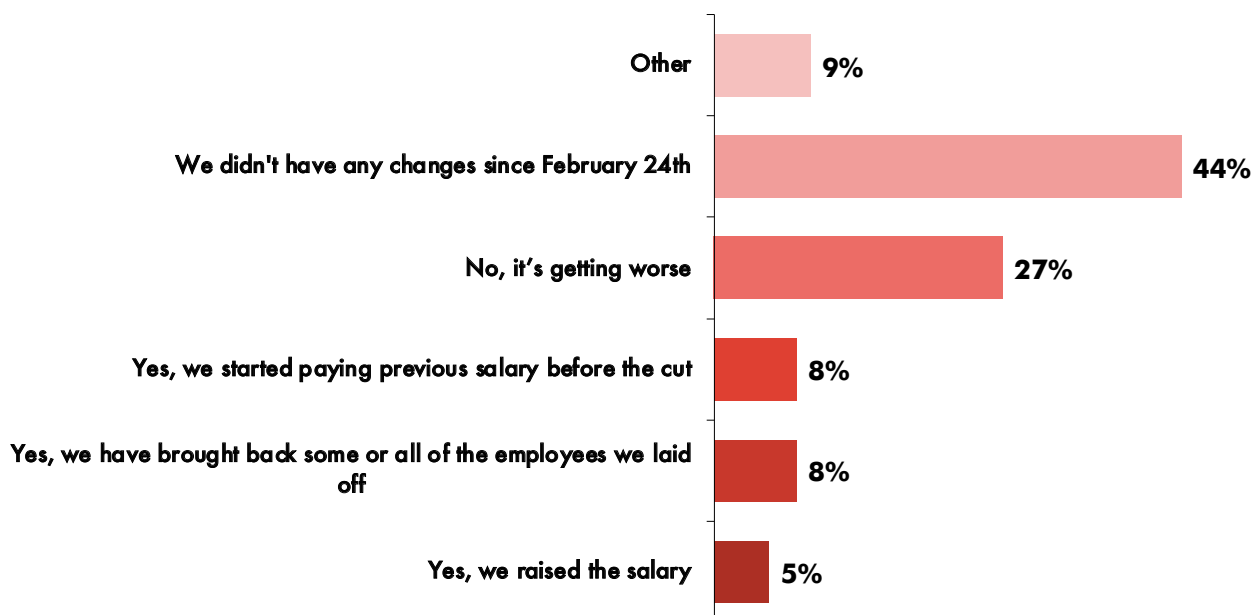
After the war broke out on February 24, 2022, almost 40% of start-ups did not take any steps to try to obtain financing for their operations and development. In 1/3 of the cases, companies tried to raise funds, but without success. This means that 70% of companies remained without access to additional sources of financing during this period. Regardless of whether they tried to get it or did not make any moves in this direction. This is directly related to the situation described earlier, i.e. the need to reduce both full-time jobs and employees' salaries, and in extreme cases to switch to voluntary work for a start-up.

Attempts to obtain financing for the company



Respondents, when asked how the situation of their start-ups has changed currently (compared to February 2022 - i.e. the beginning of the war), almost half of them indicate that they have not observed any changes in the situation of their companies for the last six months. At the same time, nearly 1/3 of the respondents are people who notice that the company's situation is deteriorating.

Change of the situation since the beginning of the war - currently



Ukrainian Ecosystem during and after the war – 5 new trends

Despite the Russian aggression, constant terroristic attacks, blackouts, damages of infrastructure, Ukrainians keep working. There are 5 new emerging trends that are worth pointing out, as those trends eventually will lead to recovery of the startup ecosystem and build the basis for the future success.

New types of founders emerge in Ukraine – veteran founders will drive Ukrainian Tech to new heights. Army and navy veterans that became startup founders are highly valued by VCs in the world. For example, there are numerous cases of Israeli startup founders who served in the army or startups founders from the US Army that founded extremely successful corporations and startups which changed many industries. This is due to many psychological features and discipline they develop in the army. These veteran founders are able to lead their teams to work in a high-stress context, they have a very special attitude toward leadership as they understand they are responsible for people's lives.

