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**SMALL AND MEDIUM-SIZED ENTERPRISES FACING
CHALLENGES AND CRISES: THE CASE OF THE AGRI-FOOD
SECTOR IN LEBANON**

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ABSTRACT

Small and medium-sized enterprises (SMEs) play a crucial role in the Lebanese economy, contributing to innovation, job creation, and economic growth. They are essential in diversifying industries and bolstering the country's economy. This study focuses on the microenterprise landscape within the Lebanese agri-food sector, specifically targeting SMEs in the Mount Lebanon region. It identifies the main challenges faced by SMEs in the region and explores how agri-food entrepreneurs address and manage them. The research utilized a blend of qualitative and quantitative methodologies, including interviews with 32 agri-food entrepreneurs in Mount Lebanon, selected based on specific criteria. Data collection took place from November 2023 to January 2024. Descriptive statistics, correlation and regression techniques were applied to the collected data. The identified challenges faced by SMEs included brain drain, limited access to raw materials, energy shortages, high operational costs, financial constraints, and declining consumer purchasing power. High energy costs emerged as the most significant challenge for SMEs, followed by financial constraints, energy shortages, and consumer purchasing power. Additionally, the results showed a statistically significant relationship between the entrepreneur's level of education and high energy costs, as well as between the type of enterprise and consumer purchasing power. These findings carry significant implications for industry professionals, business incubators and accelerators, non-governmental organizations, and other stakeholders, underscoring the importance of supporting Lebanese SMEs in enhancing their resilience amidst multifaceted uncertainties and crises.

Keywords: *Agri-food industry, Entrepreneurship, Near East, Resilience, SMEs.*

INTRODUCTION

In different regions around the world, agri-food industries have become important catalysts for both economic progress and sustainable development (Karwacka et al., 2020). The agri-food sector plays a significant role in the local economy of Lebanon, with the majority of industrial establishments being agri-food enterprises. These businesses account for 26% of all enterprises and contribute 2.9% to the country's Gross Domestic Product (GDP) (IDAL, 2020).

Despite their important role, agri-food industries and entrepreneurs encounter obstacles such as the impact of climate change (Gitz et al., 2016), limited resources (Ghayad et al., 2022), market volatility (Borsellino et al., 2020), evolving consumer preferences (Faour-Klingbeil et al., 2021), political instability (International Labour Organization, 2022), inadequate infrastructure (Al Shaher & Zreik, 2022), and brain drain (Halawi, 2022). This scenario may impede their growth and sustainability, affecting rural development, food safety, and the overall economic situation.

The potential of Lebanese agri-food entrepreneurs has not been fully explored, despite the rapidly emerging challenges and crises in Lebanon. Entrepreneurs are working hard to overcome these unfavorable circumstances, with some demonstrating quick adaptation to new scenarios due to their entrepreneurial resilience and support from various Non-Governmental Organizations (NGOs) or business incubators (Matar, 2023). On the other hand, some entrepreneurs face difficulties in emerging or recovering from disruptions, leading to social and economic losses (Maddah, 2022).

In this setting, the goals of this research are as follows:

1. To recognize and comprehend the difficulties and barriers (such as technical and financial obstacles) encountered by agri-food entrepreneurs in Mount Lebanon.
2. To pinpoint the approaches employed by agri-food entrepreneurs to develop resilience. This entails evaluating their preparedness to anticipate or confront crises, their ability to adjust to evolving circumstances, and their reaction to these crises and disruptions.

MATERIALS AND METHODS

Study area

The main hubs of social, economic, political, and cultural activities in Lebanon are the governorates of Beirut and Mount Lebanon. Beirut is predominantly urban, while Mount Lebanon comprises both urban and rural regions, making it a strategically preferable option for this research over Beirut. Furthermore, according to Nakat et al. (2023), 48% of agri-food businesses are located in the Mount Lebanon Governorate.

The international organizations providing grants often perceive the Mount Lebanon Governorate as more prosperous, resulting in an unequal distribution of funds,

donations, and aid away from this region. Therefore, it was crucial to choose this governorate and emphasize the considerable needs and challenges faced by entrepreneurs in this area and to show that it also necessitates assistance and support. The location of the Mount Lebanon governorate on the Lebanese map, along with the six distinct districts in the study area - Jbail/Jbeil, Kesrouan/Keserwan, EL Metn/Matn, Baabda, Aley, and Chouf districts - is depicted in Figure 1. Jbeil, Keserwan, and Matn make up the northern section of Mount Lebanon, while Baabda, Aley, and Chouf constitute the southern section.



Figure 1. Location of the study districts in Lebanon.

