

## Lebanon

The 2018 Aging Readiness & Competitiveness Report: Small Innovative Economies



Ī

### **Overview**

Overview

Ш

Ecosystem for Policy and Social Innovation

Ш

Community Social Infrastructure

IV

Productive Opportunity



Technological Engagement



Health Care and Wellness

Home to the oldest population in the Arab region, Lebanon is seeking to adapt to demographic change by providing innovative solutions amid continuing economic and geopolitical instability.

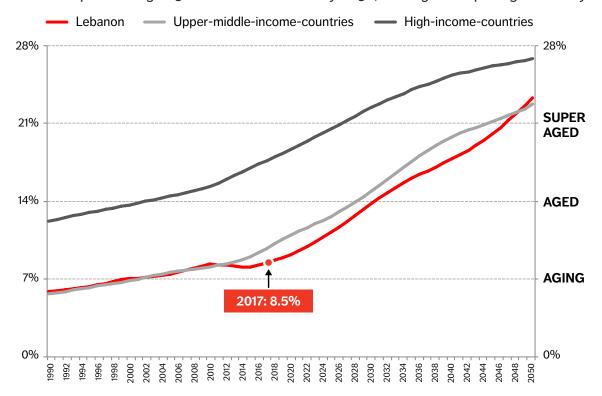
As of 2017, 8.5 percent of Lebanon's population was age 65 and older, and the number of older adults in Lebanon was projected to more than double through the year 2050, at which time it will account for 23.3 percent of the total population, above the United Nations threshold of 21 percent for a super-aged society (Figure 1).<sup>1</sup>

Three factors are driving that demographic shift:

- 1. Decreasing fertility rates;
- 2. Longer life expectancies; and
- 3. High emigration of the younger population.2

Figure 1. People Age 65 and Older as Percentage of Total Population

Lebanon's Population Age 65 and Older to Double by 2050, Making It a Super-Aged Society



**Source:** United Nations, Department of Economic and Social Affairs, Population Division

Lebanon has the lowest fertility rate among Arab countries and its population size has shrunk by two-thirds since 1970. The fertility rate is projected to stay steady at 1.7 births per woman through 2050, well below the replacement rate of 2.1 generally considered necessary to maintain a stable population. Following global trends, life expectancy in Lebanon has also risen by 20 percent since 1970 and is among the region's highest<sup>3</sup>.

Recurrent and significant waves of youth emigration continue to have a significant impact on Lebanon's demographic structure.<sup>4</sup> As of 2015, there were more than 800,000 people from Lebanon living outside the country,<sup>5</sup> with experts estimating that there are considerably more individuals of Lebanese descent living outside the country than inside.<sup>6</sup> Emigration of younger people is attributed to multiple factors, including ongoing political turmoil in Lebanon, the

Syrian Civil War, and greater economic opportunity abroad—particularly in the oil-producing Gulf States.<sup>7</sup>

The non-governmental sector is central to Lebanon's ability to accommodate the aging population. This can be attributed to a tradition of civic participation and to the sector's tremendous growth over the 16-year civil war. Grappling with fiscal constraints and a recent influx of Syrian refugees, the government has focused its efforts on infrastructure construction and the public health system.

Lebanon's community social infrastructure builds on a tradition of strong family ties and social connection built around shared religious beliefs. A multitude of programs led by non-governmental organizations (NGOs) are facilitating vibrant social lives for older adults and providing much-needed social support. Interesting initiatives have emerged to target older refugees as well. Today, refugees account for close to 25 percent of Lebanon's population.<sup>8</sup>

Older adults in Lebanon are relatively active in the labor force, largely driven by economic need. However, their productive potential is off the policy radar and remains a significant missed opportunity. Some efforts led by NGOs, however, are emerging to engage older adults in economic activities, volunteer activities, and education opportunities.

Technological engagement is another area with significant opportunity for improvement. The government's technology focus to date has predominantly been limited to infrastructure improvements in information and communications technology (ICT). Local NGOs offer training courses dedicated to the needs of older adults, but a significant digital divide persists. A regional hotbed of tech entrepreneurship, new private investments, as well as nascent startups—many of them in the health sector—are emerging, giving the country the potential to leverage technology to improve the well-being of its older population.

Lebanon's public health care system tops the government's social policy agenda, with a significant push underway to prepare its health care system to accommodate the country's changing demographics—including its recent expansion of health care coverage for retirees. The government, in collaboration with both international organizations and local NGOs, is also increasingly focused on the need for professional long-term care services and the rising prevalence of dementia in older adults.

I

Overview



Ecosystem for Policy and Social Innovation



Community Social Infrastructure

IV

Productive Opportunity



Technological Engagement



Health Care

# **Ecosystem for Policy and Social Innovation**

Aging-related policy and social innovation in Lebanon is characterized by the dominance of NGOs.

These NGOs typically work at the community level to engage with older adults and to support the country's most underserved groups. This builds on Lebanese society's tradition of civic participation along with strong social ties that are built around family, faith, and community. Although the government is not the leading force in this area, it has embraced collaboration with international organizations and the local private sector. This effort has enabled the government to leverage external funding sources and Lebanon's existing, extensive network of NGOs to meet the needs of the aging population.

#### **Key Enablers**

Lebanon's ability to adapt to demographic change begins with its tradition of civic participation and strong social ties, complemented by the substantial investment and effort of international aid organizations.

Lebanon has a long tradition of civic participation in policy-making and delivery. This tradition culminated during its 16-year civil war when the non-governmental sector grew rapidly to fill the vacuum resulting from the severely limited capacity of the government.9 A multitude of NGOs and religious organizations played an important role in providing essential social services.<sup>10</sup> Today, NGOs remain key providers of social services and health care. Close to 300 NGOs and religious organizations work with the Ministry of Social Affairs (MoSA) to provide medical assessments, and more than 80 percent of the country's hospitals are owned and managed by charitable organizations and physicians.

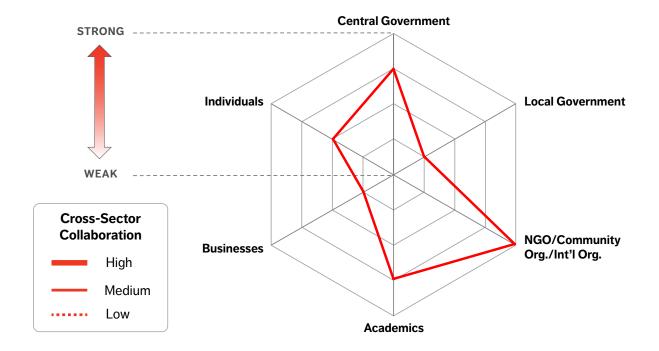
The strong influence of the non-governmental sector is shaped by social ties that are often centered around shared religious beliefs. Religion provides social identity as well as literal identity in Lebanon, with an individual's religion specified on their identity card. As of 2012, 54 percent of the population was Muslim, and 40.5 percent was Christian.<sup>11</sup> Including the smaller Druze and Jewish populations, there

are 18 different religious sects<sup>12</sup> in Lebanon, each representing a strong community. Reinforcing the religious community is a political system where parliamentary seats number in direct proportion to religious distribution.<sup>13</sup> Local religious and secular organizations' independent funding and understanding of their areas often affords them greater reach and ability to target services to their unique community contexts.