New markets and trends – Military Tech, Energy Storage and Energy production, drones. Approximately 30% of the territory of Ukraine remains mined. And according to some forecasts, demining may take from 5 to 10 years. This is a new market estimated at 500 billion dollars. Another trend is the shift in energy sources from fossil fuels to different types of alternative energy, both in Ukra-

ine and in the EU. In the long term we will see an incredible surge in the deployment of new clean energy technologies across solar, electric grid, energy storage, batteries, and electric vehicles, and new startups in this area will become extremely successful.

Better integration with world leading venture ecosystems across the globe. Ukrainians traditionally were active in the international startup arena and now this trend is even bigger. As Ukrainian now are spread all over the world, voluntarily or forcedly, they become even more connected, integrated, and build strong networks of contacts which will be useful even after the war.

Female leadership became more visible. As men are involved in protecting Ukraine and serving the army, women founders and top managers are taking on a more active role in running businesses, including startups. Women can actively represent the Ukrainian Tech Ecosystem abroad.

Rise of popularity of Ukraine as a new geopolitical center will eventually lead to investments. European and World Leaders visited Ukraine during the war more often than before at peaceful times. Kyiv bomb shelters have hosted more country leaders and prominent politicians than any top-profile conference locations.



Elena Malitskaya

Founder and CEO
at ISE Corporate Accelerator

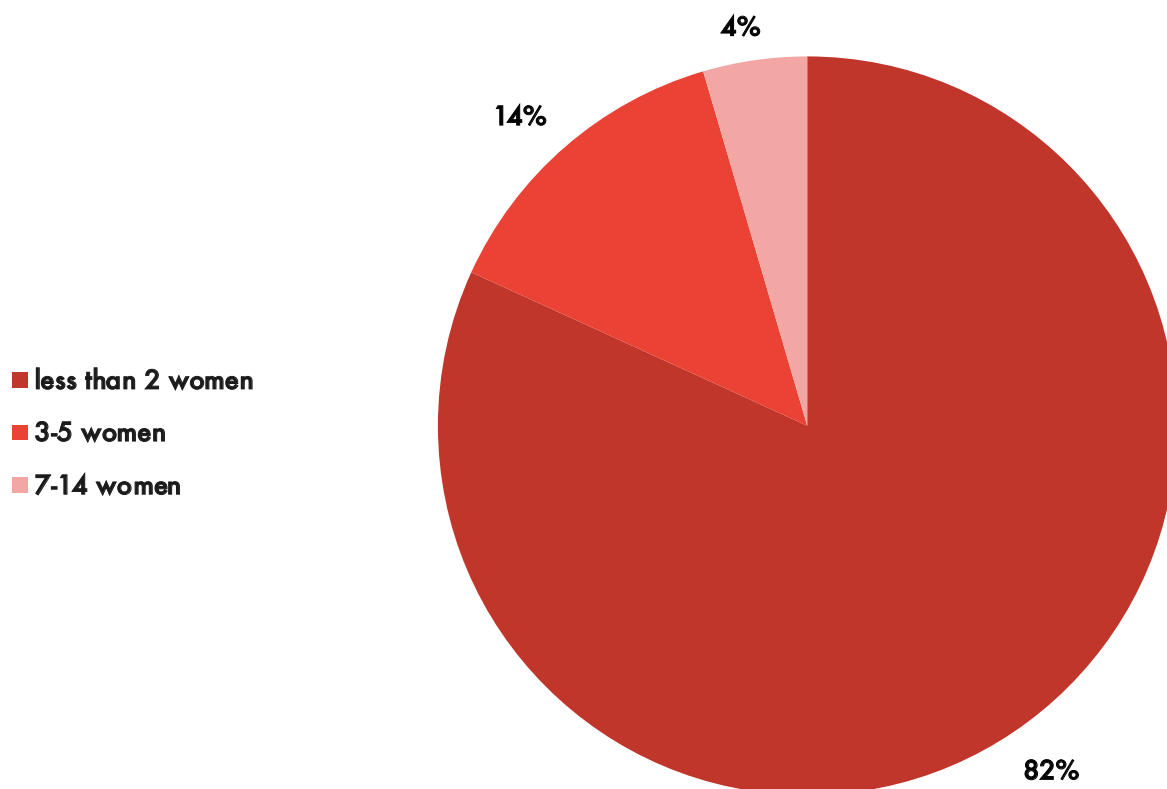
THE IMPACT OF THE WAR ON THE ACTIVITIES OF STARTUPS

In the vast majority (as many as 73% of cases) employees or owners of one-person start-ups have not been mobilized so far. It is worth emphasizing here that part of the teams of the analyzed companies are composed of women, which affects this result. 13% startups team joined defense forces of their own accord. And 14% received summons.

