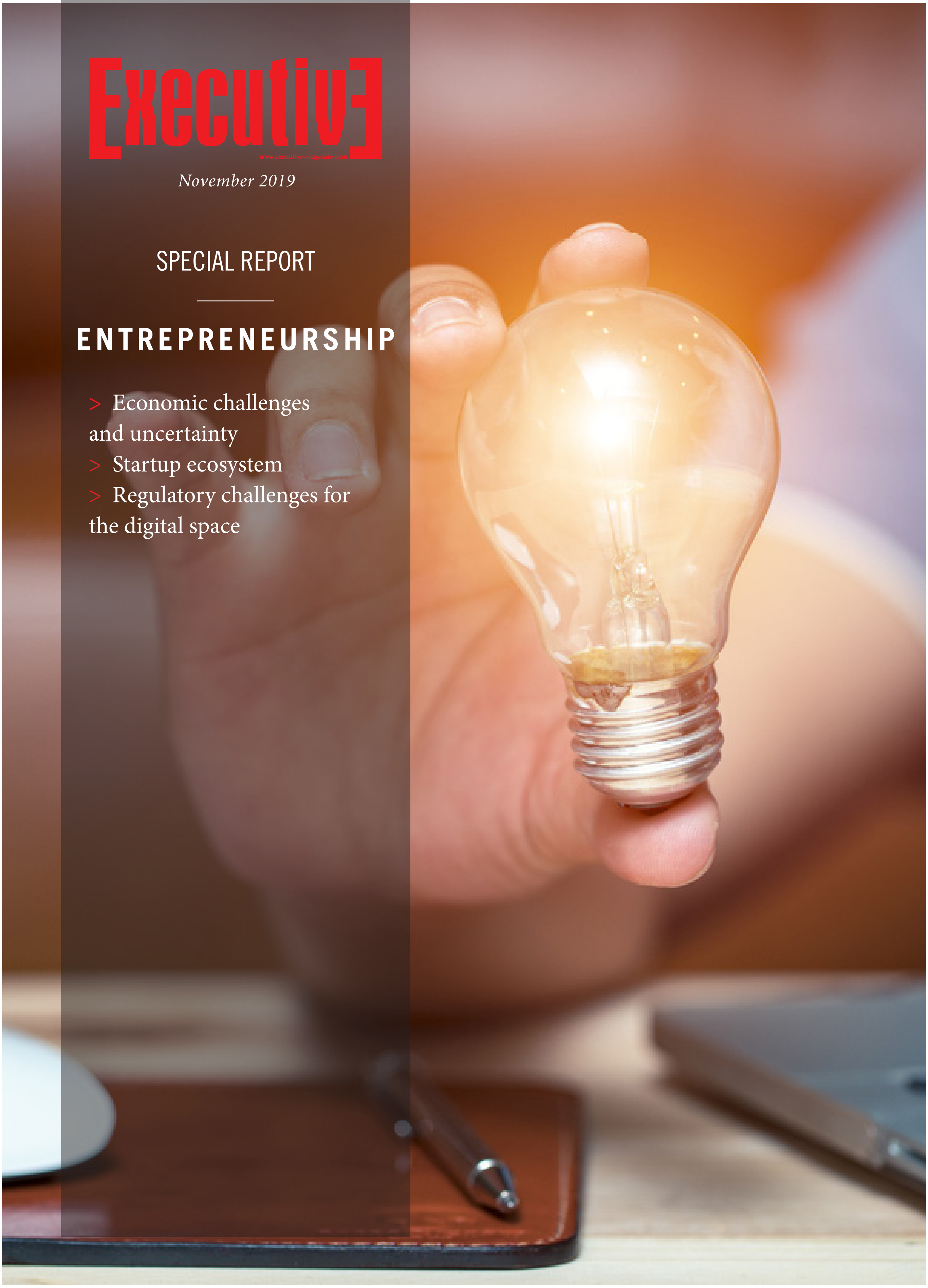

Executive

November 2019

SPECIAL REPORT

ENTREPRENEURSHIP

> Economic challenges and uncertainty
> Startup ecosystem
> Regulatory challenges for the digital space

LINKS TO THE FUTURE

By Thomas Schellen

IN BRIEF

- October 2019 events have hallmarks of systemic shocks.
- Risks are unfathomable and early economic impact evaluations are necessarily inadequate.
- The future may depend on extraordinary courage, discipline, and daring visions.
- Entrepreneurship has the potential to be a key ingredient in building national prosperity.

Entrepreneurship in times of systemic change

These are times when a discussion of entrepreneurship—Executive's traditional focus in the November issue—could be almost a crime, as it would ignore the nation's stories of courage in choosing a new destiny, of valor and compassion, of united wills, of exuberance, and of concerns.

The events of last month, to the mind of this observer, were undeniably a dual positive shock to Lebanon. The first positive shock was that the protests represented a genuine outpouring of popular will and desire for self-determination as a nation with a shared identity. A sort of Lebanese political enlightenment and break with the long narrative of self-induced or self-incurred tutelage that Immanuel Kant talked about in his Enlightenment definition 235 years ago.

Outside of this sociopolitical frame, the second positive shock sparked by the protests and related developments during this fateful October carried all the hallmarks of a systemic economic shock. Seen in the context of 27 years of systemic economic deficiencies—the emphasis on accommodation of investors and financial inflows at the expense of redistributive and bottom-up economic growth—these calls for change are both radical and necessary.

At the beginning of Lebanon's post-conflict reconstruction and development in the early 1990s, there were understandable and initially rational preferences toward rebuilding the country from its urban center and revamping profit-generating economic frameworks in communication, transport, trade, and tourism. It was the Rafik Hariri era; during which GSM mobile networks were rolled out under build-operate-transfer contracts from 1994, the airport was rehabilitated, the airport-to-city highway was constructed, and there were decades-long development efforts undertaken in Beirut Central District—the capital's downtown and country's showcase.

These investment concentrations gave the appearance of efforts calculated to benefit the economy from the top of the pyramid. For some years through the mid-1990s, these approaches worked in important ways, especially as long as they coincided with hopeful regional vibes such as optimism over ending the conflict in Palestine.

At other times, however, and increasingly after the late Prime Minister Rafik Hariri's assassination and in the more recent post-Hariri years, the international investment, debt-financing, monetary and narrow property imperatives of the Lebanese economy's orientation were either not working at all or benefited only the very few at the top. The economic system increasingly nurtured inequality.

With even more passing years and vacillating economic cycles with frequent downturns—which in the current decade were exacerbated by the impact of a persistent regional and humanitarian crises—the perception of a seemingly unstoppable drift into corruption and increasing inefficiency has been feeding not just inequality, but spiraling popular rage at economic immorality and unfairness. The people are now demanding an end to this spiral of inequality and poverty—and the end of this post-conflict economic system.

PLETHORA OF UNCERTAINTIES

Juxtaposed with these two positive and hugely important shocks of rescinding political and economic systems that have become counterproductive for Lebanon's society, however, weigh risks and uncertainties, some unfathomable, on the counter

side of the sociopolitical and socioeconomic scales of the October developments.

These serious downside potentials entail political and societal risks, such as the possibility of internal clashes between would-be system changers and system defenders. Another juxtaposition with explosive potential is grounded in the strength and deep-rootedness of the existing societal system with its communal allegiances, religious belonging-based political privileges, and forceful political consociationalism. Dismantling or abolishing this social construct is a declared aim of those who oppose it on the street all over Lebanon, but their opposition suffers from the absence of fully formulated systemic alternatives. This experiment is thus fraught with unpredictable social outcomes and risks of removing the system without having the ability to put a newer, fairer system in its place.

Also not to be neglected in this systemic political context are risks of mass proliferation of counterproductive human behavior patterns. Fears of a rise of ethically deficient political behaviors in Lebanon are supported, for example, by the track record of alternative parties and organizations in the past three years when several organizations with loud calls for change in the political establishment revealed themselves within a relatively short time to be dominated by aspiring political players that were just as power hungry and conspiratorially minded as any politico of the old guard (see Executive's pre-election coverage of 2017/18).