Because of enduring fiscal constraints, support from international organizations is essential to the country's ability to undertake both economic and social initiatives. International aid has played a critical role in rebuilding and stabilizing the economy after the end of Lebanon's civil war in 1990,<sup>14</sup> managing the historical immigration of large groups of Palestinian refugees, and responding to the current influx of Syrian refugees.

The Lebanese economy is growing at less than 3 percent annually compared to its 8-10 percent annual growth immediately prior to the ongoing war in Syria that began in 2012.<sup>15</sup> As of 2017, Lebanon had the third highest debt-to-GDP ratio in the world, with debt more than 150 percent of its GDP.<sup>16</sup> With the government projecting a USD 4.7 billion deficit in its 2018 budget,<sup>17</sup> international organizations have stepped in to fund needed improvements. The World Bank in March reported that its commitments to the country totaled USD 1.7 billion,<sup>18</sup> including

Figure 2. Driving Forces of Innovation and Cross-Sector Collaboration



major transportation infrastructure and health care modernization projects. The United Nations reported its funding also totaled USD 1.7 billion last year,<sup>19</sup> in large part providing for the Palestinian and Syrian refugee communities. And while this international support is born partially from the demands placed on the system by Syrian refugees, it will ultimately benefit the country's entire population by providing the capital necessary to improve Lebanon's infrastructure and health care.

#### **Attributes in Aging-Related Innovation**

Aging-related innovation in Lebanon is primarily driven by local NGOs, whose initiatives are often community-based— and therefore at a relatively small scale— or focus on specific subgroups of older adults. Interesting programs are emerging to target the country's most underserved groups. One example is the Social Support Society, whose mission is to support older Palestinian refugees. It operates centers

in two Palestinian refugee camps—with a planned third—and engages older residents in productive and social activities. Another example is the Order of Malta Lebanon, which focuses on older adults in rural areas through both day care centers and home visits.

However, NGO-led efforts are not limited to the community level. Some organizations are also creating models that can create larger-scale impact by partnering. The Institute for Development, Research, Advocacy and Applied Care (IDRAAC) is a representative example of this approach. In collaboration with the Municipality of Byblos-Jbail, IDRAAC developed the Elderly Empowerment Project, which includes an online database that provides older adults in Lebanon with information about work and volunteer opportunities. At the national level, the Ministry of Social Affairs has partnered with Alzheimer's Association Lebanon and The University of Balamand to develop a training and certification program for home-based care workers.

The government's collaboration with both international organizations and local NGOs to provide needed services further strengthens support for Lebanon's older population. This is manifested in the MoSA partnership with the United Nations Population Fund to develop standards for long-term care (LTC) institutions and facilitates the government's development of a formal LTC sector.

ı

Overview

## Community Social Infrastructure

П

Ecosystem for Policy and Social Innovation



Community Social Infrastructure



Productive Opportunity



Technological Engagement



**Health Care** and Wellness

Lebanon's social infrastructure is built on strong family ties and community, often based on shared religious beliefs.

Innovative initiatives, primarily led by NGOs, have emerged to engage older adults, with programs targeted to their needs and tailored to the communities in which they live. While Lebanon's social framework is strong, its physical infrastructure is decaying and lacks the accessibility required to accommodate those with mobility impairments, but new investments may lead to improvements.

#### **Social Connection**

Arab and Mediterranean societies in general—and Lebanon in particular—hold older adults in high regard. Thanks to close family ties, older adults in Lebanon enjoy meaningful levels of social connection.

Children in Lebanon typically live with their parents until marriage, and social relations within both the immediate and extended families are strong.<sup>20</sup> Family members, together with their circle of friends, are central to older adults' social lives and serve as their main sources of social support.<sup>21</sup>

Living arrangements illustrate the importance of those close family ties. More than 99 percent of those age 65 and older live within their homes, rather than residential care institutions. Multigenerational living has traditionally been the norm, with more than 64 percent of older adults residing with their adult children; close to 24 percent lived only with a spouse and just 10.5 percent lived alone (Figure 3).<sup>22</sup>

And though a strong cultural framework for social interaction remains, changing family structures are resulting in an increased risk of isolation for the country's older population:

 Mass emigration, especially by the younger population, has contributed to a reduction in the average household size of 5.4 people in 1970 to fewer than four people today.<sup>23</sup> According to a 2013 study

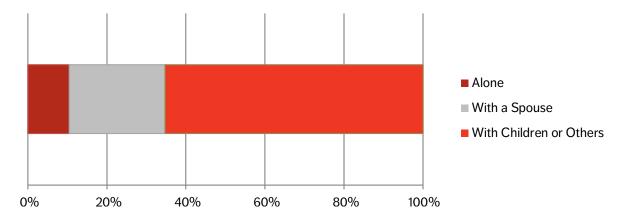
- by the American University of Beirut, older adults in Lebanon reported that up to 12 percent of their social circle lives outside the country.<sup>24</sup>
- Rising divorce rates have led to more older adults living alone. The divorce rate in Lebanon skyrocketed 55 percent between 2000 and 2013.<sup>25</sup> Divorced men remarry at a higher rate than divorced women,<sup>26</sup> making women especially susceptible to isolation as they age. The tendency for men to remarry, coupled with longer female life expectancy, has contributed to roughly five times as many widows as widowers in Lebanon.<sup>27</sup> It is estimated that 18 percent of older women live alone and are 2.5 times more likely to do so than their male counterparts.<sup>28</sup>

#### **Community Support**

While families provide the core of support for older adults, MoSA also directly provides, or funds, multiple programs for them, including:

- More than 200 social development centers, which engage older adults in various social activities and provide medical and nursing services;
- Over 30 social care institutions offering both shelter and daily care;
- Close to 300 NGOs contracted by the government to provide social and medical services and leisure activities.

Figure 3. Living Arrangements of Older Adults in Lebanon in 2013



Source: O. Shideed, A, Sibai, and R. Tohme 2013

In 2015, those different organizations had a combined number of 120,000 beneficiaries, including older adults.<sup>29</sup>

The diversity of Lebanon's people, with their distinct religious beliefs and cultures, living in both cities and rural areas, has driven NGOs to lead the charge in offering programs tailored for people's varied interests and needs. These NGOs are particularly focused on underserved groups such as those in rural areas and refugee camps. One example is the Foundation of the Order of Malta Lebanon (the Foundation), a global Catholic NGO that has been operating in Lebanon since 2000.<sup>30,31</sup> It both partners with, and receives funding from, Lebanon's Ministry of Public Health.<sup>32</sup>

The Foundation concentrates operations in two rural villages: Roum, which saw dramatic emigration following years of

conflict, and Kefraya, which experienced an influx of Syrian refugees following war in Syria. Through three day care centers, six "Warm Homes," and supplementary inhome visits, the Foundation provides meals and other social services to older adults; organizes leisure and social activities; and connects them with younger generations, including schoolchildren and young church members. In 2017, 1,400 older adults participated in day care centers and Warm Homes, and close to 100 received homevisit services.