Share of women in the startup team. 15% of startups employ the most women compared to other companies - from 6 women in the team to 10. Most companies (61%) have between 1 and 5 women on board. Interestingly, 23% of startups do not employ any women. 7% startups have more than 10 female members, and 8% has 6-10 women in their team. However, it should be remembered that many women were relocated after the outbreak of the war and forced to flee the country with their children and the rest of their families.

In the start-ups participating in the study, up to 2 women from the team were most often relocated abroad. There are also companies where women constituted a large part of the team and in their case even 7 to 14 women were forced to move abroad.

Effectiveness of particular forms of competence development of employees

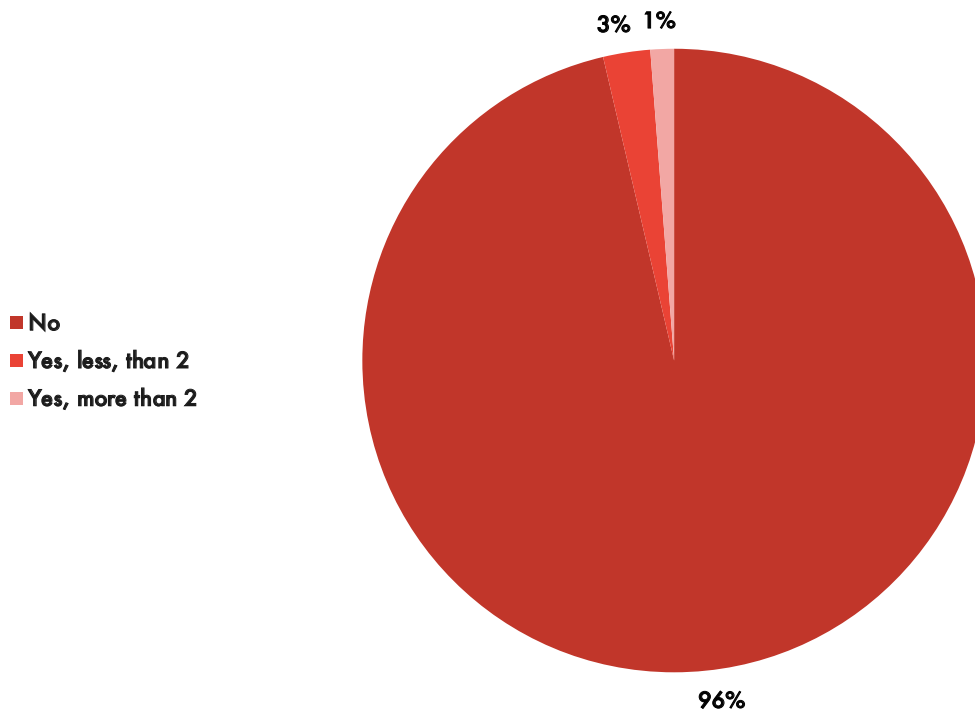


1/3 of employees and owners of start-ups indicated that they were unable to determine whether women who left Ukraine intend to return to the country. Almost 1 in 5 respondents declared that women associated with the company intend to return to the country in 2023, 18% indicated that they had already returned from the ongoing war. 15% of survey participants indicated that women working in their companies decided to stay abroad for a longer time.

In turn, men in Ukraine have often been engaged in military service for the country. Out of 27 companies whose representatives declared their participation in hostilities, 56% encountered one instance of their employees having to participate in defense of Ukraine. **As a result, in over 1/5 of the companies whose employees were involved in the war, as many as two men fight at the front.**

At the stage of research implementation, there were single cases of companies that suffered a tragedy related to the loss of a team member fighting in defense of the country.

