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Note: This policy brief is based on data collected between October 2023 and July 2024, reflecting the MSME landscape and stakeholder perspectives at that time. The information contained in this report, as well as the proposed recommendations, do not fully reflect the impact of recent conflict-related destruction and displacement.

Lebanon's MSMEs and the Energy Transition

Marc Ayoub and Ahmad Diab

The MENA region is experiencing the impact of severe climatic events, water scarcity, air quality and ecosystem degradation, as well as the deterioration of the overall health. Yet, these risks do not always get the necessary consideration knowing the continuous political turmoil and financial meltdown happening in several countries, such as Lebanon, Syria, Libya, Sudan, among others. Luckily, the region benefits from high solar irradiation and strong winds allowing it to shift towards Renewable Energy (RE), something that is not yet fully exploited. Adaptation and mitigation measures and international cooperation need to be more seriously discussed within an overarching energy transition agenda that should integrate the economic, social, and environmental spheres.

In Lebanon, however, and separate from government pledges to international climate change conferences (Conference of the Parties, COP), an integrated energy transition approach with actionable strategies is yet to be conceived. The recent multidimensional crisis that the country is experiencing since 2019 has exacerbated what were already considered as pressing socio-economic issues, leading to an increased vulnerability to climate change impacts. When it comes to the energy transition, policymakers still operate in silos and lack a holistic approach to the sector with the continued absence of structural reforms, opening the way for residential-level or community-led initiatives. There is an increased need for research work that builds on the existing parameters and aims to develop context-specific solutions with a critical eye to potential bottom-up opportunities and areas of strategic synergies.

With this background in mind, and given that micro, small and medium enterprises (MSMEs) form approximately 95% of businesses in Lebanon and account for approximately 50% of the country's GDP, this study presents a multidisciplinary approach to investigate the role of MSMEs within the overall energy transition, including the interaction of such enterprises with the dynamic energy landscape influenced by ecological disruptions and exogenous shocks to the economic and social spheres.

Findings show that the situation of Lebanon's energy sector has worsened, intensified by decades of mismanagement and the ongoing economic challenges, and signifying the structural and macro-economic issues that have plagued the country for several generations. Electricité du Liban (EDL), the public utility, has been in a state of near collapse for decades. With severe power shortages and inequitable access to electricity becoming a norm. This situation has prompted many MSMEs to seek increased energy independence via the adoption of renewable energy technologies, particularly solar power.

Limited access to financing, increased operating costs due to the energy shortage, regulatory complexities, and the impact of the informal economy, which both undermines the competitiveness of formal businesses and limits government revenue, stand out as the main challenges faced by MSMEs today. Despite these challenges, some MSMEs have leveraged innovation and diversification to navigate the crisis, showing resilience and adaptability. As a case-in-point, and driven by increased demand for locally produced goods, the agro-food sector has shown potential for growth in the crisis period.

This policy brief aims to provide evidence-based recommendations and insights for stakeholders and policymakers to support in enhancing the role of MSMEs in Lebanon's energy transition. These include:

- **Scaling up support for distributed renewable energy systems:** Adopt an inclusive social, economic, and environmental development process for boosting the uptake of distributed renewable energy solutions. Enhance access to funding, technical support, and quality control for community-driven renewable energy projects.
- **Changing strategies based on new sectors that have growth potential:** Shift the focus from the services and financial sectors to empower the productive sectors such as agriculture, agro-food, tourism, as well as information, communication and technology (ICT), while enabling a climate-smart economy.
- **Restoring trust and addressing the informal sector:** The comprehensive strategies for economic stabilization have to include incentives that would ensure MSME transition into the formal status by restoring trust in public institutions, fighting corruption, and enhancing accountability.

- **Capacity building on assessment of climate risks:** Build local capacities in order to empower both public servants and private actors to realistically assess climate risks and take into consideration the associated impacts in developing future plans.

Introduction

The multi-faceted aspect of the energy transition in Lebanon is critical to the country's economic growth, environmental sustainability, and social equity. This policy brief summarises the findings of a comprehensive case study on Lebanon conducted as part of the research project titled *'The Role of MSMEs in Fostering Inclusive and Equitable Sustainable Economic Growth in the Context of the Clean Energy Transition in MENA.'* The objective of this project, which is funded by the International Development Research Center (IDRC), is to enhance our understanding of the energy transition in six Middle East and North Africa (MENA) countries in a way that contributes to the building and promotion of strategic and evidence-based policies that address energy challenges in the region.

At the heart of this research is the recognition that MSMEs are the heartbeat of Lebanon's economy. Before the 2019 crisis, they acted as crucial engines for employment generation, economic diversification, and social cohesion, comprising more than 90% of businesses in Lebanon and contributing to around 50% of the country's total GDP.¹ However, they have faced increased pressure due to continued economic slowdown, coupled with climate change risks, increased skills gap, limited market access and difficulties linked to availability and affordability of electricity supply.