Other NGOs focus on refugees, an especially vulnerable group. The Social Support Society (the Society), concentrates on the needs of Palestinian refugees, who comprise roughly 10 percent of Lebanon's population.<sup>33</sup> The Society has established centers at two refugee camps, Burj Barajneh and Nahr el-Bared, that have

roughly 110 older refugee participants. The Society is also planning to establish a third center for the Shatila camp. Through these centers, the Society organizes activities including painting, craft-making, outings, and sporting events. The centers have also incorporated a story-sharing program, where older adults share their life stories with younger people.

Among its most interesting initiatives is "Good People, Good Foods," in which older refugees gather one day per month to prepare traditional cuisine, echoing the potluck dinners hosted by grandfathers in Palestine, which family and friends would attend.<sup>34</sup> Recognizing the value of their traditional social connections, the effort "builds on our need to feel a sense of solidarity and belonging to our community," said the Society's Zeinab Al Madhoun.<sup>15</sup> The effort extends further with older participants participating in cooking competitions judged by visiting chefs.

Another Society effort promotes social interaction for older Palestinian refugees while preserving the traditions of their homeland. The Society invites children to visit its Active Ageing House at Nahr el-Bared where older refugees share stories, traditional songs and dances, and antiques brought with them from Palestine.<sup>35</sup> Answering the children's questions helps to promote long-lasting intergenerational ties by educating the younger generation on traditional Palestinian culture.

#### **Physical Infrastructure**

The poor condition of physical infrastructure and inaccessibility of public transportation and the built environment remain key obstacles to the mobility and social participation of older adults, primarily due to fiscal constraints and lack of policy enforcement.

Lebanon ranked No. 130 out of a total of 137 countries on the World Economic Forum's Global Competitiveness Index 2017-2018 in terms of the quality of its overall transportation infrastructure better than only Yemen in the Middle East region. Due to fiscal constraints and a weak appetite from private investors, the country's infrastructure has been decaying for years.<sup>36</sup> In Gallup polls, only 51 percent of those age 50 and older in Lebanon reported satisfaction with the public transportation system.37 But a funding program approved by the World Bank in March 2018 may jumpstart the system's modernization. The Lebanese government will deploy USD 295 million in the Greater Beirut Public Transport Project. With completion expected in 2023, it will include at least 370 buses operating both within Lebanon's capital of Beirut and outside of it serving to connect other areas of Lebanon to Beirut.38

Accessibility is another area that remains lacking in Lebanon's public transportation

system. Although buses make up the bulk of public transport vehicles, the majority are not accessible to older adults with mobility impairments. Even in major cities like Beirut and Tripoli, many sidewalks remain inaccessible, often blocked by cars and other objects.<sup>39</sup> In buildings, uneven stairs and a lack of hand rails are common barriers encountered by older adults.<sup>40</sup>

The Center for Studies on Aging in Lebanon has been working to develop age-friendly cities rooted in active aging that would enhance transportation and housing options for older adults in Tripoli.<sup>41</sup> The Center uses a "locally-driven and bottomup" approach with 11 focus groups of older adults, caregivers, and representatives from NGOs and municipalities participating.<sup>42</sup> The effort needs funding, however, and implementation is so far limited to an "age-friendly street" in one municipality.<sup>43</sup>

The government has made an effort to improve accessibility through legislation but has fallen short on enforcement. In 2000, Lebanon's Parliament passed Law 220 on the Rights of Disabled Persons.

The law is built around a set of rights meant to integrate those with mobility impairments into economic and social life by ensuring access to transportation, housing, employment, health, and educational services. 44 However, the commitments of Law 220 are only sporadically met or enforced, and the process has little

oversight. For example, in 2011, the government adopted an accessibility code that required all new public buildings or premises for public use to be accessible. However, most governmental buildings, including some new buildings, remain inaccessible.<sup>45</sup>

I

Overview

## Productive Opportunity

П

Ecosystem for Policy and Social Innovation



Community Social Infrastructure



Productive Opportunity



Technological Engagement



Health Care and Wellness

Older adults in Lebanon are active participants in the country's economy, with one of the highest labor force participation (LFP) rates among countries covered in this study.

That participation, however, is born out of necessity, as the country lacks a strong pension system, and there are massive gender disparities. With government efforts to unleash the productive potential of older adults falling short, NGOs are filling the gap. Interesting practices are emerging to assist older adults in their job search, to provide training and education opportunities, and to keep the especially vulnerable population of older Palestinian refugees working.

#### **Labor Force Participation**

The LFP rate of people age 65 and older in Lebanon is 15 percent, the fourth highest among countries covered in this study after Singapore, Chile, and New Zealand. However, a huge gender gap exists—only 1.6 percent of older women are working (Figure 4).<sup>46</sup> This reflects the low level of female LFP in general. In 2016, only 23.5 percent of women age 15 and older participated in the workforce, compared with 70.3 percent of men in the same age group.<sup>47</sup>

A 2009 World Bank study found that female employment in the Middle East and North Africa (MENA) region was hindered by employers hiring male candidates over females, with a perception that women working would diminish job opportunities for men who are culturally expected to be the primary breadwinners.<sup>48</sup> In Lebanon specifically, the study found that education was more of a requirement for women in the labor force than for men, suggesting a bias against female candidates.

Older women, in particular, play the key role in caring for their spouses, grandchildren, and their older parents. In addition, a substantial percentage of older women work in the informal sector, such as agriculture or family businesses, so they are not included in LFP statistics.<sup>49</sup>

While remittances—money sent from abroad—are a significant source of income for older adults (Box 1),50 financial necessity remains the primary reason they work in later life. This can be attributed to a lack of access to both social security and pension incomes. Public sector employees and military personnel have generous pension payments,<sup>51</sup> but retirees from the private sector receive limited retirement benefits, relying on a defined-contribution pension scheme. At age 60, the latter become eligible to receive a lump-sum cash benefit.52 but they otherwise have no access to further pension income streams. In addition, there is no social security system to support older adults with insufficient income.53

The productive potential among older adults, however, has not drawn much attention, in part due to the high youth unemployment rate. The unemployment rate of the general population in Lebanon was 25 percent as of June 2017 and even higher for those below the age of 25, at 37 percent.54 "We are not living in a country with high employment. There is a kind of competition around available jobs. And it's not easy to bring retired people back to paying jobs," said Abla Sibai, President of the Center for Studies on Aging.55 Overlooking the potential of older adults is also evidenced in the absence of laws preventing age discrimination in the workplace. Today, employers are allowed to specify age ranges in their job requirements.<sup>56</sup>

#### Box 1. Remittances as an Important Income Source

For many older adults in Lebanon, emigrated family members provide an important source of financial security in retirement. Some 45 percent of households have at least one close relative who emigrated between 1992 and 2007. According to Pew Research, the total number of people from Lebanon living abroad stood at 800,000 in 2015. The United States, Brazil, Argentina, and Australia have among the largest populations of immigrants from Lebanon and their descendants. Compared to other countries of similar size, Lebanon receives a relatively large flow of remittances. As of 2014, remittances were valued at USD 7.5 billion or USD 1,600 per capita. For families receiving them, remittance funds accounted for 40 percent of their household income. Today, remittances make up 16 percent of Lebanon's GDP. For older adults, remittances represent a stable—and often essential—addition to their income, with more than 24 percent of households that receive remittances using them to pay for necessary medications.