War casualties among employees



The majority of the sample respondents (61%) did not change the location of the company's headquarters after the outbreak of the war, although there were answers (among almost a quarter of companies) that a one-time relocation to another place was necessary. Among the next 16% - i.e. in the case of 13 surveyed start-ups, declarations of more frequent changes of the company's place of operation can be observed. This is quite a high percentage of enterprises, taking into account how much effort the difficulties of relocating are demanding.

Almost 60% of respondents declared that they still work from the places where they had been before the outbreak of the war. It should be noted, however, that - according to the markings on the map in Figure 1, most companies are located in the central and western part of the country. Almost 1/3 of entrepreneurs had to change their location after February 24, 2022, to a place outside Ukraine, which is a large percentage

considering the difficulties related to the reorganization of workplaces, access to technology, good internet connection and office space for employees. Many companies received support from their foreign contractors and partners.

10% of the surveyed companies relocated to safer places in Ukraine to continue their operations.

In the entire analyzed sample of companies, the majority, almost 70%, work remotely. This fact is directly related to the declarations made in the question about changing the workplace after the outbreak of war, where almost 1/3 of start-ups mentioned the need to leave abroad. This means that companies have partly been decomposed into smaller units, partly remaining in at-risk regions and partly in safe locations.

Startup stories

Our story was to help Ukraine with the trash crisis, but in 2022, same as for other startups, we have changed our plans. **Less than 5% of all municipal solid waste is recycled in Ukraine, compared to 40% in Poland and up to 60% in the EU.** The current global energy and logistics problems require new solutions for energy generation in order to survive as a nation. With our technology, we are able to generate green biogas, as well as hydrogen, the future of clean energy, while at the same time supporting the circular economy by recovering energy from waste.

Based on our founder's successful technology deployment in Italy since 2018, we've contacted domestic startups and governmental agencies like UkraineInvest about the potential of building a recycling plant to transform waste into energy, but they have very limited resources to offer for obvious reasons. On the top of that, it's hard to find local municipality administration to support waste recycling project, not even financially but to show interest in really solving the trash crisis.

Right now we have received several opportunities in the USA, China, Hong Kong and at the same time trying to enter the Poland market via the Poland Prize Program with our solutions. We believe that Ukraine is still not ready for such initiatives both in terms of support for startups, and legal framework. After the war finished and reforms, we will be considering Ukraine as a market again.



Igor Diadyk
Cofounder and CEO
at Rewergy

Startup stories

Before the war, I produced innovative solid organic fertilizers in Mykolaiv. My production was across the fence from the Kulbakino military airfield. **From February 24 to the present, our territories have been bombed daily.** Not even a screw with a nut remained from production! Some pits and a bunch of fragments and unexploded shells, rockets, etc. Instead of mining, it turned out to be a solid polygon. And this is at a time when humanity will not be able to survive without the greening of agriculture. We are obliged to protect nature, incl. due to the greening of agriculture, if only for the sake of our children and confirmation of the title of "Homo sapiens".



Tymur Yevda

Director of SP CINTA,
LLC

My family and I have relocated, but I tried to manage my team from abroad. I love Ukraine. Our product is more needed in Ukraine now. But I see much more opportunities for my project development in the EU. Therefore, I decided to move my project abroad. I feel heartbreaking. **But I want to do my best for my family, for Ukraine, and for the global climate.**



Ivan

Pushechnikov

Founder of Brayton Power

I've been outside Ukraine since the war began. I moved to Poland and was able to continue work on startup after 3 months after the war started. Now I'm working on it, found new team members, and feel like working on a startup is that thing that gives me resources feel good and it's my way to contribute to Ukraine (hope my startup will grow and I will pay a lot of taxes, salaries to Ukrainian people and will make Ukrainian more famous by my startup too).



Vladyslav

Liesnoi

Founder of MakeBetterMe

EXPECTED FORMS OF SUPPORT

The respondents indicated two main expected forms of support: grants (74%) and return of investors (61%).