Lastly, considering Lebanon's precarious geopolitical location and weak position in global power games, it might be perilous for this country to forget timeless patterns of international power politics over all the excitement of the rising new national self-awareness of the Lebanese people. These age-old international patterns show small countries' decreasing ability to preserve or politically defend their interests against rising external military or economic pressures. Such has been manifested time and again when a fragile polity's attempts of internal systemic change and self-definition were taken as invitations by malignant neighbors, expansionary empires, or simply self-interested powers who would happily exploit soft-target societies and weak countries for their gain.

BARRAGE OF ECONOMIC RISKS

In terms of uncertainties and sadly predictable human behavioral risks in the crucially important realm of Lebanon's economic fortunes, any new development aspiration for 2020 and beyond is, since the October events, faced with a barrage of very justified concerns over ill-advised economic herd behaviors, such as capital flight and runs on banks in the immediate term, and over the implications of Lebanon's indebtedness in international financial markets in the middle to long term.

It does not need to be explained here why panicky capital flight would be a bane for the Lebanese economy. With regard to financial scenarios under no-longer-functional debt equilibriums, cautionary examples of the mercilessness of markets and international financial institutions abound and tell their tale that the best foreign intervention inflicts traumas since the establishment of the Bretton Woods System that can only be averted by a country's significant own constructive policies and extreme financial self-discipline.

Also worrisome for the economic future of Lebanon is the entrenchment of national patterns of favoring consumption with preference for imported goods, combined with an expensive and wasteful addiction to show off behavior in parts of society. Behavior change of such magnitude as a shift to increased local consumption and public pride in economic modesty needs institutional infrastructures, rational awareness, and more courage than a month of demonstrations.

A not-so-much behavioral but structural worry is also warranted by the status quo of Lebanon's national economic organization, with its lopsided growth drivers that for too long has benefited narrow elites but has stifled the building of export capacities, harmed total factor productivity, and has driven down investment in industry that could have led to healthier capital stock if addressed at earlier points in the past 15 years.

Instead of speculating on positive and lasting insistences of the popular will, it can easily be argued that the Lebanese business community, financial community, and households were somewhat complicit with their—after all, elected—governments. Such conclusions derive from the fact that urgently required investments into productivity and competitive industries in Lebanon were substituted by societal stakeholders with imports of money and imports of goods.

In the increasingly debt-dependent public and consumption-happy private sectors, there was relentless channeling of hard currency inflows into servicing of public debts and on the private side—from the remittances of the diaspora—into consumption (of daily foodstuffs, other fast moving consumer goods, and social events from dinners to weddings), consumption (of household investment goods such as cars and non-productive real estate), and consumption (of education and health services that would not increase productivity in the short run in the first case, or quality of living in the second—unless embedded in smart public investment and job creation programs, which they were not).

WHICH WAY IS FORWARD?

The protestors' denials of the economic status quo and calls for instantaneous abolition of the entrenched system of many flaws cannot mitigate the plethora of national economic concerns—and in some cases, like fears for the banking sector's liquidity levels, seem to exacerbate the problems. Given the precarious juxtaposition of positive shocks and self-destructive triggers in Lebanon in Q4 2019, the October developments and Lebanese Enlightenment appear, therefore, to be in deep need of economic answers that transcend the wisdoms and mental range of business-school orthodoxies and utterances by economists who adhere to the run-of-the-mill perspectives. It is a time of big risks that are not to be denied but might be soluble with courage and strength that arises from united wills and daring visions.

In economic and philosophical literature it is uncommon to find visions that are not just utopian thought experiments or disruptive to a point where their implementation would preserve nothing worth calling an economy, but some might exist outside of the realms of first-world schools of economic thought.

The level of daringness that the current problems of Lebanon require in addressing might, for example, be connected to alternative pathways that divert from the often tried and always imperfect solutions that are in line with agendas of austerity, draconian deficit cutting, and internationally directed debt reforms. The weaknesses of such approaches, which have been associated with the Bretton Woods System, have been pointed out in the context of the Greek and southern European but also various Latin American crises. A few years ago, in the late 2000s, an economic critique of globalization and first-world recipes on how aspirational developing countries should manage their economies was formulated in a theorem of "bad Samaritans" by Korean-born development economist Ha-Joon Chang.

In Chang's perspective, today's rich countries—above all the US—and the international financial institutions aligned with the interests of the most powerful economies have historically tended to elevate their economic performances by practicing methods, such as unfair subsidies, self-serving (albeit somewhat limited) inward trade protectionism, coupled with outbound trade imperialism, and blatant re-engineering of important new tech products (e.g. rail technology in the 19th century), while they were themselves still economic underdogs in comparison to other countries. Once they are occupants of top economic rankings, however, the so-risen powers habitually kick away the very ladders that fostered their economic advancement from beneath developing economies under the guise of neo-liberal paradigms, such as free trade and strict intellectual property protection.

> ■ That this is a time of big risks is undeniable, but these can be faced with courage and strength through united visions and wills.

Such points seem debate-worthy as Lebanon is in need of rescue from falling under even worse international economic domination. However, what might even be more pertinent in the context of Lebanon's situation and need for strong home-grown economic visions today, could be in emulating a national entrepreneurial mindset for which Chang provides a hypothetical example—with 50-year-forward vision of an economic miracle in the world's poorest country by GDP in 1995 (Mozambique)—and a historic case from the background of personal life experience as a Korean native who grew up in lockstep with South Korea's economy rising from abject poverty—a per-capita GDP half that of Ghana at time of Chang's birth in 1963—to being included in the top tier of global economic influencers—the OECD and the G20—from the late 1990s.

Chang's noteworthy messages could be read in the current Lebanese state to say that underdog countries can find their prosperity and that there is no foretelling of the future potential for exorbitant economic growth that a combination of new tech and inspired entrepreneurialism can create for a country—even one in a situation such as Lebanon finds itself.

However, an even more potent and more hopeful self-perception and vision in future-oriented Lebanese thinking could perhaps grow from a combined development of entrepreneurialism as the implementation of an economic vision without regard to the risks, with a focus on manufacturing, and creating supportive and efficient—and digital—institutions. This constructive design thinking would necessitate a forward-looking thought culture and a departure from currently popular obsessions with perceiving everything and everyone dealing with money and development a priori as corrupt.

A new and futuristic national mindset coincidentally also might be a nice organic fit with a more self-asserted polity that is convinced of its national belonging and common purpose. But besides the emphasis on entrepreneurial virtues that the Lebanese claim to possess to a very high degree, it is unlikely to work without prioritization of manufacturing (noted not only in *Bad Samaritans: The Myth of Free Trade and the Secret History of Capitalism* as "the most important, though not the only route to prosperity" for aspiring countries) and a focus on reshaping a national determination and culture that perceives economic growth as achievable and provides entrepreneurial initiatives with structured administrative, policy, and institutional support.

A truth quite frequently ignored in local debates is that there exists no immutable mentality in any society that would mandate a culture of economic underperformance or backwardness. But new paths by definition are the paths that need to be discovered and trails that need to be blazed—and this is exactly where the practical virtues of entrepreneurship come into play. Entrepreneurship, which appears to exist in Lebanon indeed in relative abundance now even in form of producing impactful societal movements, is one of the factors that can make economic hopes work and that can generate jobs—especially in entrepreneurship of the export-oriented manufacturing kind.

Still, constructing a successful economic development mosaic of Lebanon will require adding further pieces. As another noted development economist, Briton Paul Collier, recently emphasized in musings on the future of capitalism, disadvantaged economic locales such as provincial cities that have been left behind, fallen off, or never embarked on the economic development train can be vitalized by the creation of new economic clusters. "Broken cities need to attract firms that are dynamic enough to start a new cluster in their wake," writes Collier, but he admonishes that such dynamic firms and entrepreneurs need to be institutionally supported and protected against the first-mover disadvantage of nesting in a broken city (the same presumably applies to a small country with backward infrastructure).