MSMEs have then had to deal with the COVID-19 pandemic, the Port of Beirut explosion, the implications of the Russia-Ukraine war, as well as the economic meltdown and the accompanying political turmoil. Despite all that, Some Lebanese MSMEs have proven themselves to be remarkably adaptable in the face of crises, and this resilience was evident in their diverse strategies for survival and growth. Existing literature² distinguished between 'thrivers' MSMEs and 'divers' MSMEs, and reported that as a last resort to save their company, divers tried to innovate, but they lacked the prior capability, strategy, knowledge, or capital to make their innovation successful. In contrast, thrivers were able to capitalize on the crisis as a possibility for import substitution and to deliver services or products that have greater need during the crises.

Innovation was also a key weapon in their arsenal. According to the Ministry of Economy and Trade, around 3,350 trademarks were registered in 2021 alone, suggesting a healthy level of innovation in the sector.³ In one

¹ Farran I and Fawaz M, 'Role of SMEs in Lebanese Economy' (ResearchGate27 September 2018) https://www.researchgate.net/publication/327918417_Role_of_SMEs_in_Lebanese_Economy

² Mercy Corps (2022). How can small businesses cope in the face of multiple crises in Lebanon?

³ According to an interview with the Ministry of Economy and Trade (MoET/Interviewee 12, 2024).

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Attieh. (2022). *Entrepreneurship and Resilience in Times of Crises: The Case of SME's in Lebanon*.

5
World Bank (2024). *Lebanon Country Climate and Development Report*. Open Knowledge Repository (worldbank.org).

study, 28% to 36% of businesses introduced entirely new or improved products and services.⁴ The agro-food sector, for example, saw businesses adapt their product lines to better suit changing market conditions. Similarly, the tourism industry shifted its focus to attract new customer segments, such as domestic tourists and remote workers seeking alternative work locations.

Being the country's 'biggest drag on its economy and environment,' according to the latest World Bank Climate Change and Development (CCDR) report,⁵ Lebanon's power sector continues to be one of the heaviest challenges and bottlenecks MSMEs have to face, and their growth cannot be seen in isolation from such realities. By examining the interplay between MSMEs and the evolving energy landscape, the research highlights the challenges and opportunities these enterprises face in adapting to a rapidly changing environment and transitioning to cleaner and greener sources of energy.

Methodology

This study follows a multidisciplinary approach using a mixed methods data analysis to generate valuable information that would give us a clearer understanding of the state of MSMEs and their role in a sustainable and more equitable energy transition. On the quantitative side, a nationwide, firm-level survey covering 804 MSMEs was conducted beginning in early 2024 with the aim of extracting information pertaining to the energy consumption of MSMEs, their economic activities and performance, as well as the workforce they employ. Both Computer-Assisted Telephone Interviewing (CATI) (699 respondents), and Computer-Assisted Personal Interviewing (CAPI) (105 respondents) were conducted during the survey.

The latter work was complemented qualitatively by conducting 24 key informant interviews (KIIs) with public servants, representatives from local and International Organizations, as well as industry experts in the energy field. In addition, five focus group discussions (FGDs) were organized including two with MSMEs representatives. Additional secondary sources involving official government publications and scientific literature belonging to the most recent research conducted locally, regionally, and internationally were also reviewed.

Findings

Survey Findings

The quantitative survey yielded findings on MSMEs in Lebanon and their role in the energy transition. Among the surveyed sample, micro-enterprises had an average of three employees, small businesses had nine employees, and medium businesses had 43 employees. About 32% of surveyed enterprises had female managers or owners, with medium enterprises holding the biggest share. It was also noted that on average, medium enterprises had both

the most female full-time workers, as well as the highest number of young professionals aged between 18 and 24.

Survey results highlighted the limited financial support through loans or grants, with only 2% of surveyed enterprises having received assistance in the past five years, half of which was acquired in 2023. However, 67% of surveyed enterprises who had not received funding expressed an interest in applying for funding, if available. Regarding awareness of grant opportunities, 15% of all respondents were aware of such opportunities.

At the energy consumption level, 24% of surveyed enterprises required a minimum of eight hours of power daily, while 18% needed around the clock electricity supply (mainly the food and beverage, the healthcare and medical services sectors). For over 70% of these enterprises, peak consumption typically occurred between 10 am and 2 pm. Due to unreliable utility-provided electricity, enterprises have resorted to alternative sources to meet their electricity needs. While the majority of surveyed enterprises (91%) were connected to the state-owned utility, 62% were also connected to a private generator network/subscription. Also, 36% had generators, 35% had battery storage systems, and 24% had installed solar energy systems.

