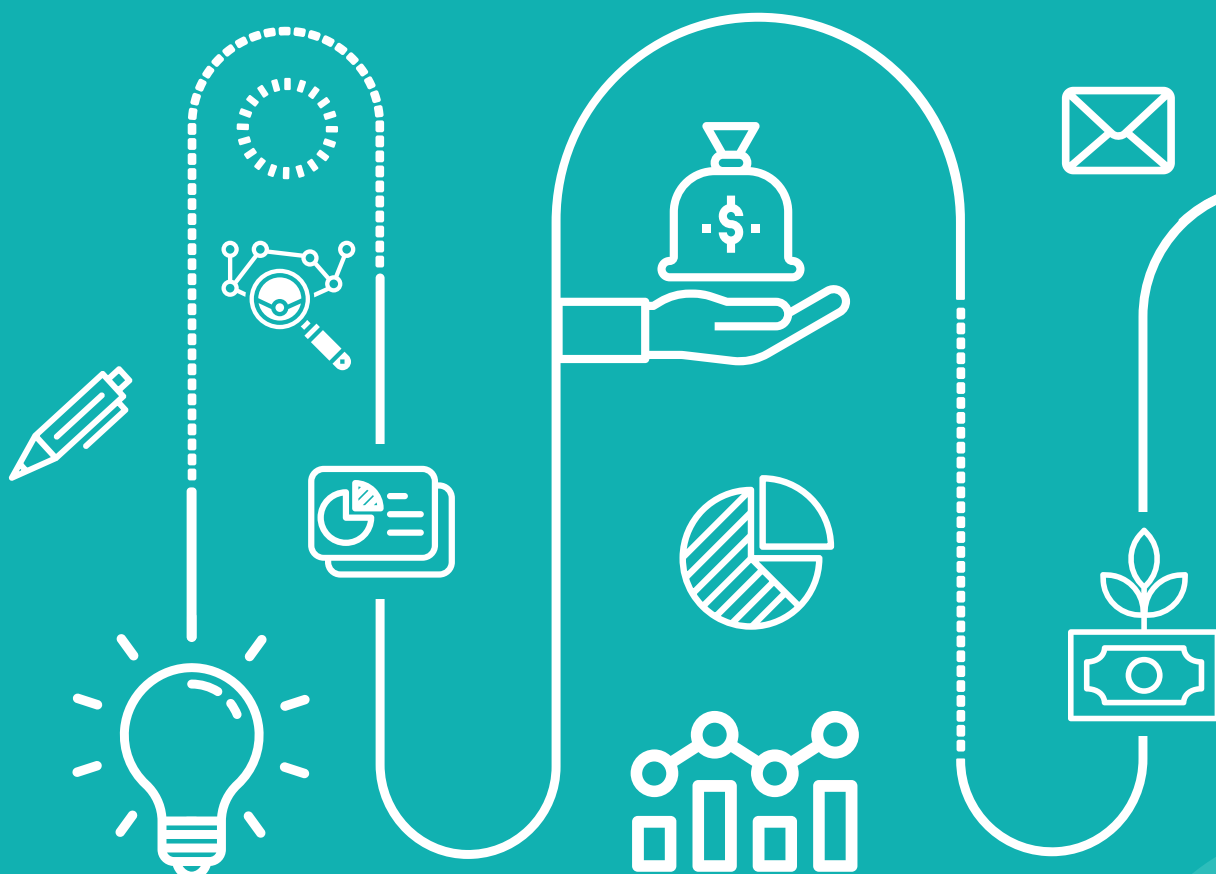


BRAVING THE STORM:

Safeguarding the Lebanese Innovation Economy

March 2022



BRAVING THE STORM

SAFEGUARDING THE LEBANESE INNOVATION ECONOMY

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Foreword

Economic growth, job creation, social development, industrial and technological innovation require creative and active entrepreneurship. Entrepreneurs in turn need a stable political and economic environment and at least a minimum of functioning and reliable infrastructure. For many years, Lebanon has held a leading position in the Arab world as a location for start-ups and small and medium-sized enterprises.

However, with the dramatic socio-economic and governance crisis that the country has been facing since 2019, the entrepreneurial sector is encountering major challenges.

At the same time, this sector has the potential to become a driver of economic recovery and reconstruction that Lebanon would urgently need.

This overview of the state of the Lebanese innovation economy and its ecosystem aims to put the political and economic debates on a valid empirical basis and thus identify options for action for entrepreneurs themselves as well as for political and economic decision-makers in Lebanon and internationally.

Together with its partners, Konrad-Adenauer-Foundation Lebanon will continue its efforts to strengthen the Lebanese entrepreneurial community.

Michael Bauer,
KAS Resident Representative to Lebanon





Freedom, justice and solidarity are the basic principles underlying the work of the Konrad-Adenauer-Stiftung (KAS).

KAS is a political foundation, closely associated with the Christian Democratic Union of Germany (CDU). It encourages people to lend a hand in shaping the future along these lines, with more than 80 offices abroad and projects in over 120

countries, KAS makes a unique contribution to the promotion of democracy, dialogue, conflict prevention, civil society and social market economy.

To foster peace and freedom we at KAS encourage a continuous dialog at the national and international levels as well as the exchange between cultures and religions.

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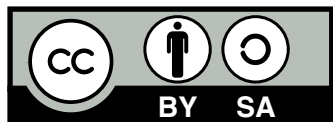
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Arabnet is a leading event, insights and innovation program organizer focused on tech business and innovation in the MENA region.

Arabnet organizes major conferences for the tech sector in Dubai, Riyadh, Kuwait and Beirut;

publishes news and analysis of the sector in their online news portal and produces original research and reports focused on the sector; and organizes custom-tailored innovation programs for corporates and governments.

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Executive Summary

Starting in August of 2019, the Lebanese startup ecosystem has been affected by a series of crises – a financial crisis (August 2019; ongoing), Covid-19 pandemic (2020; ongoing), and the Beirut port explosion (August 2020). This research report sought to examine the severity of the impact on Lebanese startups as well as the wider ecosystem. Based on one-on-one interviews with key ecosystem enablers – VCs, business incubators, co-working spaces, internet service providers, banks, and NGOs – and a quantitative startup survey, the report is able to assess the impact of the crises across 5 key dimensions:

1. Talent

Despite some limited, and arguably short-term cost advantages – namely cheap low level employees; talent exodus has been one of the three most detrimental factors to business,

with supply for technology related skills – development and coding, as well as specialized tech skills, such as data, analytics, and AI – and marketing displaying the biggest drops. The exodus of experienced talent in particular has been pronounced, leading to the emergence of an “experience gap.” The report was also able to determine that the impact of talent drain has been more detrimental to early-stage startups, and that the drivers of the exodus were primarily related to concerns over security and worsening living conditions.

2. Access to Capital

The lack of access to investment and capital has been cited as the most detrimental challenge to business. Foreign investor appetite, in particular, has been severely negatively affected, which has had a ruinous effect on certain startups. On the other hand, the report noted that startups were most successful in raising funds from Lebanese investors. Pre-crisis deals were also affected, with startups reporting investors losing interest and



holding back disbursement of committed funds. When it came to securing deals after the crisis, here again the research revealed that early stage startups were more affected – with a significantly higher failure rate in securing deals.

3. Access to Markets

The drop in purchasing power has shrunk local demand, leading to a rise in dependence on exports. In certain instances, currency devaluation has also helped create a positive effect on cash flows and profitability.

The research has found that likelihood of a successful pivot was strongly tied to two factors: having an exportable product and a minimum amount of existing traction in foreign markets.

Early-stage startups were again at a disadvantage: They were more likely to be dependent on the local market and, consequently, more affected by its drop and less likely to successfully solicit life-saving investments.

4. Infrastructure & Operations

The degradation of the Lebanese infrastructure – electricity and connectivity – and the freezing of the banking system have been widely felt across the ecosystem. Almost all surveyed startups reported that the decline in the quality of infrastructure services had affected their productivity; and almost 4 out of 10 had missed targets as a result.

Difficulties in executing money transfers and paying internationally was overall rated the second more detrimental consequence of the crisis – and

has been widely cited as a challenge to accessing needed foreign products and services and a notable hurdle to scaling.

However, the survey also revealed that, while these challenges were pervasive, the severity of their harm was fairly divided and correlated with the funding stage, with later stage startups more able to rent an office space for the purpose of accessing a steadier supply of electricity or securing a reliable internet connection.

5. Government & Regulation

The government's inaction has been counterproductive to recovery. The failure to officially determine the size and distribution of the losses of the financial sector has been keeping banks from resuming operations.

The reluctance to increase the prices for internet bandwidth is driving the deterioration of the network. An inflexible centralized authority, sluggish bureaucracy, and absenteeism where common critiques of the government's behavior as well.

The report also identified underlying faults in the planning and execution of Circular 331, primarily, the requirement that legally and financially binds startups to Lebanon – more than half of surveyed startups citing being unable to relocate the company abroad was a major challenge associated with Circular 331.

Furthermore, requiring companies to spend the majority of their budget (75%) locally was ill-fitting for digital startups. Criticism was also leveled at the lack of supporting reform.

Ecosystem support services, on their part, have also reported difficulties related to talent retention and productivity – owing to the worsening conditions of financial and infrastructure services.

Donor recipients, business incubators and NGOs in particular, noted a change in the priorities and goals of donors: namely, a shift away from tech and entrepreneurship and into relief efforts and providing basic necessities.

An increased attention to SME support and youth development and digital upskilling were also mentioned.

Emerging Opportunities

At the same time, the report is also able to highlight emerging opportunities in the current market conditions. Currency depreciation has engendered cost reductions for startups, mainly cheap (low-level) labor and cheaper office rent. The devaluation has also created a comparative advantage for local startups both in foreign markets and locally. An increase in local demand for needs-based products and services was noted as well.

Scalable, tech-enabled solutions were identified as potentially viable propositions by investors and business incubators, particularly in e-commerce, education, gaming, and fintech. SaaS was highlighted as an attractive delivery model.

The crisis has also created a favorable environment for outsourcing, particularly for ventures that leverage available local expertise, such as digital marketing, fashion, and pharmaceuticals manufacturing.

Recommendations

Based on the accounts and insights collected during the research, the report is able to recommend the following as potential mitigations and solutions:

Rethinking Priorities: Ensuring survival and growth

- Broadening the view of what constitutes the Lebanese innovation ecosystem to include foreign-based Lebanese startups and entrepreneurs, extending support to these entities, and working on channeling back their success to create economic and job opportunities at home.
- Revising rules and policies that restrict Lebanese startups from freely relocating, either partially or fully, operations outside of Lebanon.

Helping Secure New Sources of Capital

- Facilitating the exporting process, by simplifying paperwork and reducing fees.
- Creating specialized emergency funds that supply emergency bridge financing and loans to struggling startups.
- Supporting startups acquire and develop fundraising skills – deck building, pitching, etc – and developing interpersonal and leadership skills in entrepreneurs.
- Engaging Lebanese investors, both in Lebanon and in the diaspora

Facilitating Access to Foreign Markets

- Creating a transnational network of established or influential diaspora members – successful entrepreneurs, businessmen, civil servants -that are able to help or facilitate accessing foreign markets.

Increasing Productivity

- Establishing productivity zones – office clusters that are guaranteed an adequate amount of electricity supply and a reliable internet connection
- Creating incubation centers in universities, leveraging their resilient infrastructure and standing as credible institutions, as well as their talent and research output, to support entrepreneurial activity.
- Developing or supporting digital upskilling programs, either through private programs designed in coordination with the private sector, or by embedding coding in the education system.
- Positioning Lebanon as a hub for digital or innovation activities through country-level marketing.
- Reducing the dependency of the internet infrastructure on the public electricity grid by investing in renewable solar power sources.

Background

Since October 2019, Lebanon's economy has entered a severe and prolonged economic downturn, which was worsened by the Covid-19 pandemic and its impact on many sectors of the economy.

The World Bank estimated that Lebanon's real GDP shrunk by 20.3% in 2020, and projected a further 9.5% contraction in 2021.

Currency devaluation has led to an average exchange rate depreciation of 129% in 2020, while inflation averaged 84.3% in the same year. A UN report published in September, 2021, had found that more than 70% of the population were living under the poverty line.

The crisis has also led to a drastic uptick in emigration. Information International, a Beirut-based independent research and consultancy firm, had recorded a 346% increase in migration between 2020 and 2021, from 17,721 to 79,134 respectively, and expected the number to double in 2022.

Furthermore, fuel and diesel shortages have created a crippling energy crisis. With government-produced power lasting no more than a few hours of a day, the Lebanese have had to depend on high-priced private generators that have also struggled to meet demand.



The Lebanese innovation ecosystem, much like the wider economy, has also been severely affected. Data from a forthcoming publication by Arabnet and Digital Digest reveal that, between 2017 and 2021, yearly total investments in local startups shrunk by more than 70% - from \$54M to \$16M respectively.

On the other hand, the number of deals dropped from 56 to 12, which puts Lebanon

in 14th place when it comes to the number of investments among 18 MENA countries, falling from 2nd place in 2017.

The resulting toxic environment has also led several startups to relocate outside of Lebanon, such as Mint Basel Market, Kamkalima and Ounousa, as well as heavyweight Anghami, which is valued at \$220M.

Country Ranking by Number of Deals

2017		2018		2019		2020		2021	
1	—	1	—	1	▼	2	⬆️	1	UAE
3	—	3	⬆️	2	⬆️	1	▼	2	Egypt
4	▼	5	⬆️	3	—	3	—	3	Saudi
5	▼	8	⬆️	4	—	4	—	4	Jordan
13	▼	14	▼	16	⬆️	12	⬆️	5	Qatar
6	⬆️	4	▼	9	⬆️	5	▼	6	Tunisia
11	▼	12	⬆️	10	⬆️	9	⬆️	7	Morocco
9	⬆️	7	⬆️	5	▼	7	▼	8	Bahrain
8	▼	10	⬆️	7	▼	10	⬆️	9	Kuwait
7	⬆️	6	▼	11	⬆️	6	▼	10	Oman
14	▼	15	▼	17	⬆️	13	⬆️	11	Iraq
10	▼	11	⬆️	8	▼	11	▼	12	Palestine
15	▼	16	⬆️	12	▼	14	⬆️	13	Algeria
2	—	2	▼	6	▼	8	▼	14	Lebanon
16	▼	17	⬆️	13	▼	15	—	15	Sudan
18	—	18	—	8	—	18	⬆️	16	Libya
12	⬆️	9	▼	14	▼	16	▼	17	Yemen
17	⬆️	13	▼	15	▼	17	▼	18	Syria

Objective & Methodology

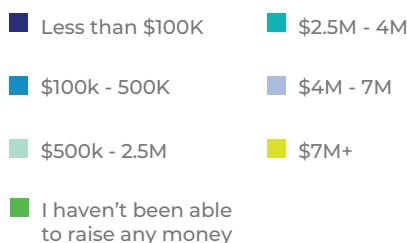
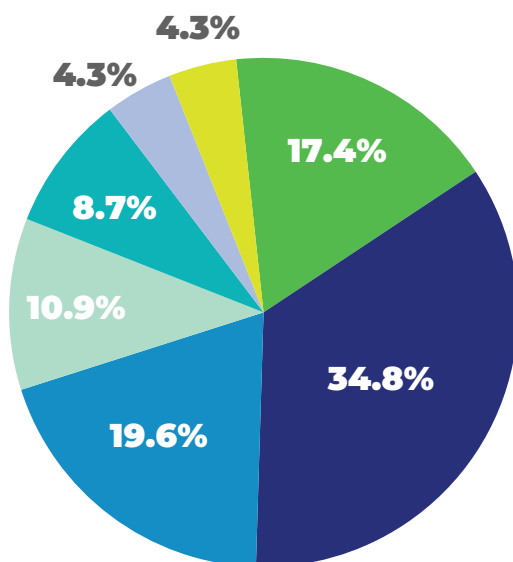
The objective of this research report is to assess the impact of the crisis in Lebanon on the startup ecosystem and suggest solutions and policy recommendations that would mitigate its repercussions.

The report is produced based on data collected across three methods: first, a startup focus group with 5 participating early-stage companies; second a quantitative survey which collected insights from 46 local startups on the day-to-day

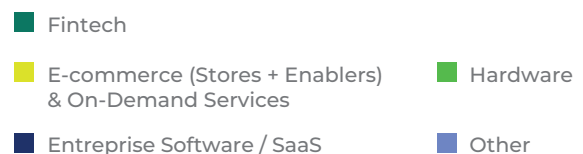
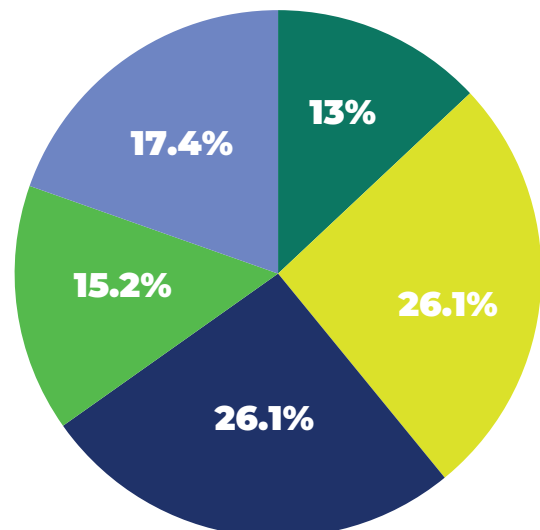
challenges as well as long term impact of the crisis; and third, one-on-one, in-depth interviews with 15 stakeholders – decision makers in key support units, including local VCs and funds, incubators and accelerators, co-working spaces, universities, banks, internet service providers, government entities, and relevant NGOs.

The answers obtained from the interviews, focus group, and survey have been aggregated and anonymized.

Respondents by Funding Stage (Pre-crisis)



Respondents by Sector



Introduction

According to the research findings, the crisis has engendered a harsh environment for startups and ecosystem support services.

Finding and retaining talent has become significantly more challenging, particularly because the talent exodus has been primarily driven by the pursuit of safer and better living conditions.

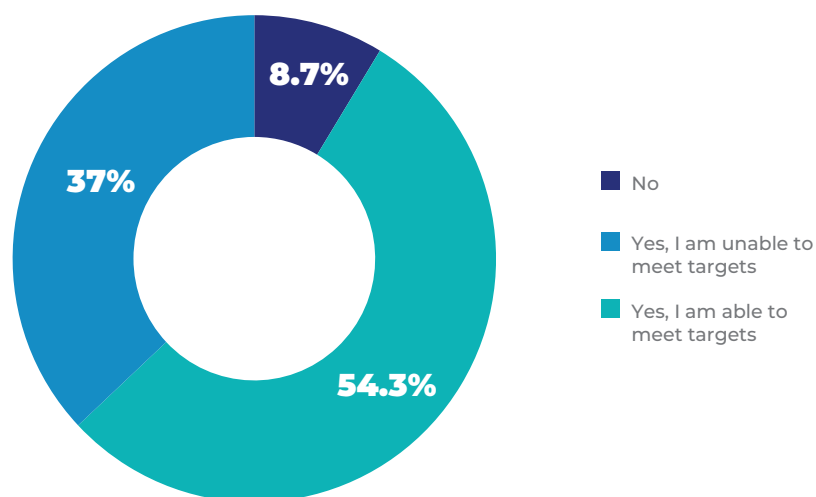
Meanwhile, the deterioration of infrastructure services, including electricity, connectivity, and mobility, as well as the disruption of financial services, has had a severe negative impact on foreign investor appetite and startups' ability to deliver on their milestones.



According to the survey, 91.3% of startups said that their productivity has been affected by

infrastructure issues; 37% said that it had resulted in them missing targets.

