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*Form Approved  
OMB No. 0704-0188*

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<b>1. REPORT DATE (DD-MM-YYYY)</b> 03/29/2021	<b>2. REPORT TYPE</b> Master's of Military Studies	<b>3. DATES COVERED (From - To)</b> AY 2020-2021
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<b>4. TITLE AND SUBTITLE</b> Lebanon Amid Austerity: How Can The Lebanese Armed Forces Face Immense Defense Budget Cuts?	<b>5a. CONTRACT NUMBER</b> N/A
	<b>5b. GRANT NUMBER</b> N/A
	<b>5c. PROGRAM ELEMENT NUMBER</b> N/A

<b>6. AUTHOR(S)</b> Fayad, Rashad, Major, LAF	<b>5d. PROJECT NUMBER</b> N/A
	<b>5e. TASK NUMBER</b> N/A
	<b>5f. WORK UNIT NUMBER</b> N/A

<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> USMC Command and Staff College Marine Corps University 2076 South Street Quantico, VA 22134-5068	<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b> N/A
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<b>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b>	<b>10. SPONSOR/MONITOR'S ACRONYM(S)</b> Dr. Christopher C. Harmon
	<b>11. SPONSOR/MONITOR'S REPORT NUMBER(S)</b> N/A

**12. DISTRIBUTION/AVAILABILITY STATEMENT**  
Approved for public release, distribution unlimited.

**13. SUPPLEMENTARY NOTES**

**14. ABSTRACT**  
Lebanon is currently passing through one of its worst economic crises and the government has adopted an austerity policy that affected various sectors of the country, especially the military sector as enormous cuts in the defensive budget were implemented. The European countries faced the same problem after the 2008 world economic crisis, and their military institutions had to carryout vital actions to adopt to the budget cuts. Similarly, there are certain procedures that the Lebanese Armed Forces can put in effect in order to reduce its expenditures without risking the loss of the ability to carry out the overloaded missions tasked to it by the government.

**15. SUBJECT TERMS**  
Lebanon; Lebanese Armed Forces; Austerity; 2008 Economic Crisis; Defense Budgets; Budget Cuts

<b>16. SECURITY CLASSIFICATION OF:</b>			<b>17. LIMITATION OF ABSTRACT</b>	<b>18. NUMBER OF PAGES</b>	<b>19a. NAME OF RESPONSIBLE PERSON</b>	
<b>a. REPORT</b>	<b>b. ABSTRACT</b>	<b>c. THIS PAGE</b>			USMC Command and Staff College	
Unclass	Unclass	Unclass	UU	33	<b>19b. TELEPHONE NUMBER (Include area code)</b> (703) 784-3330 (Admin Office)	

United States Marine Corps  
Command and Staff College  
Marine Corps University  
2076 South Street  
Marine Corps Combat Development Command  
Quantico, Virginia 22134-5068

MASTER OF MILITARY STUDIES

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**TITLE:**

**Lebanon Amid Austerity: How Can The Lebanese Armed Forces  
Face Immense Defense Budget Cuts?**

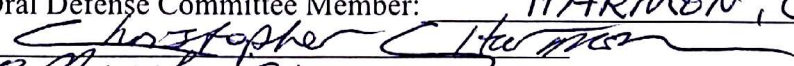
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MASTER OF MILITARY STUDIES

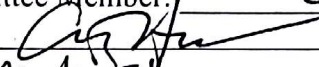
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AY 2020-21

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Mentor and Oral Defense Committee Member: HARMON, Christopher C., PhD  
Approved:   
Date: 18 March 21

Oral Defense Committee Member: CRAG HAYDEN  
Approved:   
Date: 22 March 21

## **Executive Summary**

**Title:** Lebanon Amid Austerity: How Can The Lebanese Armed Forces Face Immense Defense Budget Cuts?

**Author:** Major Rashad Fayad, Lebanese Armed Forces

**Thesis:** The Lebanese Armed Forces can accommodate the defense budget cuts by adapting an austerity policy and implementing some measures that could significantly contribute to achieving savings and reducing its expenses.

**Discussion:** Lebanon is currently passing through one of its worst economic crises and the government has adopted an austerity policy that affected various sectors of the country, especially the military sector as enormous cuts in the defensive budget were implemented. The European countries faced the same problem after the 2008 world economic crisis, and their military institutions had to carry out vital actions to adopt to the budget cuts. Similarly, there are certain procedures that the Lebanese Armed Forces can put in effect in order to reduce its expenditures without risking the loss of the ability to carry out the overloaded missions tasked to it by the government.

**Conclusion:** Despite the severe defense budget cuts, the Lebanese Armed Forces can continue to fulfill its missions through implementing measures that help save money and reduce military spending. Some of these measures are using sustainable energy resources, promoting a culture of austerity among military personnel, changing some units' structure, cutting down the number of personnel and equipment, developing military industrialization, and using digital instead of paper mailing system.