Types of required support for start-ups

Types of support needed	number of indications	% of entities
Grants	62	74%
Assistance with client acquisition	37	44%
Legal support, setting up legal presence in a new country	33	39%
Place (co-working) in a country	16	19%
Introduction to investors	51	61%
Acceleration in a new county	21	25%

Apart from financial resources, the competencies of the project teams themselves are also crucial for the development of start-ups. The respondents were also asked about the key competence deficits observed in their teams. Among the indicated deficits, deficits in sales competencies (44%), marketing competencies and those related to obtaining investment financing (33% each) were indicated most frequently. Some startups are lacking of business relationship building and language skills.

EXPERT'S OPINION

Even before the war, Ukrainian startups did not have an easy "startup life". Limited access to venture capital and the unstable formal and legal situation in the country were a challenge even before the COVID pandemic, that had hit the whole world through all businesses in the world into turmoil, adding even more uncertainty. **Ukrainians have been prepared for many years to act, firstly, in fewer greenhouse conditions than their colleagues from Western Europe, strongly focused on going beyond the country's borders and with great determination.** Additionally, such initiatives as the USF appeared, and investors from both the immediate environment and developed markets began to look more and more willingly at the Ukrainian ecosystem with a huge pool of technological and IT talents.

The brutal Russian attack on Ukraine and the war that no sane person could have imagined in Europe - with schools and housing estates bombed - changed everything. Thus, with the same admiration that we look at Ukrainian fortitude and courage in defending their country against the aggressor, we can also look at Ukrainian startups. Perseverance, dedication, and pursuit of the goal certainly distinguish these founders.

On the other hand, you also have to look at it from a purely business perspective - there is a regular war

going on in Ukraine. This is a time when it is difficult from a business point of view to engage resources there and as an investor being bound by a significant key contract for the supply of services, etc. From a business perspective - it can be a difficult challenge.

Therefore, the present report highlights the context of needs, which are primarily financial and, not surprisingly, in the form of grants. This is an understandable approach - startups must survive and develop, and they do not stand in an equal fight with competitors from other countries. In connection with written above, the need for client acquisition support seems quite natural. With Poland at the forefront, it seems that these needs are quite well met by the neighboring ecosystems in terms of support and relocation.

Ukrainian startups often win with technology, team determination, or USP, though they often lose due to the geolocation on the world map. I hope that support for them will be available faster than the entire process of the post-war reconstruction of Ukraine because strong and international startups can be just as important for the reconstruction of the economy as infrastructural investments.

At Simpect Ventures, an impact investing venture fund with a focus on Central and Eastern Europe, we are always open to good prospects from Ukrainian founders. **Slava Ukraini!**