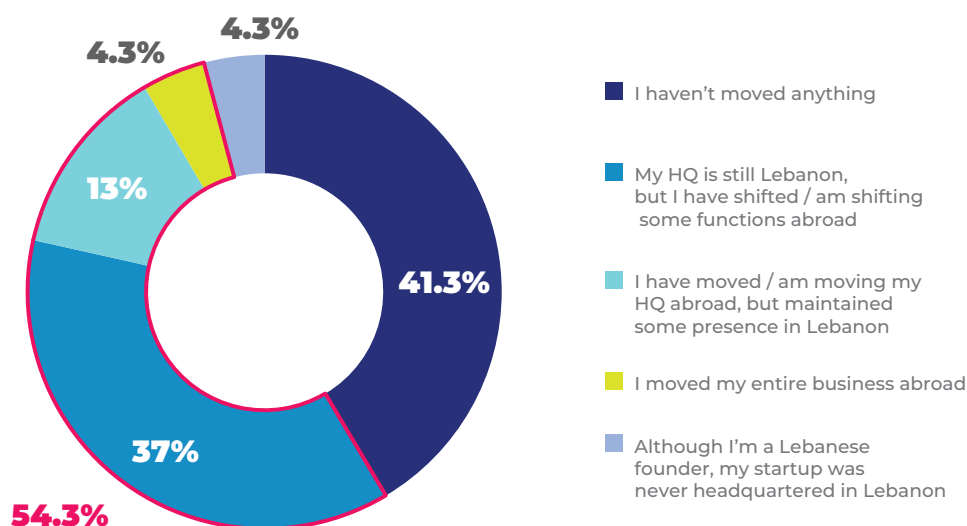
Have infrastructure issues affected your productivity?



These conditions have sparked a notable exodus of talent and business, with more than half of surveyed startups (54.3%) confirming

that they have moved at least some part of their operations abroad.

Have you moved your HQ or any departments or functions abroad since the crisis?



This trend does not bode well for the Lebanese economy. In the following sections, the report sheds light on the nature and gravity of the emerging challenges across five key dimensions: talent, access to capital, access to foreign markets, infrastructure and operations,

and government policy and regulation. It also highlights opportunities and suggests policy recommendations that have been formulated taking into account the feasibility given the current circumstances.

Ecosystem Assessment



1. Talent

The impact of the crisis on talent retention and acquisition has been felt across the ecosystem. Despite some limited, and arguably short-term benefits, the overall impact has been negative.

With the exception of VCs, issues with talent retention and acquisition have been widely reported as significant pain points by the interviewees and startups.

The findings from the interviews and survey show that the most detrimental impacts have been loss of specific skill sets, a depletion of know-how and the formation of an experience gap.

Furthermore, the survey revealed that the severity of the impact as well as the drivers for talent drain were varied.

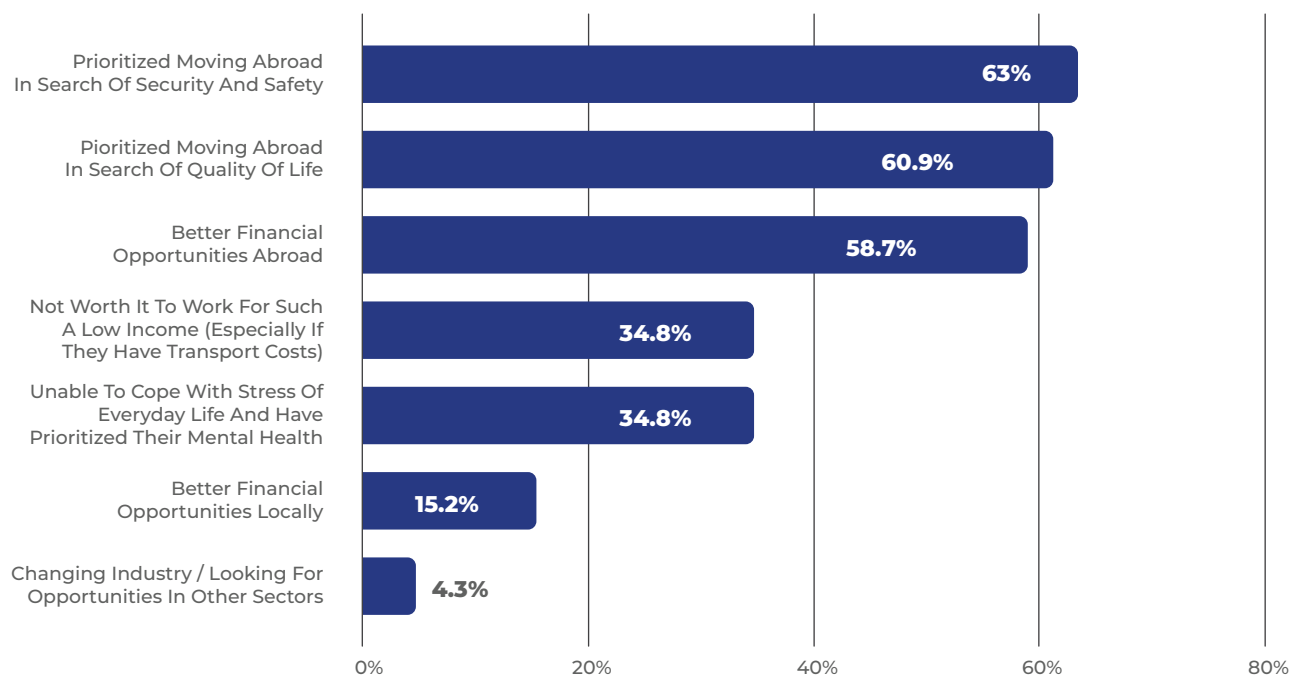
Why is Talent Leaving?

Part of the labor force has prioritized seeking employment outside of Lebanon as a result of the crisis. The drivers of this exodus, according to our interviewees, are not limited to financial reasons, but also include concerns over worsening security and living conditions: in one instance, one interviewee rued losing employees merely because their spouse was able to secure a job and a move abroad as a consequence; another investor noted that the biggest challenge related to talent was figuring out how to keep employee morale and commitment up.

These observations were also evident in our startup survey. The three most commonly cited reasons for employee exodus all implied that employees were seeking to relocate outside of the country. The search for security and safety and better living standards were the two top cited reasons (63% and 60.9% respectively), followed by the pursuit of better financial opportunities abroad (58.7%).



What have been the main reasons for employees leaving the business?

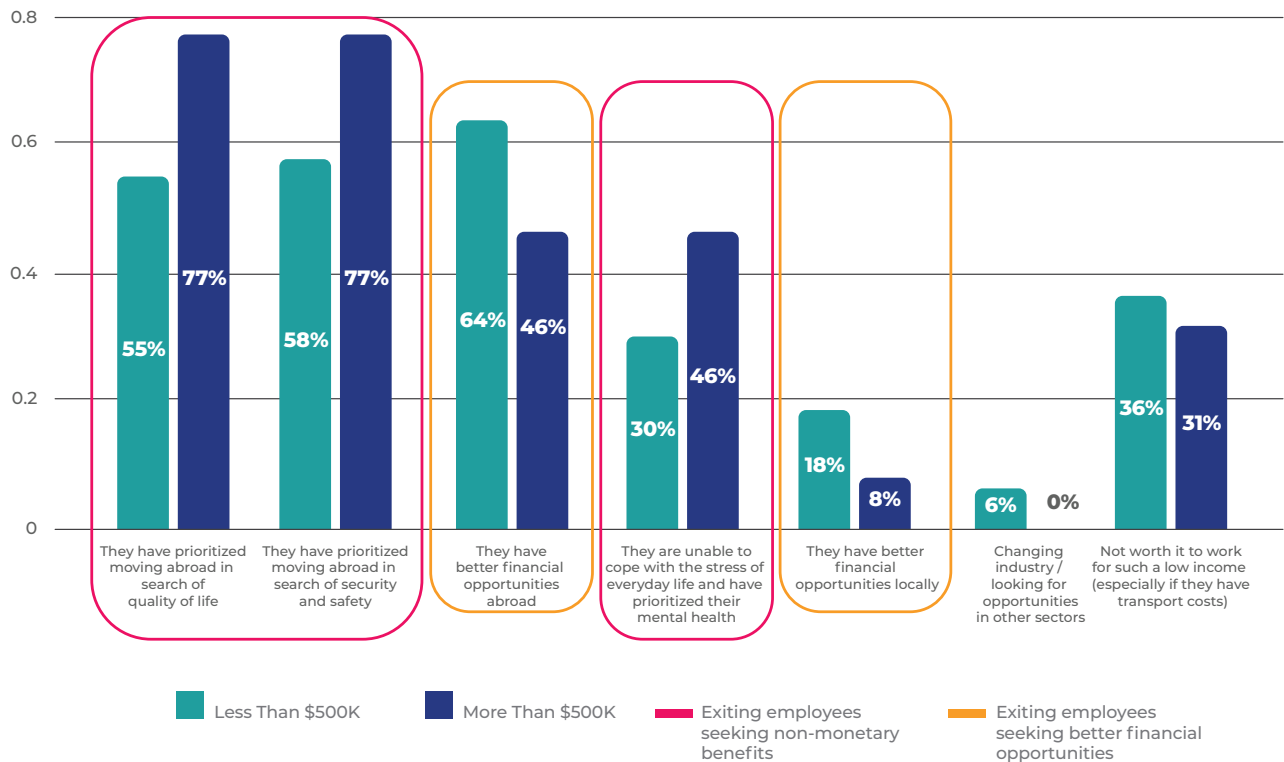


Poaching by foreign companies was also mentioned as a reason for the shrinking talent pool available to local companies, namely due to the former's ability to pay in US dollars. "There is a whole parallel market now of remote working so there are employers that are snapping up talent in Lebanon, paying them dollars and keeping them in Lebanon;" noted one interviewee, "so we locally are competing with remote employers."

Namely, whereas employees of the latter group were more likely to be looking to exit the company in search of non-monetary benefits - quality of life, safety and security, and better mental health – employees leaving pre-seed stage startups were more likely to be seeking better financial opportunities. One possible explanation for this finding is that seed stage companies are less able to adjust their salaries to compensate employees.

The survey also revealed a notable difference in what compels employees to seek new employment, between pre-seed stage startups (companies that have raised less than \$500,000) on one hand, and seed and growth stage startups (companies that have raised more than \$500,000) on the other hand.

What have been the main reasons for employees leaving the business?



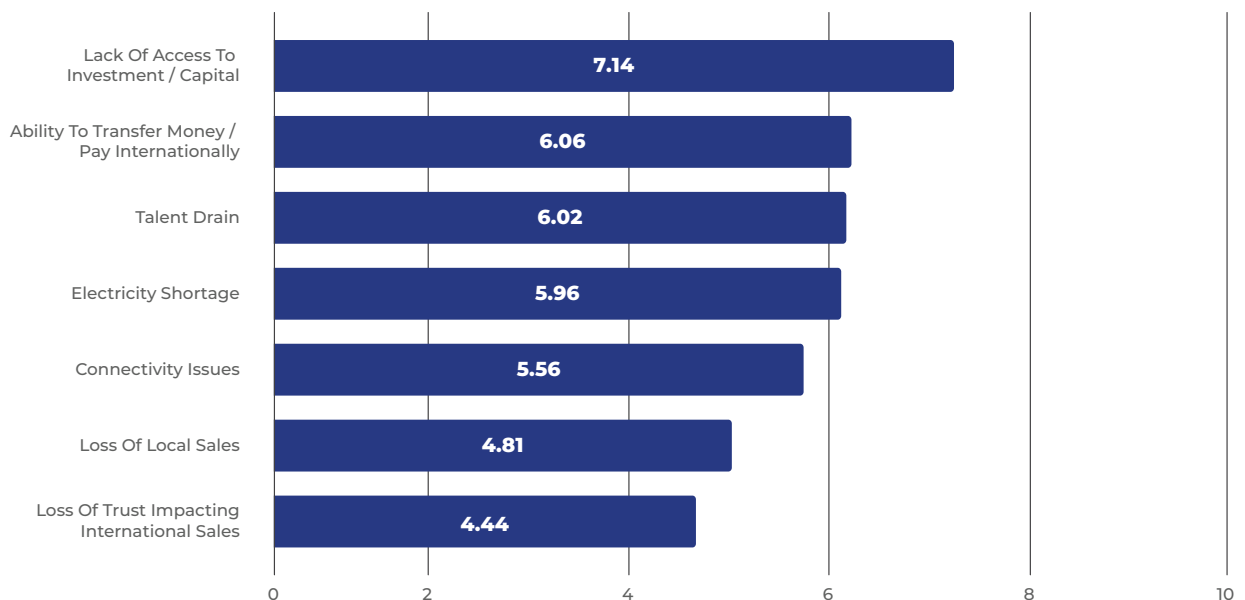
Assessing the Impact

The impact on talent has been two pronged. According to the survey, while talent drain ranked high (#3) on the list of factors that are

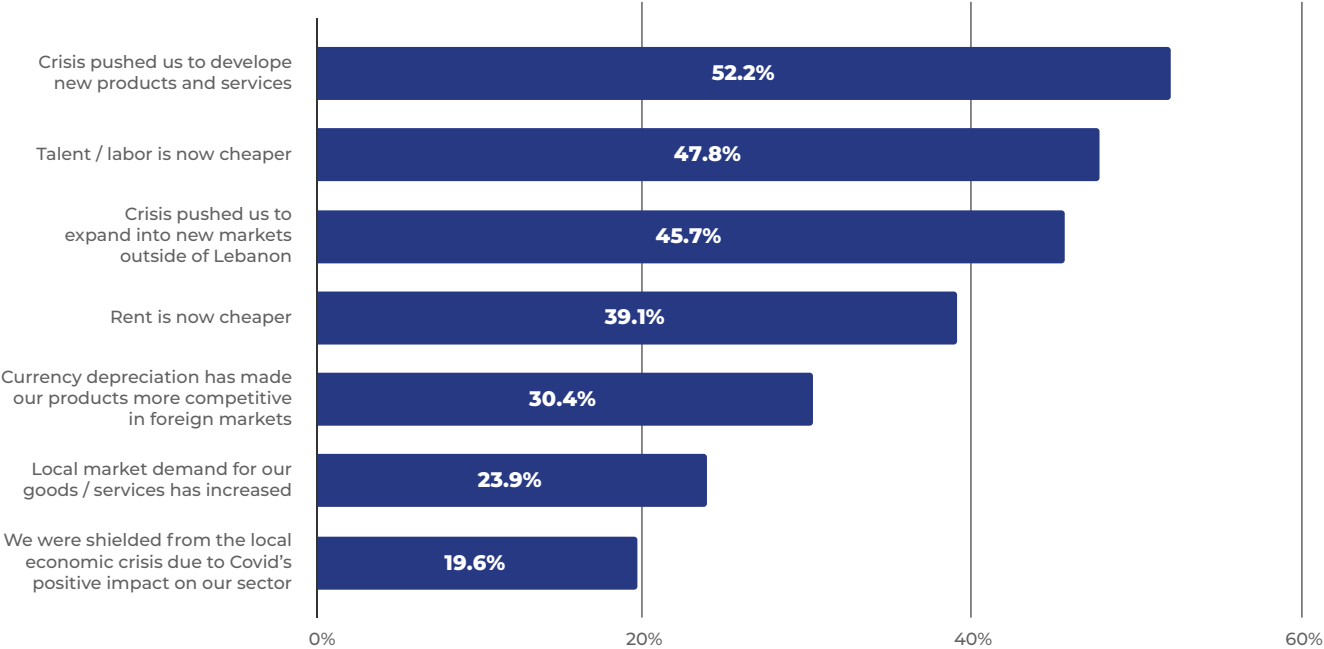
most detrimental to the startups; cheap labor and talent were the second most commonly cited opportunity arising from the crisis.

Which of the following challenges have been most detrimental to your business?

[1 least detrimental; 10 most detrimental]



What are the opportunities from the crisis?

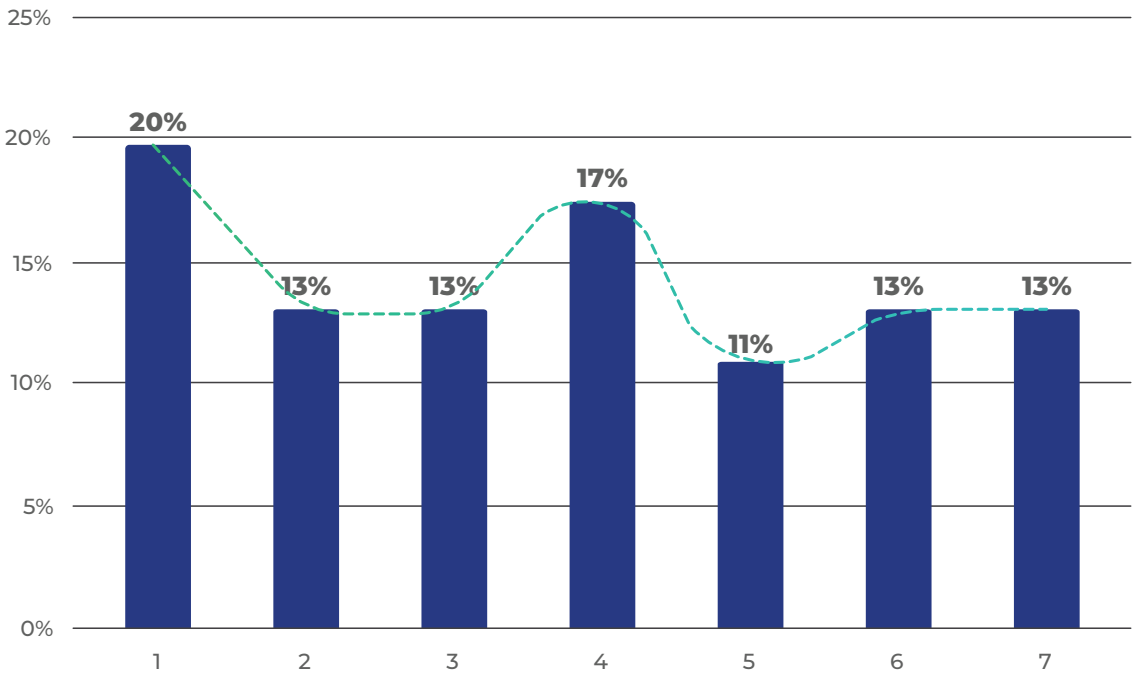


Furthermore, a breakdown of the respondents' ranking of talent drain as a detriment to business reveals that the impact on startups has been inconsistent, with the degree of severity

reported by the respondents being roughly evenly distributed between most and least detrimental factor.

Talent Drain

[1 most detrimental; 7 least detrimental]

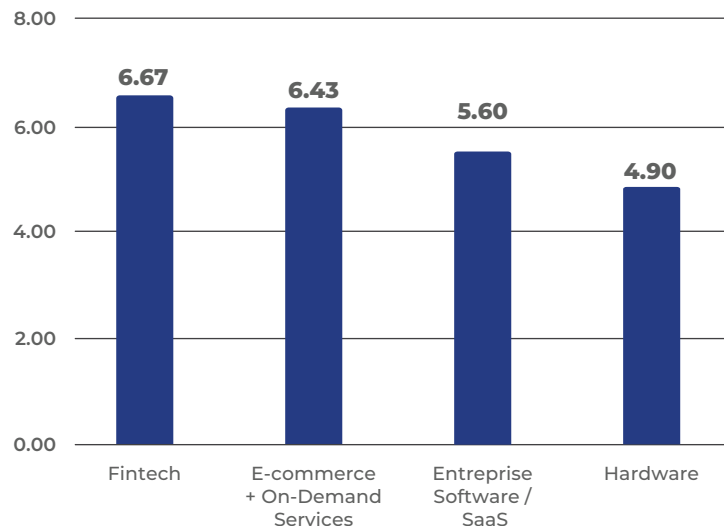
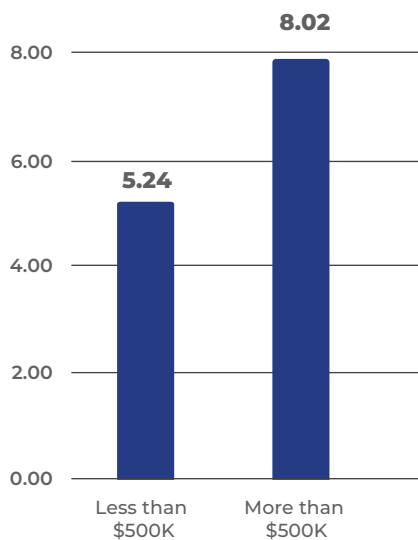


Lastly, a breakdown of answers based on funding stage and sector reveals that companies that have raised more than \$500,000 were significantly

more affected by talent drain, whereas fintech and e-commerce were the two most affected sectors.

How detrimental has talent drain been on your business?

[1 least detrimental; 10 most detrimental]



Silver Lining

Cheap talent has been a silver lining during the crisis. Currency devaluation has made Lebanon an attractive destination for outsourcing, even compared to established competitive markets such as Portugal and countries in Eastern Europe. Foreign companies have already opened offices in Lebanon to take advantage of this opportunity according to one of our interviewees, who singled out digital marketing as an area of interest to companies looking to outsource, owing to the availability of qualified creative talent.