This is where the circle between Lebanon's systemic change impulses and Executive's self-chosen focus on entrepreneurship as the regular coverage pillar and main topic in the November issue actually closes, at least in some sense. Before the events in the middle of October, Executive editors were investigating examples of Lebanese entrepreneurship and potential job creation from the growing ranks of accelerators and incubators linked to the tech entrepreneurship ecosystem at and around the Beirut Digital District (see page 60) and Agrytech acceleration (see story page 56) to a manufacturing-based and very entrepreneurial initiative called Houmal Technology Park (HTP) in a semi-rural hillside community 20 minutes away from the Lebanese capital.

> There is no immutable mentality in any society that would mandate a culture of economic underperformance.

To recall how Kant defined Enlightenment while it was in full swing, his essay says that tutelage is man's inability to use his cognitive facilities without another man's direction and stipulated that this tutelage is self-incurred if it is not because of complete ignorance or weakness of said cognitive facilities but where tutelage is based on lack of resolution and courage to think and act for oneself. In regard to Lebanon's exit from tutelage in conjunction with its emerging and not yet fully visible new sociopolitical and economic realities, it seems that old Enlightenment philosophers, modern development economics, and practical entrepreneurial experience all point toward a need for a genuine and well-structured social contract that is based on original thinking and true—meaning practical and interconnected—self-interests of the polity that has shaken this country up with the effect of opening so many new and positive futures.

By Nabila Rahhal

FEEDING LEBANON SMARTLY

Technology and agriculture meet in Agrytech

IN BRIEF

- There is a need for innovation and R&D in the agro-industry sector in Lebanon and the region.
- Agrytech, a program by Berytech focusing on innovations in agriculture, was created to address this need. It has four major pillars including an accelerator program and an agri-food innovation cluster.
- Agrytech was promoted to university students and graduates through various activities and interest in the accelerator program, now in its third year, has risen slowly and steadily.
- Agrytech received its second round of three-year funding from the Foreign Ministry of The Netherlands this August 2019.

At the time of writing, Lebanon is over a week into nationwide protests which were, to a large extent, fueled by the miserable economic situation the country is facing. Now more than ever, we are reminded of the importance of high performing productive sectors, namely industry and agriculture, in a country's economy. In a 2018 article published in EXECUTIVE's end of year issue, Cristiano Pasini, representative and director of the United Nations Industrial Development Organization (UNIDO) for Lebanon, Jordan, and Syria, wrote that a strong industrial sector, which benefits from technological advancements and innovation, is a driving force behind national economic growth.

Among the industry subsectors in Lebanon, it is agro-industry that shows the most potential for being a driver of economic growth. "There are around 960 companies working with food products in Lebanon. [Agro-industry] is the second [largest] subsector in terms of exports, and the first in terms of added value, since the raw material used is grown or found in Lebanon," Mounir Bissat, the secretary of the Syndicate of Lebanese Food Industries told

Executive in a December 2017 interview. According to the Food and Agriculture Organization of the United Nations, agro-industry contributes 5 percent to GDP (as does agriculture) and "constitutes a major and growing employer in the economy."

However, one of the reasons the agriculture and agro-industry sectors are not living up to their full potential is the lack of investment in research and development (R&D) and innovation. In the same interview with Executive, Bissat explained that almost 90 percent of the companies in agro-industry are family-run small- and medium-sized enterprises (SMEs) with limited budgets, making it difficult for them to invest in modernizing traditional recipes or innovate design or food production techniques.

According to Ramy Boujawdeh, deputy general manager at Berytech—an ecosystem that fosters innovation technology and entrepreneurship, initiated in 2002 by Université Saint-Joseph—the agriculture sector in Lebanon and the region faces many challenges that could be addressed through innovation, yet are not. "We see Lebanon as one of many countries around the MENA area that have major issues in innovation in their food sector," he says. "The main issue is that we are really dependent on the import of food, which, in turn, goes back to our lack of connected agricultural value chains, water security issues … there are lots of opportunities and systems across value chains that could be improved through innovation."

It is within these dynamics that Berytech launched Agrytech in January 2017. Boujawdeh says Agrytech, an agri-food innovation hub, was "designed and branded to attract people that are interested in reviving and improving the agricultural sector in Lebanon."

The program has four pillars, the first of which is an acceleration program designed to support entrepreneurship in agri-food. Second is an agri-food innovation cluster focused on SMEs and large businesses. Third is an online resource platform designed for those with an engineering or tech background who want to get insights on the challenges facing agriculture in Lebanese and regional markets to identify opportunities where they could make a difference. The last pillar is a digital fabrication lab, which is accessible to Agrytech through the funding of Berytech and is open for all at varying costs (depending on whether it is individuals, startups, or established companies). In the Fab Lab, people can prototype their hardware solution or scale their minimal viable product to take to investors and show them how it works.

Agrytech receives 90 percent of its funding from the Ministry of Foriegn Affairs of the Netherlands, and Boujawdeh says they raise the remaining 10 percent through a variety of channels including sponsorship opportunities for various activities at Agrytech. He says that getting noteworthy sponsors such as banks and agricultural companies sends a positive message that their program has weight and that a number of people believe in it.

> Lack of R&D investment is preventing the agriculture and agro-industry sectors from reaching full potential.

This past August marked the end of the first three-year period of funding for Agrytech, at an amount of $3.3 million. The program has now entered into a second three-year round of funding, with the Dutch again covering 90 percent. The fund for the coming three years is $6 million to be split in half between Agrytech and a new program by Berytech called Cleantech (see story page 66 for more details). However, Agrytech does not plan on sustaining itself indefinitely based on external funding and support. Boujawdeh says they are looking to move into an equity-based accelerator model in the coming years, now that they have built up their expertise and know-how and have several solid success stories. They are also looking at how such a model can be exported to the region and drive innovation in the agriculture sector outside Lebanon as well.

SETTING THE WRONG FOOT RIGHT

In its third batch of startups, Agrytech is now well-established, but things did not run smoothly at first. As Boujawdeh recalls, the initial thought was that by simply launching the program and opening the call for applications to the acceleration program, they would be flooded with applicants—this was not the case. "We thought we had a problem of youth without jobs so they would be happy to find job opportunities [through the program] and they would immediately relate to the sector and our work would be done," he says. "But we quickly realized that there needs to be an educational component whereby they can learn about the sector before they get excited about it."

Boujawdeh says that this is because the agriculture and agri-food sectors are generally not perceived as providing attractive job opportunities. Many people in Lebanon and the region still perceive agriculture as the rural farmer on his donkey tending to goats and sheep or toiling away on the land with little reward. As such, Agrytech had its work cut out for it in attracting tech-minded people to its program and exposing them to the challenges in the agri-food sector.

To achieve this, Boujawdeh says Agrytech focused on university students and targeted them through several channels. During the winter and spring seasons, prior to the launch of the accelerator program in the fall, they organized a series of two-day startup weekends, ideathons, and hackathons. During those events, Boujaweh says, teams or individuals propose a problem and spend a few days with experts, mentors, and coaches discussing it and learning the thought process involved in developing viable solutions. On the last day of the event, they pitch their solutions in front of a jury and three winners are announced; winners receive cash rewards of varying amounts depending on the event.

Another way Agrytech spread the word for its program was through reaching out to university professors and asking them for their support. "The word is getting out and so we have university professors in engineering pushing their students to look at agriculture as an opportunity or connecting with a colleague in the faculty of agriculture and getting their students to meet him or interview him," Boujawdeh says. "We are seeing more final year projects that are in the engineering field focusing on applications in agriculture."

Those who have been working in the agriculture sector for several years and were familiar with its challenges were also interested in Agrytech's accelerator program, he says. To them, they had a potential solution for a certain challenge but were afraid to take the risk of leaving their jobs and so they tested their idea with Agrytech.

Their efforts to familiarize the market with their program is slowly but surely paying off, according to Boujawdeh. Agrytech had 65 to 70 applicants for their first accelerator batch in 2017, 80 applicants for the second batch in 2018, and 110 applicants for the third batch that was launched in October 16 of this year. Boujawdeh says that not only has the quantity of applicants increased, but so has their quality and maturity level: "People in the first batch were looking at the downstream side of agri-food production—the post-harvest aspects that include everything between food processing and the end product that reaches consumers. With the second and third batch, we have more people looking at the entire value chain and focusing on the upstream side of production—the pre-harvest aspects from the sourcing of fertilizers, seeds, and equipment through farming until you produce and harvest. This is super exciting because most of the problems lie in this upper chain."