Source: Adapted from CometoLebanon (2024)

Research design

To meet the needs of this study, both qualitative and quantitative research methods were employed. Qualitative research involved interviewing key stakeholders, while quantitative research involved gathering measurable data from agri-food entrepreneurs in the Mount Lebanon region through thoughtfully crafted surveys that explored the challenges faced by these SMEs after the 2019 crisis, as well as their approaches to addressing these challenges. The survey questionnaire was adapted from other studies led by Murimi et al. (2019), Attieh (2022), and Alshebami (2023), and was customized to suit both the Lebanese context and the research goals. To maintain ethical data collection, the survey included a section outlining the research objectives, data protection protocol, confidentiality, and voluntary participation.

Sampling

The study focused on agri-food entrepreneurs located in the Mount Lebanon governorate. A comprehensive list of agri-food SMEs in Mount Lebanon was compiled using various sources, such as contacts with business incubators, online research, internships at Fair Trade Lebanon NGO, participation in entrepreneurial

development events, and engagement in local markets. The criteria for including SMEs in the study were: agri-food Lebanese entrepreneur, located in Mount Lebanon, and operating for a minimum of 2 years. The enterprise should have a turnover of \$500,000/year or less, with a maximum of 50 employees.

Based on the above-mentioned criteria, 32 SMEs were selected from the initial list and contacted.

Data entry and analysis

Upon collection of the data, the survey responses were analyzed using SPSS software version 29.0. Each response received a numerical value and scale, which were then processed using the software. Descriptive statistics and correlation were employed to establish connections between the factors of interest and the challenges encountered by SMEs, considering statistical significance at 5 %.

The reliability of the questionnaire was assessed using the Cronbach alpha test to produce scores. Additionally, the association between the socio-demographic factors and each of the challenges faced by SMEs was evaluated using the Chi-square test. When more than 20% of cells had anticipated frequencies < 5, Fisher's exact test was used in the results because the approximation approach was inadequate (Kim, 2017).

RESULTS AND DISCUSSION

Descriptive statistics

Socio-demographic characteristics of the participants

The participants' demographic profile displayed an equal distribution between genders. A significant proportion of the entrepreneurs are aged over 35, with 40.6% being over 45. This demographic is representative of the industry's knowledge and education, which contributes to the development of new ideas and thoughtful decision-making. The majority of SMEs specialize in processed foods, beverages, and dairy products. The northern Mount Lebanon region is home to 81.3% of SMEs, with 40.6% of firms having 1-5 employees and 37.5% having 6-10 workers.

SMEs have operated for at least five years, indicating stability and expertise within the industry. Despite varying levels of income, the majority of SMEs in the agricultural and food sector generate annual revenues ranging from \$20,000 to \$99,000, highlighting the financial diversity, market reach, and different levels of achievement across these businesses.

Challenges faced by the SMEs

Agri-food SMEs in Lebanon face significant obstacles, notably energy shortages as shown in Figure 2, coupled with the high cost of energy sources depicted in Figure 3. A majority of the SMEs (59%) reported a substantial impact on their business operations due to energy shortages, while 85% expressed that high energy costs have significantly affected their business. A report from the International Labor Organization (ILO, 2022) highlighted that the agri-food sector in Lebanon is facing immense challenges due to electricity cuts and the loss of refrigeration for food,

increasing the risk of food spoilage and diminishing the quality and shelf-life of food products. The breakdown of infrastructure poses a severe threat to the ability of small businesses and start-ups to navigate and overcome these challenges.

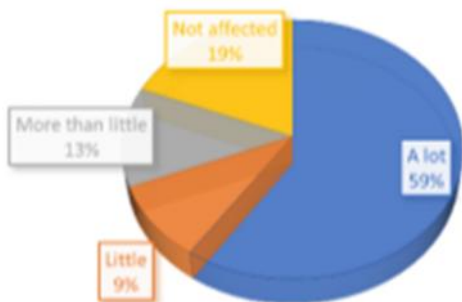


Figure 1. Impact of energy shortage

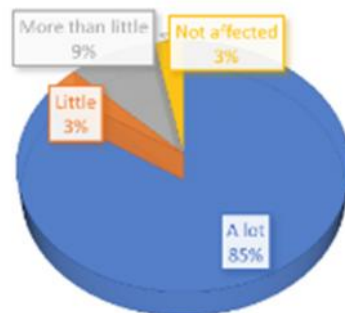


Figure 2. Impact of high energy cost.