Among the latter group, 70% reported being very satisfied with the solar system, whereas only 2% reported being unsatisfied and 29% being satisfied. Regarding their willingness to expand their current energy systems, 39% expressed a lack of interest in doing so, attributing it to their existing spatial constraints or high capital cost.

Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs)

The survey was complemented with 24 KIIs and 5 five FGDs. The FGDs covered three municipal mini-grid solar projects (Kfarmichki, Baaloul, and Bechmezzine), MSMEs active in the agro-food sector, and leading MSMEs in the renewable energy (RE) and energy efficiency (EE) sectors.

At the municipal front, several municipalities across Lebanon have stepped in to fill the gap caused by the continuous electricity cut-offs. These municipalities have installed distributed RE systems (mainly solar power) in their jurisdictions, emerging as key players in Lebanon's bottom-up energy transition. FGDs emphasised the municipalities' essential role in the management and oversight of the projects' implementation as well as in serving as an intermediary between residents and various stakeholders, which include international funding agencies, central public administrations, local private businesses, expat communities, and civil society organisations.

The lack of additional financing was noted as constituting a main obstacle to the expansion and maintenance of these infrastructure projects. In one of the studied municipalities, participants mentioned the reliance on donor and

expat assistance due to the lack of funding and decreased municipal revenues. These projects have benefited MSMEs through the provision of reliable and affordable electricity supply, reviving businesses whose activities were constrained by crippling power deficits. Although these mini-grid projects were unable to generate direct employment opportunities, they showed the potential for diverse job creation if scaled up (technicians, customer service, and administrative roles).

For MSMEs involved in the RE/EE sectors, the absence of government subsidies made RE and EE technologies unaffordable to many enterprises in the current socio-economic environment. Participants revealed that the lack of enforcement of quality control standards resulted in the entry of recycled equipment, posing safety risks and undermining consumer confidence. RE and EE businesses with higher qualifications and levels of experience are placed in an uneven playing field with new firms that opened during the crisis. Yet, participants acknowledged the cost-effectiveness and stability provided by the RE system. It was noted that some MSMEs experienced a phase-out of their electricity bills, while others noticed up to a 40% reduction in operation costs, demonstrating the economic viability of RE for enterprises.

High capital expenditure and the lack of access to bank loans or governmental support have forced many MSME owners to rely on personal resources or limited funding to finance these projects, while the ones struggling with financing or installation costs have faced competitive setbacks. Regarding EE measures, the effective implementation of EE standards in the buildings has been hindered by weak enforcement, inconsistent application, limited awareness, and high costs, yet respondents saw significant cost reductions by adopting energy efficiency measures, with reductions varying by factors such as building standards, location, and equipment.

As for MSMEs in the agro-food sector, local products became more attractive despite the economic downturn and hyperinflation, as these benefitted from a reduction in their production and operating costs. Although export potential grew as well, MSMEs faced challenges pertaining to their small size, as well as the lack of enough knowledge about international standards and quality certifications. Respondents reported that subsidy removal dramatically increased energy costs, which prompted MSMEs to resort to adaptation strategies involving investing in RE and using energy monitoring applications as well as water conservation measures. The important role played by development organisations in providing training and assistance was deemed essential, however such support declined due to increased competition in the sector. The need for better financing options has been linked to the need for increased automation and investments in energy-efficient solutions.

Although the energy crisis triggered a boom in rooftop distributed solar

installations, it was plagued by issues such as lack of financing options, spatial constraints, shortage of skilled personnel, and substandard equipment installed by unqualified companies. Lebanon's energy transition was also characterised by community-led initiatives focusing on women and youth empowerment. Despite the impact and benefits generated by such initiatives, and while the energy transition has created some opportunities, it did not appear to be dramatically shifting entrenched gender imbalances in the overall workforce and leadership of the energy sector itself so far.

The rise of the informal sector remains a major challenge for businesses as it undermines the competitiveness of formal MSMEs and decreases state revenues.

Discussion and Recommendations

Lebanon stands today at a critical juncture when it comes to its energy transition path, and consequently the role MSMEs can play in this future. Policy decisions made today will impact what the country will look like for at least a decade. One of the key lessons from the ongoing crisis is the need to strengthen the productive sectors, manufacturing and agriculture, to play a bigger role in the economy. Strengthening MSMEs, and enabling the environment for them to innovate, fall in this direction. Although some MSMEs were able to find some opportunities to grow during the crisis, the accumulated benefits have already been phased out with ongoing hyperinflation. Thus, the current business environment will not be supportive and will not create sustainable opportunities.

Operating in a crisis scenario has been the trend for most Lebanese MSMEs. The country's political economy and its unique form of development post-civil war is one key aspect at the root of social, environmental, and economic difficulties that were and continue to be lived as part of the 'normal' mode of business operation. The banking, real estate, and services industries were the main areas of development during that time (pre-2019), with a focus on the expansion of the private sector and its integration into the global economy. This has resulted in increased socioeconomic injustices, with policies largely benefiting the political and economic elites of sectarian communities through the numerous privatization schemes and the clientelist allocation of state contracts.