ACCELERATOR BREAKDOWN

From the 110 applicants for the third year of Agrytech's accelerator program, 24 were selected and were due to begin their 11-month journey with the program on October 16. Teams can be made from individuals with a variety of backgrounds but there has to be members with experience in science or technology.

The program is divided into three phases, the first of which is a two-month validation phase where Agrytech works with the startups to make sure the problem tackled is big enough to have a market share and be investable. Only 12 participants make it to phase two of the program, and here they go from a well-developed idea to a minimum viable product that is piloted or tested among users. The third and final phase sees eight shortlisted startups learn to become "investment ready" by practicing pitching to investors and by identifying potential clients.

> Efforts to familiarize the market with Agrytech is slowly but surely paying off, wiith increasing applicant numbers.

Startups get a cash injection at each stage: $2,000 in the first phase, $15,000 in the second,

Many aspects of what we consider normal in modern daily life in Lebanon and the region are thanks to innovative entrepreneurs.

and up to $20,000 that they need to match in the final stage—they do so either through personal funds or by different competitions such as Arabnet, for which Agrytech helps them pitch. Boujawdeh explains that they give participants cash instead of procuring the needed materials themselves because they want them to learn how to invest their money in the best interest of their business. How this money is spent, however, is monitored and regulated. Agrytech also run audits on what they do to make sure everything is above board.

Post accelerator program, Agrytech maintains a soft follow up on their graduates and invites them back to speak to the new batch and share their success stories. Boujawdeh says any startup that has been through the program and that raises funds in the year following the program is committed to pay up to 5 percent of any equity they raise up to a million dollars, so up to $50,000. "It is a way for them to pay it forward for others in the program," he explains, adding that the money raised goes into funding the accelerator program.

TOGETHER WE ARE BETTER

Another major component of Agrytech's program is an agri-food innovation cluster called Qoot—from the Arabic word for a farmer's daily snack—that was launched in February 2019. The cluster is made up of 35 companies that either work directly in the agro-industry by producing foods or indirectly by developing packaging or printing machinery. The idea behind the cluster, according to Boujawdeh, is to have these companies—and others who will join down the line as Boujawdeh hopes to reach 100 companies by the end of 2020—support and source material from each other and work together to improve the agriculture value chain. Boujawdeh compares Qoot to a cluster of grapes, whereby each individual grape has its own identity, but since it is connected to the other grapes, it can grow better and faster.

Annual membership fees for Qoot range from $250 for companies with less than 10 employees to $800 for large companies (more than 50 employees). Boujawdeh says they are selective regarding admittance to Qoot, with two main criteria being that companies show an interest in innovation—through their business model, product, or service—and are willing to share and collaborate with others in cluster. Agrytech provides Qoot members with training and talks on innovation on a regular basis, and supports them in connecting to new markets.

Qoot provides a network of support for the startups in Agrytech's accelerator program in that a number of its members mentor, coach, and test or buy some of the startup's solutions. Meanwhile, many of the startups that graduate join Qoot to have a network of peers and professionals whom they could benefit from or support, Boujawdeh says. During the next three years, Agrytech will be scaling up Qoot and through it will be doing some advocacy and lobbying.

Many aspects of what we consider normal in modern daily life in Lebanon and the region are thanks to innovative entrepreneurs. It is high time that these innovations are directed toward agriculture and agro-industry, two sectors that literally feed us. Agrytech is the first bud of this plant bed, the hope is for the growth of more similar initiatives down the line.

By Thomas Schellen

HOUMAL TECHNOLOGY PARK

Squaring the circles

IN BRIEF

- Houmal Technology Park (HTP) can be an example of tech manufacture and fruitful entrepreneurialism.
- Export orientation of tech companies can be realized independently from the Lebanese entrepreneurship ecosystem that relies on Circular 331.
- First-mover disadvantages of pioneering tech companies need to be compensated by state and municipal partners for creation of productive clusters.
- Risks pertaining to the structural deficiencies in the legal and administrative infrastructure and risks linked to the recent changes in the financial and economic environment urgently need to be overcome.

Digital infrastructure of data centers is an easily overlooked growth industry in tech when compared to the exotic spheres of blockchain-based banking and finance, the internet of everything, or development hotspots from health and virtual reality gaming to artificial intelligence. And the project of a first national data center realized in Lebanon as a public-private partnership (PPP) frankly looks today even more utopian than at the beginning of this year, partly for reasons of uncertainty added by the October protests and partly because of the irrational political miscalculations that the PPP project has evidently been facing for over a year (and that contributed to the atmosphere of despondency that set the stage for October 17). But despite no rational line of vision on a national data center to be built as a PPP in the coming years, a new industrial campus on a hilltop a few miles southeast of Beirut provides its visitors with a strong impression of this important information technology (IT) growth sector's potential for Lebanon. This industrial site goes by the name of Houmal Technology Park (HTP).

Talking with Fadi Daou, HTP's mastermind and owner, Executive corroborated the following: It is possible for a young enterprise from Lebanon to have innovative manufacturing with a complete focus on export markets, job creation through such a venture could alter and upgrade the economic and social fortunes of the communities in which it exists, and HTP's biggest struggle has been finding the full institutional support that it needs.

Daou's company, Multilane, produces equipment for data center infrastructure. The international market for which is currently worth $100 billion, he explained in an early October presentation on his project to students. The market, the presentation continued, has seen a 25 percent annual growth over the last five years, with this level of growth forecasted to continue. This is due to continuously rising data volumes and transmission speeds in the IT realm that still functions in line with Moore's law (that processor speeds, or overall processing power for computers will double every two years).

Daou tells Executive that he just has passed the half-way mark in investing $15 million into the development of HTP, and that he aims to at least triple his workforce between 2020 and 2022. "The business we are in is the business of big data infrastructure, and as a company, we are young and growing," he says. "We are now in the early days of [transmission] standards of 400 gigabits (Gbit) per second per node, from the top-of-the-rack down. As Multilane we are in a leadership position in the 400 Gbit market—we are first to market in that area and believe that this market is going to start growing in 2020 with a five-year growth cycle. [We believe that this market] will carry the growth of the company for the next few years. This is fundamental.

OPTIMISTIC OUTLOOK

"All our development is done in Lebanon—the conception, realization, testing, qualification and support are initially done in Lebanon, but eventually we are outsourcing go-to-market with our partners—subassembly is done with our contract manufacturers in China, Malaysia, and Taiwan, and the final assembly, programing, and calibration is done here."

Optimism over global market positions of Lebanese companies is not a message one hears every day. But what one hears even less is companies confident about their job creation potential in Lebanon. Daou is not merely confident of this in an abstract sense; he has a job creation agenda that is currently in the warm-up round, with an emerging tech academy and discussions or agreements for collaboration with several universities.

"We expect to train upwards of 100 students per year, perhaps one to two hundred. We expect the headcount of the company to grow by at least 50 percent annually for the next three years," he explains. Transferring this to a numerical example, Daou confirms that this target growth implies moving from a headcount of 100 today to 150 in year one, 225 in year two, and about 340 or 350 in year three.

Daou concurs that the HTP vision not only had many mental barriers, bureaucratic obstacles, or even demands for "soft fees" to conquer over the past decade before it reached today's status—near-readiness for full migration of the Multilane enterprise and its attached academy. Attesting to having encountered distinct first-mover disadvantages, he says, "The problem is not necessarily the money, but the delays that we encounter with bureaucracy under the existing system. Delays impact us in a very negative way. The world that we work in relies tremendously on time to market, and if we are delayed in any project, our customers are not going to wait for us next time. They are going to use our competitors. We need to remain competitive not only on price, value, [and] performance, but also on turn-around time."

In his perspectives on what can work in improving the industrial tech sector in Lebanon, Daou sees the path of attracting dynamic multinational companies to Lebanon as preferable over efforts to foster local formations of tech companies and take them from startup to international exit.