Local startups have also been benefiting from cheaper labor, with one interviewee noting that startups have tried to retain operations in Lebanon as “much as possible” to benefit from the low labor costs. “You can easily scale if you have strong

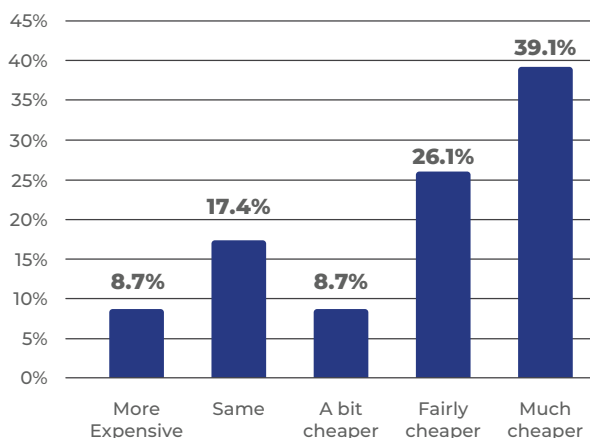
fundamentals and a strong team in Lebanon, (...) which is cheaper to recruit in comparison to Dubai or Saudi.”

However, a close inspection of the change in the cost of talent reveals that the decrease in cost has been more pronounced on low-level employees. Namely, the survey showed that the price of low-level employees has seen a clear and significant drop – close to three quarters (73.9%) of surveyed entrepreneurs reported that low-level employees were now cheaper, with as much as 39% qualifying it as “much cheaper”.

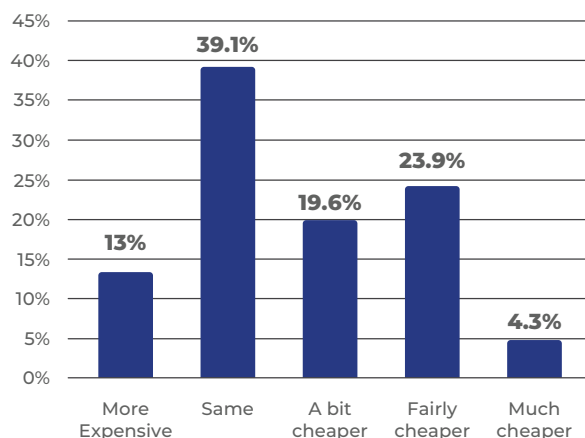
Conversely, for more than half (52.1%) of surveyed startups, the cost of upper-level employees had either stayed the same or increased.

In dollar value, how has the cost of talent changed since the crisis?

Low-level employees



Upper-level employees



The Experience Gap

“It’s great if the labor is cheap, but if it’s cheap it means there is no talent.”

There is consensus among the interviewees that the loss of talent is creating an experience gap, warning that while labor has become cheaper, its quality is on the decline. In other words, as experienced talent constantly seeks to exit the country, local companies are “only left with fresh graduates,” as one interviewee put it.

This trend severely stunts knowledge building within companies and the ecosystem as a whole, and is particularly detrimental to an industry that largely depends on “brain power”.

The impact of qualified talent drain hasn’t been limited to startups either, but has also impacted the ability of ecosystem enablers to support entrepreneurs. In our interviews, business incubators, NGOs, and educational institutions have all expressed their frustration at retaining

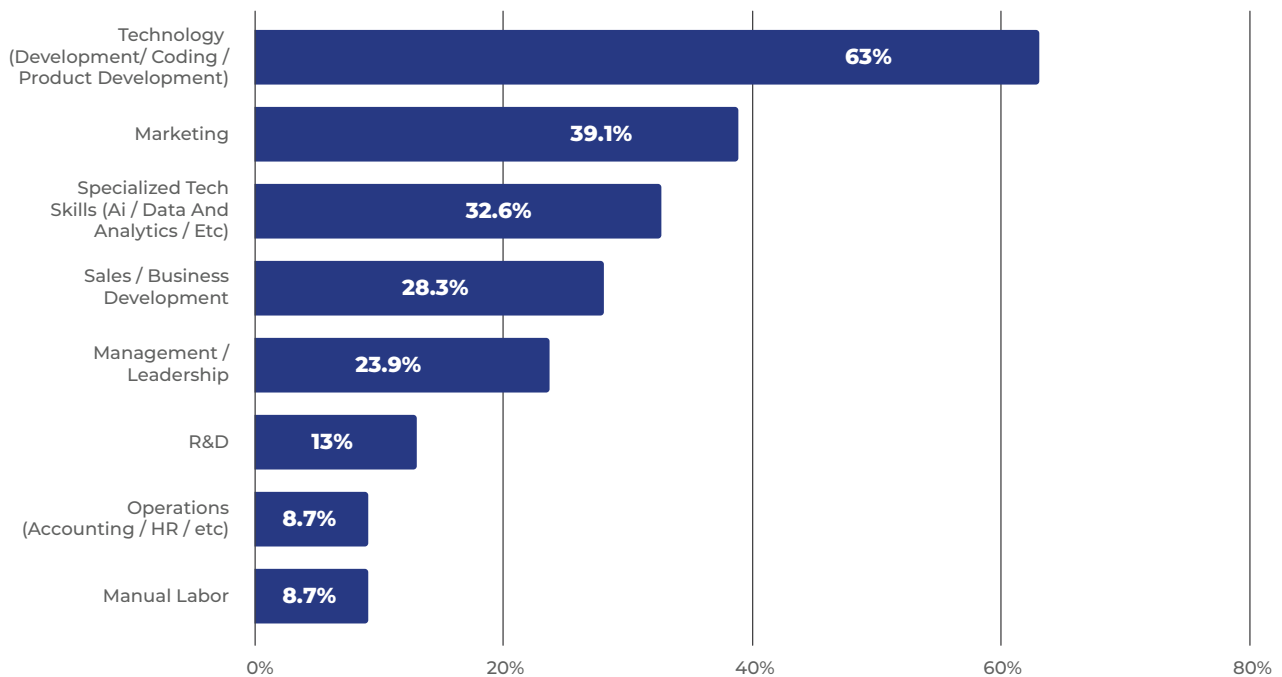
and finding experienced talent, including mentors, instructors, professors, administrative or faculty personnel.

“We can no longer afford the talents we need,” one interviewee explained; another highlighted a sense of helplessness in combating the drain: “It’s not just about compensation, it’s about having a decent life.”

The Skills Gap

The crisis has had a major effect on startups’ ability to recruit talent with technology-related skills: Close to two-thirds (63%) of surveyed entrepreneurs said that development and coding talent has become more difficult to acquire and retain, and a third (32.6%) said that specialized tech skills are also becoming harder to find. Marketing skills were the second most affected skill, having been cited by almost four out of six (39.1%) surveyed entrepreneurs.

Which set of skills have you found difficult to hire / retain / replace?



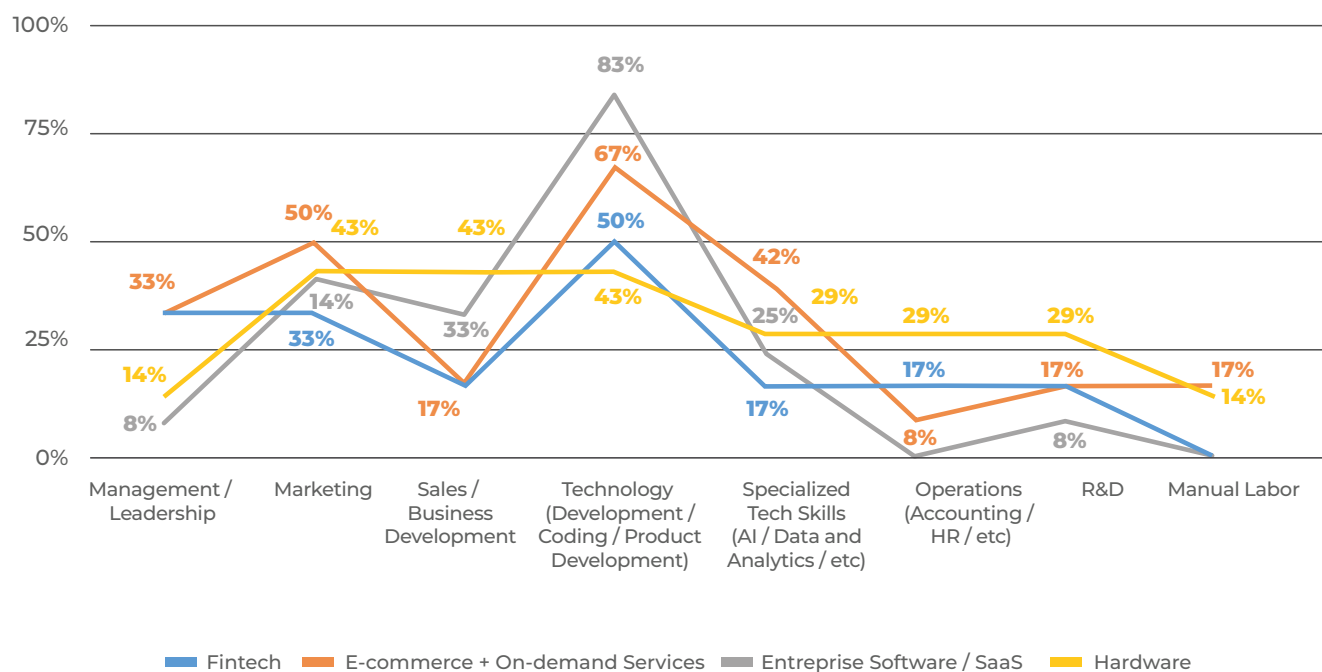
Arguably, this phenomenon can be attributed to the fact that these sets of skills – particularly development and marketing – can be easily conducted remotely, making them more prone to be poached by foreign companies.

One interviewee's testimony in particular lends credence to this explanation: only about 8% of graduates from a local coding school end up leaving the country, whereas around 50% end up working remotely for companies based abroad.

Lastly, the survey also shows that the shortage of development and coding skills was particularly pronounced for companies that develop enterprise software or SaaS services as well

as e-commerce companies. The latter is also particularly affected by the shortage of marketing talent.

Which set of skills have you found difficult to hire / retain / replace?



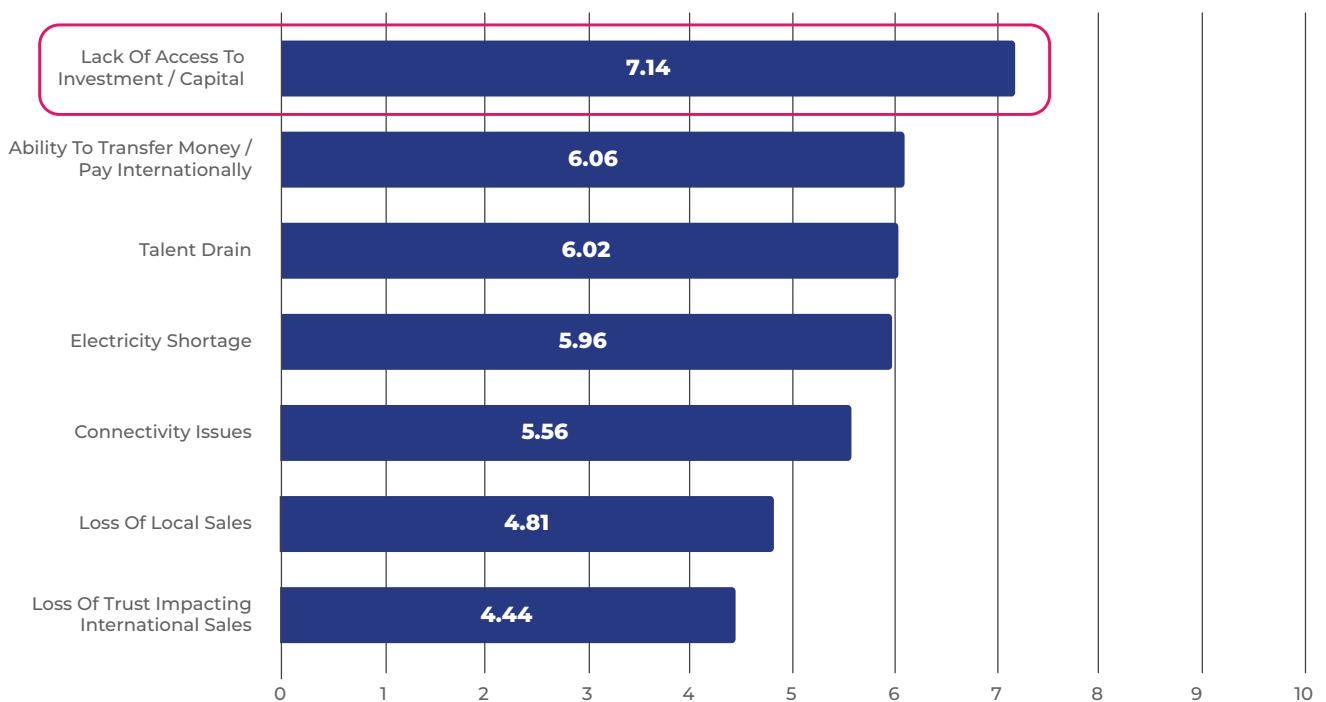
2. Access to Capital

The crisis has also had a pronounced impact on startups' ability to access capital, which has become a prime concern for startups.

In the survey, the lack of access to investment and capital was seen as the most detrimental challenge to business.

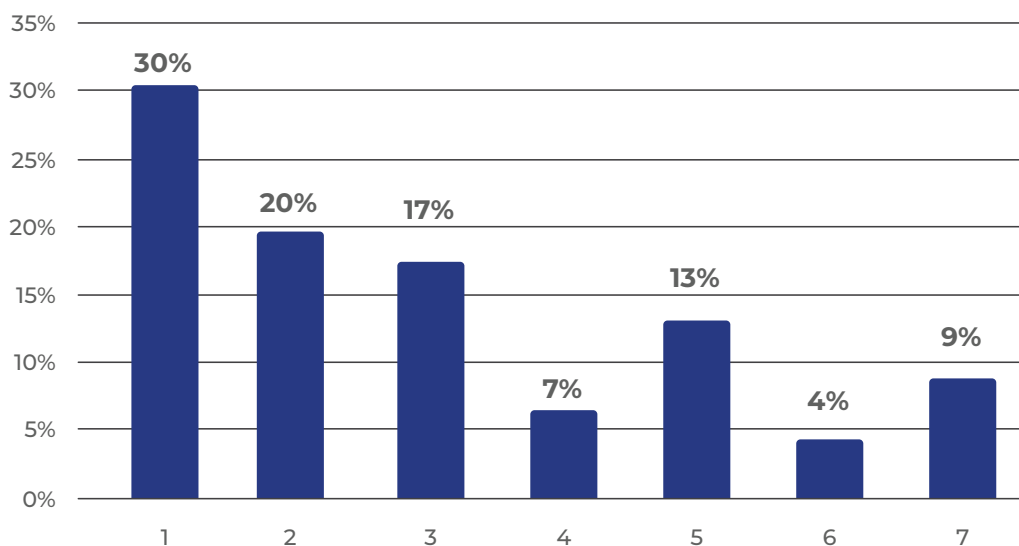
Which of the following challenges have been most detrimental to your business?

[1 least detrimental; 10 most detrimental]



Lack of access to investment / capital

[1 most detrimental; 7 least detrimental]

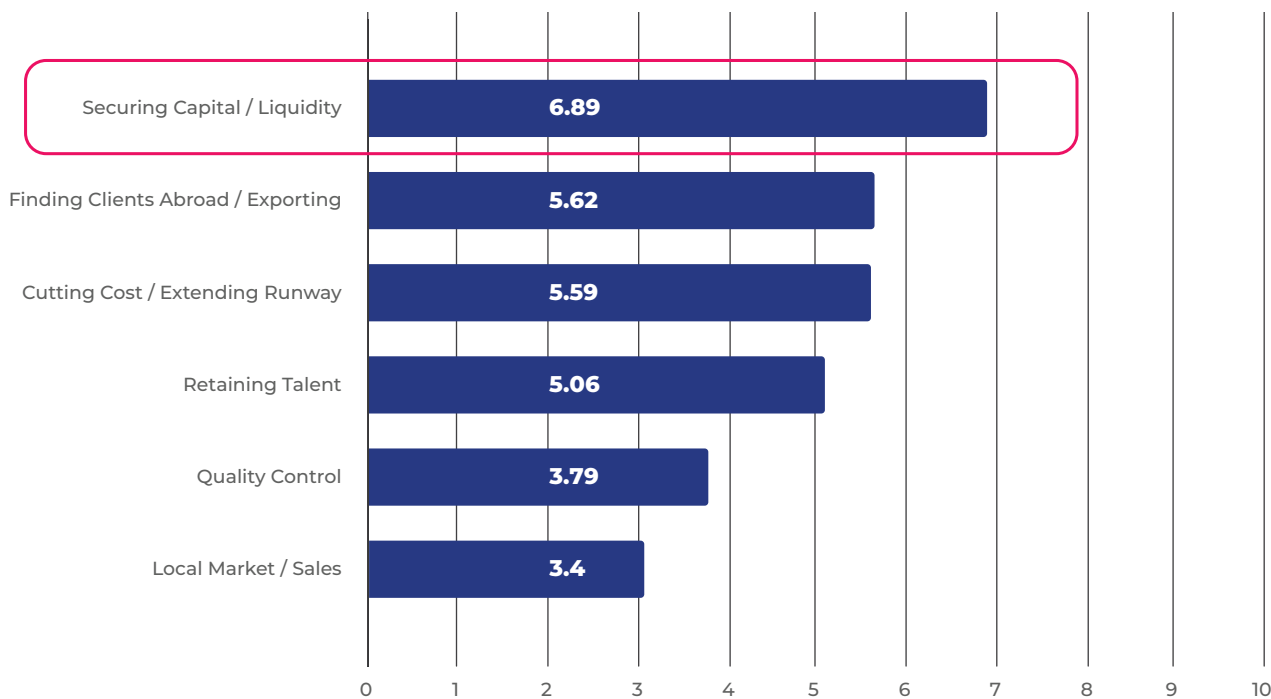


The gravity of the situation was also reflected in the urgency exhibited by startups when it came to accessing capital: On average, surveyed startups

also rated securing capital and liquidity as the area of business that they prioritized most in response to the crisis.

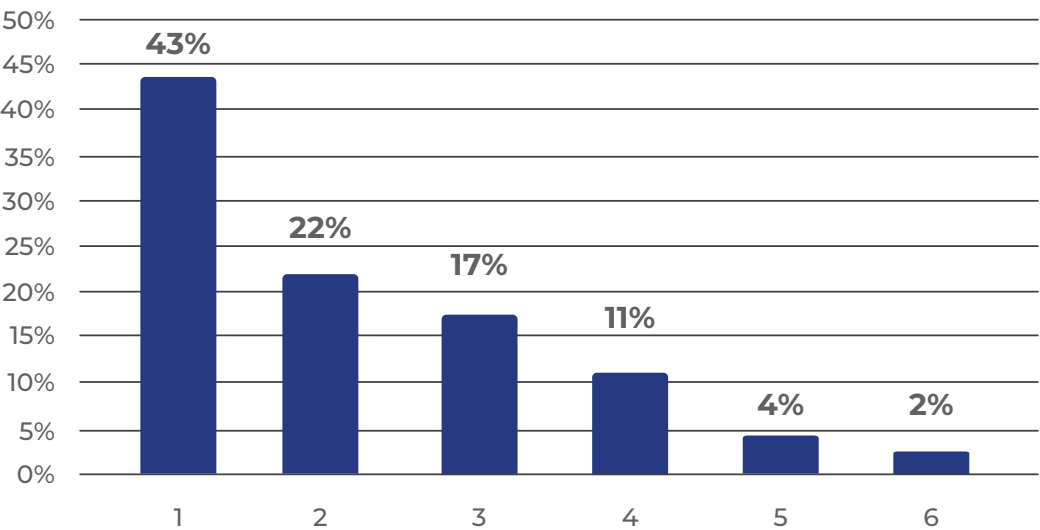
Which areas of the business did you prioritize / focus on in response to these challenges?

[1 lowest priority; 10 highest priority]



Securing Capital / Liquidity

[1 highest priority; 6 lowest priority]



Investor Sentiment & Donor Priorities

Interviewees have unanimously noted that the decrease in investment appetite is having a consequential, sometimes ruinous, effect on startups, with the current environment being described as toxic for investors.