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### *Acknowledgments*

I want to thank everyone who contributed, directly or indirectly, to preparing this paper, and I especially thank the leadership of the Marine Corps Command and Staff College and its instructors for giving me the opportunity to conduct this study. All appreciation for my mentor Dr. Christopher C. Harmon who kindly reviewed this paper and provided me with the necessary and appropriate instructions and a few ideas about case studies and organizations. I would also like to acknowledge Mrs. Stase Wells from the Leadership Communication Skills Center for her professionalism and availability as she continually provided quality feedback. As for my beloved wife, Malak, the least I can give her is a word of thanks in appreciation for her moral support and encouragement to achieve the best results.

## **Introduction**

For more than a year, Lebanon has been going through an economic crisis unprecedented in the nation's history. Lebanon is a country that is very dependent on imports; it has started to suffer from the loss of foreign exchange to pay for what it consumes, and the government is printing money to keep on paying salaries while it is unable to repay the public debt. What has prevented the financial collapse so far is the imposition of strict capital controls by banks, but this, in turn, has shut down a large part of the economy, causing high unemployment rates and bankruptcy of many private companies. The crisis in Lebanon, which relies heavily on imports, has worsened since August 2020, when Beirut's port was severely damaged by a huge explosion resulting from the storage of large quantities of ammonium nitrate in a way that does not comply with minimum public safety requirements. In addition to all these misfortunes, the country's "medical emergency" to combat the spread of COVID-19 might be a nail in the coffin of the remaining companies that are already struggling to survive.

All of that led to many demonstrations for a change in the ruling political class. Thus, Lebanon began to suffer from more security challenges as the street movements led to more unrest. There is a concern among economic analysts that this crisis will worsen to the point where the state, whose financial distress has been exacerbated by the collapse of the ability to collect tax revenues, cannot pay public sector salaries. At that point, excessive inflation of the Lebanese pound will lead to the devaluing of people's income. Such a scenario could lead to the disintegration of governmental legitimacy, and what were essentially peaceful protests could turn into acts of violence.

In an attempt to confront this severe economic crisis, the government adopted exceptional financial and economic measures. These included containing the mass expenditures on salaries and wages, moving towards a fairer tax system, strengthening state revenues and tax collection, and strengthening mechanisms for controlling spending. According to these financial policies, the state's general budget reduced the expenditures of most of the ministries and public administrations, including the Ministry of National Defense, which had its budget decreased by about 9.2% from the previous year. These budget cuts were in several fundamental areas, in spite of the fact that Lebanon's spending on the defense budget was already meager.

The Ministry of National Defense consists of the Lebanese Armed Forces (LAF), the General Directorate of Administration, the General Inspectorate, and the Military Council. The LAF has been the pillar of maintaining security in Lebanon since 1990, when the government assigned it with the task of supporting the Lebanese Internal Security Forces in maintaining security in the country. In addition to that, it remains responsible for fulfilling its essential mission, which is to defend the Lebanese territories against any external aggression.

The LAF's budget is the largest in the defense budget, as it constitutes around 98.7%. That defense budget has been affected by the significant reduction that has befallen it, especially in primary areas such as equipping, arming, feeding, construction, fuel, and social financial aids. Consequently, it is natural that the LAF is the most affected by these reductions, and that might negatively affect its performance against many dire challenges both externally and internally. Therefore, the LAF must take some measures to limit the negative repercussions that resulted from its budget reduction so that it can continue to preserve the integrity of the country and civil peace.

Lebanon is not the first country to go through defense budget cuts. Many countries that faced economic crises looked towards their military institutions and worked to reduce their budgets. The Lebanese army can accommodate its budget cuts by adapting an austerity policy and following some possible implementation steps (in short/long term). This research paper offers LAF's planning headquarters a tool for developing visions and ideas that might help the LAF to adapt to its budget cuts and to mitigate the adverse effects of this reduction. That can be critical, particularly in light of the delicate security situation that demands more defense budget increments instead of reductions, in order to enable the LAF to confront all the threats Lebanon is facing, especially after the army has proven on several occasions that it is able to confront and play its national role to the fullest.

### **Current Policy Discussion**

Since Lebanon's financial crisis reached its worst levels just over a year ago, not many peer-reviewed papers have discussed that subject. Moreover, most of those papers and articles focused on the Lebanese economic problems in general, and very few scholars discussed the vast defense budget cuts, how these cuts affect the Lebanese Armed Forces, and how the LAF can adapt to these cuts or at least the austerity measures that the LAF is already implementing.

According to former Defense Minister Elias Bou Saab, adaptation to the austerity policy is possible by stopping the recruiting of officer cadets every year, reducing the armed forces' number by ten thousand soldiers within five years, and conducting a study to gradually reduce the number of generals in the armed forces from over 400 to 120 generals.<sup>1</sup> Such procedures should be part of an integrated plan discussed in the Council of Ministers that takes into

consideration increasing the participation of the Internal Security Forces in peacekeeping operations inside Lebanon, a job that the army is currently doing in Lebanon.