> "The problem is not necessarily the money, but the delays that we encounter with bureaucracy under the existing system."

In this sense, what sets HTP apart from other initiatives in the entrepreneurship ecosystem of Lebanon is that it is not a story of the monetary stimulus engendered by Banque du Liban's (BDL), Lebanon's central bank, Circular 331 and crystallized around the Beirut Digital District (BDD). Not being part of the entrepreneurship ecosystem of BDL-inseminated tech embryos nurtured in BDD breeding boxes on lifelines of banking-infused funds that are administered by VC nurses, the HTP campus feels more like the founding cell of its own ecosystem.

In the context of seeking to test the mutual influence and development potentials between Lebanon as location of an innovative manufacturing project and such an enterprise, Daou is now facing uncharted territory and risk scenarios. Talking after recent changes in the banking sector practices and before the protests, he notes new risk potentials that are rising in Lebanon's economic framework. "If the cash flow barrier becomes prohibitive for us, we would reach a point where we would need to mitigate this risk by adopting a different operations model where we can function without operating out of Lebanon," he says. "Another risk which we are afraid of facing is the fact that we have employees at subsidiaries and offices in Germany, the US, and Taiwan. If we get to a point where we can no longer transfer money, hard currency, to compensate them, we would not be able to keep these offices open or keep our customers satisfied. This is the risk that we face as an indirect or secondary monetary effect."

By Lauren Holtmeier

IN NEED OF VIRTUAL SPACE

Lebanon needs fintech regulation to keep up with regional growth


AUB-iPark at Beirut Digital District

IN BRIEF

- Lacking regulation or access to licensing, fintech in Lebanon proves challenging.
- While there are fintech-adjacent paths entrepreneurs can pursue, these require partnering with licensed entities, such as banks and financial institutions, which are limited in the number of partnerships they can undertake.
- Other countries in the region have opened up regulation and created regulatory testing sandboxes to encourage fintech.

Entrepreneurs in Lebanon seem to have a certain resilience within them. "If you can make it work in Lebanon, you can make it work anywhere," is a mantra often heard by Executive. For one sector, however, making it in Lebanon proves particularly challenging—especially for late comers. Fintech entrepreneurs in Lebanon are faced with the lack of access to licensing and the lack of regulatory or technical sandboxes—usually established by a government or central bank—making it hard for fintech startups to operate or test their products. As a result, many fintechs find themselves turning to regional markets earlier in their lifecycle than startups in other sectors—in some cases before testing or marketing their products.

Globally, the fintech market took off around 2015. Market size will reach $305.7 billion by 2023, according to international consultancy firm Kenneth Research. Other predictions by the firm include the payment/billing services sub-market segment generating $207.11 billion in revenue by 2023, with significant growth in artificial intelligence and blockchain, and North America leading globally in expected growth, but Asia-Pacific anticipated to grow faster than other regions.

In the MENA region, fintech is growing, albeit behind global rates. A report from Magnitt, a Dubai-based entrepreneurs' network, found that in 2018, fintech attracted the most investment by sector in the region—at 12 percent of investment overall. Annual growth is expected to reach $125 million by 2022, according to a 2018 research by Beirut-based MENA Research Partners. The number of fintechs in the MENA region has more than doubled in the past two years—to more than 240 companies—according to research from Fintech Galaxy, a Dubai-based company.

REGULATORY DESERT

Fintech in Lebanon is challenging, but success stories do exist. A 2019 Arabnet article cited16 fintechs in Lebanon, with the country ranking third in number of fintechs hosted regionally. From the commercial bank side, in 2018 Bank Audi ran a hackathon where it invited five startups to test their products in a sandbox they had created. A new white paper by MEVP from 2019 titled "Evolving MENA Fintech Landscape" notes the importance of such a sandbox in a fintech ecosystem: "The virtual space created by such a framework provides a restricted area in which FinTech businesses (both established and start-ups) can test and refine their technology-based innovative products, services, and platforms without being immediately burdened by the usual regulatory and financial requirements which would otherwise apply to their activities." Sandboxes are especially important for those entrepreneurs who wish to develop payment, wallet, digital banking, loan, and microloan solutions.

Another positive signal for fintech in Lebanon is that banks are looking to collaborate with startups, founder and CEO of Fintech Galaxy Mirna Sleiman says. One successful example is that of Tycron, whose product gives banks a real-time overview of their local and overseas accounts, now in use by SGBL. The Investment Development Authority of Lebanon's Fintech Sector in Lebanon 2018 Factbook points to seven Lebanese fintechs that have grown into regional and international players in the last five years, as well as identifying Lebanese fintech market opportunities in insurtech and e-payment with "12 payment providers offering fast and innovative payment methods which enables fintech start-ups to bring new techniques."

Lack of regulation, however, remains a major challenge. Back in June this year, Riad Salameh, the governor of Banque du Liban (BDL), Lebanon's central bank, released a statement saying: "Our intention is to regulate and supervise fintech companies, by imposing their licensing by Banque du Liban." To EXECUTIVE's knowledge, no progress was made on this front. (Pinpay, an electronic money transfer service is the only Lebanese fintech to acquire licensing to operate from the central bank. Its shareholders are BankMed, Bank Audi, Fransabank, and Middle East Venture Partners.)

David Norman, co-founder of Juno, a digital solution for unbanked populations, tells EXECUTIVE that in June he and his co-founder Alexander Axiotiadis were in talks with Prime Minister Saad Hariri's office. "They were looking at how to do a regulatory sandbox, but now because of the economic crisis, they dropped it," he says. BDL's willingness to consider fintech and other digital solutions and cryptocurrency has accelerated in the last couple years, which is a positive signal for the eventual future of fintech in Lebanon. However, recent political and economic developments in the country leave the future on a lot of fronts, fintech included, looking uncertain.

■ The number of fintechs in the MENA region has more than doubled in the past two years—to more than 240.

There are other options for those who wish to pursue fintech in Lebanon, such as channeling efforts into solutions that do not require a license to operate. However, some entrepreneurs following these routes are still required to partner with banks because they need a licensed party to operate with.

"Blockchain and AI, customer experience, that is technology that is useable. AI companies should be flourishing in Lebanon, but still they don't survive," Sleiman says. "Part of it is lack of awareness and ignorance on a banking level."

For those who are newer to the scene, finding partner banks appears challenging. Two new Lebanese fintech startups Anachron, a robo advisory tool, and Juno that EXECUTIVE spoke with (and previously profiled) cited the lack of regulation, lack of a sandbox, and inability to locate a partner bank as the main drivers behind their decision to move their focus out of Lebanon.

Both Anachron and Juno have looked for but failed to find a licensed partner, e.g. a bank or other financial institution, to operate under. "I've spoken with Blom Bank, Sarander, Audi, and Cedrus, and all have said no for different reasons," Norman says. "Some are afraid of the tech, some don't understand what you're trying to do. The usual excuse is that 'It's not within our strategy.'"

Juno, because of their unbanked target market, are primarily considering Egypt (2017 World Bank numbers estimate that 33 percent of adults own a bank account) and Jordan (World Bank data states only 42 percent had a bank account in 2017). Anachron is considering Bahrain, which has a sandbox and legislation for fintech, co-founder and managing partner Wael Khattar tells Executive. "So far our market [in Lebanon] seems to be nonexistent, not just because of the banks, but because of how our product matches the current economy in Lebanon," Khattar says. Anachron is used by investment advisers and asset managers in banking to increase efficiency of client interaction—it is a difficult time to offer such a product due to the current economic situation.

Even with modest progress, Lebanon lags behind the region significantly when it comes to offering an attractive environment for fintech. "Fintech requires regulatory support. Full stop," Galaxy's Sleiman says. "When it comes to fintech, you can easily set up a company, burn so much cash throughout your lifecycle, reach a deadlock where regulations are not helping you, and then you can go to the graveyard without anyone noticing you were a startup."


ESA Business school

"Some are afraid of the tech, some don't understand what you are trying to do. The usual excuse is that 'It's not within our strategy.'"