A highly impractical and volatile currency exchange system – which includes multiple, changing official rates as well as a highly fluctuating black market rate – and uncertainty around startups' ability to overcome infrastructure challenges and meet demand has created an extremely risky investment environment. Some investors have defaulted on their commitments; securing new deals has become bound by several restrictive conditions.

Foreign investors, in particular, were reported to have become highly reluctant to consider deals with startups that have any connection to Lebanon. However, while interest in local startups is low, investors would not automatically rule out considering opportunities in Lebanon.

Particularly, startups with proven, scalable businesses and exportable goods were highlighted as propositions that may be able to secure funding. Having a market base abroad is also a significant boon.

E-commerce was a commonly cited tech sector among interviewees as an area with potential for growth, as well as gaming and Software-as-a-Service (SaaS) ventures.

Several interviewees also singled out fintech, owing to the existing banking experience

available in the country and the potential local market for fintech solutions. Similarly, the agro-food, pharmaceutical, and fashion sectors were also mentioned for their export potential.

Donors, meanwhile, have shifted their priorities. "I can understand that they have to shift," said one interviewee.

"They shifted their priorities to be more relevant because the country is changing. The ecosystem disappeared. You have to change your mindset. After October 2019 it's a complete reset."

Namely, several interviewees – NGOs, and business incubators – noted that donors were now allocating funds away from tech and entrepreneurship towards relief efforts and providing basic necessities.

Other trends noted by interviewees were an increasing attention to SME support and youth development. One interviewee, who runs a digital upskilling program targeting youths noted a palpable eagerness from donors to support the program. The healthcare and education sectors were noted in particular as new areas of interest for donors.

Decline in Bank Lending

Not only has venture capital dried up, but bank lending has also come to a standstill.

The government's failure to unify the exchange rate has severely restricted banks' ability to operate as lenders. Namely, the persistence of the legality of the \$1=1500 LBP exchange rate,

particularly, for the repayment of loans, inevitably exposes banks to arbitrage.

There are currently two different dollars being used in the Lebanese economy: “fresh dollars”, which have been brought into Lebanon after October 2019 and can be used freely, and “Lollars,” which are dollars that were in the banking system before the crisis and are very restricted in their use.

There is an informal market for exchanging the two – with one fresh dollar equal to about 5 lollars stuck in the bank. However, there is no legal framework that acknowledges this difference.

Hence banks are in a difficult situation – if they choose to lend a customer in fresh dollars, the customer can then return the payment in “lollars” – and the bank has no recourse as

the government does not legally recognize a difference between the two. This has put a significant damper on banks’ willingness to lend in dollars.

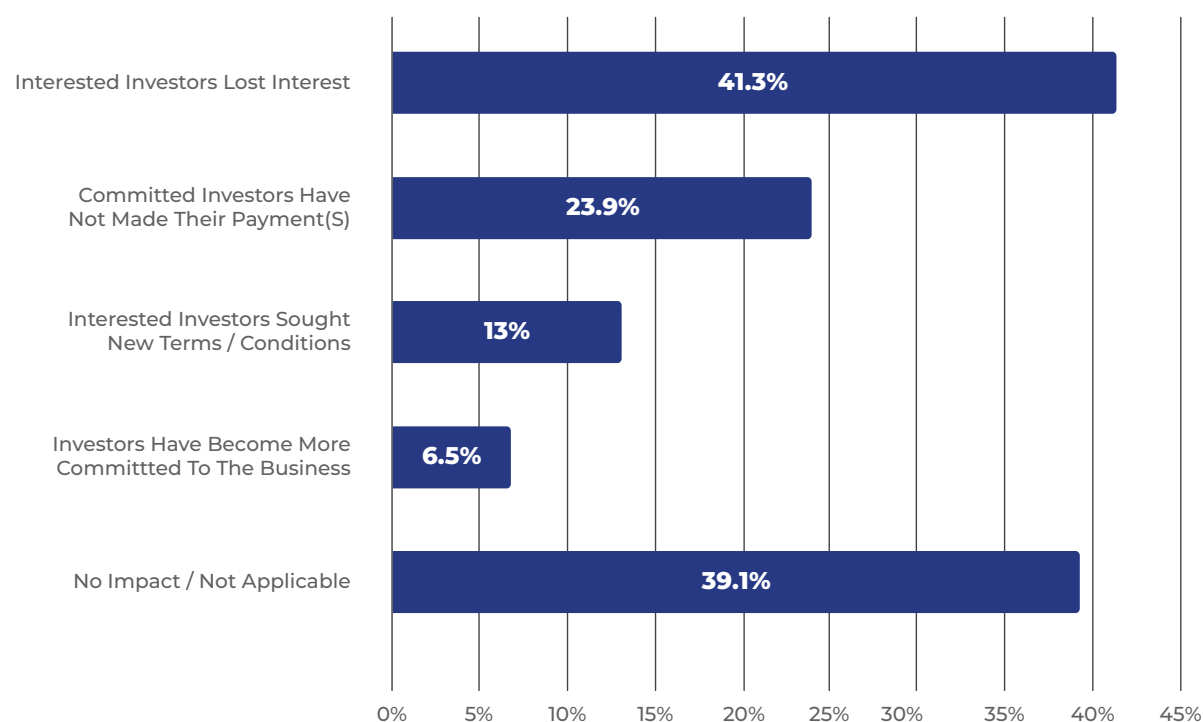
Assessing the Impact on Startups

Impact on Pre-crisis Deals

Negotiations with investors and investment deals that predate the crisis have been largely negatively affected, with 41.3% of startups reporting that the crisis had turned away interested investors, and close to a quarter (23.9%) saying that committed investors had held back disbursement.

Furthermore, a small proportion of respondents (13%) had to renegotiate and revise existing terms with investors. Only 6.5% felt that investors had become more committed to the business.

How has the crisis affected any pre-crisis funding deals?



Securing New Deals

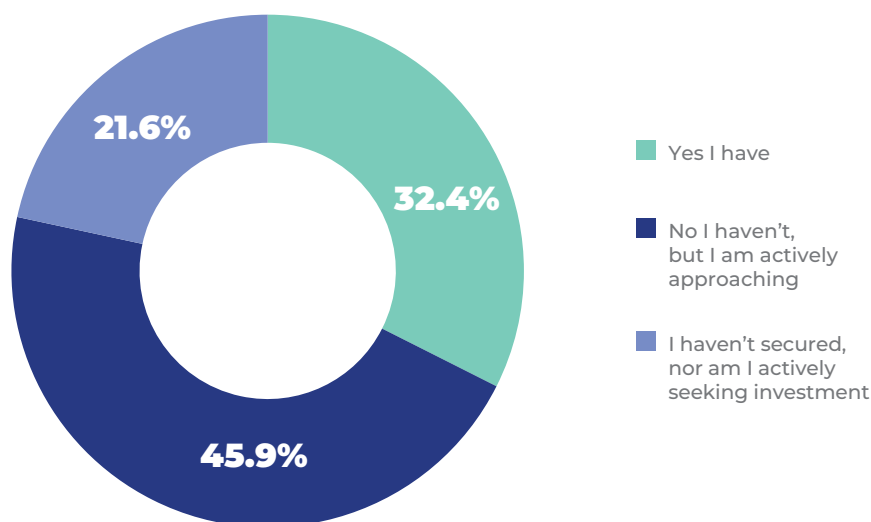
Despite an overall negative sentiment and outlook in the investment environment, a considerable number of startups were still able to secure investments.

The startup survey shows that, since the beginning of the crisis, as much as a third of surveyed startups (32.4%) were able to secure funding deals.

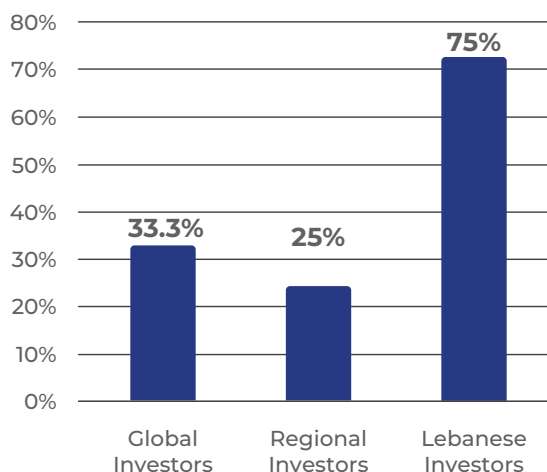
However, close to half (45.9%) had sought, but failed to do so. It is interesting to note that while startups are seeking funding from global and regional investors, the ones that have successfully raised funds are mostly from Lebanese investors.

There may be an opportunity here to support entrepreneurs direct their fundraising efforts more towards local investors who appear to be more likely to support their business.

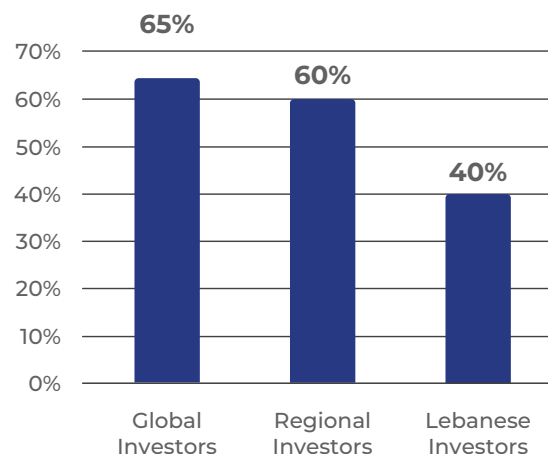
Have you been able to secure funding deals after the crisis?



I have secured money from...



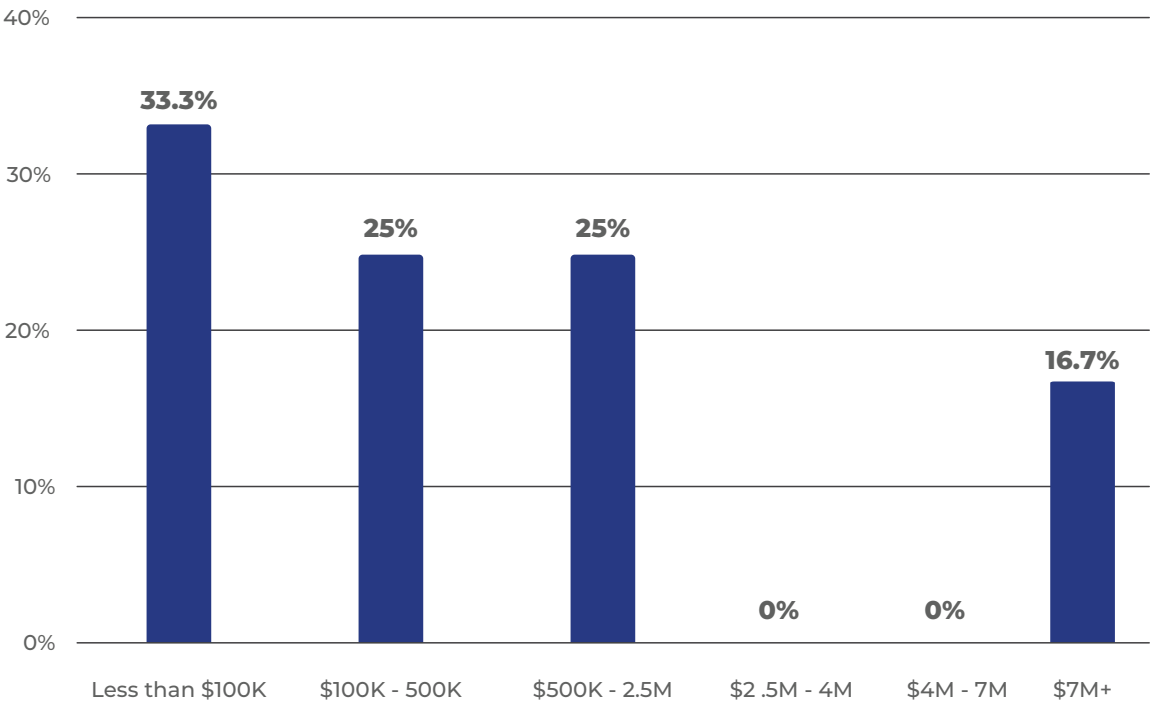
I am currently trying to secure funding from...



Round Size

Except for two \$7M+ investment deals, the investments secured after the crisis by surveyed startups were all below \$2.5M, with the highest number of deals having a round size of less than \$100,000.

How much did you secure?

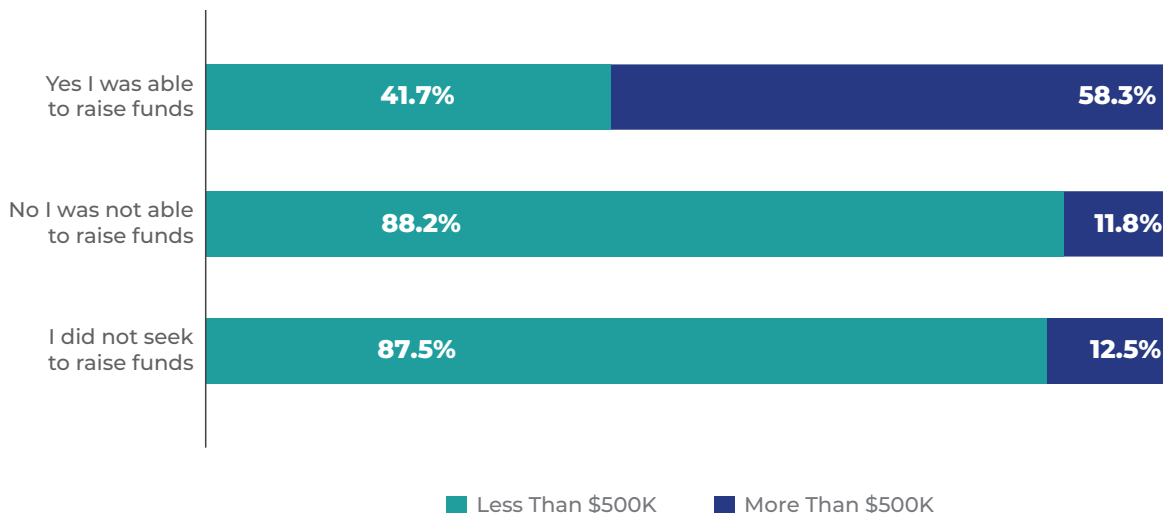


Breakdown By Funding Stage

According to the survey, startups that had managed to raise more than \$500,000 prior to the crisis were more likely to secure funding

deals after the crisis. Earlier stage companies, meanwhile, were less interested in seeking funds and had a significantly higher failure rate in seeking them.

Have you been able to secure funding deals after the crisis

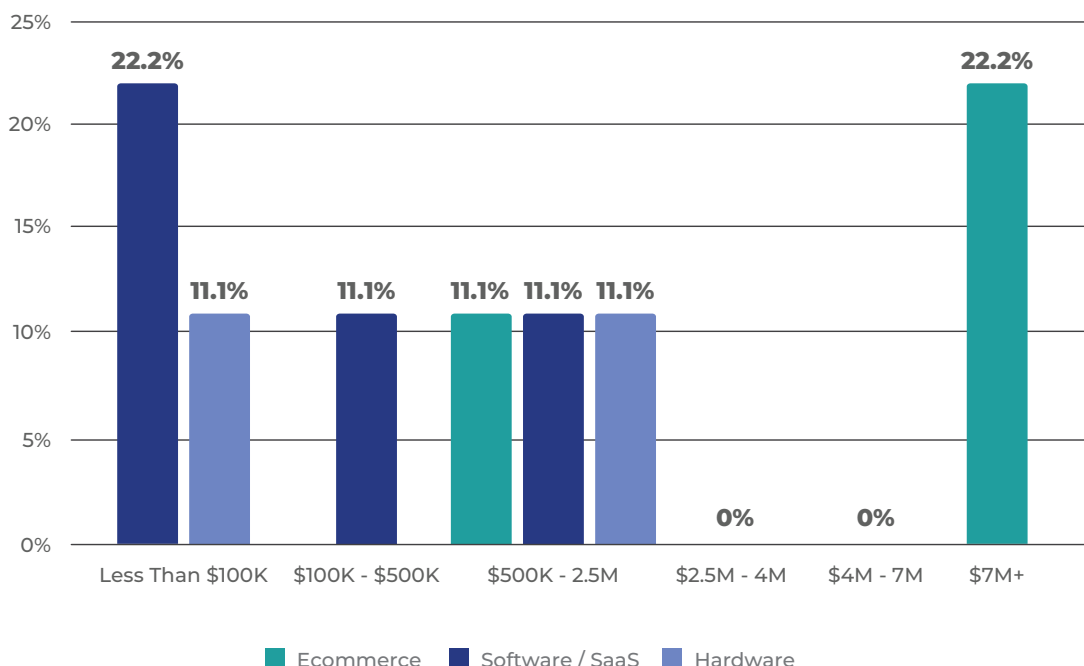


Breakdown By Sector

A breakdown of investment deals made after the crisis reveals that e-commerce startups were the

biggest recipient of investments, with two deals that exceed \$7M. Fintech startups, on the other hand, had failed to secure any investments.

How much were you able to raise?



How Investors and Startups Reacted

In order to be able to manage their cash flows and access US dollars, startups have resorted to registering their companies in foreign countries – with Cyprus being the most commonly mentioned destination. Doing so allows startups to access the full value of their capital.

Furthermore, by eliminating the country risk, startups with legal presence outside of Lebanon also increase their chances to secure additional funding.

Emergency cash injections were also a vital tool. Funds were used to extend the runways of startups and allow them time to stabilize and potentially move out of the country.

One interviewed investor managed to save 10 out of their 14 startup portfolio companies namely by plugging the working capital gap.

This was achieved with the support of a foreign co-investor either through a secondary buyout or exit, a contingency plan that “can be replicated by others,” according to the investor.

Another investor said that he had to intervene with emergency cash loans, which was needed for about 20% of their portfolio companies.

Another interviewee, the Managing Director of a regional business incubator, had resorted to matching local startups with Lebanese angels based outside of Lebanon.

Local emergency funds were also set up, with one such initiative securing investments for eleven 331 startups through a high-growth investment vehicle backed by local private and institutional investors.

3. Access to Markets

The criticality of access to foreign markets has risen significantly as a result of the crisis, and for many startups, foreign demand was a deciding factor in their survival.

The research has found that while some startups were able to increase foreign sales, survive and even grow during the crisis, the likelihood of success was strongly tied to two factors: having an exportable product and a minimum amount of existing traction in foreign markets.

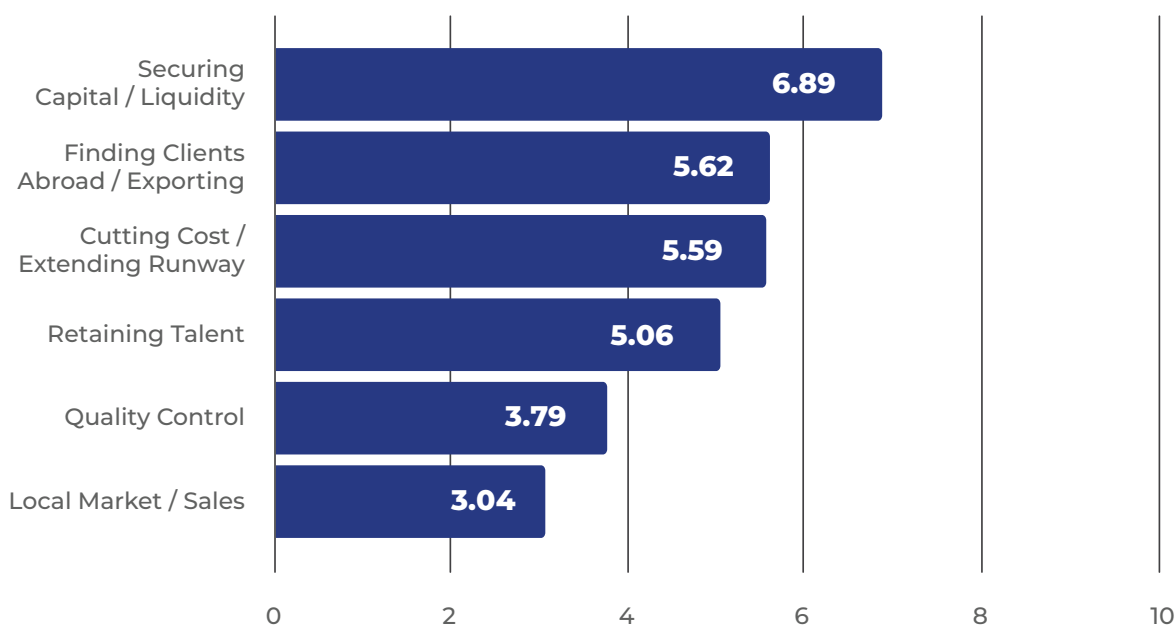
A severe erosion of purchasing power in Lebanon has wiped out much of the revenue that could have been generated from local demand.