In the same context, some researchers discussed the LAF headquarters' action to select officer cadets from within the military corps instead of recruiting new civilian people.<sup>2</sup> During their military academy training, those selected soldiers will get lower salaries as cadets than what they were receiving as enlisted soldiers. Also, the average age of those soldiers is greater than that of civilians usually recruited as officer cadets; thus, this contributes to reducing the percentage of officers that reach high ranks.<sup>3</sup> A lot of them will reach the retirement age before promotion to brigadier general, and thus their end of service compensation will be much less.

Some experts writing on the Lebanese defense budget argue that the military can save money by terminating certain positions in the armed forces. They discuss the possibility of canceling the military attaché position in Lebanese embassies abroad.<sup>4</sup> There are about twelve military attaches (usually a general with a warrant officer as an assistant) distributed among the five permanent members of the UN Security Council, in addition to other selected countries. The abolition of these jobs saves a significant amount of money for the armed forces because these attachés receive their salaries in US dollars and not in Lebanese pounds by virtue of their presence outside Lebanon, not to mention the high travel allowance they receive.<sup>5</sup> There is an ongoing discussion in the Ministry of Defense and even in essential branches in the government about keeping only the military attachés in the Security Council's five permanent member countries.

In a video report, the LBC television station touched on some measures that reflect the LAF's austerity policy. In order to reduce the medical and health bills, the LAF started

modernizing its military hospital and linking it with civilian hospitals, and at the same time developing the military hospital call center to help monitor the process of military patients and their families' entrance into civilian hospitals.<sup>6</sup> Such an entrance will not be possible before contacting the call center and getting approval from a military doctor on duty who gives his approval only for emergency cases, which will reduce the bill to the nation.<sup>7</sup>

The report also mentioned some of the procedures regarding military training abroad. With such significant defense budget cuts, experts expect that the Lebanese Armed Forces will not send any officers or soldiers to participate in training courses abroad unless the host country covers their travel and accommodation costs.<sup>8</sup> In travel, the LAF will buy economy class tickets for officers with the rank of brigadier general and higher, instead of the business class tickets they used to get, and whoever wants to travel on business class pays from his own money.<sup>9</sup>

One of the articles in the Lebanese army's monthly magazine discussed some other measures that reflect the LAF's austerity policy. A "spending rationalization" policy adopted by the LAF's headquarters is based on a consensual agreement with the government and allows the Armed Forces to buy green (environmentally friendly) diesel directly from the Ministry of Energy instead of buying it from contractors, thus achieving savings up to 20%.<sup>10</sup> In the same context, the armed forces procurement office is preparing a study on the possibility of purchasing its needs of 95-octane gasoline directly from the Ministry of Energy in order to achieve more savings and keep the money within the treasury.<sup>11</sup>

Perhaps the Lebanese Armed Forces can achieve some self-sufficiency in terms of nutrition. For example, the army used to have baking ovens inside its barracks; those stopped working in the 1980s due to the civil war.<sup>12</sup> The LAF should study how several Arab armies,

including the Syrian and Egyptian armies, tried resorting to self-sufficiency by establishing farms for cows and poultry and vegetable cultivation; these experiences have been encouraging in general.<sup>13</sup> On the contrary, a military expert journalist argues that there are no possibilities in Lebanon to adopt similar solutions for the LAF lacks the infrastructures, resources, and expert labor necessary for such a project; purchasing materials from the market remains the best solution.<sup>14</sup> The quantities bought by the LAF contribute to move the economic cycle in Lebanon and solve the production crisis that olive and apple farmers suffer from in particular.

One method that can help during an austerity period is selling outdated equipment. The Lebanese Air Force has just one type of jet plane, the five English-made "Hawker Hunter" planes that it brought between 1958 and 1977. Some argue that the LAF should maintain its antique "Hawker Hunter" planes because of their importance in the history of the Lebanese Air Force, for most of the armies honor their history and immortalize it in museums or through the establishment of military tourist attractions that add a kind of "marketing" highlight.<sup>15</sup>

Nevertheless, others argue that the armed forces should dispense with these planes' missions, given that they have become old-fashioned, and because the cost of operating them has become prohibitive, in addition to the lack of spare parts for their maintenance.<sup>16</sup> Consequently, they are no longer suitable for operational missions, and their use is limited to military parades. The sale or exchange of these aircrafts today can secure an amount of money enough for the purchase of two primary-flying training aircraft because the Air Force currently has only three outdated "Bulldog" primary training aircraft, and most probably the Air Force will remove them from service after about three to four years.<sup>17</sup>

The points discussed above cover almost everything related to the Lebanese defense budget cuts that a researcher can find and access on the internet or in libraries, for the procedures suggested by the planning division in that LAF to adopt with the budget cuts are still classified and have not been published yet. Since there is not enough current peer-reviewed information on Lebanon's economic crisis and resulting military budget problems, this paper will analyze these issues and potential solutions by looking at cases from other countries, especially some procedures that major European armed forces applied after the 2008 economic crises that resulted in austerity policies in their defense budgets.