REGIONAL OUTLOOK

According to the MEVP white paper, Bahrain was one of the first to launch a sandbox in 2017, just one year after Abu Dhabi. Bahrain's sandbox has incubated more than 35 startups and Bahrain's central bank has helped integrate fintech solutions into 11 banks. Today, despite its small market size, it remains an attractive option for fintech in the region, Sleiman says.

Other countries, like the UAE and Egypt have taken strides forward to make their markets attractive to players in the fintech field by introducing sandboxes and designing innovation-friendly legislation. Bahrain, UAE, Egypt, Saudi Arabia, Jordan, and Oman have all introduced regulatory sandboxes beginning in 2016.

Dubai and Abu Dhabi are also attractive options for those in fintech because of testing environments, but one thing they still lack is the involvement of the central bank, says Sleiman. In 2017, the Dubai Financial Services Authority introduced the Innovation Testing License that allows fintech firms to develop and test concepts within the Dubai International Financial Centre without being subject to regulatory requirements that typically apply, according to the MEVP white paper.

Egypt is another up and coming market, and in Sleiman's opinion, has the chance to be at the forefront of fintech in the region. In 2019, Egypt's central bank established a $58 million fund to invest in fintech startups and also introduced a regulatory sandbox. The first pilot cohort gained access to the sandbox in June 2019 according to a report by *Daily News Egypt*, and have been focusing on digital know-your-customer applications.

The region has made rapid progress in the last two years, but the modest developments from Lebanon are not enough to keep Lebanese fintechs in the country. Even with some fintech finding success, regulation from the government and central bank must catch up.

CAPITAL CONCEPT S.A.L.

STRATEGY - FINANCE - GOVERNANCE

Registery of Commerce of Beirut 1004399 | Capital 30 000 000 LL. Fully Paid
Al Bourj Building, Martyrs' Square, Beirut Central District, Lebanon
Tel. + 961 1 991 911 | **Fax.** + 961 1 997 050 | **E-mail.** info@kconcept.biz

By Lauren Holtmeier

PLUGGING THE GAPS

New programs offer business, financial help to entrepreneurs

IN BRIEF

- New accelerator, incubator, and grant programs for startups demonstrate a nichificiation of the ecosystem.
- Many entrepreneurs rely on these programs for financial support and in-kind services, such as office space and mentorship, to develop their young businesses.
- The ecosystem still has gaps that will need to be addressed to develop further.

Since 2013, and the advent of Circular 331 in that year that was designed to boost investment in the knowledge economy, the Lebanese startup ecosystem has matured significantly. The injection of funds into the ecosystem raised awareness and attracted aspiring entrepreneurs. However, with 331 funds funneled to accelerators and VCs via commercial banks having previously slowed, and the country now facing the possibility of economic crisis, the future for Lebanese entrepreneurs looks increasingly challenging and uncertain. Fewer entrepreneurs have set up shop in Lebanon in the last few years as compared to the original Circular 331 boom, and there are still gaps in the ecosystem, such as an early stage and post-acceleration, but pre-VC stage, gap that must be addressed.

For startups in their early stages, ways to mitigate risks and alleviate challenges entrepreneurs face include accelerator and incubator programs that provide support to fledgling businesses, whether by providing finance or in-kind services such as office space, mentorship, and access to networks. According to a 2018 Arabnet report on the Lebanese innovation economy, an ecosystem gap for early stage support exists, and 80 percent of survey respondents said the need for ecosystem support motivated them to apply to accelerator programs. In conversations with VC funds, heads of accelerators, and entrepreneurs, Executive was told that funding for post-accelerator stage entrepreneurs is lacking. Today, there are at least seven accelerators and incubators, most of whom were launched in the few years post-331, with the notable exception of Berytech, an ecosystem for entrepreneurs which launched in 2002.

Circular 331 was credited with causing dramatic change in the ecosystem; some attempts to create acceleration programs in the pre-331 era came and went leaving little impact. Now a new generation has been ushered in, and, in some ways, the accelerator aspect of the ecosystem is beginning to see a nichification. New accelerators and other initiatives offer support for green industrial initiatives; fintech (similar to the recently launched Startecheus); financial inclusion, which in part includes fintech; social enterprises; and one will target renewable energy, waste, and water valorization. In an August interview, IM Capital fund manager Corine Kiame told Executive, "We need more accelerators. We have so many gaps. And we need more accelerators outside software, we need incubators and accelerators that are diversified across the sectors." While new niche programs are cropping up, one general initiative has emerged as well like the Talal and Madiha Zein American University of Beirut Innovation Park (AUB-iPark) that launched on September 2.

Those behind these initiatives see a need for this new nichification. Developing programs specifically for agriculture and industry, considered productive sectors, may help spark innovation and churn out new products and solutions to further develop them. In June, Executive wrote that there were not necessarily enough fintech players in Lebanon to warrant a fintech accelerator, and that outlook has not changed. According to 2019 Arabnet data, there are 16 fintechs in Lebanon, and regulatory hurdles and the absence of a sandbox in Lebanon make other regional countries more attractive options (see story page 62).

SUPPORTING INNOVATION

Beirut-based French business school, École supérieure des affaires (ESA), is launching a new accelerator set to be operational in Q1 2020. This will be housed alongside ESA's SmartESA accelerator program in a new 3,000 square-meter facility, but will operate on a slightly different model. SmartESA's new program hopes to incubate 10 startups per cycle, with startups from fintech, insurtech, and productive sectors eligible to receive $50,000 in cash, plus in-kind services, with a chance for follow-on funding. Unlike SmartESA, which only offers in-kind services and does not take equity, the new accelerator will take equity as payment from the startups. For the new accelerator, the SmartESA team is in talks with corporate and private sponsors, but as nothing is yet finalized details remain scant, and they are applying for Circular 331 funding via a partner bank, but Antione-Jihad Bitar, SmartESA coordinator, declined to say which bank. With banks implementing stricter capital controls and protests in the country in their second week, he says "Are they going to change their mind after the crisis? I don't know, but it's an important question." With one pure fintech accelerator already in existence, the need for two, given the current number of fintechs and lack of important support from the central government and central bank, even with SmartESA's new accelerator only partly focusing on fintech, is questionable according to members of the accelerator scene.

RayMondo sal, a green industrial incubator initiative by environmental NGO Fondation Diane received a $3 million investment from Viridis investment fund (both the NGO, Viridis, and RayMondo were founded by Diana Fadel, who is the majority shareholder of the latter two), says RayMondo manager Antoine Abou Moussa. The new incubator had its soft launch in August and hopes to be fully operational by the end of the year. Located in the Roumieh industrial district in its own 3,000 square-meter facility, RayMondo has plenty of space to incubate new initiatives. So far, FabricAID has begun to use the space, and Abou Moussa says they are in advanced discussions with L'Atelier du Miel to have their operations there. Abou Moussa says that startups, SMEs, universities, and even corporations can use the space. He tells Executive they will invest between $50,000 and $100,000 in startups, and they will consider taking equity, a percent on eventual sales, or collecting rent as ways to monetize the company. He did not know the total size of the fund available, and when asked if there was a range they were considering investing in total, he replied, "No range."

According to a press release from RayMondo, they will have space for 40 green startups and SMEs. Abou Moussa says that they are searching for one large "anchor tenant," such as a university that rents space as well. RayMondo will buy the machines necessary for industrial innovation, and currently they are sorting out viable clusters for investment; the clusters include waste management, food waste and food companies, and essential oil production. Abou Moussa says that while no fund size is specified for equipment investment, Fadel will provide funds based on a needs assessment. "It's new and it's untapped," Abou Moussa says. "We're using our gut feeling in a lot of places. We don't have a lot of studies done yet on green industries. There's a few studies, but they're not specific to what we're doing. Whatever comes, we're open, and we're trying to adapt and understand."

> With one pure fintech accelerator already in existence, the need for two, given the number of fintechs, is questionable.