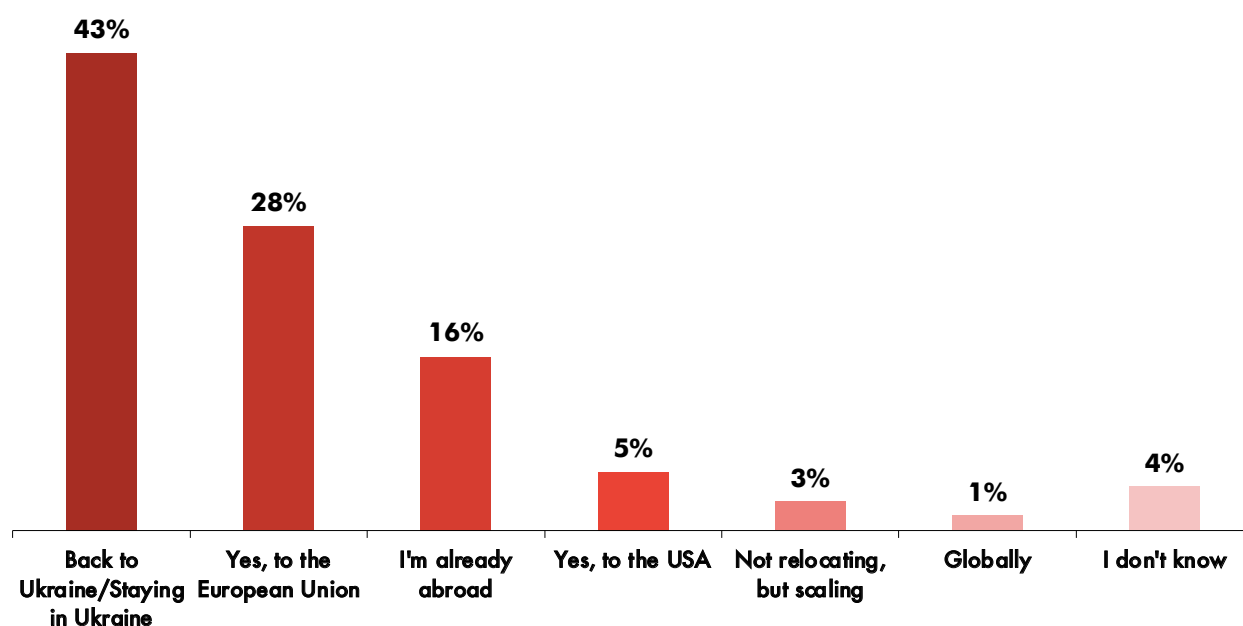
Jacek Ostrowski

Partner
at Simpect VC

UKRAINE'S FUTURE CHALLENGES

Among the respondents who answered the question about plans to relocate their start-ups after the end of the war and Ukraine's victory, the largest percentage indicated that they planned to return to the Ukrainian market or stay there (43%). Almost 1/3 of the sample are people who want to move their company to the European Union market, less often (only 5%) to the United States. Some companies were already outside Ukraine at the stage of completing the survey (16%).

Plans for relocation after the end of the war



Not all start-ups that were relocated after the start of the war found themselves in the new reality, working outside the country. Almost half of the representatives of the companies declared that they had not yet settled in the professional community or among representatives of the industry in a new place.

This may mean that more assistance is needed for entrepreneurs who have left Ukraine and moved their activities to European markets and, in a broader sense, to Western markets. The remaining 54% of the survey participants said that they acclimatized well in the new circumstances - they found professional partners and their place among local representatives of the industry.

Open answers to the question about the most surprising observations on new markets after relocation outside Ukraine were very diverse. In the case of almost half of them (7 observations out of 21 responses), it was difficult to try to assign them to any of the categories listed in the table below.

Below is an overview of these unclassified answers, which are very interesting in nature and enrich the merits of the development of this question.

One of the respondents was very surprised by the normality of life outside war-torn Ukraine –

- *"Here life exists. And the market. And money. Planes fly. No curfew time after 23:00."*

Another person pointed to a positive surprise of the mentality and values of people from outside Ukraine:

- *“I have found many more people with the same values as I knew in Kyiv, and it was very fast.”*

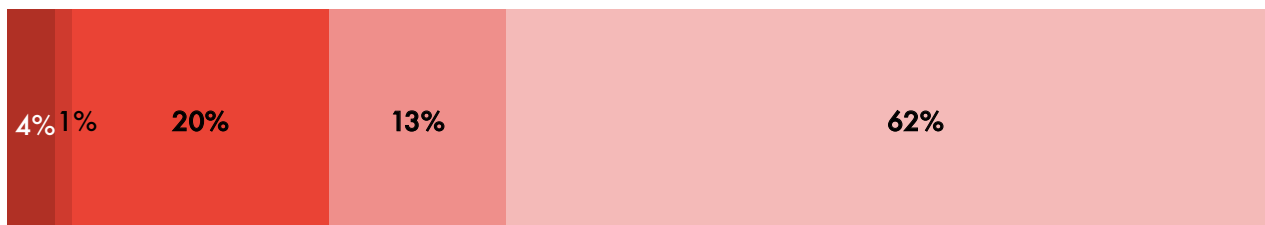
There were also slightly less favorable voices describing the problematic nature of the support offered to companies relocated from Ukraine to foreign markets (fragmentation of support, lack of support), as well as the phenomenon of prejudice of representatives of new markets to technology from Ukraine.

Analyzing the remaining data, it can be seen that some companies at the time of the study were just planning to relocate, but have not yet managed to implement this plan (5 companies), there are also 4 answers of respondents for whom the relocation did not bring any major surprises.

Among the companies that have successfully relocated to foreign markets, the opinions on integration in the new workplace are divided. ½ of the respondents indicate that they have not integrated in local communities, and the other half that already at this stage they see the effects of "settling in" in the country from which they operate. It should be noted that companies stay in new locations for a relatively short time, which means that this indicator will change over time and in subsequent studies, the results may be more optimistic, indicating a growing level of integration.