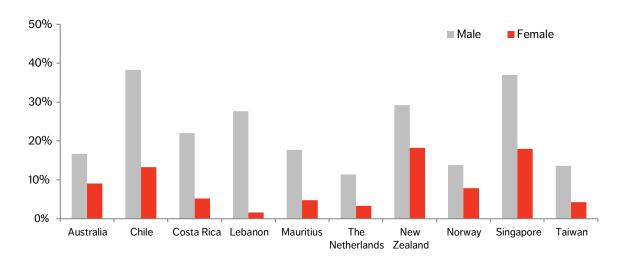
#### **Job Placement and Volunteerism**

Despite the overall lack of attention to older adults' productive potential, some NGOs have led an early effort to promote and assist their economic participation. One interesting example is the Elderly Empowerment Project (the Project), started two years ago by IDRAAC. The Project's aim is to offer older adults the opportunity to volunteer or to secure new jobs. Collaborating with the municipality of Byblos-Jbail, and with additional funding from the European Union,<sup>57</sup> IDRAAC vetted 3,600 businesses in Byblos-Jbail and identified 161 willing to offer either paying or volunteer jobs to older adults. Job

opportunities were then added to IDRAAC's online database and posted on its website.<sup>58</sup> Work opportunities include preparing pickled olives and jams; assisting in offices; driving trucks; practicing law; and leading leisure activities, such as fitness classes, for older people.<sup>59</sup>

According to IDRAAC's Dr. Georges Karam, a psychiatrist, the project was born out of a clinical need he assessed after seeing anxiety and depression grow among older adults who indicated they lacked options to stay active. 60 Karam hopes the measured impact of the existing program will mean additional funding to expand it outside Byblos-Jbail, with his ultimate goal to create a national program serving older adults anywhere in Lebanon. 61

Figure 4. Labor Force Participation Rate by Gender, 2016 or Latest Available



**Source:** International Labor Organization Statistics

Innovative practices are also emerging to provide opportunities for older refugees to stay both active and productive, including two projects created by the Social Support Society at Nahr al Bared Palestinian refugee camp.

Launched in 2010, the "Green Land Project" provides an opportunity for older refugees to grow fruits and vegetables of their choosing on a dedicated plot of land and supply them daily to the Society's center in the refugee camp. They also sell them on a weekly basis at a Beirut market. Based on the positive outcomes of the Green Land Project, the Society recently expanded with a second endeavor called "Teta's Kitchen." Teta's Kitchen features a fully equipped

kitchen where older people keep Palestinian culinary traditions alive by catering events and social gatherings. The Green Land Project and Teta's Kitchen also create additional funding for the Society's work, which helps it remain financially sustainable.

These efforts are born from the NGO's recognition of the special circumstances of older refugees. "The Palestinian elderly are the most underprivileged of the most underserved populations," said Melek Nimr, Founder of the Society. "We wanted them to wake up in the morning and have something to look forward to." 62

#### **Education and Training**

Lack of job skills and knowledge is another obstacle keeping older adults in Lebanon from participating in the work force. The education level attained by the current older population is relatively low, although it has improved significantly by generation. The most recent statistics from 2009 indicate that 40 percent of those age 65 and older are illiterate—again with a gender gap—54 percent of women and 27 percent of men.<sup>63</sup>

Even so, there are few training opportunities tailored to older adults. The Ministry of Social Affairs manages multiple Social Development Centers (SDC) that provide training programs in conjunction with NGOs, but these programs do not specifically aim to help older adults. In addition, these programs operate in the absence of government policies or a regulatory framework and do not reach a large audience. In 2009, only 1,200 individuals, more than 80 percent of whom were women, completed training in a MoSA SDC program.<sup>64</sup>

A pioneer in educating older adults is the University for Seniors. Part of the American University in Beirut, it began as a pilot program in 2010 and was institutionalized in 2012. The organization—which today has 300 students—offers more than 15 courses over two semesters for a fee of USD 200 per term. Topics include creative writing, English as a second language, gender

"The program is basically for and by the seniors. We plan it with them. We're not imposing something on them. So we get their feedback, what they would like, and we work accordingly with them."

– MAYA ABI CHAHINE, Program Manager, University for Seniors

discrimination, aviation science, and the Lebanese energy economy. The University for Seniors also hosts educational trips, cultural events, and concerts. Although open to anyone age 50 or older, the majority of its students are between the ages of 60 and 75. We chose [to open the University for Seniors starting at age] 50, not 60 or 65, because lifelong learning is still a new idea in Lebanon. We wanted people to get acquainted and grow older with it, asid Maya Abi Chahine, University for Seniors Program Manager.

University for Seniors distinguishes itself further through its constant collaboration directly with older adults, and has done so from its inception. The organization distributes evaluation forms to students and lecturers electronically, then adjusts its curriculum based on their feedback, including removing courses or changing lecturers. Older adults serve on the

organization's multiple committees, such as the institutional, steering, curriculum, and social committees, and ensure the program reflects the interests of its students. "The program is basically for and by the seniors. We plan it with them. We're not imposing something on them. So we get their feedback, what they would like, and we work accordingly with them," said Abi Chahine.<sup>68</sup>

ı

Overview

### Technological Engagement

П

Ecosystem for Policy and Social Innovation

Ш

Community Social Infrastructure

IV

Productive Opportunity



Technological Engagement

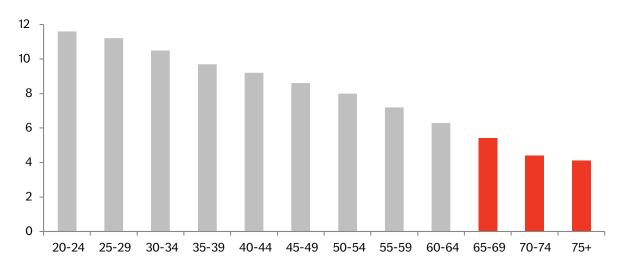


Health Care

Among the countries covered in this study, Lebanon faces the biggest challenge in harnessing the power of digital technology to accommodate its aging population.

In 2016, it ranked No. 88 on the World Economic Forum's Networked Readiness Index (NRI) with Mauritius performing next best, ranked at No. 49. As Lebanon grapples with infrastructure and economic challenges, an influx of Syrian refugees, and the continued emigration of young people, the government's ICT focus has been largely limited to revamping infrastructure and developing technology startups. There is a lack of attention on serving populations vulnerable to digital exclusion—especially older adults. As a result, informal training from family members and emerging programs targeted to older adults are the driving forces of digital literacy for Lebanon's older population.