### **Case Studies**

The year 2008 witnessed global economic and financial crisis. That had a significant impact on European countries, especially on their financial decisions and budgets in various areas of politics, including security and defense budgets. Hence, European countries were forced to adapt their budgets to the economic crisis environment despite the fact that international security requirements still necessitated an adequate response to a range of national and external risks and threats. That included cyber threats; regional instability, specifically in North Africa and the Middle East; the presence of some terrorist and extremist movements; potential natural disasters; and human trafficking and organized crime.

Despite all those risks, the 2008 economic crisis forced European countries to implement austerity measures on defense budgets. Overall, real defense-spending levels in Europe were 7.4% lower than in the previous year.<sup>18</sup> Despite this general trend, at the national level, the cuts in defense budgets were different across Europe. The most extensive military budget cuts, almost up to twenty percent, were introduced in the smaller European countries.<sup>19</sup> Most of the middle-

sized European countries introduced military budget cuts with an average of ten to fifteen percent, while larger E.U. countries that were known to have the most robust economies like Germany, the United Kingdom, and France had to cut down their military budgets by about eight percent.<sup>20</sup>

The below case studies aim to analyze how the British, German, and French armed forces responded to the deep cuts in defense budgets applied by their governments. Such analysis helps to draw lessons from how some of the best European armies dealt with such cuts in their budgets. Also, the case studies show the measures these countries took in order to continue to develop their capabilities and define their spending priorities according to the risk analysis and to the possible future roles of these armies in military conflicts.

### **The British Military**

Britain's armed forces reduced their capabilities while trying to maintain sustainability and adopting a phased readiness system that assumed the avoidance of having to engage in, or maintain, a large-scale, long-term military operation.<sup>21</sup> To deal with possible capability gaps, the U.K. Ministry of Defense developed its defense cooperation with France; it signed a treaty in November 2010. Such cooperation helped both countries reduce some military expenditures by combining logistics and maintenance of the A400M transport aircraft; having joint research and development efforts in multiple military domains such as cybersecurity, new missile systems, and satellite communications; and doing joint training exercises.<sup>22</sup>

One of the procedures that the British Army implemented was the "Whole Fleet Management" (WFM) system. In this system, the British army created a central pool of military equipment instead of issuing the army units a full complement of equipment, and items would be

later issued out to those units based on training requirements or operational objectives.<sup>23</sup> By using this system, a smaller amount of equipment would be sufficient to conduct all necessary missions. The British army also made some changes in its force structure to adapt to the budget cuts and reduction in equipment. It divided its units into two primary forces: a reaction force (fully equipped and ready to conduct any military operation) and a light adaptable force (just for limited operations).<sup>24</sup>

In addition to changes in its force structure, the British armed forces had to reduce their personnel and equipment. The army's overall personnel decreased from about 105,000 in 2008 to 90,000 in 2015 and 82,000 in 2020.<sup>25</sup> As for the equipment, the army decreased the number of its main battle tanks (MBT), the Challenger tanks, by forty percent, and its AS90 155mm howitzers by 30 percent.<sup>26</sup> Regarding the British Royal Navy, budget cuts led to the reduction of the surface fleet from twenty-two to nineteen frigates and destroyers.<sup>27</sup> Britain's military also had to reduce its Air Force platforms. The Air Force took out of service its Tornado F3 and Harrier planes, thus reducing the types of its fast jets from four to two, and at the same time, reducing the Tornado GR4 force by two squadrons.<sup>28</sup>

The British military determined that a reduced amount of nuclear warheads could provide the same degree of deterrence and thus decided to reduce the number of nuclear warheads on its submarines from forty-eight to forty each. The number of nuclear missiles on each submarine was also reduced from twelve to eight in order to decrease the high maintenance costs.<sup>29</sup>

### **The German Military**

The German military took several actions to adapt to its budget cuts. Its study concluded that reducing the total size of all military forces from about 228,000 soldiers, sailors, and airmen

to 185,000 would lead to a significant reduction in expenditures and would allow closing of hundreds of unessential military facilities while at the same time maintaining the ability to conduct essential tasks.<sup>30</sup> The German military strategy after the 2008 economic crisis recommended that the military should transform into a force primarily directed at stabilization operations of a less violent character, which helped the German military to reduce the size of its forces without affecting the ability to conduct required missions.<sup>31</sup>

Germany restructured its army to reduce personnel numbers, where it went down from five to three divisions and from eleven to eight brigades.<sup>32</sup> Another change in the German army's structure was adopting a force generation system similar to the U.S. Army's ARFORGEN.<sup>33</sup> According to that system, a division would be required to provide the forces needed for all deployment missions for a one-year period followed by two years of training and reassignment aimed at providing basic joint forces maneuver capabilities for conventional high-intensity combats and any other capabilities necessary for the planned future deployments. In addition to that, the German army adopted the British Whole Fleet Management system, which helped in reducing its equipment inventory.<sup>34</sup>