Respondents, employees and owners of Ukrainian start-ups are optimistic about the upcoming changes in the start-up ecosystem in Ukraine. For 75% of the respondents, the future of the Ukrainian market will be good - they believe in the growth and development of their (and similar) activities. Equally, 1/5 of the analyzed sample are people who are moderate in their assessment and marked a neutral answer, not wanting to assess the direction of development of the situation. Only 5% of respondents see the coming years for start-ups in Ukraine in dark colors. These data, as well as several previously mentioned statements and results, clearly indicate the very high morale of the Ukrainian nation - also in the group of start-up leaders. Despite the fact that the citizens of Ukraine are currently in a very difficult situation, their will to survive and fight for their future is great.

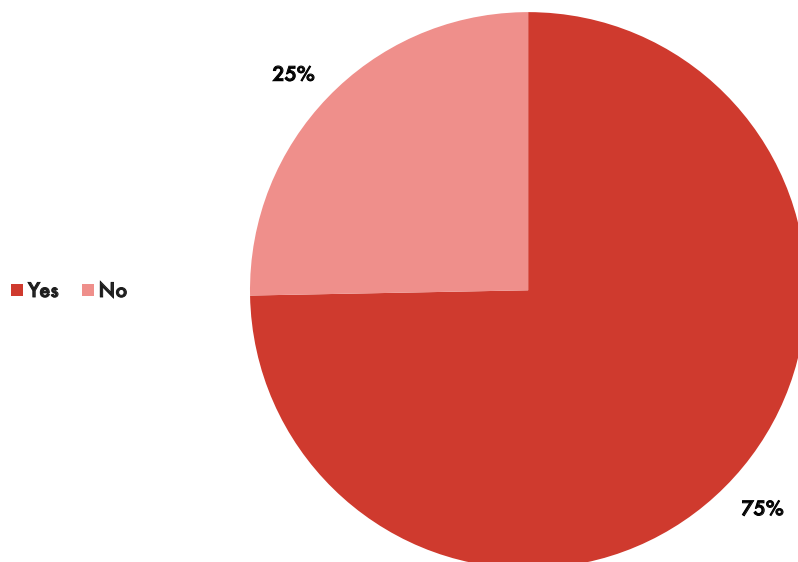
Positive assessment of the future of the start-up market in Ukraine



■ 1 - No I don't believe at all ■ 2 ■ 3 ■ 4 ■ 5 - Yes, I believe firmly

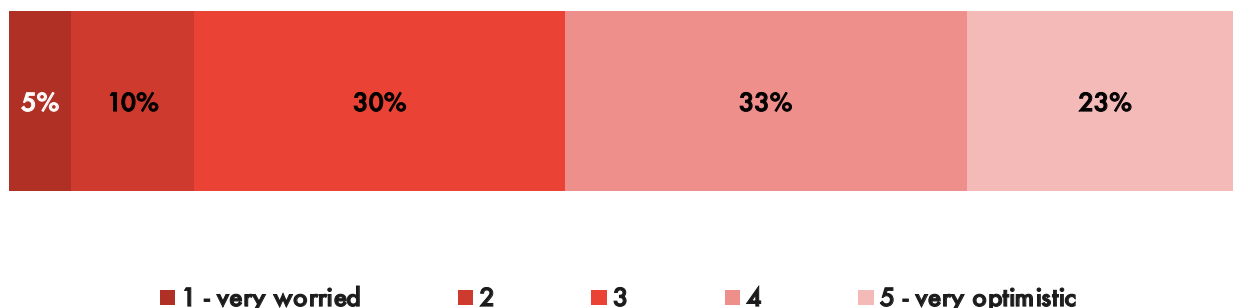
Despite the difficult conditions prevailing in the country, representatives of start-ups mostly declare that they see the potential for the development of their companies. Entrepreneurs show courage, looking into the future with hope and planning further development of their businesses.

Noticing the potential for the company's development



55% of respondents also indicated that they are optimistic about the next year of their company's operations. Nearly 1/3 of the respondents did not want to take a solid position on this matter and were not sure how to assess the prospects for further operation and development of their start-up. There is a minority of respondents who are pessimistic about the next year - those are 15% of the entire sample.