Consequently, for many startups, foreign demand represented the only viable lifeline.

In fact, a heightened focus on the importance of exports is prevalent among startups. In our survey, exporting and finding clients abroad was a high priority for startups, second only to capital and liquidity, while local sales ranked last.

Which areas of the business did you prioritize / focus on in response to these challenges?

[1 lowest priority; 10 highest priority]



Investors were keen to note that several startups had been able to weather the crisis by growing the share of their revenues from foreign markets, adding that the currency devaluation had also helped create a favorable effect on their cash flows. “They managed to increase revenue weight from other countries instead of having to focus on the Lebanese Lira.”

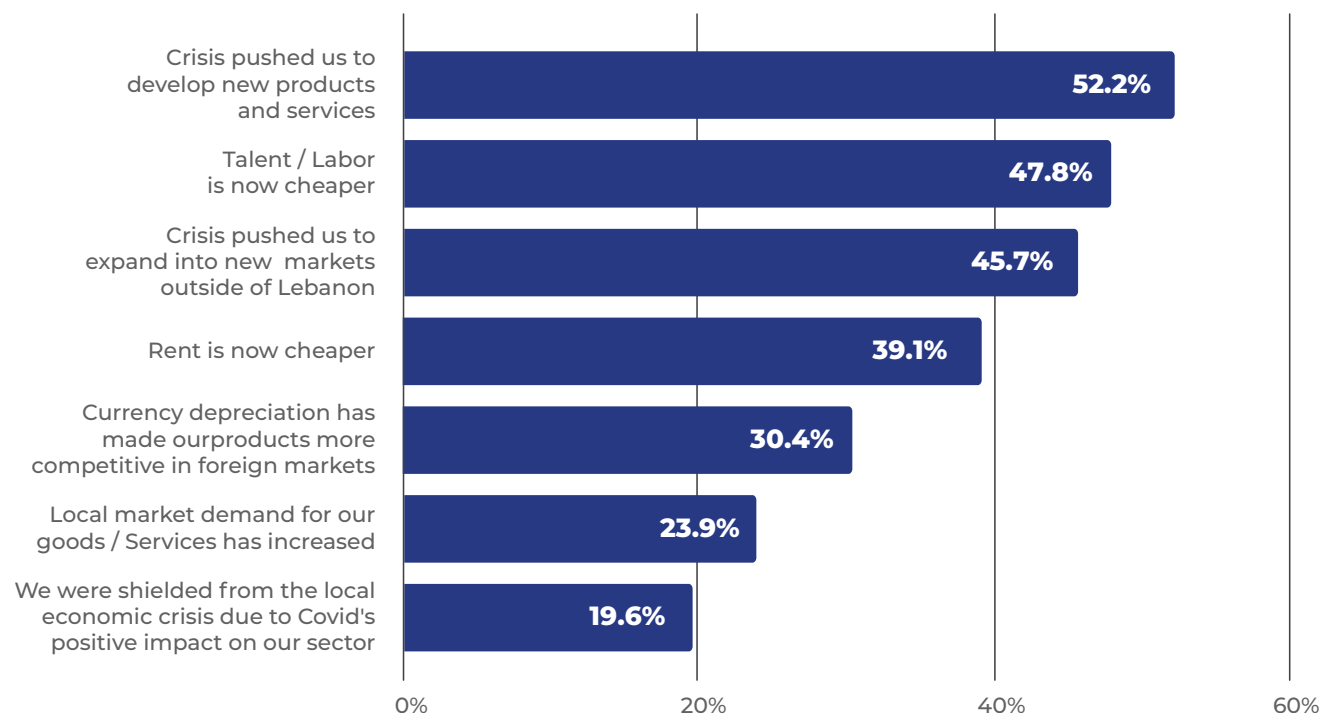
Before the crisis they used to have 70 to 80% of their revenues coming from local operations, and they managed to make more than 60% of the revenue coming from abroad; this helped them a lot with the revenue mix.

Secondly, they profited from the collapse. The salaries that they are currently paying after the

crisis are less, one investor observed. In fact, close to half of surveyed startups (45.7%) had even indicated that they

perceived the need to expand into foreign markets as an opportunity.

What are the opportunities from the crisis?



However, investors were also keen to highlight that having traction in foreign markets proved to be a make or break factor for many startups, specifically because it strongly affected their ability to receive life saving investments.

“The ones who managed to expand, and managed to have some of the revenues come from outside the country, and have a solid value proposition, and a proven model abroad had the chance to attract foreign new investors,” one investor observed.

On the other hand, startups that had not yet had the opportunity to prove their model abroad, typically early stage startups, were stripped of the opportunity. “They were really at an inflection point and they were pivoting and trying to prove

the model abroad,” one investor describing the plight of portfolio startups said. “And they needed this oxygen and money to fuel their expansion and they couldn’t, so they had to shut down.”

This occurrence exposes a disconcerting new predicament for budding local startups. As several of the interviewees had pointed out, the local market has always been too small to foster market leaders and unicorns on its own, and had rather represented a space to test and validate models before exporting and scaling for a majority of local startups.

As such, the lack of local demand makes it more difficult for Lebanon to act as a testing ground for new companies.

Early Stage Startups Bearing the Brunt of the Crisis

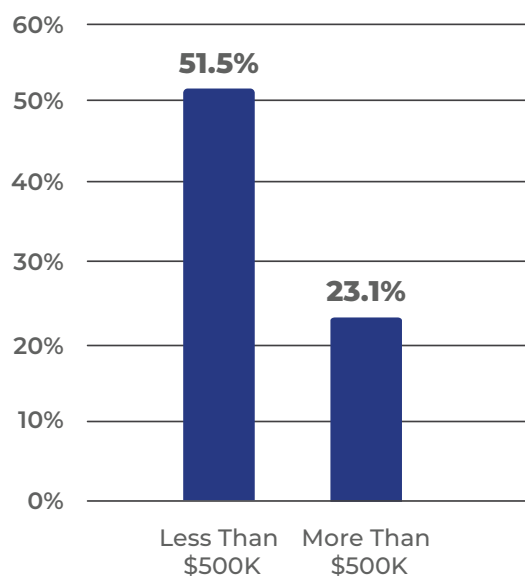
The survey also revealed that early stage startups were more dependent on the local market, and consequently more affected by the collapse of local demand.

For instance, startups that had raised less than \$500,000 dollars were far more likely to report a drop in sales due to the local market shrinking

and their inability to increase exports, and considerably more concerned about the drop in local demand than those who had raised more than \$500,000.

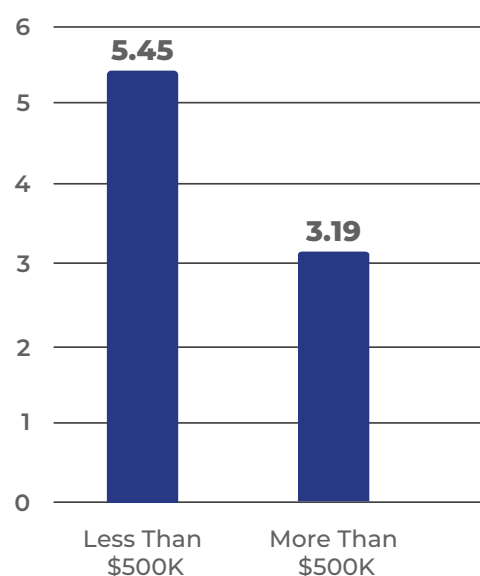
Furthermore, they were more likely to prioritize local sales to navigate the crisis.

My sales have decreased because the local market has shrunk and I haven't been able to scale abroad



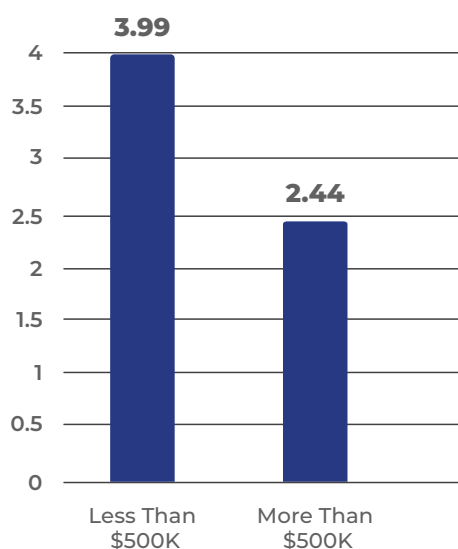
How detrimental was the loss in local sales a challenge to your business?

[1 least detrimental; 10 most detrimental]



How much priority did you place on sales in the local market?

[1 lowest priority; 10 highest priority]



4. Infrastructure & Operations

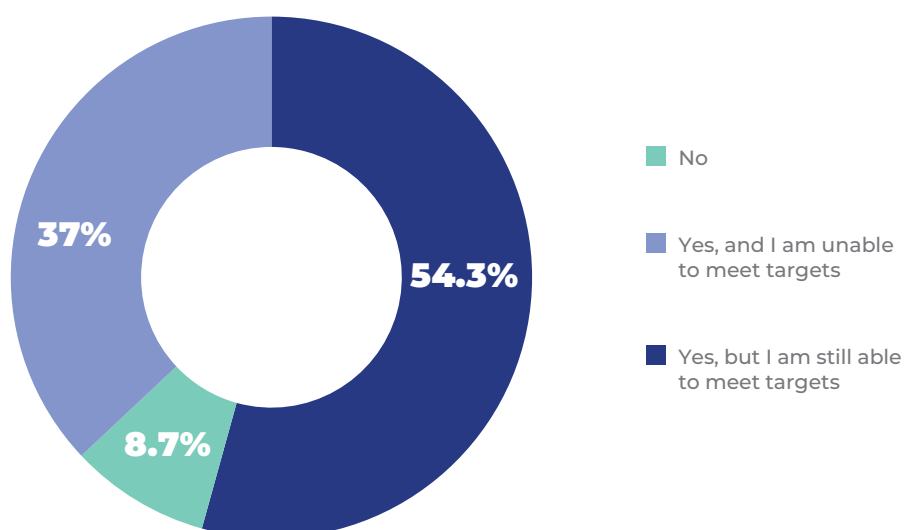
The degradation of the Lebanese infrastructure is having an overwhelming effect on local startups.

The impact has been widely felt across the ecosystem: In our survey, a vast majority of respondents (91.3%) have confirmed that the decline in the quality of infrastructure services

had in fact affected their productivity, with a significant proportion (37%) reporting missing targets as a result.

Similarly, support services - business incubators, NGOs, education institutions, internet and banking service providers - have unanimously complained about infrastructure failings challenging their ability to operate effectively.

Have infrastructure issues affected your productivity?



The Severity of the Impact has Been Inconsistent

In our interviews, VCs and business incubators consistently cited managing payments and transactions, maintaining an adequate supply of electrical power and reliable connectivity as common debilitating factors for their startups.

In the startup survey, difficulties in executing money transfers and paying internationally was overall rated the second more detrimental

consequence of the crisis. Inadequate supply of electrical power was very close in magnitude to talent drain (5.96 vs. 6.02).

Connectivity issues, on the other hand, were perceived as less severe in comparison to electricity.

Which of the following challenges have been most detrimental to your business?

[1 least detrimental; 10 most detrimental]



A closer inspection of the data reveals that, while these challenges are pervasive, opinion over the severity of their harm was fairly divided.

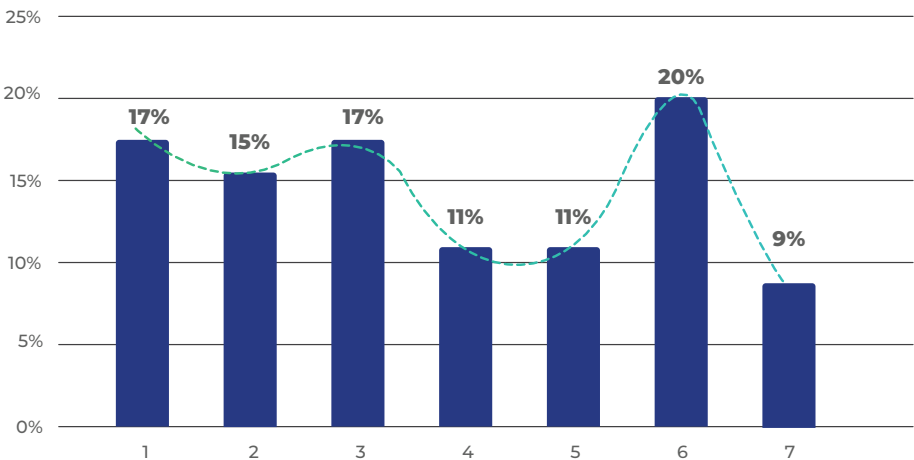
For all three considerations – money transfers, electricity, and connectivity - respondents' rating of the gravity of the associated challenges showed clear divisions. Ability to transfer money was the most contentious issue, with answers relatively evenly spread out between most detrimental and least detrimental factor to the business.

Opinion around electricity and connectivity was more clearly delineated, with responses roughly concentrated in two groups for each one. When it came to electricity, shortages were very highly detrimental to a significant proportion of startups (17%); the remaining responses were distributed around a 5 out of 7 rating.

Conversely, connectivity was rated as least detrimental consequence by 17% of respondents, whereas the remaining responses were evenly distributed around a 3.5 out of 7 rating.

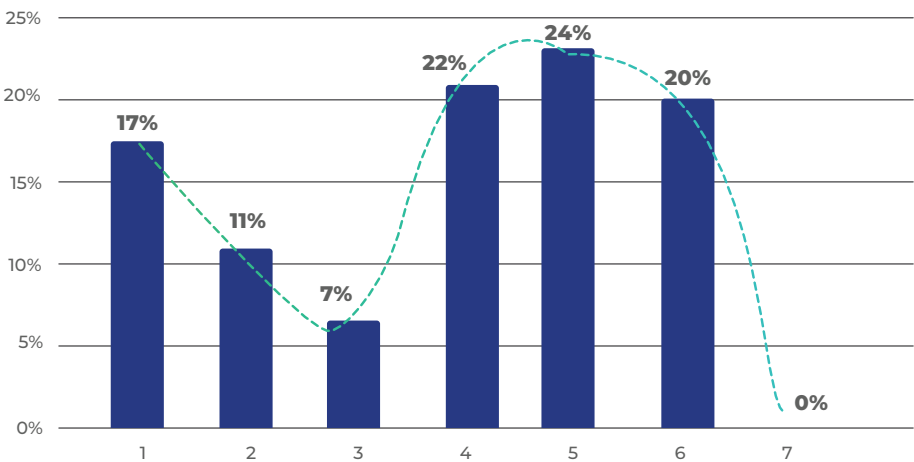
Ability to transfer money / pay internationally

[1 most detrimental; 7 least detrimental]



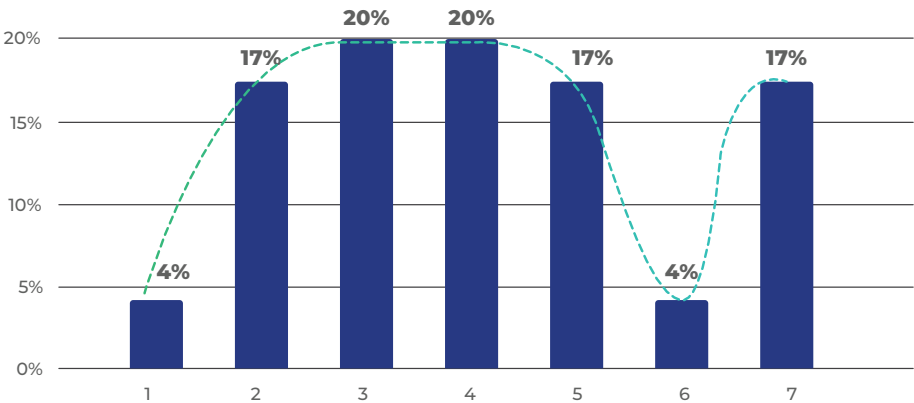
Electricity Shortage

[1 most detrimental; 7 least detrimental]



Connectivity Issues

[1 most detrimental; 7 least detrimental]

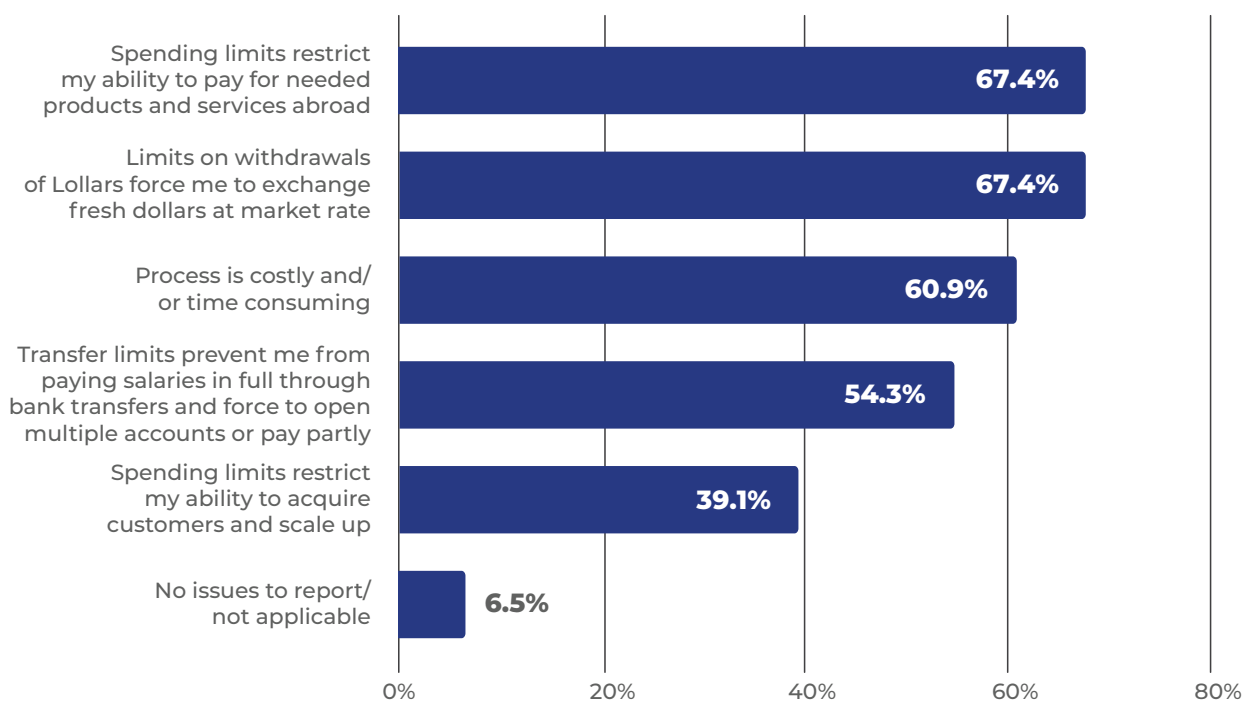


The Challenges of the Banking System

The Lebanese banking system has become a significant burden for Lebanese startups. While surveying startups on the difficulties posed by banking limitations, every possible answer

was cited by a considerable portion of the respondents, with only 6.5% stating that they have no issues to report.

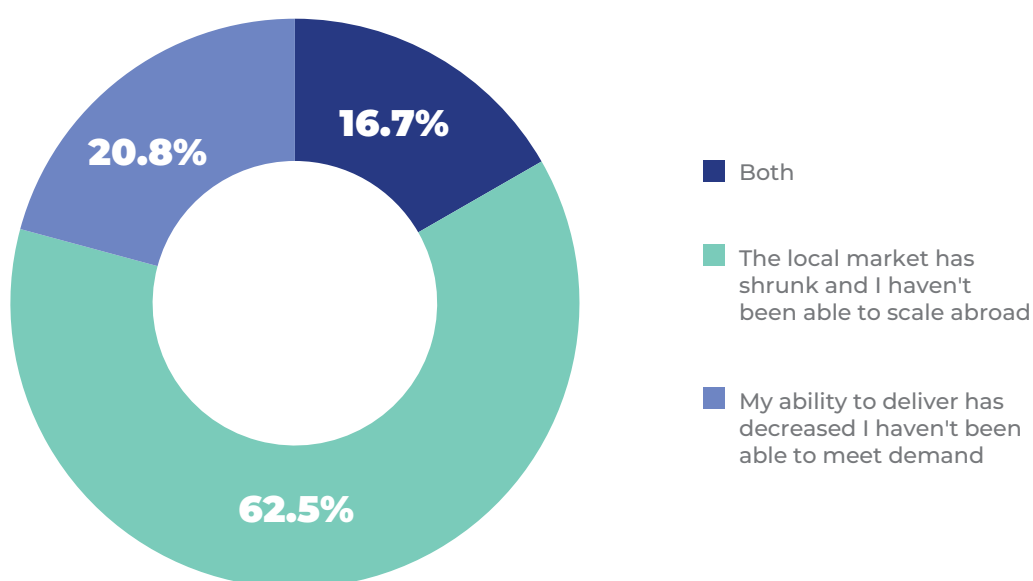
What are the challenges of using dollar accounts at Lebanese banks?