In addition to budget savings attained from reorganizing various aspects of the German armed forces and getting rid of some administrative levels, additional savings came from reductions in personnel (military and civilian employees) and both current inventory of equipment and future procurements.<sup>35</sup> In the army, according to *Jane's Defense Weekly* magazine, the Leopard 2 main battle tank fleet was reduced from 350 to 205, and the number of Puma infantry fighting vehicles (IFVs) went down from 405 to 350.<sup>36</sup>

As for the Navy, and despite its small size, it went through a challenging reorganization process. It closed a number of bases, including one that was only dedicated to mining countermeasures vessels, and left only four major naval bases.<sup>37</sup> The Navy also merged different headquarters, where all naval aviation assets were incorporated at one naval airbase and subordinated to a Navy Aviation Command, and the Fleet Command and the Naval Staff were combined in a unifying Navy Command.<sup>38</sup>

### **The French Military**

In response to the defense budget cuts, the French military issued plans to reduce workforce levels, to defer procurement operations by slowing down the delivery process, and to adjust its force structure. The White Paper of 2008, which detailed military planning for the next fifteen years, called for a decrease in the number of troops, helicopters, transport aircraft, tanks, and ships.<sup>39</sup> In correspondence with that paper, the French military reduced its 320,000 member force by 54,000 personnel, reduced its Leclerc main battle tanks fleet, and reduced the number of personnel deployed overseas from 50,000 to 30,000.<sup>40</sup>

The French ministry of defense decided to close around eighty two garrisons and several training facilities, including the mountain warfare school.<sup>41</sup> The army was restructured into seven brigades, which allowed the French military to cut off twenty regiments and battalions (mainly engineering, logistic, artillery, and signals units) and reorganize some administrative services.<sup>42</sup>

The French Air Force was strongly affected by the defense budget cuts, as it incurred a sharp manpower reduction. The Air Force size was reduced to 50,000 after a cut of 24 percent of personnel.<sup>43</sup> In addition, the Air Force reduced the number of aircraft deployed for overseas operations and closed a number of airbases both inside France and abroad. As for the French

Navy, it had a reduction of 6,000 personnel, and to maintain its ability to effectively perform its extended roles overseas, it increased the number of military alliances with its partners, especially Britain.<sup>44</sup>

The French military made some changes in its force structure to adapt with the reduction in personnel and equipment. Similar to the Britain strategy, it moved toward a medium-weight force with optimal capabilities suitable for the broadest set of contingencies.<sup>45</sup> The French army also applied its equivalent version of the British Whole Fleet Management system, which is called "Politique d'emploi et de gestion des parcs" (PEGP), in order to achieve significant savings regarding equipment management.<sup>46</sup>

Another change in the structure was related to the staffing level. Historically, the French army had three levels of staffing: the execution level, which is conducted by the brigades; the conducting level, which is executed by the French Armed Forces Command; and the conception level, which is performed at what can be considered as the French equivalent of the Pentagon.<sup>47</sup> Due to improved communications and military downsizing, the French military made reductions at the lowest and highest levels, and most of the responsibilities of these two staff levels were transferred to the middle level, which became more essential in the French new force structure.

### **Recommendations**

The case studies of the British, German, and French armed forces after the 2008 world economic crisis showed that these militaries faced big deductions from their budgets through three main approaches: reducing the size of the force in a way that does not affect their abilities to achieve their missions and their governments' strategies, reorganizing their force structure to

compensate the personnel downsizing, decreasing their equipment inventory, and closing some of their bases. This part of the paper explores the possibilities of applying these approaches within the Lebanese Armed Forces, as well as suggesting some additional measurements that are specifically related to the Lebanese case and that can help the LAF decrease its yearly expenditures.

### **Personnel and Force Structure**

The number of the Lebanese Armed Forces is about 80,000. Theoretically speaking, this number is considered relatively large for a small country like Lebanon (area of 4036 sq mi), but the duplication of work and tasks performed by the LAF made this number insufficient. Since 1991, in addition to its main mission of defending the nation's borders against any external attack, the LAF has been assigned to maintain security inside the country as well as contributing in main development and humanitarian missions. The security deployment within the various Lebanese lands required the need for places for the military to be stationed, and since most of the military barracks were outside cities and did not meet the imposed requirements for patrols and perpetual check points, the LAF had to find real estate and buildings inside the cities and pay for rent, electricity, and other expenses.

There are a number of possible measures that contribute to reducing the logistical and personnel requirements in the security missions. For example, the lack of coordination between the agencies leads to the deployment of military personnel from the LAF and security personnel from the rest of the agencies like Internal Security Forces (ISF) or State Security for the same mission, especially in protecting ceremonies in places of worship during religious holidays. Prior coordination between the agencies reduces the consumption of military forces and their vehicles.