Moreover, SMEs encountered significant obstacles such as limited financial resources (Figure 4) and a reduction in consumer purchasing power (Figure 5). 81% of the SMEs surveyed reported a substantial or significant impact on their businesses due to financial constraints. It is evident that SMEs rely on consumer purchasing power, with 53% stating that the decrease in the latter had a noteworthy impact on their activities. Furthermore, a study conducted by Expertise France (2021) highlighted that access to funding continues to be a major challenge for female entrepreneurs in Lebanon, along with hyperinflation, fluctuations in the Lebanese currency, and declining customer buying power.

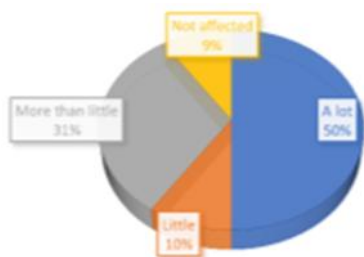


Figure 4. Impact of the lack of financial resources on SMEs.

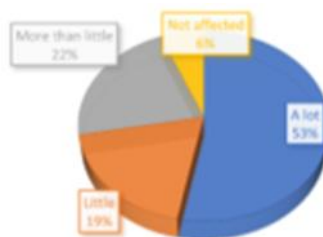


Figure 5. Impact of the purchasing power on SMEs.

It is noteworthy that despite the current crisis in Lebanon causing a loss of skilled workers and brain drain (ILO, 2022), a majority of SMEs (59%) indicated that this problem did not significantly affect their operations. Despite the economic crisis, the Lebanese agri-food sector remains appealing, particularly for young individuals who are returning to farming and engaging in agri-food activities (ILO, 2022). Lastly, the impact of shortages or high prices of imported raw materials was minimal, with only 22% of SMEs reporting a moderate or significant effect on their businesses.

Readiness of SMEs for future crises

The survey aimed to understand the challenges encountered by entrepreneurs during times of crisis and their strategies for addressing them. Based on their feedback, entrepreneurs have made significant changes to their business models and strategies in response to crises. These strategies included introducing new product lines, implementing delivery services, and adjusting manufacturing and distribution systems. Entrepreneurs have emphasized the importance of creativity, resource efficiency, and adaptability in overcoming crises.

In order to alleviate the emotional impact of the crisis, entrepreneurs have implemented strategies such as seeking support from family members, fostering a supportive work environment, making facility and salary adjustments, setting clear objectives, managing expectations, seeking guidance through prayer and faith, and prioritizing critical enterprise tasks.

Some business owners expressed concerns regarding the potential effects of crises related to political instability and security issues, while others expressed confidence in their capacity to overcome hurdles. They highlighted the importance of some personal traits such as adaptability, knowledge, and innovation in maintaining resilience.

Many entrepreneurs intend to broaden their revenue streams by diversifying their product offerings, enhancing marketing strategies and distribution channels, and extending their market presence both domestically and internationally. They identified various stakeholders, including investors, non-governmental organizations, and financial institutions, whose support would be crucial in enhancing their resilience to future challenges. The needed support covers a wide range of areas, including technical expertise, financial assistance, business planning, marketing strategies, and expansion into new markets.

Correlation between socio-demographic factors and the faced challenges

Age

Entrepreneurs of different ages faced similar challenges, showing a consistent level of resilience across age groups. However, a closer examination uncovered interesting patterns. Individuals aged 45 and above reported more significant impacts, particularly in terms of brain drain and employee turnover (30.8%) as well as difficulties related to energy shortages (76.9%). Conversely, younger entrepreneurs encountered challenges related to obtaining raw materials (26.3%), high energy costs (100%), limited financial resources (89.5%), and reduced consumer purchasing power (84.2%). This suggests a dynamic interaction between experience and adaptability, with older entrepreneurs relying on established networks and knowledge, while younger ones using agility and creativity to navigate uncertainty.

Gender

Gender-specific analyses revealed noticeable disparities without being statistically significant. Significant challenges are faced by female entrepreneurs and managers due to shortages of raw materials (37.5%), scarcity of energy (75%), high energy

expenses (100%), and limited consumer purchasing power (81.3%), which could present obstacles in securing financing and establishing supply chain networks. In contrast, male owners and managers encounter substantial difficulties related to brain drain and staff attrition (25%), as well as inadequate financial resources (87.5%).

Education level

The results showed that individuals with a high school diploma or less, experienced significant impacts from high energy costs and limited financial resources, affecting 75% of them. They also faced some impact from energy scarcity. Individuals with a bachelor's degree encountered challenges related to high energy costs, limited financial resources, and reduced consumer purchasing power.

While the majority of associations are not statistically significant, the level of education had a notable impact on issues such as energy scarcity, high energy costs, limited financial resources, and, most importantly, a decline in consumer purchasing power.