The banking system is cutting off Lebanese startups from the rest of the world. More than two thirds (67.4%) of surveyed startups indicated that spending limits stopped them from paying for all needed foreign products and services, while around 4 in 10 startups (39.1%) had said that their ability to acquire customers and scale up has been affected.

This trend is particularly alarming, given that the survey also revealed that the inability to scale was an overwhelming factor behind drops in sales: Of the startups that had seen their sales decrease as a result of the crisis – who represented more than half (53.2%) of the total number of surveyed startups - 79.2% had indicated that the drop was due to the drop in demand in the local market and their inability to scale abroad.

My sales have decreased because...



Electricity and Connectivity: A Tragic Love Affair

Lebanon's electricity woes span decades, but the crisis precipitated the fall of the energy sector into a moribund state.

Fuel shortages and a dilapidated electrical grid have left Électricité du Liban unable to supply more than a few hours of electricity a day; days-long power outages have also been recurrent.

The ripple effect generated from the collapse of the country's main power supplier has also impacted internet service providers.

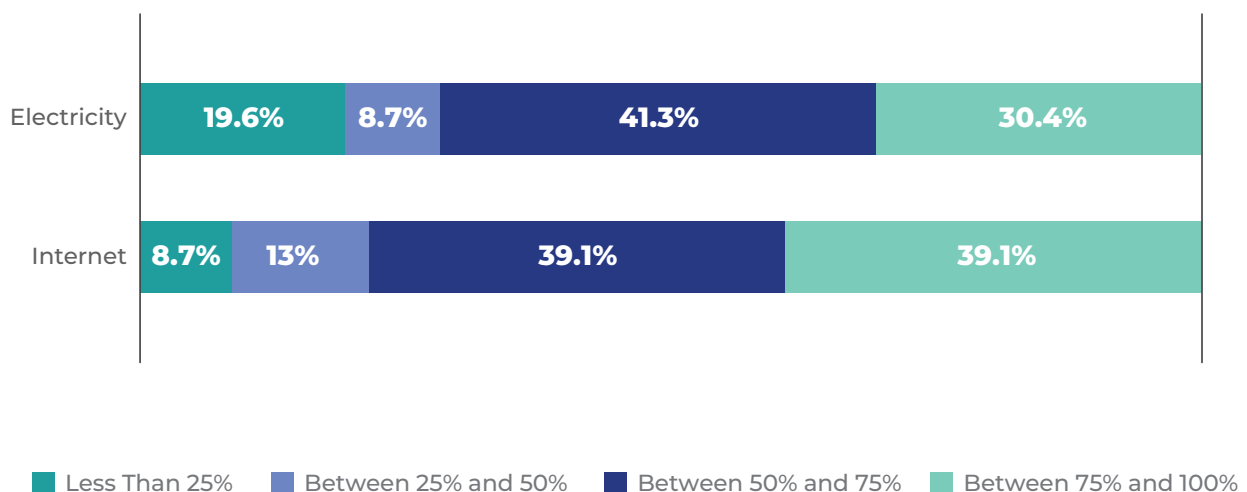
In our interviews, a leading internet service provider rued incurring significant additional costs in order to be able to secure diesel from the black market and generate its own power.

Furthermore, currency devaluation has effectively diminished revenues, while the drop in consumers' purchasing power has made any price adjustment difficult. These two factors are setting internet service providers on an unsustainable financial path.

Analyzing the Impact

The survey confirms that shortages of electricity and connectivity have been significant for a majority of startups.

What percentage of your electricity and internet needs are you able to secure?

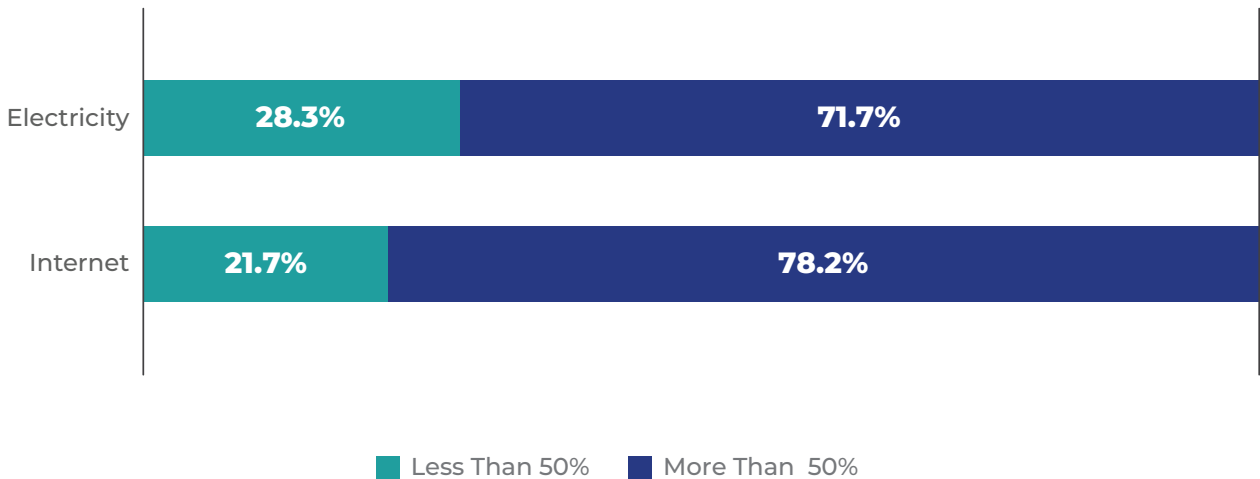


More than 20% of startups surveyed have reported that they are unable to secure the majority of their electricity and internet needs.

However, once again the impact of this challenge is not consistent across startups.

What percentage of your electricity and internet needs are you able to secure?

[Proportions of respondents able to secure more or less than 50% of their electricity and internet needs]

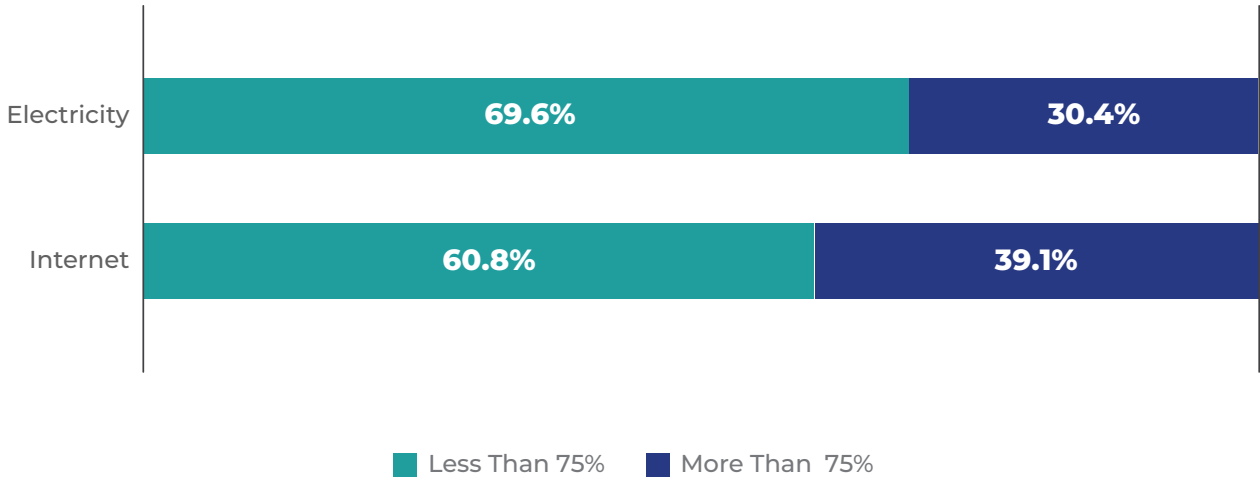


The survey revealed that an even larger proportion – hovering between 30% and 40% – was in fact

able to secure more than 75% of its electricity and internet needs.

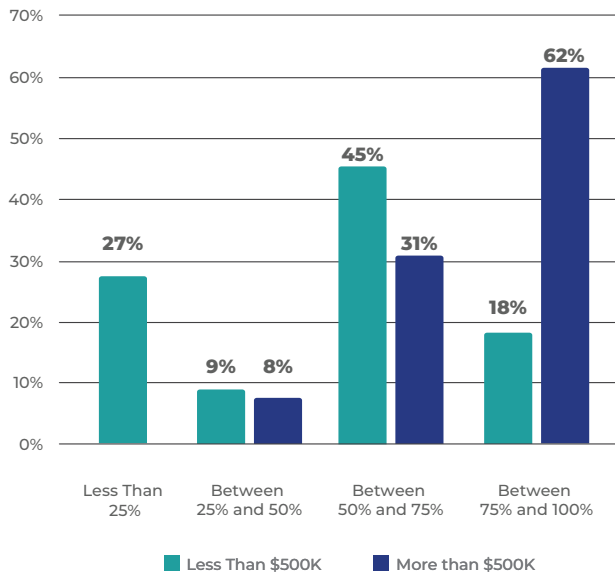
What percentage of your electricity and internet needs are you able to secure?

[Proportions of respondents able to secure more or less than 75% of their electricity and internet needs]

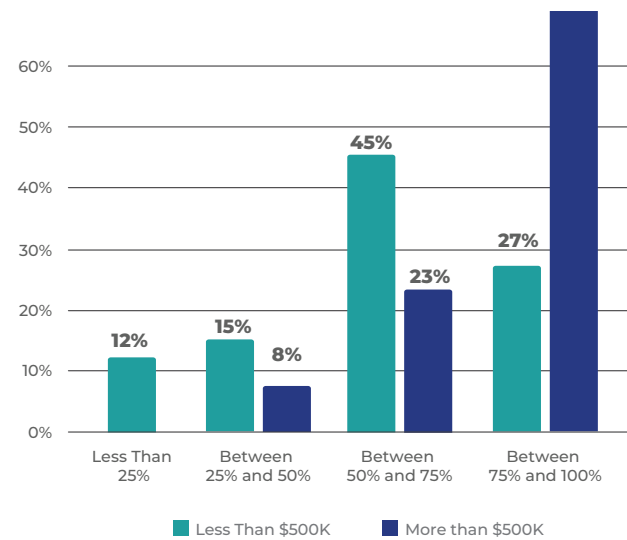


Further inspection of the data reveals that the degree of impact from the electricity and internet shortages differs drastically depending on whether the startups had raised more or less than \$500,000.

What percentage of your electricity needs are you able to secure?

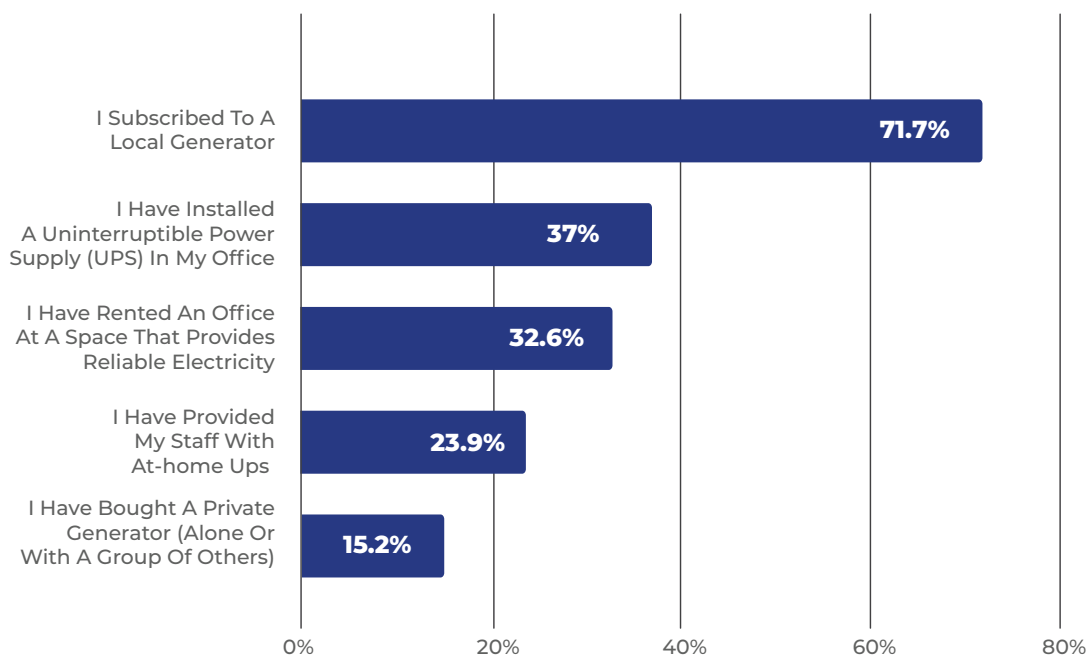


What percentage of your internet needs are you able to secure?



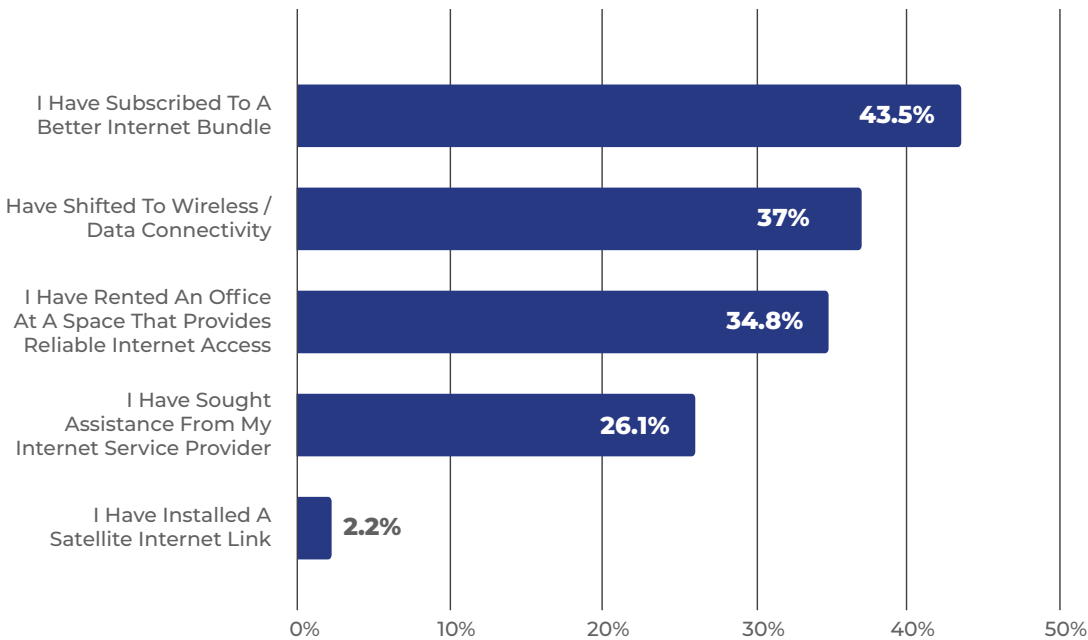
Among the solutions sought by startups, subscribing to a local electricity supplier has been the most popular solution to compensate for the shortage of electricity by a wide margin.

How have you been working around electricity shortages?



Solutions seeking a more reliable internet connection, on the other hand, were more evenly distributed.

How have you been working around connectivity issues?

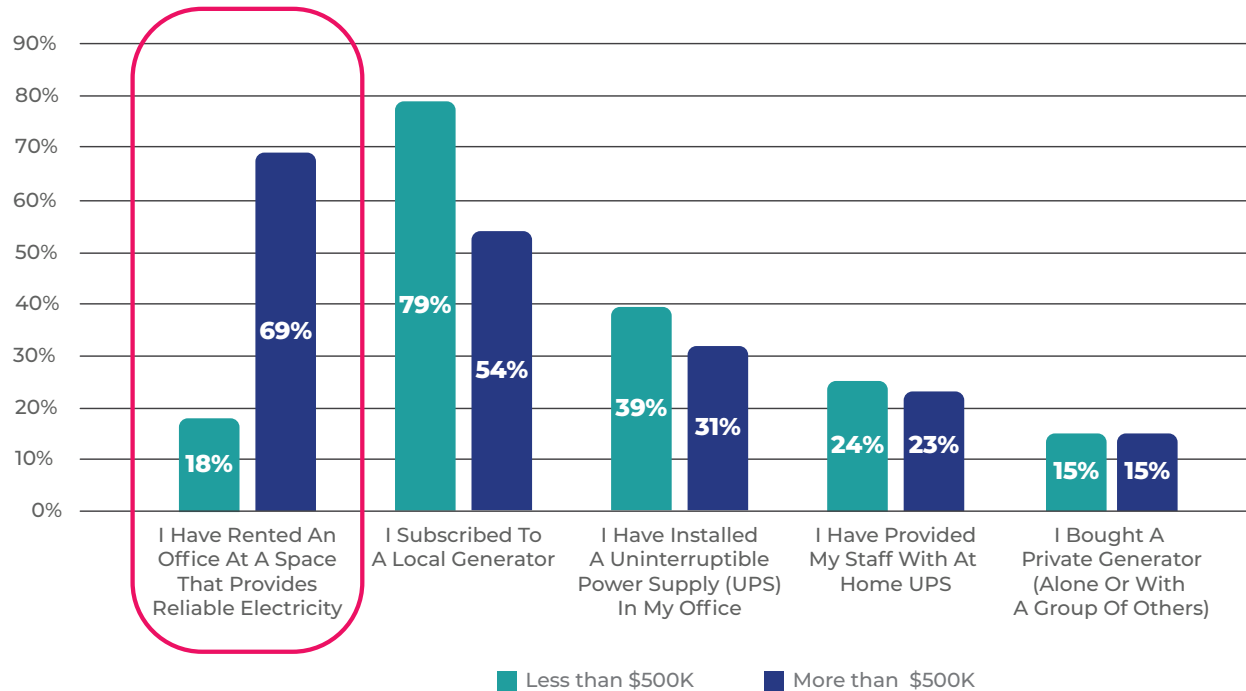


However, splitting the results by funding stage yields interesting results.

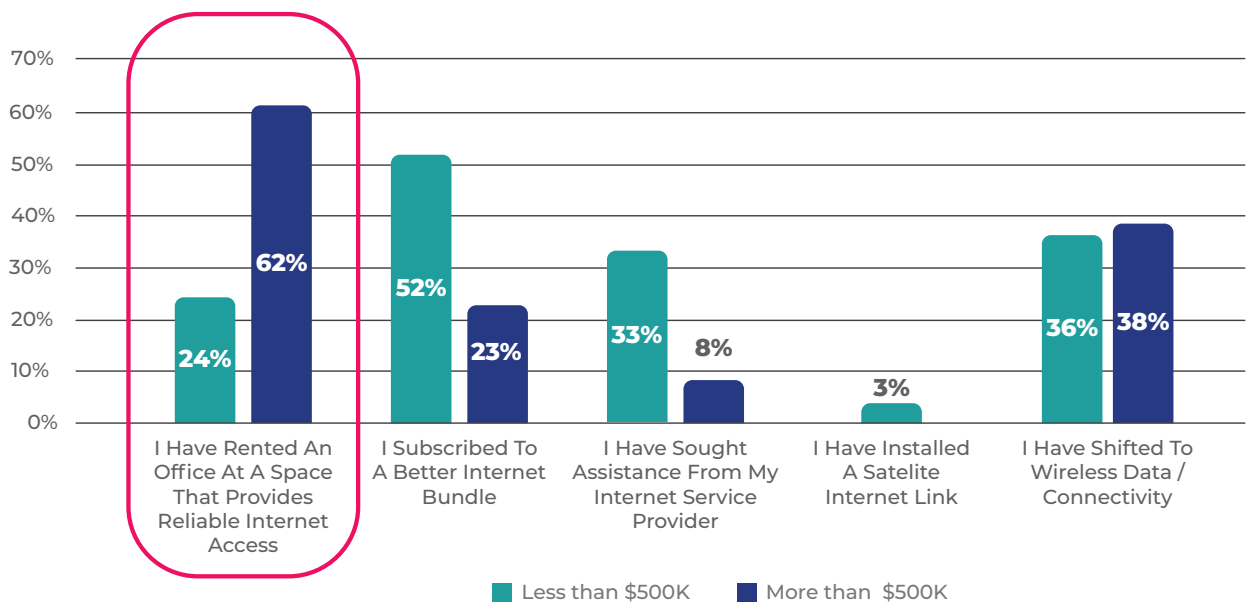
As seen in the charts below, renting an office space either for the purpose of accessing a

steadier supply of electricity or securing a reliable internet connection were both cited disproportionately by startups that have raised more than \$500,000.