Figure 5. Average Years of Total Schooling by Age Group, 2010



Source: Wittgenstein Centre

#### **Digital Diffusion and Divide**

Lebanon has achieved notable improvements in its level of digital competitiveness. Between 2013 and 2016 alone, its NRI ranking rose from No. 94 to No. 88.<sup>69,70</sup> This is driven in part by the government's continued effort to revamp the country's telecom infrastructure, with a recent focus on expanding fiber-optic broadband and upgrading mobile services.<sup>71</sup> Lebanon's NRI ranking on infrastructure moved up 11 places during 2013-2016 (from No. 88 to No. 77) and during the same period of time, the percentage of households with internet access increased from 61.8 percent to 68.4 percent, and the ratio of mobile broadband subscriptions

jumped from practically nothing to 53.5 percent.

Coupled with infrastructure improvement is growing internet usage. As of 2016, 75 percent of Lebanon's total population was online, a marked increase of 44 percent from its 2013 level. 72,73 Digital divide and exclusion remain a challenge, but one that has not yet been quantified, as no official statistics are collected by the government for technology penetration in this demographic.

Earlier small-scale studies underscore older adults' vulnerability to the digital divide—driven by a comparative lack of broad education, technological skill, and access to technology. As of 2010, the average years of total schooling ranged from only 4.1 to 5.4

years for adults age 65 and older, declining by age (Figure 5).<sup>74</sup> Conducted two years earlier, a 2008 study assessing potential users of online government services found that older adults were less technologically skilled compared to their younger peers at the same levels of occupation, income, education, and wealth.<sup>75</sup> Notably, the study found that age was the *only* factor that impacted both skill level and digital access.<sup>76</sup>

As a result, older adults in Lebanon have relied on family members to learn digital technology, with programs from institutions outside the government recently emerging.

Lebanon's strong family ties foster an environment in which children teach their parents and grandparents about technology, according to Abla Sibai, President of the Center for Studies on Aging. "Children here sit with their parents and grandparents and teach them how to use iPads and phones and set them up with social media accounts," she said.<sup>77</sup> Although that family environment can be conducive to older adults building technological skills, it can also pose challenges, as younger people can be impatient when teaching older relatives, according to Abi Chahine.<sup>78</sup>

In addition to family, the University for Seniors is a unique resource in Lebanon offering in-depth technology training courses specifically created for the older population. Courses include social media training, iPad training, blogging, online shopping, and travel booking.<sup>79</sup> Although

the organization offers other study subjects, technology courses are in demand and are the only courses that repeat each semester. Skills developed in those courses can be a godsend to those hoping to keep in touch with family abroad. "It's enhancing connections with their families, and it's also empowering—because most of what you want to do these days is basically online," said Abi Chahine.<sup>80</sup>

Technology courses at the University for Seniors go beyond mere skills training, however. They also help to foster intergenerational ties. Teachers are younger students who are all members of a technology club at the American University of Beirut. These courses were born out of the University for Seniors' concerted efforts to promote intergenerational interaction benefiting both older students and young teachers alike.<sup>81</sup>

#### **Private Sector Engagement**

With the government's ambition to build the country into the Silicon Valley of the Middle East, Lebanon envisions an opportunity to accommodate its older population with home-grown digital technology. The number of investors in Lebanese technology startups was third among Arab countries over 2004-2017, following the United Arab Emirates and the Kingdom of Saudi Arabia.<sup>82</sup>

In 2014, the central bank of Lebanon, Banque du Liban, announced Circular 331, a plan to inject up to USD 600 million into the local technology sector. The plan earmarks 75 percent of the bank's investments for direct or indirect technology startup equity investment.83 The benefits of this in-country funding support are twofold: 1) motivating the formation of in-country startups that in turn benefit the Lebanese economy, and 2) making Lebannese venture capital firms more attractive to highly educated and high-performing graduates in the country graduates who may have otherwise emigrated due to their easy access to the rest of the Europe Middle East North Africa region.

Many of Lebanon's newly minted startups are focused on health care, which could benefit an older generation.<sup>84</sup> Among these are Spike, a diabetic monitoring mobile application born in Lebanon;<sup>85</sup> CardioDiagnostics, a heart monitoring company founded in the United States in 2012 but now with an office in Beirut;<sup>86</sup> and Sohati, a health information website based in Beirut.<sup>87</sup>

For future generations of Lebanon's older adults, these startups may pay multiple dividends such as offering better health care; helping to create a robust economy, which fosters new programs addressing their specific needs; and discouraging the emigration of younger family members on whom older people often depend.

Overview

## Health Care and Wellness

П

Ecosystem for Policy and Social Innovation



Community Social Infrastructure



Productive Opportunity



Technological Engagement

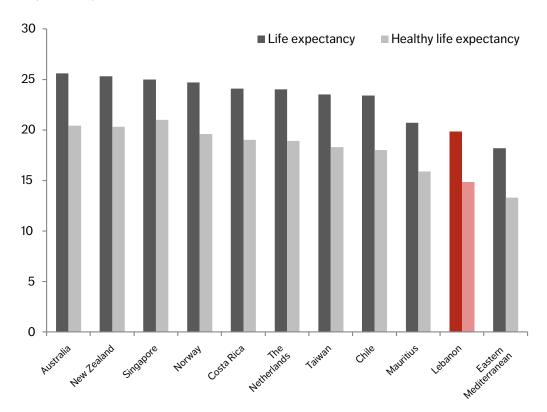


Health Care and Wellness

Lebanon remains behind other countries covered in this study in the health and wellness of its older adults.

This is attributed in part to various hurdles the country has faced in rebuilding its health care system after over a decade of civil war came to an end. The effort to improve medical care has been further challenged by the recent influx of Syrian refugees. To remedy this, Lebanon is working to improve the access and affordability of health care, with older adults among the biggest beneficiaries. While the country's formal long-term care system remains nascent, it has drawn increasing attention from both NGOs and the public sector focused on enhancing professional capacity and creating high standards of care services.

Figure 6. Life Expectancy and Healthy Life Expectancy at Age 60, 2016, in Years



**Source:** World Health Organization Global Health Observatory; Institute for Health Metrics and Evaluation

#### **Health Status**

In 2016, adults in Lebanon having reached age 60 could expect to live another 19.8 years, including 14.8 years in relatively good health. These levels of life expectancy (LE) and healthy life expectancy (HALE) are above the Eastern Mediterranean regional averages, although still among the lowest

among countries covered in this study (Figure 6). Between 2000 and 2016, the LE and HALE gained one year and 1.1 years, respectively, with a slight decrease in the gap between the two measures.<sup>88</sup>

Non-communicable diseases, including hypertension, cardiac conditions, and diabetes, are the leading causes of death for older adults, with more than 75

percent suffering from at least one chronic disease. A high prevalence of tobacco use, in particular, is a major cause of adverse health outcomes. In 2015, Lebanon ranked No. 3 in the world for the number of smokers per capita, with 31 percent of women and 45 percent of men smoking. Printy percent of women age 65 and older and 36 percent of men in the same age group are smokers. To counter the high prevalence of tobacco use, the government enacted a 2011 law that bans smoking in all indoor public spaces. It later expanded the law to include the hospitality sector, but enforcement and compliance remain poor.