The LAF can reduce its number of personnel, but that should be associated with reactivating the role of the Internal Security Forces (ISF). After thirty years have passed since the end of the civil war, there is no reason or convincing argument for the ISF not to be able to carry out the security missions that are draining the LAF's capabilities and manpower. The ISF argues that it does not have enough personnel to maintain security across the whole country, so the LAF approach to reduce its size should be to suggest to the government that instead of demobilizing a number of soldiers, a better plan would be to transfer them to the ISF. In this way, the ISF will get enough experienced manpower to exclusively undertake the task of maintaining security in the country, whereas the LAF would keep a number of intervention regiments ready in their barracks to intervene in emergency situations as a support for the ISF, while maintaining their basic role, which is to train to stay fully prepared to confront external aggressions against Lebanon.

In parallel, the LAF would leave a number of intervention regiments ready in their barracks, to continue their training, not being tasked with security missions, but rather as a quick precaution to intervene in emergency situations as support for the Internal Security Forces in maintaining security, while maintaining their basic role, which is to work within their tasks to confront external aggressions against Lebanon. As for the rest of the LAF units, especially the mechanized infantry brigades, their exemption from the task of maintaining security will allow them to focus more on military training in order to bring them to a professional readiness that helps changing their structure into smaller, yet more specialized and proficient units.

There are many jobs within the LAF that do not need any military expertise to be performed. There are, for example, a number of small shops at the brigade level and in the LAF

administrative bases (they meet basic needs for the soldiers and thus are called a soldiers' house), and a number of soldiers serve within these homes, usually a manager and two to six vendors depending on the shop's classification and capital. Also, in each of the LAF's five regional commands, there is a military kitchen that provides the brigades within its region with daily hot meals. Each day the brigades send soldiers to the military kitchen to help in logistical tasks like loading and unloading goods, preparing the ingredients, distributing the meals, etc.

The job of a salesman in the soldier's shops, or that of a workman inside a military kitchen, does not require military specialization. Such jobs can be filled by civilians instead of using soldiers that the LAF has already spent a lot of time and resources on training and preparing to carry out military missions. Also, those civilians will only cost the LAF monthly salaries, while a military person would cost a lot more than that, from the monthly salary to the expenses of feeding, training, providing military equipment, hospitalizing, providing allowance for military clothing, in addition to paying the end of service compensation and the retirement pension.

The LAF can save ample sums through doing a study to determine which of the jobs occupied by military personnel can be contracted to civilians or private companies which will allow reductions in personnel numbers without affecting the ability to fulfill its missions. Many armed forces around the world have entrusted such tasks to civilian companies, as they have greater capabilities and experience in many non-military jobs within the armed forces. Some militaries even deal with private companies to repair their military vehicles, including tanks and armored vehicles after realizing the extent of savings these measures provide.

In 2007, the Lebanese government suspended military conscription for political reasons, but in light of today's severe economic crisis, the LAF can benefit from reactivating that service to create military reserves that can help in confronting sudden dangers threatening the country. Furthermore, military conscription would allow the LAF to augment its military capabilities at relatively low costs, as it is kind of a temporary annual contract that does not bind the LAF or the Ministry of Finance with large expenses in the long run like the retirement pension or the end of service compensation, as in the case of recruitment.

For a country emerging from a civil war, and with sects and religious parties that are still in constant conflict, military conscription would allow young people coming from different regions, affiliations, and society classes to fuse in one melting pot, and to experience feelings of familiarity and brotherhood engendered from training together. It also leads to the engagement of Lebanese youth with each other, increases communication between them within state institutions, and entrenches the values of national belonging and patriotism through the interaction between the military and the civil society.

Military conscription would contribute to securing additional personnel for the LAF and thus would allow it to reduce the numbers of active duty soldiers and officers. By receiving various numbers of recruits for military conscription each year, the LAF would be able to control its size, increasing or decreasing it according to those numbers and the number of annually retired military personnel, while taking into consideration the LAF requirements and the needs imposed by the circumstances surrounding the country.

## **Equipment**

As part of its security-keeping tasks, the Lebanese army relies on military vehicles such as the Humvee troop carrier vehicles and the old 2.5 and five-ton RIO trucks for its movements and patrols. Frequent and persistent implementation of security-keeping measures exacerbates the malfunctions in those already worn-out vehicles. Spare parts for these vehicles are very expensive, and most of the countries put export restrictions on these spare parts considering that they are classified within the military equipment category. Therefore, sometimes political issues affect the possibility of getting some military equipment or their spare parts, and in general, it is difficult and expensive for local traders in the Lebanese markets to buy such parts. The only way the LAF is able to get these parts is through paying huge sums of money to a limited number of manufacturers that practice monopoly or, in the best case scenario, through logistic donations from allied militaries.