How have you been working around electricity shortages?



How have you been working around connectivity issues?



5. Government & Regulation

The government's inaction is counterproductive to recovery. All of the interviewees criticized the government's shy response and lack of initiative, some complained of idleness and absenteeism when dealing with government entities.

Criticism was not limited to the government's slow and tepid reaction either, but also highlighted regulatory and policy shortcomings that precede the crisis – namely regarding circular 331, with complaints about centralized authority, sluggish bureaucracy, and misdirected policies being voiced.

Political Impasse & Incoherent Behavior

The political deadlock is crippling the recovery of the banking system. The failure to officially determine the size and distribution of the losses of the financial sector is keeping banks from attempting to resume operations. "We need to have the vision to [work out] what to do with our assets, yet we don't know the losses," one interviewed banker explained, "How much is it? 10%? 20%? 60%?"

It makes a lot of difference to value how much our losses are." Furthermore, he lamented the reluctance of the government to impose capital controls and the relinquishing of that obligation to the banks - "It's not the role of the banks' association to impose capital controls, the government should have done that since the first day."

Delayed Actions & Government Bottlenecks

Government indecision is proving to be detrimental. For instance, the delay in treating dollars transferred from outside Lebanon as "fresh dollars" was mentioned as a costly oversight.

One interviewee, the founder of a local NGO, reported "huge losses" during the early stages of the crisis, which he incurred from exchanging freshly wired dollars at discounted official exchange rates – initially 3,900 lbp and later 12,000 lbp; "this has downsized all of our projects," he explained.

In a similar vein, the government's refusal to increase the prices for internet bandwidth is likely to have an adverse effect. As mentioned earlier in this report, internet service providers have been unable to adjust their prices to compensate for the loss of value of the local currency, owing to the fact that the authority to set prices rests in the hands of the ministry of telecommunications.

The resulting drop in the value from revenues has been described as "the most devastating consequence of the crisis" by one internet service provider, bemoaning its inability to adequately invest "in an industry that requires at least quarterly or yearly investments [in the infrastructure.]"

Circular 331

Inherent Problems

Interviewees noted several underlying faults in the planning and execution of Circular 331.

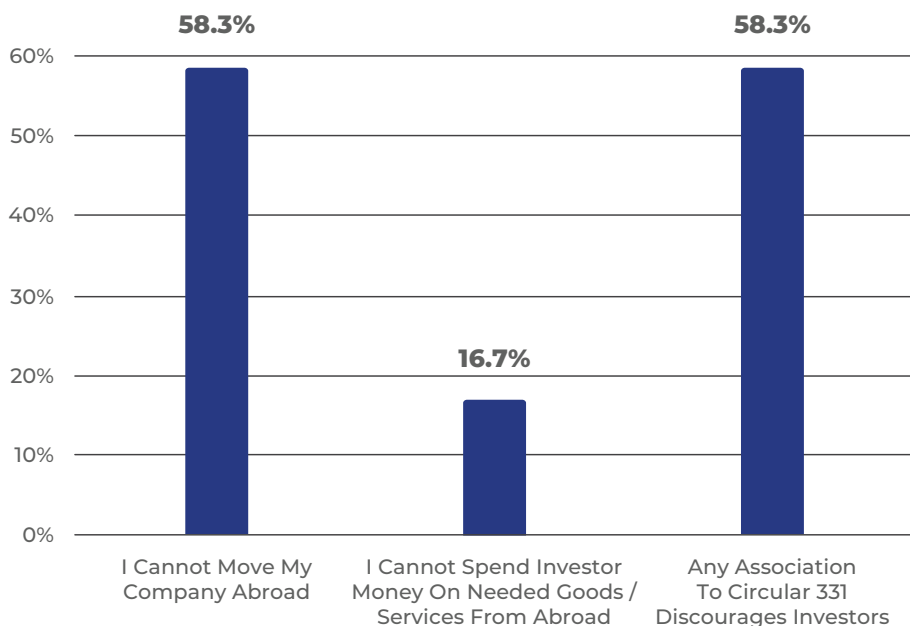
Primarily, the circular's requirement that legally and financially binds startups to Lebanon was consistently viewed as inherently limiting to growth.

"Keeping money in Lebanon discouraged foreign investors who would have been interested in scaling the company and increasing valuation," noted one investor.

Furthermore, requiring companies to spend the majority of their budget (75%) locally was ill-fitting for digital startups.

In the survey, of the 12 startups that had received 331 funding, more than half (58.3%) had found that being unable to relocate the company abroad was a major challenge associated with Circular 331, and an equal proportion agreed that any association with the circular discouraged investors.

What are the main challenges with circular 331?



Criticism was also leveled at the lack of supporting reform, namely related to funding and bankruptcy, and incentives, e.g. tax exemptions.

One investor faulted the disproportionate allocation of 331 investments to startups at similar stages of development, explaining that the money should have initially been focused on early stage startups and gradually focusing on later stages.

The Outcome from Circular 331

Opinion regarding the overall outcome and future of Circular 331 was divided. Some labeled it a failure and called for sale of all the assets, while others found that it was a success, helping create many jobs, and that it should be rescued.

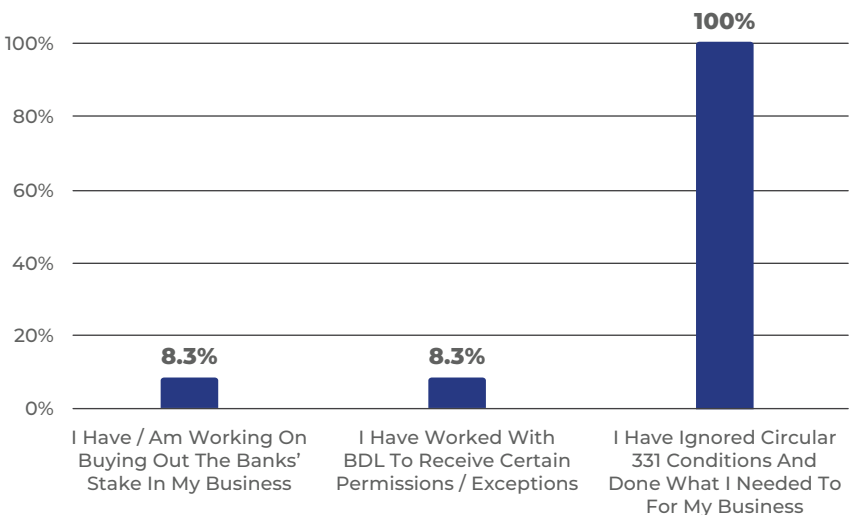
“We are in the mood of liquidating,” said one banker. “The best solution is to sell your share and therefore 331 will cease to exist. That is the only solution in my opinion. At least you will get back your money.” He was keen to explain that his lack of resources is what has kept him from saving potentially successful startups, ruing the fact that these startups will be picked up by someone who has that capacity at a discounted price. “He won,” he concluded.

Others called for the removal of restrictions, particularly to allow startups to operate from abroad. “Someone needs to take over circular 331, fix it and continue, because we are maturing as an ecosystem,” one interviewee opined.

“We started this in 2012 while other countries have started on this now.” The main challenge, restructuring the holding company according to one investor, is “not too complicated.”

Startups, on their part, have marched on. In our survey, all of the 12 startups that had received 331 funding have indicated that they had, at least in some instances, operated with disregard to conditions imposed by Circular 331, with only a small minority reporting that they have tried to work with the central bank to get exemptions.

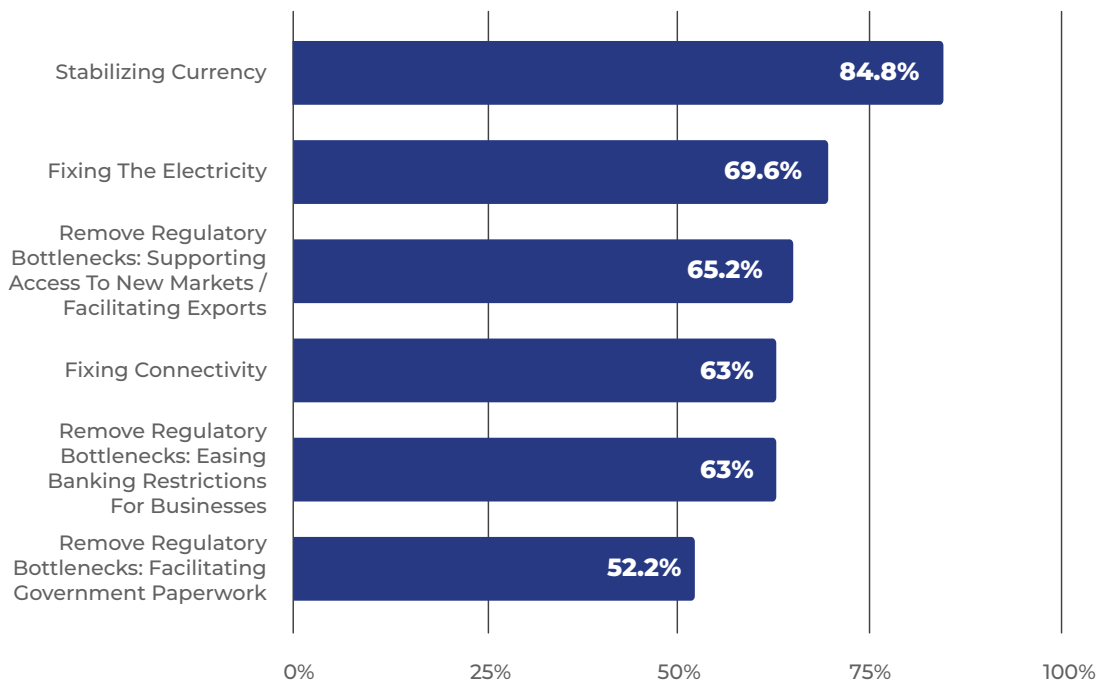
What work arrounds have you implemented to manage the challenges created by circular 331?



Furthermore, a large majority (84.8%) of respondents said that the government should prioritize stabilizing the currency, followed by fixing the electricity (69.6%).

Close to two-thirds (65.2%) noted that the government should prioritize removing regulatory bottlenecks, namely to facilitate exports.

Which of the following do you think the government should prioritize?



Opportunities

There are silver linings to the crisis. In many instances, it has galvanized startups to innovate and expand into new markets. Currency depreciation pushed certain costs down, helped boost exports for some startups, and created a favorable environment for outsourcing, leveraging available local expertise.

Locally, there has been a broad shift in the types of opportunities for products and services available in the local market, namely, an increase in the demand for needs-based products and services.

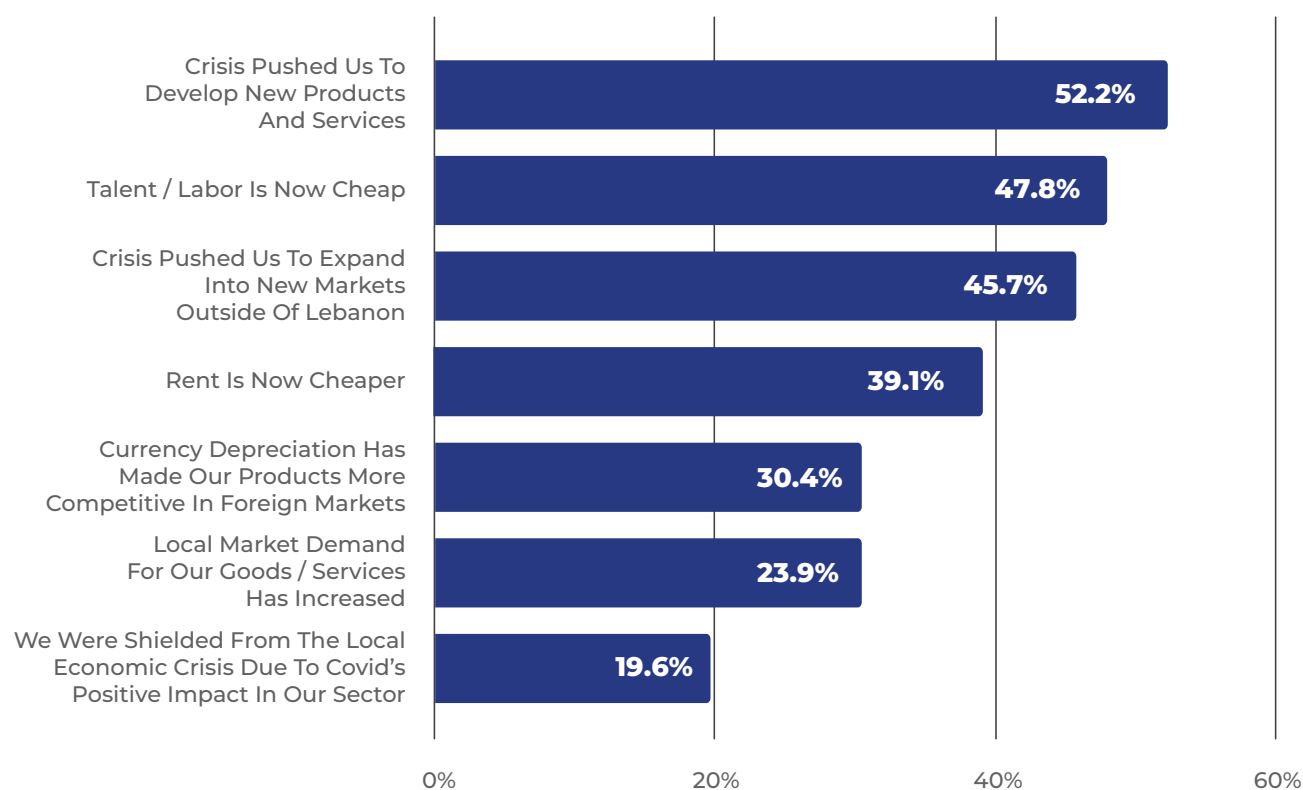


Crisis Stimulating Innovation and Exports

According to the survey, the most commonly cited opportunity from the crisis has been a drive to develop new products and services, which

was cited by more than half (52.2%) of surveyed startups; close to half (45.7%) said that the crisis pushed them to enter new foreign markets.

What are the opportunities from the crisis?



Reduced Costs and New Demand

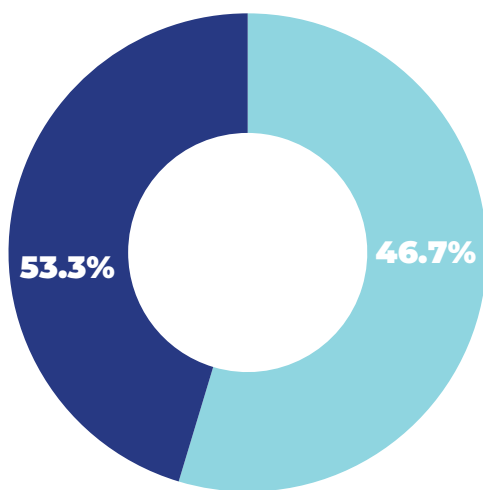
Currency depreciation has engendered some cost reductions for startups. In the survey, cheap labor (47.8%) - particularly low-level employees as established earlier in the report, and cheaper office rent (39.1%) were commonly cited as opportunities arising from the crisis.

The devaluation has also created a comparative advantage for local startups both in foreign markets (30.4%) and locally (23.9%). (Refer to the graph on page 55)

Local demand had also seen a boost from digitization driven by the Covid-19 pandemic, with growth in e-commerce, logistics, and e-education, etc.

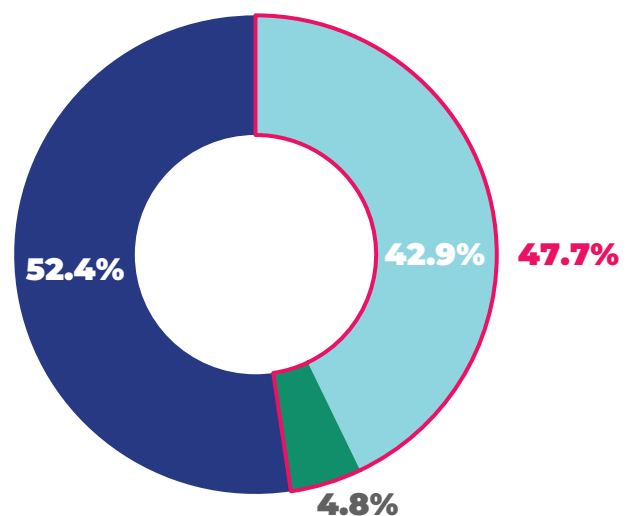
Overall, close to half of respondents (46.7%) have seen their sales rise since the beginning of the crisis. Of those, close to half (47.7%) attributed the increase in sales to increased demand from foreign buyers.

How has the crisis impacted your sales?



- My sales have increased
- My sales have decreased

My sales have increased because...



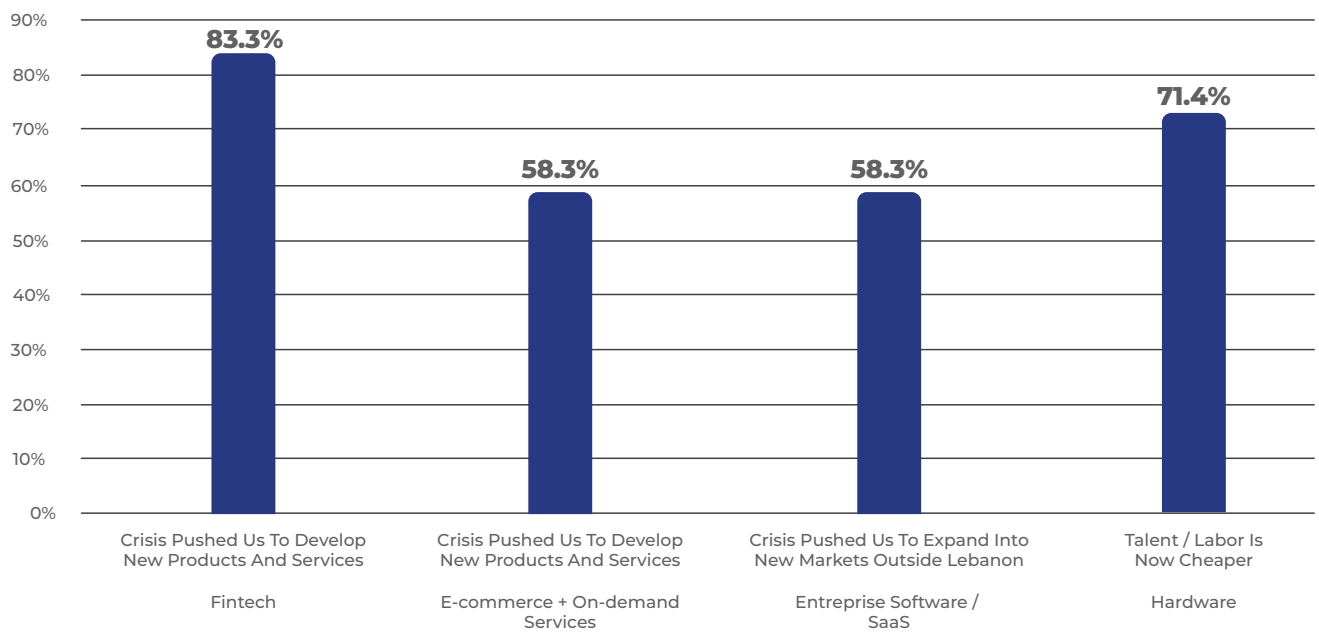
- Foreign demand for my product has increased
- Local demand for my product has increased
- Both

Breakdown by Sector and Funding Stage

A breakdown of responses by sector reveals that for fintech and ecommerce, developing new products and services were the most

commonly cited opportunities, while software and SaaS ventures saw the biggest opportunity in expanding into new foreign markets.