Evaluation of the next year of the company's operation



To support Ukraine, work with Ukraine

“It’s too early to invest in Ukraine. Don’t be the one that will regret that thought”. This is one of the main theses I address my colleagues from venture capital funds worldwide.

Investment in the country at war? It sounds counterintuitive for a commercial mind calculating the IRR and the investment risk at first. However, there are multiple examples of the resilience of the Ukrainian government and business, which show the will for victory, peace, and post-war recovery close to the dedication and abnegation demonstrated by the Ukrainian soldiers on the front line today that the whole world is seeing.

Yes, it might be hard to calculate the risk for direct investment. Still, wouldn’t you want to have a presence and work with people with such a strong sustainability mentality that allows some sectors in the country, like IT, to grow more than 20% despite all the disruption caused by the war? I bet you would.

Start-ups in Ukraine have been at the forefront of cutting-edge developments in areas such as artificial intelligence, machine learning, and blockchain, which have helped to position the country as one of the leaders in the global technology landscape.

ICU has been investing in VC since 2018 with the investment thesis to back start-ups with the potential to be global businesses. **Before the war, Ukrainian start-ups’ cumulative revenue reached** its absolute top revenue since independence in 1991, **with a gross figure of roughly \$900m¹.**

¹ Figures are from the Ministry of Digital Transformation of Ukraine on IT industry development

Yet even since the inception of the war, the Ukrainian venture capital space has remained buoyant, with 96%² of Ukrainian start-ups having maintained their operations during the War, and the IT sector even having grown a further 24%³ of Ukrainian export, exceeding \$6bn⁴ during 2022.

Since 2018 ICU Ventures has made over 30 investments, with ticket sizes ranging from \$200K to \$5 million, depending on the investment stage. About half of all the start-ups in the ICU Ventures portfolio are Ukrainian or have Ukrainian roots and have a deep tech element, an angle in which ICU has been found to exhibit a competitive edge in success over other players.

Most of the country’s start-ups had contingency plans before the war, with many companies using cloud technologies to store data and moving their base to the west of Ukraine to continue operations. All ICU Ventures portfolio companies have continued to operate and thrive, with half demonstrating growth even with all Russian revenues being axed.

So, what I would think investors could do now to take benefit of post-war Ukraine recovery:

- They could get to know Ukraine and Ukrainians better now. Find out why Ukrainians are fighting so hard and whether investors share the values that Ukrainians are protecting now.

² Figures are from the Ministry of Digital Transformation of Ukraine on IT industry development

³ According to forecast data from the National Bank of Ukraine and the Ministry of Economy of Ukraine

⁴ According to data from the National Bank of Ukraine

To support Ukraine, work with Ukraine

- Investors could start analyzing the Ukrainian market now and be one of the first to understand the opportunities that will come soon after the war. Recovery always brings opportunities, and those opportunities quickly become very calculable for those ready.
- If investors like what they find out about Ukrainians, our prevailing values, and Ukrainian market opportunities, they could start working with Ukraine now.

The Ukrainian start-up scene has demonstrated remarkable resilience despite numerous challenges. It has maintained a strong focus on creating new solutions across multiple sectors, keeping the sector competitive and proving its value as an essential driver for the investors' portfolio.



Roman Nikitov

Head of ICU Ventures

METHODOLOGY

During the survey, which lasted from October 14 to November 15, 2022, the opinions of 83 representatives of Ukrainian start-ups were obtained. Respondents were recruited through multichannel distribution of information about the study. Representatives of the target group received information about the study by e-mail, but it was also available in electronic media that profiled their content in the direction of topics of interest to startup leaders. Therefore, the selection of the sample was intentional (non-probability), and the results are a valuable source of information about the surveyed population of start-up leaders.

The study was conducted using the CAWI method (Computer Assisted Web Interview). The method of data collection used made it possible to obtain the respondents' opinions through an on-line questionnaire and thus quickly reach a large and geographically dispersed group. The platform used for the study (Type Form) enabled full control of the data collection process: access to the survey by specific respondents, response time to individual questions, the number of times respondents entered the questionnaire and the consistency of the answers provided.

STUDY CONDUCTING AND DEVELOPING TEAM



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