Analyses showed a statistically notable correlation ($p < 0.05$) between the education level and the consumer purchasing power. Higher levels of education have a more pronounced influence on consumer buying capacity. Consequently, it can be inferred that entrepreneurs with extensive education often tailor their products to appeal to customers with significant purchasing power.

Higher levels of education among business owners are often associated with an increase in consumer purchasing ability, as customers may be willing to pay more for creative or high-quality goods. However, it is crucial to acknowledge that this correlation can be impacted by factors like market conditions, consumer preferences, and the overall economic climate. Instead of assuming that consumer purchasing power decreases as business owners' education levels rise, it is more probable that shifts in consumer preferences and spending patterns will be influenced by the introduction of innovative or superior products.

Type of enterprise

SMEs encounter various obstacles such as limited financial resources, energy scarcity, high energy expenses, and a decrease in consumer buying power. Upon careful examination of the data, it was noteworthy that high energy costs were significantly prevalent ($p=0.05$) among different types of organizations. This emphasizes the substantial impact of energy expenses on the operational dynamics and profitability of enterprises in the studied sectors. This obstacle should be tackled through effective resource management, the formulation of efficiency strategies, and the exploration of alternative energy sources or cost-saving measures to alleviate its adverse effects.

Number of years in operation

Though there was no significant difference ($p > 0.05$), it was observed that younger SMEs experienced lesser impact, indicating their higher adaptability and agility compared to more established businesses. However, new companies encountered

more difficulties related to consumer buying power (85.7%), likely due to concerns about entering the market, as well as shortages or rising costs of raw materials (28.6%), as opposed to older SMEs. These results highlight the necessity of combining expertise with innovation, agility, and responsiveness to market changes to ensure sustained long-term growth.

Entrepreneurs, especially those running businesses for less than five years, have highlighted that the emergence of new SMEs during the recent crises (since 2019) is impacted by different elements including necessity, recognizing prospects, pursuing independence, strength, broadening revenue streams, and decreasing dependence on traditional jobs.

From the outset, integrating innovative business models has empowered these emerging entrepreneurs to operate more efficiently and adapt quickly to market changes. Furthermore, the hardships faced in Lebanon's economic and political landscape since 2019 have equipped them to put in place strategies to minimize risks and overcome challenges more effectively. In addition, the entrepreneurial mindset of these new SMEs, characterized by resilience and a willingness to experiment, has contributed to their capacity to prosper during adversity, recognizing crises as opportunities for expansion. Lastly, the impact on fledgling small businesses is less significant compared to larger, more established enterprises with greater responsibilities and longevity.

CONCLUSIONS

The research provides insights into the capacity of SMEs in the agricultural and food industry in Mount Lebanon to cope with economic and social difficulties, particularly during recent crises.

SMEs in Lebanon face a significant hurdle due to the escalating energy expenses and shortage. SMEs can alleviate the impact of soaring energy costs by exploring alternative energy sources and adopting energy-efficient technologies such as solar panels. NGOs can assist SMEs by devising energy-saving initiatives specifically tailored to their requirements, offering technical assistance, training, and access to energy-efficient solutions to lower operational expenses. SMEs often encounter limited financial resources, which is a commonly experienced hurdle for entrepreneurs aiming to expand their businesses. Entrepreneurs can tackle this challenge by exploring alternative funding avenues like crowdfunding, venture capital, or angel investors. Local banks can also play a vital role in assisting SMEs by providing them with advantageous loan terms and interest rates to spur economic growth. Moreover, businesses can address the impact of decreasing purchasing power on SMEs by implementing strategies such as diversifying their product offerings, providing discounts or promotions, and targeting niche markets with higher purchasing power to maintain their operations in the face of challenging economic conditions.

Considering the current difficulties faced by Lebanon's agri-food sector, the proposed strategies seek to tackle urgent issues and take advantage of emerging opportunities. For example, concentrating on providing support to young SMEs

and home-based businesses is in line with the objective of nurturing entrepreneurship and generating employment prospects, particularly during periods of economic hardship and social instability. Initiatives that aid women-led enterprises and artisanal production can give a voice to marginalized communities while encouraging comprehensive economic development. Moreover, delivering customized coaching and training initiatives to tackle Lebanon's specific challenges, including crisis management, financial control, e-commerce, and market fluctuations, can enable entrepreneurs to cultivate resilience and adaptability in volatile environments. Integrating export planning and market insights is vital considering Lebanon's dependence on exports and the necessity to diversify market destinations in uncertain global conditions.

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