What are the top opportunities from this crisis

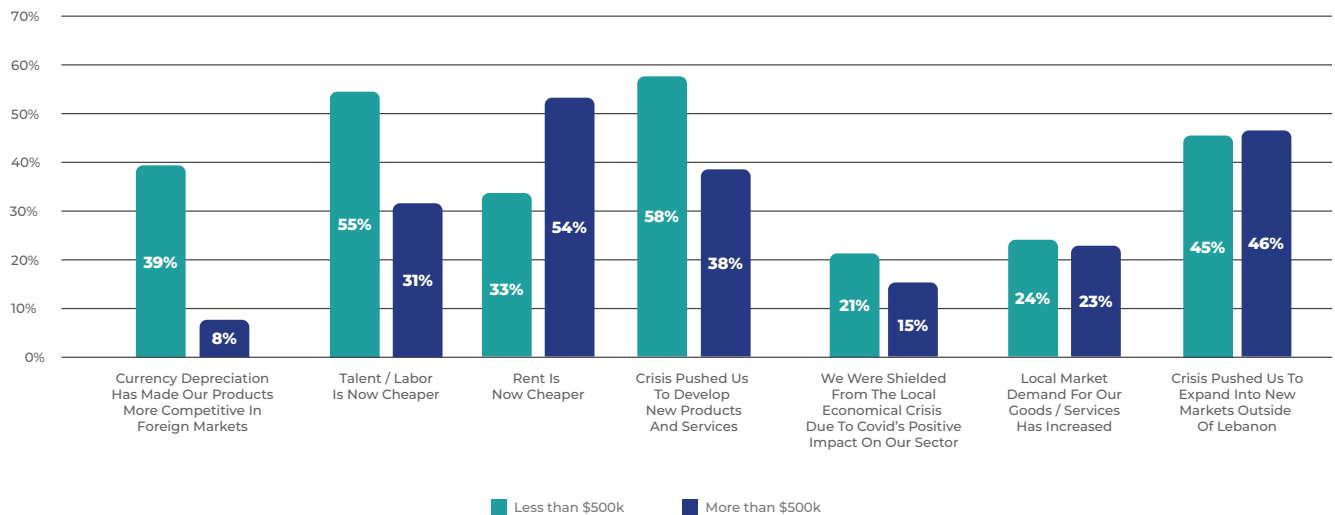


On the other hand, a breakdown by funding stage reveals that younger startups, namely those that have raised less than \$500,000, were much more likely to cite an increase in exports due to devaluation as an opportunity from the crisis.

This can perhaps be explained by the fact that more mature startups were already exporters, as

opposed to younger startups that had yet to scale. These startups were also more prone to develop new products or services, arguably due to the fact that younger startups are less likely to have developed products and customer bases, which makes it easier for them to pivot.

What are the opportunities from this crisis



Emerging Opportunities

Interviewees were also keen to highlight several emerging opportunities and areas of potential growth. Scalable, tech-enabled solutions were identified as potentially viable propositions by investors and business incubators, who singled out e-commerce and marketplaces, education, gaming, and fintech propositions as areas of interest.

“SaaS excites investors,” one interviewee noted, the managing director of a local business incubator.

On the other hand, the crisis has also created demand for new products and services. The deputy general manager of a major co-working space in Lebanon has already observed a

notable shift in the types of emerging startups. Instead of “silicon valley copycats, (...) the types of innovation that we see now are related to the crisis,” he explained. “We are seeing more necessity entrepreneurship than opportunity entrepreneurship, which usually creates less jobs and scales slower.”

Agri-food, renewable and clean tech, and transportation, were commonly mentioned as examples of sectors that could grow as a result.

Lastly, several interviewees noted that there is an opportunity in focusing on services, trades, and skills that are developed in Lebanon, such as digital marketing, fashion, and pharmaceuticals manufacturing.

Recommendations

Based on the accounts and insight collected from the interviews, focus group, and survey, the report is able to formulate recommendations that address emerging challenges and common bottlenecks in the ecosystem.



Rethinking Priorities: Ensuring Survival and Growth

The research has shown that the local environment has become extremely difficult for local startups.

The freezing of the banking system, deterioration of infrastructure services, and exodus of talent have put significant strains on local startups' ability to raise funds, operate and meet demand.

Given these circumstances, it would be ill-advised to uphold rules and policies that restrict Lebanese startups from freely relocating, either partially or fully, operations outside of Lebanon.

At the same time, it is recommended to broaden the view of what constitutes the Lebanese

innovation ecosystem and support foreign-based Lebanese startups and entrepreneurs.

The success of Lebanese in the diaspora can then be funneled to create economic and job opportunities in Lebanon.

"What we can do today is invest in the Lebanese diaspora and encourage them to grow wherever they are, and then, that lot of investment will be used to spend and build backend teams for them in Lebanon."

At the same time, efforts must be directed at the government to facilitate the exporting process – including simplifying paperwork and reducing fees.

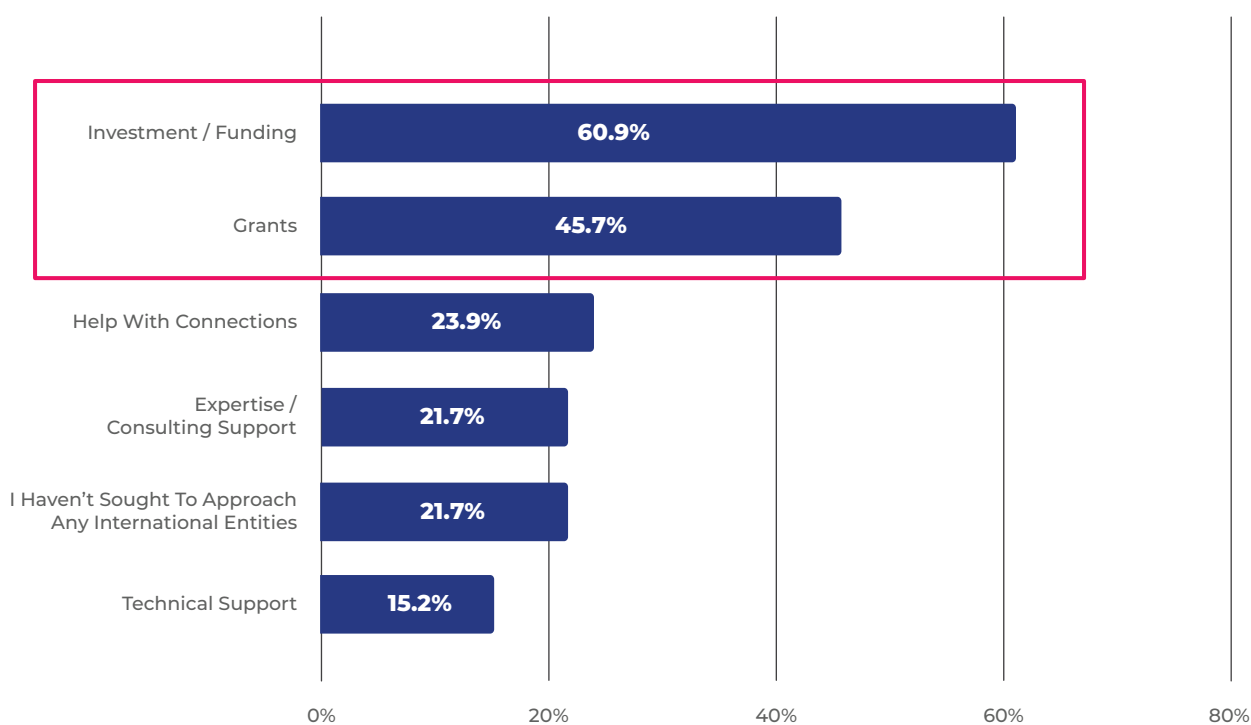
Securing New Sources of Capital

Access to capital has become a primary hindrance and source of concern for a significant number of local startups. Foreign capital in particular has dried up, namely due to foreign investor reluctance to channel money through the

Lebanese banking system and concerns over the startups ability to deliver on targets.

In the survey, monetary support – investment funding and grants – were the two top motives for startups approaching international entities.

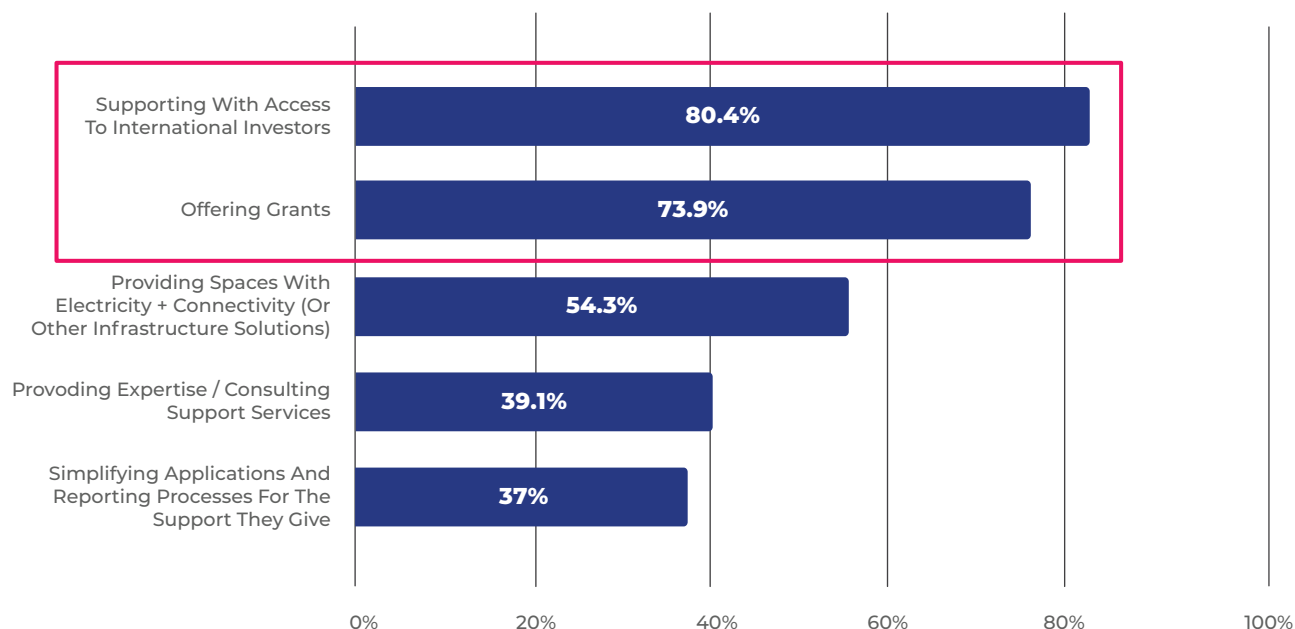
Since the crisis, have you approached international entities (VCs, NGOs, accelerators, public agencies, etc) for the purpose of receiving:



In the same vein, support with access to international investors and grants were the

two most desired types of support from the NGO community.

Which of the following do you think NGOs should focus on?



Emergency funds can lend life-saving support to startups. In our interviews, emergency bridge financing and loans were an effective tool in saving struggling startups.

In one noteworthy instance, an emergency relief initiative dispensed grants to subsidize purchase orders from local clients.

Furthermore, soliciting investments from the Lebanese diaspora could help offset the drop in foreign investment.

According to research, diaspora investors are more likely to invest in their country of origin than non-diaspora investors (Sonia P. and Dilip R. 2011).

They are driven by altruism, as well as cultural affinities and market knowledge, and are less averse to political risk and economic shocks than foreign investors (Nielsen and Riddle 2009).

This is in line with insights noted previously in the report that there is evidence to suggest that Lebanese investors have been more willing to invest in local startups than foreign investors, which implies that there may be an opportunity to support entrepreneurs direct their fundraising efforts more towards Lebanese investors who appear to be more likely to support their business.

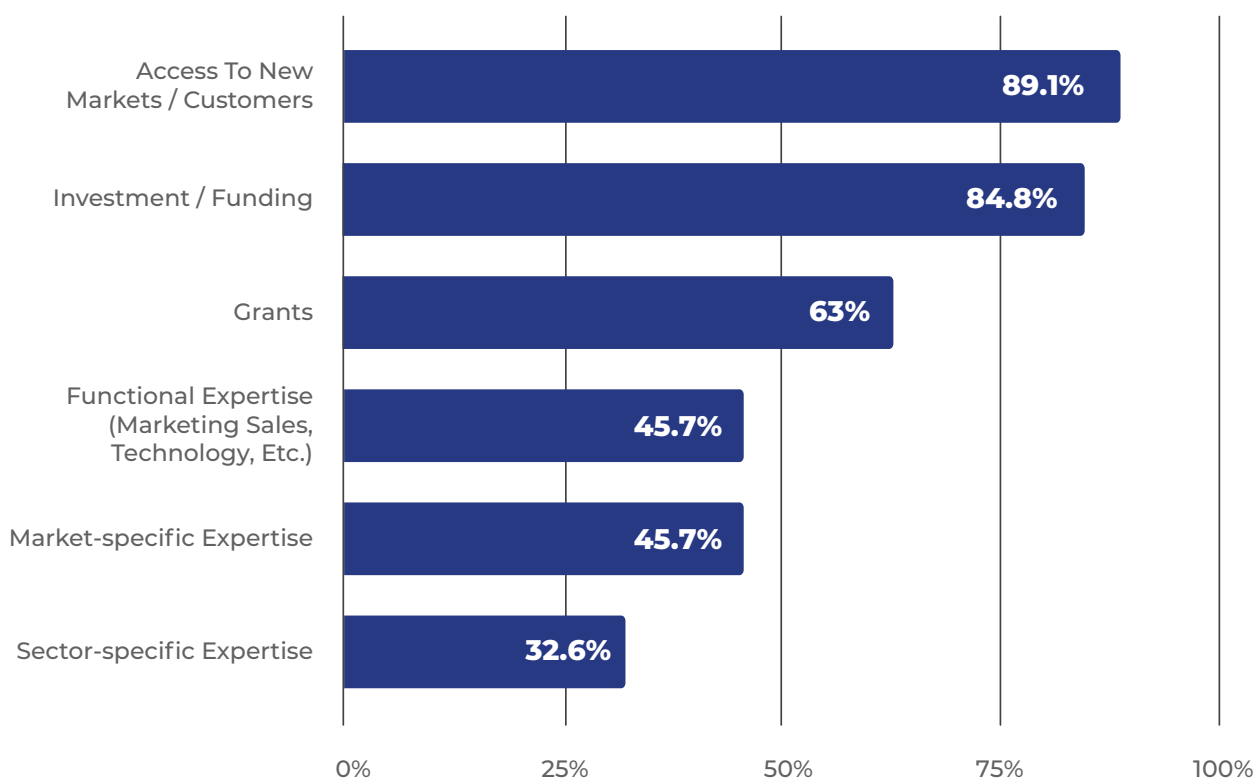
Lastly, the focus should also be placed on helping early-stage startups acquire and develop fundraising skills – deck building, pitching, etc – and developing interpersonal and leadership skills in entrepreneurs.

Facilitating Access to Foreign Markets

The diaspora was also frequently discussed as a potent factor in unlocking foreign markets during the interviews.

In the survey, close to 9 out of 10 startups believe that the diaspora would be most effective in helping Lebanese startups access new markets and customer bases.

Which of the following do you think the diaspora can be most effective in helping Lebanese startups?



The report recommends creating a transnational network of established or influential diaspora members – successful entrepreneurs,

businessmen, civil servants - that are able to help or facilitate accessing foreign markets.

Increasing Productivity

To mitigate infrastructure issues and ensure that startups are able to function effectively, it is recommended to establish productivity zones – office clusters that are guaranteed an adequate amount of electricity supply and a reliable internet connection.

Optimally, transportation could be provided as well. Investing in renewable energy sources was also suggested as a solution to the power crisis.

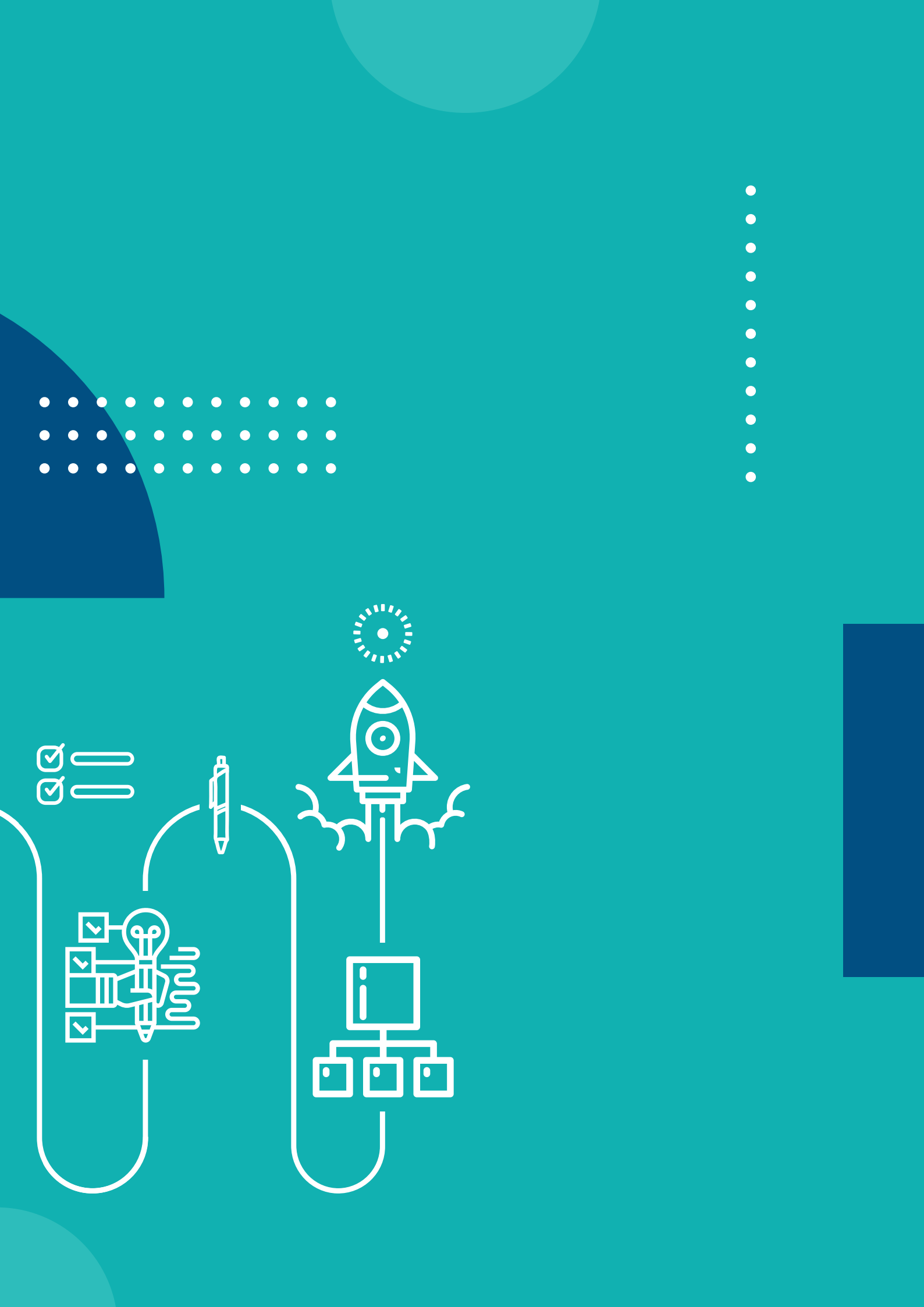
Universities were particularly highlighted as institutions that could be leveraged to host and support entrepreneurial activity – through incubation, owing to their resilient infrastructure and standing as credible institutions, as well as their talent and research output.

Developing or supporting digital upskilling, either through private programs designed in coordination with the private sector, or by embedding coding in the education system, will help close the digital skills gap and ensure a steady supply of trained professionals for the local ecosystem.

At the same time, given the comparative advantage of employing the local workforce, there is an opportunity for country-level marketing that positions Lebanon as a hub for digital or innovation activities. Digital marketing and advertising, fintech, and coding/development centers are good examples.

One possible solution to mitigate the drop in connectivity would be to reduce the dependence of the internet infrastructure on the public electricity grid and switching to solar power.

One interviewed internet service provider noted that \$13M – \$16M investment in solar energy would be able to compensate for 14 to 16 hours of electricity outages.



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