#### **Health System**

In the early 1990s, Lebanon's public health system had dwindled to almost nothing due to economic instability following its civil war. Since then, the Lebanese government has made remarkable progress in restoring it. However, the system remains lacking in its ability to accommodate Lebanon's rapidly aging population, due to obstacles that include:

• Lack of universal health insurance coverage: Only 47 percent of the population is insured (Figure 7).93 Public coverage offered to non-public-sector employees under the National Social Security Fund (NSSF) is tied to employment. This results in a disadvantage to those who are self-employed, those who work in the

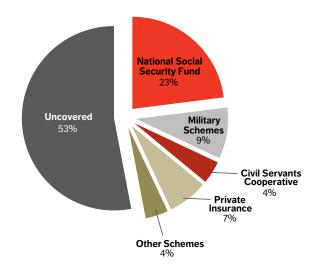
- informal sectors, or those who work as homemakers. Until recently, even private sector employees would have lost access to NSSF health care coverage once they retired. As a result, as of 2012, out-of-pocket expenditure accounted for 37.3 percent of Lebanon's total health care spending, twice as high as the global average of 18.5 percent.<sup>94</sup>
- **Fragmented system:** Private sector resources expanded rapidly during Lebanon's civil war to fill the gap left by deteriorating public health care facilities. Today, the private sector remains Lebanon's largest curative care provider. More than 80 percent of the hospitals in Lebanon are privately owned and managed either by physicians or by charitable organizations, often religiously based.95 To combat a disparity in care quality, the government has enforced accreditation standards for the hospitals with which it contracts, improving their level of care, although the World Health Organization this year identified a continued need for improvement.96
- Lack of professional capacity: There is also a deficit of trained general operations staff and nurses, numbering only 2.72 nurses for every 1,000 people, according to a 2017 study. This amounts to about a third of the ratio of nurses in Europe and just over half of the ratio of nurses in North America.<sup>97</sup> Low enrollment, low retention, and high emigration rates together contribute to this gap.

Conscious of these challenges, the government is making strides toward improving health care, with a recent focus on expanding health care coverage and access to quality care, particularly among low-income people and refugees. As a step toward achieving universal health care, in 2016 the government decided to provide 100 percent hospitalization coverage for those age 65 and older<sup>98</sup> and to grant health care coverage post-retirement to those who had worked at least 20 years in the private sector.<sup>99</sup> In practice, however, the budget has been insufficient, with older people left having to pay many costs out of pocket.<sup>100</sup>

With funding support from international organizations, the government is seeking to increase access to health services for vulnerable groups. One such example is the Lebanon Health Resilience Project (the Project) initiated in 2017.101 The Project is funded by a World Bank grant of USD 120 million and an Islamic Development Bank grant of USD 30 million. Through the active involvement of the Ministry of Public Health, the Project's goal is to make significant improvements in 204 primary health care centers and 28 public hospitals around the country.102 Although the Project has multiple health-related goals, it also explicitly cites a need for greater primary care services for older people, with a focus on care provided in primary care centers and at home, counseling services, and mental health evaluation.103

A series of deadlines for reaching specific milestones is maintained by the World

### Figure 7. Health Insurance Coverage in Lebanon



Source: World Bank

Bank, with the overall Project scheduled for completion in 2023.<sup>104</sup> Although the Project's funding is partially a response to the strain on the health care system caused by the influx of Syrian refugees, leaders emphasize that refugee-based funding is also an asset to locals who will reap the benefits of improved health care.

#### **Long-Term Care**

Families are traditionally the predominant source of LTC for older adults in Lebanon. "Because of our religious and cultural values, the family is the core element of support for older adults," said Sibai. 105

However, the emigration of younger people and the increased number of nuclear families, and the resulting decline of the traditional extended family, drive the need for external sources of care such as homebased caregivers and residential institutions. While the LTC system remains relatively immature, Lebanon is striving to establish high standards in quality of care.

With children emigrating, and older adults preferring to live at home, middle- and upper-income families are increasingly turning to live-in domestic workers often low-skilled and from abroad—to care for older family members. In light of this rising demand, and to ensure high standards in quality of care, IDRAAC this year collaborated with the Alzheimer's Association Lebanon and The University of Balamand to develop a training and certification program for homebased caregivers, and has applied for a government grant for funding. The program also serves to create a greater societal benefit by providing low-income individuals with a caregiver certification, empowering them and helping to address the country's high unemployment.106

Residential institutions, while providing an alternative care resource, have limited capacity and inconsistent geographic access. As of 2012, there were 49 residential care institutions providing 4,000 beds in Lebanon, with the majority run by the government and not-for-profit organizations.<sup>107</sup> Facilities are unevenly distributed geographically, concentrated in

urban areas such as Mount Lebanon and greater Beirut. Urban facilities account for 71 percent of the country's facilities, with just 29 percent operating in the rural provinces of South Lebanon, Nabatieh, North Lebanon, and Bekaa.<sup>108</sup>

Dar Al Ajaza Al Islamia Association, a Beirutbased non-profit founded in 1954, runs a hospital that devotes half its 600 beds to the LTC of older adults. Leveraging its medical care capacity, the organization offers older residents rehabilitation services and treatment for Alzheimer's. Parkinson's. and issues resulting from stroke. In addition, Dar Al Ajaza runs geriatric awareness campaigns and social engagement programs such as picnics and other social outings. Dar Al Ajaza's services have grown so popular that it had to institute a waitlist for families eager to participate. 109 To meet future demand, Dar Al Ajaza has purchased a plot of land and plans to build facilities that will provide medical supervision of older adults along with intermediate care and dementia care.

Given the strong culture of caring for elders at home rather than placing older parents in LTC institutions, enhancing the capacity and quality of home care and residential options is essential in ensuring that the expanding population of older adults has access to high-quality services. With funding support provided by the United Nations Population Fund, the Lebanese government is undertaking a broader effort to enhance the capacity and care quality at residential institutions by creating service standards.

Based on extensive study and engagement with stakeholders—including care providers, older adults, and academics—the government is working to create and implement standards for LTC institutions along with accreditation schemes for buildings, equipment, and staff.<sup>110</sup> At the end of 2017, the Ministry of Social Affairs publicly announced the formation of an institutional standards advisory group and is now working to develop and disseminate these standards of care.<sup>111</sup>

#### **Dementia Care**

As in other countries, the number of older adults in Lebanon affected by dementia is growing as the country's population ages. As of 2016, dementia accounted for eight percent of deaths in Lebanon, the second largest cause of death following Ischemic heart disease, with the number of dementia-associated deaths increasing by 109 percent between 2005 and 2016. By the year 2050, the number of people with dementia is projected to more than quadruple to 123,000 cases of Alzheimer's and related diseases, from an estimated 30,000 in 2015.

In the absence of a national strategy to tackle the dementia challenge, NGOs are leading the effort to help those affected by dementia, by reducing the stigma surrounding it and promoting early diagnosis. The Alzheimer's Association Lebanon (AAL), founded in 2003, is one of the most active NGOs.<sup>114</sup>

- AAL organizes monthly meetings to provide counseling and lectures to those suffering from dementia, their supportgivers, and their family members. AAL hosts capacity-building and outreach programs bringing together more than 800 social workers<sup>115</sup> and family members at social development centers to share knowledge about caring for Alzheimer's patients.<sup>116</sup>
- Working with the government on the ground in 2013 and 2014, the AAL partnered with the Ministry of Social Affairs to create an early diagnosis program, including screening drives, to diagnose the disease in nine regions.<sup>117</sup> The initiative brought together doctors, occupational therapists, and social workers to assess 656 people age 65 and older. It found 107 cases of Alzheimer's and related disorders, with 16 percent of participants previously undiagnosed.