Highlights of these issues include a macroeconomic context that offers little opportunity to thrive, significant skills gap, limited access to credit, inadequate government services, unreliable infrastructure, difficulty in doing business (registration, taxation, insurance, informal economy), limited global market access, and vulnerability to continuous climatic or social unrest events. In this context, international development organizations, foreign and diaspora support, along with a handful number of government policies (start-up

support/incubators, MSME development strategies by local ministries, and others) were considered paramount for the survival and continuity for many businesses, even in the face of structural challenges.

These structural and macroeconomic challenges were exacerbated by the economic and banking crisis, the Covid-19 pandemic, and the Russia-Ukraine conflict, which not only worsened existing difficulties, but also led to the reduction of government and inter-governmental efforts that were key to sustaining the sector.

The research findings underscore just how integral MSMEs are to a clean energy transition. Engaging MSMEs as active partners in the transition would enable Lebanon to unleash these enterprises' full entrepreneurial spirit, innovative capacity, and agility to deliver strong economic growth, employment generation, and environmentally sustainable development. As a consequence, it becomes evident that enhancing the regulatory framework, creating innovative financing models that meet particular MSME needs, increasing the skilled workforce by investing in training programs and capacity building, empowering youth and increasing knowledge-sharing, fostering collaboration between MSMEs and beyond with donors and international organizations are all key policy issues to be tackled with a bigger urgency than the pre-crisis era.

Yet, these policy instruments should also consider the current emerging realities, as well as placing Lebanon in the broader context of the energy transition that is taking place in the MENA region. Thus, this study builds on existing research and complements it by proposing strategic measures that would contribute to developing the harmony of the existing MSME and energy landscape in Lebanon.

■ **Scaling-up support for distributed RE systems**

While municipal distributed projects have provided a great example of community-led processes, the supporting policies to such initiatives, as well as for EE measures, need to be scaled-up to provide adequate funding, technical assistance, quality control and monitoring, and develop partnerships between the local businesses and residents. Although the approved distributed RE law is a step in the right direction, it is not sufficient alone to support an inclusive social, economic, and environmental development process.

■ **Shifting strategies**

Shifting strategies from the services and financial sectors to more productive sectors in a climate-smart pathway by empowering the industrial, agricultural, agro-food, tourism, and ICT (digital transformation and technology) sectors is key. These sectors need to leverage the existing know-how and aim for cross-sectoral collaborations, especially in the fields of digital transformation and technology adoption.

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Lebanon is one of the very few countries that does not have an implemented competition law.

LCPS

About the Policy Brief

A Policy Brief is a short piece regularly published by LCPS that analyzes key political, economic, and social issues and provides policy recommendations to a wide audience of decision makers and the public at large.

About LCPS

Founded in 1989, the Lebanese Center for Policy Studies is an independently managed, non-partisan, non-profit, non-governmental think tank whose mission is to produce and advocate for policies that improve governance in Lebanon and the Arab region. LCPS's current research agenda focuses on: enhancing governance, informing the process of economic growth and sustainable development, promoting inclusive and effective social policies, and informing the development of policies for a sustainable environment. Four themes cut across the above areas of focus, including gender, youth, conflict resolution, and technology.

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■ Restoring trust and dealing with the informal sector

Enabling the environment for a sustainable growth of MSMEs in Lebanon cannot be imagined in the current abnormal conditions the country has been going through since the economic collapse. Solving the major macroeconomic issues is necessary to stabilize and ensure public finances are put on a stable trajectory and avoid further temporary solutions that further delay any kind of real resolution. In addition, the restructuring of the banking sector must be a top priority, in order to restore trust, open future pathways for green financing and investment opportunities, and start planning for a sustainable and resilient green transition.

Moreover, dealing with the informal economy is another priority for both government and business owners. Given the stark negative impact that the informal economy has on both government revenues and the formal MSME sector (due to illegitimate competition⁶), tackling this with strategic regulatory instruments would create benefits with multiple dividends for the overall economy. Creating incentives for MSMEs to join the formal economy—such as tax breaks for micro enterprises, providing easier access to formal credit facilities, increasing access to formal markets for products and services, and creating networking opportunities and platforms for MSMEs to connect with formal businesses, government agencies, and other stakeholders—can be some of the applications. It is important to note that jobs in the informal sector do not have the same protection as others, especially when it comes to women and youth.

■ Building capacity to assess climate risks

Beyond macroeconomic and banking sector considerations, it is crucial to take into account the climate's impact on the overall economy as well as on individual sectors, which are still overlooked. There is an urgent need to build local capacities in order to empower both public servants and private actors to realistically assess climate risks and take into consideration the associated impacts in developing future plans.