Similarly, Cleantech, an offshoot of Agrytech—which in itself is a program by Berytech—which will be launched in June 2020 will look at three main categories: renewable energy, waste, and water valorization. Although Cleantech will be open to all fields and backgrounds that have to do with water, waste, and energy, Ramy Boujawdeh, deputy general manager of Berytech, says they are working to link it with Agrytech (see story page 56) through what they call the water energy food nexus. "If you want to create sustainable agriculture, you need to make sure you are not depleting your water reserve and not abusing your energy to produce food," he says, explaining candidates would be startups that are looking at techniques to reduce water usage in agriculture, for example, or at using less energy for irrigation. Cleantech plans to form advocacy groups for each category that will develop and publish white papers to draft laws that aim to improve the capacity to utilize innovation in the Lebanese agricultural sector.

A DIFFERENT KIND OF SUPPORT

No matter the outcome of ongoing protests in the country, industry and agriculture, will continue to be cornerstones of Lebanon's economy, despite accounting for a relatively small share of total GDP; combined, they currently account for around 15 percent of total GDP according to McKinsey's Lebanon Economic Vision. With added stress on the finance and insurance sector in the last two months, which accounts for 9 percent alone, agriculture and industry's importance cannot be overlooked. Innovation in these sectors have the potential to be largely impactful, and support for startups in these sectors will be important to help entrepreneurs develop their ideas and get their nascent businesses off the ground.

Two other niche initiatives that operate differently from traditional accelerator and incubator programs are the Arab Financial Inclusion Prize Fund (AFIIP) and the Hult Prize Lebanon. AFIIP was inaugurated in 2018 and is currently in its second cycle; it provides funding and a more informal support network to startups, SMEs, and larger corporations in the financial inclusion field across the region. AFIIP has $55,000 that will be dispersed this year as part of the grant that is provided by four sponsors: Consultative Group to Assist the Poor (CGAP), the Sanad Fund by Finance in Motion, Spectrum Digital Holdings, and Tamer Amr, who is a private sponsor. Alexander Reviakian, co-founder of AFIIP says while he realizes the amount is small, the technical support provided to winners and finalists is an added value.

As AFIIP is a grant, it operates differently from an accelerator, yet when asked what support they provide outside funding, Reviakin pointed to several ways that AFIIP, which had 97 applicants this year, helps those who apply to network (e.g. by paying for them to attend regional conferences with major players in financial inclusion and setting up meetings in advance) and indirectly develops their go-to-market strategies by facilitating connections between small players, like startups, and large players, like regional banks and accelerators.

Similarly, Hult Prize Lebanon, developed in partnership with Lebanon's central bank—Bank du Liban (BDL)—Blom Bank, the United Nations, and Hult Prize Foundation, which operates in 15 cities globally, is a grant and mentorship program designed for university students. Hult Prize Lebanon, part of the global Hult Prize Foundation that launched in 2009, is now beginning its third cycle having launched its first cycle in Lebanon in 2017. It awards an annual seed grant of $250,000 for one startup focusing on impact entrepreneurship, which in Lebanon could be those that focus on electricity or healthcare, for example. Karim Samra, CEO and founder of Changelabs and COO of Hult Prize Lebanon tells Executive that when they began the initiative they found Lebanon to be an attractive country because of BDL's Circular 331. Since they began operating in Lebanon, the number of participants doubled from year one to year

Agriculture and industry will continue to be cornerstones of the economy.

two, and Samra says numbers for year three are on track to double again. There are now around 70 active campuses spread across 30 to 40 universities, with 5,000 students applying last year, Samra says.

Beginning in September, Hult Prize Lebanon sends mentors to campuses for what they call the on-campus round and students receive training in ideation and pitching; experts also run hackathons. For round two, teams that make it to the next phase are invited to Beirut Digital District for the Student Startup Forum for further coaching, and ultimately they pitch their ideas. Finally, the teams are narrowed down to the top six who go through a six-week incubation program in Beirut, and experts are flown in to provide mentorship throughout the cycle. The winner is registered as a company and continues to receive support while establishing their business. While the runners-up receive no cash, Samra says that last year, two were accepted into Berytech's program. Two avenues exist for Lebanese to get global experience; the winner of the Student Startup Forum is invited to an incubator program in London, and the best on-campus team from each campus is invited to compete in global regionals.

FUTURE OF ENTREPRENEURSHIP

Both these programs provide networking opportunities to companies in their programs. Reviakin tells Executive that plans to expand in coming years include developing more categories for applicants, such as one for startups and one for more established companies. These programs both offer direct avenues to regional and global conferences, networking, and opportunities for additional funding. In Lebanon, where many startups look to expand beyond Lebanon, this kind of networking could be a key ingredient to helping many survive and grow their companies.

The AUB-iPark does not discriminate on the type of startups it will accept and has identified pre- and post-accelerator gaps as target areas for their new initiative. Leveraging research and talent produced at AUB, they hope to improve the quality of the pipeline going into accelerators. For the post-accelerator stage, mentorship and networking are the main offerings. Overall, the ecosystem lacks investors for the post-accelerator stage, though a couple new initiatives have emerged in the last few years. And while mentorship is valuable at any stage, cash is crucial for startups in the post-accelerator stage to further develop their product and expand their customer base through marketing. While the AUB-iPark will not take equity or charge for rent, they offer no cash for startups. Startups with at least one founder that is a current student or AUB alumni will be eligible for the program. They will run competitions in which smaller cash prizes are available, but the details had not been confirmed as of writing. Salim Chahine, AUB-iPark executive director, says, "We are using the support of our Zein Endowment as well as the AUB operating budget to support startups." He declined to comment on the size of the endowment or budget.

> Ideas are often born of crises, and with Lebanon on the brink of crisis, some are hoping to see more turn to entrepreneurship.

With all these new initiatives and fewer new businesses, the question of the utility of so many new accelerators is raised. Bitar says that while the overall number of startups is decreasing, the overall quality has increased. But even with an overall quality increase, are there enough new ideas to warrant so many programs? Bitar believes there are. And efforts like the AUB-iPark and Hult Prize that aim to create startups and feed the pipeline at the university level, perhaps they will successfully generate interest in entrepreneurship.

Ideas are often born out of crises, and with Lebanon on the brink of crisis, some are hoping to see more turn to entrepreneurship. "We're always worried about the economic situation, right?" Chahine says. "But this is something out of our hands and out of our control, so we're trying to look at things positively. If there's an economic crisis, our kids need to do something differently, and our kids need opportunities. Maybe pushing them to think of their struggle, they can come up with new ideas."

Making predictions right now for the future is hard, but entrepreneurship certainly has a role in the future of this country, especially in productive sectors. If these programs are able to find enough quality startups to accelerate and incubate, they have the potential to add real value to the ecosystem. It can be assumed that a few quality startups will emerge in the coming year or two as the ecosystem since Circular 331 has gradually established itself, but if there will be enough to fill up the space these new programs in addition to spaces existing programs offer is yet to be determined. And regarding a holistic examination of the ecosystem, more analysis is needed on the post-accelerator gap to determine current supply and demand and its effects on the ecosystem.

By Roxana Mohammadian-Molina

LESSONS FROM THE UK

Lebanese entrepreneurship requires a robust regulatory framework

IN BRIEF

- Regulation is key for the success of entrepreneurship initiatives.
- Tax breaks, a regulatory sandbox, and access to finance will aid investment in small and early stage startups in Lebanon.
- The Banking Control Commission of Lebanon could play a pivotal role in kick-starting the fintech sector through a regulatory sandbox.

The High-Level Lebanon-UK Tech Forum, held in London on September 19, was a showcase not only of the Lebanese entrepreneurial spirit, but of the global outreach of Lebanon's tech industry and digital ecosystem. The takeaway was that despite undeniable and plentiful challenges in Lebanon's startup ecosystem, at the governmental level the desire is there to actively support entrepreneurship, particularly within the tech sector.

Yet, underpinning the government's goodwill is a key cornerstone on which the success or failure of entrepreneurship initiatives depends: regulation. The experience of other countries that have successfully created a thriving business and startup hub shows that creating an appropriate regulatory framework to support such efforts is key. Investors seek stability, consistency, and proportionate and predictable regulation that is built around a long-term strategy.