### **Endnotes**

- 1 United Nations, Department of Economic and Social Affairs, Population Division (2017). World population prospects: The 2017 revision, custom data acquired via website.
- 2 Abdulrahim, S., Ajrouch, K., & Antonucci, T. (August, 2015). Aging in Lebanon: Challenges and Opportunities. The Gerontologist, Volume 55 (issue 4). Retrieved from https://academic.oup.com/gerontologist/article/55/4/511/580948
- 3 United Nations, Department of Economic and Social Affairs, Population Division (2017). World population prospects: The 2017 revision, custom data acquired via website.
- 4 Dibeh, G., Fakih, A., & Marrouch, W. (January, 2017). Decision to Emigrate Amongst the Youth in Lebanon. Retrieved from http://ftp.iza.org/dp10493.pdf
- 5 Pew Research Center. (2016, November 10). International Migrants by Country. Retrieved from <a href="http://www.pewglobal.org/interactives/migration-tables/">http://www.pewglobal.org/interactives/migration-tables/</a>
- 6 Abdulrahim, S., Ajrouch, K., & Antonucci, T. (August, 2015). Aging in Lebanon: Challenges and Opportunities. The Gerontologist, Volume 55 (issue 4). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4542589/#CIT0041
- 7 Dibeh, G., Fakih, A., & Marrouch, W. (January, 2017). Decision to Emigrate Amongst the Youth in Lebanon. Retrieved from http://ftp.iza.org/dp10493.pdf
- 8 Union of Relief & Development Associations.
  (2017, January 1) Number of Syrian Refugees in
  Lebanon, Retrieved from http://urda.org.lb/en/details.
  aspx?ID=1426; United Nations Relief and Works Agency.
  Where We Work. Retrieved from https://www.unrwa.org/where-we-work/lebanon

- 9 Kingston, P. Understanding Governance in Lebanon: The Case of Disability Policy-Making. The Lebanese Center for Policy Studies.
- 10 World Health Organization, Regional Office for the Eastern Mediterranean. Lebanon: The Role of Contractual | Arrangements in Improving Health Sector Performance (Draft).
- 11 Central Intelligence Agency. Middle East: Lebanon. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/geos/le.html
- 12 United States Department of State. (2011). Lebanon. Retrieved from https://www.state.gov/documents/organization/193107.pdf
- 13 Cultural Atlas. Lebanese Culture. Retrieved from https://culturalatlas.sbs.com.au/lebanese-culture/ lebanese-culture-core-concepts#lebanese-culture-core-concepts
- 14 Dibeh, G. (2007, January). Foreign Aid and Economic Development in Postwar Lebanon. Retrieved from <a href="http://www.eldis.org/document/A32473">http://www.eldis.org/document/A32473</a> accessed 09/02/18
- 15 Perry, T. (2018, June 22). IMF urges Lebanon to Make 'Immediate and Substantial' Fiscal Adjustment. Retrieved from https://www.reuters.com/article/us-lebanon-economy/imf-urges-lebanon-to-make-immediate-and-substantial-fiscal-adjustment-idUSKBN1JIoMX
- 16 Perry, T. (2018, June 22). IMF urges Lebanon to Make 'Immediate and Substantial' Fiscal Adjustment. Retrieved from https://www.reuters.com/article/us-lebanon-economy/imf-urges-lebanon-to-make-immediate-and-substantial-fiscal-adjustment-idUSKBN1JIoMX

- 17 Barrington, L., & Bassam, L. (2018, March 12). UPDATE 2-Lebanon's cabinet agrees 2018 budget with lower deficit. Retrieved from https://www.reuters.com/article/lebanon-economy-budget/update-2-lebanons-cabinet-agrees-2018-budget-with-lower-deficit-idUSL8N1QU5KH
- 18 The World Bank. (2018, March 15). World Bank supports Lebanon's public transport to improve mobility, spur growth. Retrieved from https://www.worldbank.org/en/news/press-release/2018/03/15/world-bank-supports-lebanons-public-transport-to-improve-mobility-spur-growth
- 19 United Nations. (2018, February 12). Funding for Lebanon response in 2017 amounts to USD 1.68 billion. Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/Press%20Release%20Funding%20 2017-ENGLISH.pdf
- 20 Ajrouch, K.J., Abdulrahim, S., & Antonucci, T.C. (2013). Stress, Social Relations, and Psychological Health Over the Life Course. GeroPsych, volume 26 (issue 1). Retrieved from http://csa.org.lb/cms/assets/2013/ajrouch\_abdulrahim\_antonucci\_gerotopsychology\_smaller4.pdf
- 21 Ajrouch, K.J., Abdulrahim, S., & Antonucci, T.C. (2013). Stress, Social Relations, and Psychological Health Over the Life Course. GeroPsych, volume 26 (issue 1). Retrieved from http://csa.org.lb/cms/assets/2013/ajrouch\_abdulrahim\_antonucci\_gerotopsychology\_smaller4.pdf
- 22 Shideed, O., Sibai, A., & Tohme, R. (2013). Living Arrangements of Older Adults in Lebanon: Correlates of living with married children. Eastern Mediterranean Health Journal, volume 19 (issue 12). Retrieved from http://applications.emro.who.int/emhj/v19/12/EMHJ\_2013\_19\_12\_1026\_1034.pdf?ua=1
- 23 (2018, January 12). Lebanese Family Becoming a burden, Not a Safety Net. In The Daily Star (Lebanon). Retrieved from https://www.pressreader.com/lebanon/the-daily-star-lebanon/20180112/281706910081650
- 24 Ajrouch, K.J., Abdulrahim, S., & Antonucci, T.C. (2013 Stress, Social Relations, and Psychological Health Over the Life Course. GeroPsych, volume 26 (issue 1). Retrieved from http://csa.org.lb/cms/assets/2013/ajrouch\_abdulrahim\_antonucci\_gerotopsychology\_smaller4.pdf