The task of maintaining security requires speed and flexibility in movement within cities and condensed neighborhoods. A number of dual-use (military-civilian) vehicles, which are abundantly available in the local Lebanese markets, are considered very suitable for effective maneuvering in such areas. These vehicles are usually cheaper than the military ones, especially regarding the maintenance and spare parts costs. In addition to that, the process of acquisition of these vehicles is not subject to any political restraints. The LAF should consider the possibility of modifying the type of vehicles issued to units carrying out security missions inside the cities where some dual-use (military-civilian) vehicles can be as effective as the military ones in fulfilling the mission requirements, while at the same time helping the LAF reduce some of its expenses.

## **Buildings and Establishments**

When the LAF was assigned the mission of maintaining security inside the country at the end of the Lebanese civil war, it had to deploy in cities and villages where there were no military bases. Therefore, a lot of the LAF units were stationed in civilian buildings and houses abandoned by their owners due to the civil war. Nowadays, this incurs several expenses for the LAF, from rents to maintenance, electricity, and water expenses. Some of these places are occupied by small numbers of forces that do not even exceed a platoon size. The LAF can reduce such expenditures by evacuating unnecessary buildings and merging the nearby small military forces in a way that the minimum force in a single facility is of a company size. As for the long term, the LAF should start a project to completely eliminate the rent expenses, and this can be done by moving all the units into posts owned by the LAF. There are still many communal lands that belong to the Lebanese state, and the LAF should take advantage of some of them to build its own military posts.

## **Military Industry**

Military industry is one of the largest economic sectors in developed countries. This industry provides countries with military supremacy in addition to securing jobs for thousands of people inside the country. Unfortunately, there is no Lebanese military industry, and Lebanon does not have the raw materials or the expertise necessary for most of the complex types of these industries. However, the manufacturing of some military products, such as small arms ammunition, is not scientifically complicated and does not require skills that the Lebanese army does not possess.

The LAF should establish a factory to produce ammunition instead of purchasing it from arms dealers, and thus it can save a lot of money. The LAF should also construct a combined military-civilian development and research unit to study the possibility of manufacturing light and medium weapons, means of surveillance, military eavesdropping tools, etc. The results of this research should be transferred to a public company in the first phase in order to attract investments, with a part of that company being privatized later.

### **A Culture of Austerity**

Austerity should be the hallmark of this stage and the culture of military personnel of all ranks. The LAF must spread a culture of austerity and rationalized spending at all levels, from its command headquarters and planning level to soldiers executing tasks and orders, with a focus on using the minimum possible forces and equipment to carry out tasks and duties. In addition to training and developing the soldiers' skills, their military culture and way of living and conducting work in the military should be developed through constant orientation to understand that they do play an important role in helping the LAF save money.

The driver, the vehicle commander, the storekeeper, the signal operator, the gunner, the operators of the equipment and the machines, and everyone in the LAF must take care of the equipment they are responsible for in order to maintain the efficiency of the equipment and extend the machines' life expectancy for the longest possible period. By doing so, each member of the LAF would be participating in saving money paid for buying spare parts, repairing, and replacing the unfixable equipment. It is important here to highlight the crucial role of the officers who are direct supervisors of these operators to ensure the proper use and maintenance of the equipment.

Leaders should not hesitate to take appropriate disciplinary measures (behavioral and financial penalties) against anyone who uses the equipment in a wrong way that leads to its disruption, especially if that is a result of negligence or deliberateness. These disciplinary measures should not be restricted to direct executors, as supervising officers should also be subject to these punishments in case they are found to be negligent and not performing their duty in terms of proper supervision.

### **From Paper to Digital Mail**

Military correspondence forms the principal way of communication and exercising leadership within the LAF chain of command. The enormous volume of administrative work within the military organization causes large expenses for the LAF, from the cost of paper, to the cost of photocopying machines and their maintenance, in addition to the need of military personnel to do the task of a postman to deliver the written instructions and orders to various units.

Recently, the LAF began relying on digital ways for sending and receiving data in administrative work, as it constructed its own intranet and started using a “FILE TRANSFER PROTOCOL” (FTP) program to circulate mail, but this did not achieve significant savings, for two reasons. First, the adoption of the FTP system remained at the level of the LAF headquarters and down to the brigade command level only. Secondly, the LAF currently circulates the official mail via the FTP system in order to speed up the delivery of information and initiate the required procedures and measures, and then a hard copy of that mail is sent by traditional methods, and thus this is still financially costing the LAF a lot.

The LAF should rely more on digitalization in administrative work starting at the company level and upwards. It should start acquiring computers at the company's headquarters and connect these computers to the LAF intranet given the importance of such measures in speeding up the process of circulating and sending mail and exchanging various military memos and information at much less cost. The LAF is still reluctant about completely moving into digital systems regarding its internal messaging and mail because of the fear of hacking and leaks, yet most militaries across the world, that even deal with much more critical and sensitive daily paperwork, have turned completely digital in conducting their official mailing and messaging, from the administrative work all the way to operational orders.