A look at measures that have proved successful in other countries is a good starting point. Take, for example, the UK tech startup ecosystem, which has evolved rapidly over the past decade, outpacing other European countries in terms of funding—7.1 billion euros ($7.8 billion at the time of writing) was raised in 2017 alone. The ecosystem has largely benefited from support by the UK's financial services and markets regulator, the Financial Conduct Authority (FCA), through its Project Innovate, designed to aid innovative businesses in fintech and regtech. A key element of this project was its regulatory sandbox, established in 2015, that allowed authorized businesses to trial innovative propositions in the market with real consumers. A review of the regulatory sandbox published by the FCA in October 2017 confirmed that it had indeed reduced the time and cost of introducing innovative ideas into the UK market.

PRACTICAL SOLUTIONS IN LEBANON

What exactly are the regulatory measures that could see investment in small and early stage startup businesses transform Lebanon's economic landscape and even make the country a global hub for startup capital? We will look at three: tax breaks, a regulatory sandbox, and access to funding.

The UK Seed Enterprise Investment Scheme (SEIS) has been a successful government policy to encourage investors fund small and early stage startup businesses in the UK by offering those investors tax-efficient benefits—allowing up to 50 percent of the investment to be claimed back as income tax relief. Before 2012, investors would be taxed relatively heavily on any money they put into a new business, creating a lack of incentive to fund small and early stage startups. However, under SEIS, a number of tax breaks were introduced to would-be investors that made it much more rational for them to fund a startup.

Undoubtedly, a well-designed tax benefit scheme similar to the SEIS for would-be investors targeted to boost growth in specific sectors (fintech, agritech, medtech, and insurtech) would be a good starting point in Lebanon.

A common area of concern for investors in early-stage startup companies is the regulatory certainty of the firms in which they are considering investing. Feedback from all startup firms who participated in the UK regulatory sandbox indicated that taking part in the sandbox program provided a degree of reassurance to investors through the oversight of the FCA and the increased regulatory certainty participation provided. The Banking Control Commission of Lebanon (BCCL) has the opportunity to play a pivotal role in kickstarting the fintech startup industry with measures such as a regulatory sandbox. This would serve as a framework to allow small-scale live testing for new business models and increase the credibility of domestic Lebanese startups with both investors and customers alike.

As for access to funding, fintech, with solutions such as loan-based peer-to-peer (P2P) and investment-based crowdfunding platforms, stands as a serious contender to unlock the funding challenges faced by Lebanon's SMEs. Yet the emergence of a P2P lending sector requires a strong regulatory framework to protect both lenders and borrowers and ensure that investors receive the appropriate level of protection.

A common area of concern for investors in early-stage startup is the regulatory certainty of firms.

In the US and the UK—the two largest P2P markets in the world by volume—the sector is highly regulated. In the UK, the regulatory framework around P2P has been designed primarily to provide additional protection to consumers, while promoting effective competition within the P2P lending industry. The regulation of this sector in Lebanon would allow the emergence and growth of the industry in a controlled way. What is needed is a combination of legislation and a regulatory framework from BCCL and Banque du Liban, Lebanon's central bank. This would not happen overnight, but with the right roadmap in place this could be achievable in the next five years.

The Middle East has one of the highest savings rates in the world, but people do not use a lot of credit, and investment opportunities are lacking. Therefore, a P2P model has the potential to place Lebanon at the receiving end of savings to be channeled into a dynamic SME and startup ecosystem.

Roxana Mohammadian-Molina is chief strategy officer and board member at Blend Network. A former banker at Morgan Stanley in London, she now focuses on investing in, growing, and advising fintech companies.

By Samer Elhajjar

BOOSTING OUR ENTREPRENEURIAL SYSTEM

Lessons from the American entrepreneurship ecosystem

IN BRIEF

- Fostering a supportive culture is key for entrepreneurship.
- The government needs to create policies that enable entrepreneurship, such as tax incentives and intellectual property rights.
- Universities in Lebanon need to include real-world, hands-on engagement within entrepreneurship programs.

With the current hardships and challenges Lebanon is encountering, the government needs to look to new ways to reboot its economic system and to boost its economic growth. The answer is in investments into our entrepreneurial ecosystem. This summer, I had the opportunity to spend three months in the US as a visiting scholar at Ball State University, where I learned a lot about the American entrepreneurship ecosystem. Although entrepreneurial developments in Lebanon are progressing, I believe that Lebanon can learn from the solid American ecosystem to make running businesses easier and more efficient.

SUPPORTIVE CULTURE

In the US, the entrepreneurship culture is community oriented. When I was there, I realized that there is a sense of responsibility toward the other, and a willingness to support each other. A key factor of America's innovation ecosystem is the strong interconnections among its people, which promotes collaboration and the exchange of ideas. This is important for innovation because it allows entrepreneurs to have allies, receive help, and form connections more easily. Entrepreneurs usually seek supportive communities that encourage entrepreneurial pursuit and reward innovative mindsets. To thrive, entrepreneurs need to be immersed in a culture of innovation and one where risk-taking is supported. Culture is an enabler for the entrepreneurial ecosystem and can play a vital role in motivating entrepreneurs to launch their own companies.

ENABLER GOVERNMENT

On the policy level, undoubtedly the Lebanese government has to create new policies that will transform the country's entrepreneurial ecosystem into a more dynamic and finely tuned one. In fact, the US government plays an important role in nurturing entrepreneurship by developing protected intellectual property rights and imposing low and stable nondiscriminatory tax regimes and regulations. In addition, the US government aims to make doing business easier in the country. The government wants to reduce the time and effort required to register a company. For instance, it took me less than 72 hours to register a business in the state of Indiana. The entire process was done online from my home and through a website.

ENTREPRENEURIAL EDUCATION

American universities have a huge impact on the entrepreneurial ecosystem by offering high-quality academic programs that equip students with the mindset, knowledge, and skills to run entrepreneurial firms. Entrepreneurship is integrated into the curriculum and available at all levels of hundreds of business schools across the US. Courses focus on all aspects of business growth including pre-startup, startup, growth, and consolidation stages. In addition, business schools have strong connections to industry, with a number of research centers and innovation hubs. In the Lebanese context, universities are showing interest in investing in entrepreneurship education, but still with a real lack of hands-on, real-world engagement with the problems faced by Lebanese entrepreneurs in the market. The role of entrepreneurship education should be approached with caution. There is no doubt that entrepreneurship education is likely to be of value to Lebanese students. However, the reality of launching, sustaining, and growing a business in Lebanon has specific requirements. While some universities are focusing on how to launch a startup, they ignore the importance of teaching startups how to grow and scale a business in the Lebanese context.

ACCESS TO FINANCE

To prosper and grow, innovative and creative startups need access to appropriate forms of finance. The availability of finance is a further positive feature of the American entrepreneurial ecosystem. For example, the US Small Business Administration provides funding to entrepreneurs and small businesses when private banks are not inclined to do so. Many states also offer incentive programs for startups. For instance, Massachusetts encourages startups to invest in research and development (R&D) by offering sales and use tax exemptions. If a startup in Massachusetts is buying gas, steam, electricity, or heating fuel, and has five or fewer employees, it can be exempt from sales and use tax. Actually, some Lebanese or foreign would-be entrepreneurs might not make the decision to invest in Lebanon because of the high taxes. To compete with other businesses, startups need a supportive financial environment. Reducing financial barriers would definitely then improve the Lebanese ecosystem dynamism.

> Entrepreneurs need to be immersed in a culture of innovation and one where risk-taking is supported.

The American ecosystem took years to build. In Lebanon, around six years ago, the entrepreneurship spirit was nearly nonexistent. However, in 2013, with advising from the World Bank and EU, Banque du Liban, Lebanon's central bank, issued Circular 331. The Circular played a significant role in activating Lebanon's startup economy across the country. The Lebanese government, alongside local institutions, should keep this momentum and provide new initiatives and incentives to drive growth in our economy.

Samer Elhajjar has a PhD in marketing from the University of Strasbourg. He is an assistant professor at the University of Balamand and consults in strategic management and marketing.