This all should be accompanied with robust cybersecurity measures and strict SOPs about how to deal with the digital data. In addition to that, the LAF should do periodical orientation and training for the operators and their officers in order to establish the importance of staying vigilant and paying attention to different forms of hacking attempts. This can be done through permanent awareness and utilization of the expertise available in the LAF so that additional training programs and cybersecurity measures do not outweigh the costs saved by switching from paper to digital systems.

### **Sustainable Energy Resources**

The Lebanese geography and climate provide tremendous potential for generating renewable energy in a way that contributes to sparing the country from the negative repercussions caused by polluting energy sources. The most important of these sources is the sun, as the average of sunny days in Lebanon is approximately three hundred days a year, and technologies for generating energy from the sun have developed during the last several decades

to a large extent. Nowadays, solar energy provides all the electric energy needs of many countries with the same geographical size of Lebanon at a low cost and is a way that serves the environment and health. Another way of generating sustainable energy is through building wind mills. There are several studies that discuss how Lebanon is able to produce electricity through winds, as Lebanon has favorable winds in several regions, especially in the north and along the western mountain range.

The Lebanese government's failure to exploit these natural resources, either due to the political differences or due to the widespread corruption in some administrations, should not be reflected in the LAF. Currently, the LAF uses only four electric power plants (photovoltaic cells) that it got from the Ministry of Energy and Water. The LAF should start installing such power plants at least in all its big military bases. In its other small posts, less sophisticated equipment can be used, like the solar water heating systems. These systems are abundantly found in the Lebanese market at affordable prices, and installing them in all units will help the LAF reduce its expenditures of electricity bills to a great extent.

### **Conclusions**

In recession, or with a sharp decline in economic activity, most countries resort to austerity policies before it is too late. Such policies aim to reduce the size of government spending or raise taxes in an attempt to reduce the public budget deficit and to avoid the increase of government debt as a percentage of the GDP. Usually, the first sector targeted by these policies is the military sector because of its high portion of the government's budget or GDP. Around the world, the armed forces are considered the main tool to achieve the strategic policy,

vision, and interests of the state. Therefore, states invest a huge part of their budget in their military forces to enable them to play their required role.

The global economic crisis in 2008 is one example of that. Military spending was the most affected by the austerity policies adopted by countries due to that crisis. The case studies in this paper included how the French, British, and German militaries dealt with the considerable defense budget cuts that their governments took in response to the economic crisis. Those militaries have deliberated and found a balance between adapting to the budgets' cuts and maintaining the capabilities to carry out the various types of operations they may be involved in. The most noticeable measures taken by those militaries were reducing the size of the armed forces, making adjustments to the force structure, and reducing military equipment.

Lebanon, a small developing country, is suffering from a catastrophic economic crisis, an unbalanced development, and a tremendous shortage of material resources necessary to face such challenges. In an attempt to limit the repercussions of this economic crisis and find appropriate solutions, the Lebanese government adopted an austerity policy that affected various sectors of the country, especially the military sector. Increasing government spending on public health resources to counter the Coronavirus is expected to push governments in the coming years to rationalize expenditures furthermore and reduce military spending.

The Lebanese Armed Forces will be significantly affected by the big defense budget cuts, and the leadership of these forces will have to take austerity measures appropriate with the new budget. This paper includes some proposed measures that, if implemented thoughtfully, could significantly contribute to achieving some savings and reducing the expenses of the LAF, thus helping to cope with the sharp cuts in the defense budget. The most prominent proposed

measures are cutting down the number of personnel and equipment, changing some units' structure, using sustainable energy resources, embracing military industrialization, popularizing a culture of austerity among military personnel, and using the digital instead of the paper mailing system.

In the end, it is essential to point out that with the increasing security challenges facing Lebanon, it is in the interest of the Lebanese government to maintain strong national armed forces that defend the country's security, protect its interests, and confront external and internal threats. After all, ensuring the country's security stimulates economic growth and protects society. The LAF is well aware of the seriousness of the economic crisis afflicting the country and of the need to reduce military spending so that it does not form a burden on the national economy or lead to the depletion of the country's capabilities and economic, financial, and human resources. However, at the same time, the government must be careful not to reduce the military budget to the extent that it directly affects the ability of the LAF to carry out its tasks effectively, therefore risking its national security.

The wisdom lies in choosing the spending ratios in each sector in the country in a manner that secures the comprehensive development of the state and in conducting a study to determine the optimal size of military spending in Lebanon according to transparent and objective principles and based on a clear national strategy that defines the threats and priorities that the LAF must deal with. Unfortunately, no study of this kind has ever been conducted in Lebanon, and the current government, like all previous ones, has failed, up to today, to issue a national strategy or to agree on a defense strategy through which the LAF should operate.

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