- 25 The rising divorce rate is driven in part by growing popularity of civil marriage, from which it may be easier to divorce than in marriages governed by some religious denominations in the country; (2017, January 18). Divorce in Lebanon. In Al Jazeera. Retrieved from <a href="https://www.aljazeera.com/programmes/aljazeeraworld/2017/01/divorce-lebanon-170117073031972.html">https://www.aljazeera.com/programmes/aljazeeraworld/2017/01/divorce-lebanon-170117073031972.html</a>
- 26 (2018, January 12). Lebanese Family Becoming a burden, Not a Safety Net. In The Daily Star (Lebanon). Retrieved from https://www.pressreader.com/lebanon/the-daily-star-lebanon/20180112/281706910081650
- 27 (2018, January 12). Lebanese Family Becoming a burden, Not a Safety Net. In The Daily Star (Lebanon). Retrieved from https://www.pressreader.com/lebanon/the-daily-star-lebanon/20180112/281706910081650
- 28 Abdulrahim, S., Ajrouch, K., & Antonucci, T. (August, 2015). Aging in Lebanon: Challenges and Opportunities. The Gerontologist, volume 55 (issue 4). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4542589/
- 29 Information provided by the Ministry of Social Affairs.
- 30 Order of Malta. National Institutions. Retrieved from https://www.orderofmalta.int/sovereign-order-of-malta/national-institutions/
- 31 Order of Malta Lebanon. Structure. Retrieved from http://orderofmaltalebanon.org/structure/#
- 32 Order of Malta Lebanon. Retrieved from <a href="http://orderofmaltalebanon.org">http://orderofmaltalebanon.org</a>
- 33 Kadi, S. (2017, August 6). Lebanon's Youth Bearing the Brunt of Unemployement, Regional Instability. In The Arab Weekly. Retrieved from <a href="https://thearabweekly.com/lebanons-youth-bearing-brunt-unemployment-regional-instability">https://thearabweekly.com/lebanons-youth-bearing-brunt-unemployment-regional-instability</a>
- 34 E-mail communication with Zeinab Al Madhoun, Social Support Society. March 2018.
- National Social Security Fund. Memo Number 559
  Dated 24/07/2017. Retrieved from <a href="https://www.cnss.gov.lb/index.php/pubcirculars/pubcirc0559">https://www.cnss.gov.lb/index.php/pubcirculars/pubcirc0559</a>.

- 36 The World Bank. (March 15, 2018). World Bank Supports Lebanon's Public Transport to Improve Mobility, Spur Growth. Retrieved from https://www.worldbank.org/en/news/press-release/2018/03/15/world-bank-supports-lebanons-public-transport-to-improve-mobility-spur-growth
- 37 HelpAge International. Notes on Methodology and Terms/Concepts Used on the Global AgeWatch Website. Retrieved from <a href="http://www.helpage.org/global-agewatch/about/notes/">http://www.helpage.org/global-agewatch/about/notes/</a>
- 38 The World Bank. Greater Beirut Public Transport Project. Retrieved from <a href="http://projects.worldbank.org/">http://projects.worldbank.org/</a> P160224/?lang=en&tab=overview
- 39 United Nations Educational, Scientific and Cultural Organization. (2013, September). Social Inclusion of Young Persons With Disabilities (PWD) In Lebanon: Where Do We Stand and What Should Be Done to Promote Their Rights?. Retrieved from http://unesdoc.unesco.org/images/0024/002442/244263e.pdf
- 40 Center for Studies on Aging. (2011, June). Age-Friendly Cities: An Opportunity for Friendly Aging. Retrieved from http://www.csa.org.lb/cms/assets/ archives/2011/5%20age-friendly%20cities%20an%20 opportunity%20for%20friendly%20aging%20english.pdf
- 41 Abdulrahim, S., Ajrouch, K., & Antonucci, T. (August, 2015). Aging in Lebanon: Challenges and Opportunities. The Gerontologist, volume 55 (issue 4). Retrieved from https://academic.oup.com/gerontologist/article/55/4/511/580948
- 42 Center for Studies on Aging. (2011, June). Agefriendly Cities: An Opportunity for Friendly Aging. Retrieved from http://www.csa.org.lb/cms/assets/ archives/2011/5%20age-friendly%20cities%20an%20 opportunity%20for%20friendly%20aging%20english.pdf
- 43 Interview with Abla Sibai, President, Center for Studies on Aging. February, 2018.
- 44 United Nations Educational, Scientific and Cultural Organization. (2013, September). Social Inclusion of Young Persons with Disabilities (PWD) in Lebanon: Where Do we Stand and What Should Be Done to Promote Their Rights? Retrieved from <a href="http://unesdoc.unesco.org/images/0024/002442/244263e.pdf">http://unesdoc.unesco.org/images/0024/002442/244263e.pdf</a>

- 45 United Nations Educational, Scientific and Cultural Organization. (2013, September). Social Inclusion of Young Persons with Disabilities (PWD) in Lebanon: Where Do we Stand and What Should Be Done to Promote Their Rights? Retrieved from http://unesdoc.unesco.org/images/0024/002442/244263e.pdf
- 46 International Labor Organization Statistics. Accessed Feb. 3, 2018.
- 47 Avis, W.R. (2017, August 16). Gender Equality and Women's Empowerment in Lebanon. Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/175-Gender-Equality-and-Womens-Empowerment-in-Lebanon.pdf
- 48 The World Bank. The Status & Progress of Women in the Middle East & North Africa. Retrieved from http://siteresources.worldbank.org/INTMENA/Resources/MENA\_Gender\_Compendium-2009-1.pdf
- 49 Center for Studies on Aging and United Nations Population Fund. (2011). Older Population in Lebanon: Facts and Prospects. Retrieved from http://www.csa.org.lb/cms/assets/archives/2011/13%20country%20 profile%20elderly%20population%20in%20lebanon%20 facts%20and%20prospects%20english.pdf
- 50 Pew Research Center. (2016, November 10). International Migrants by Country. Retrieved from http:// www.pewglobal.org/interactives/migration-tables/; Muglia, C. (2015, February 4). Methods of Finding Population Statistics of Lebanese Migration Throughout the World. In Khayarallah Center for Lebanese Diaspora Studies News. Retrieved from https://lebanesestudies. news.chass.ncsu.edu/2015/02/04/methods-of-findingpopulation-statistics-of-lebanese-migration-throughoutthe-world/; Bayanot Box. Sending (More Than) Money Back Home: The Importance of Remittances for Lebanese Families. Retrieved from https://bayanatbox.info/ sending-money-back-home-importance-remittanceslebanese-families/; The World Bank Group. (2015, June 15) Lebanon: Promoting Poverty Reduction and Shared Prosperity. Retrieved from http://documents.worldbank. org/curated/en/698161468179049613/pdf/97498-CAS-P151430-SecM2015-0202-IFC-SecM2015-0073-MIGA-SecM2015-0047-Box391476B-OUO-9.pdf; Abdulrahim, S., Ajrouch, K., & Antonucci, T. (August, 2015). Aging in Lebanon: Challenges and Opportunities. The Gerontologist, volume 55 (issue 4). Retrieved from https:// www.ncbi.nlm.nih.gov/pmc/articles/PMC4542589/

- 51 Public-sector employees rely on a defined-benefit scheme. Effective replacement rate is high and often close to 100 percent.
- 52 Equivalent to the accumulated contribution associated with past employers, and one month of earnings for each year of service with final employer (up to 20 years, with half a month for each year in excess of 20 years).
- 53 Jarmuzek, M., & Nakhle, N. (2016, March). Sustainability and Equity Challenges: Some Arithmetic on Lebanon's Pension System. Retrieved from http://www. databank.com.lb/docs/pension%20system.pdf
- Kadi, S. (2017, August 6). Lebanon's Youth Bearing the Brunt of Unemployement, Regional Instability. In The Arab Weekly. Retrieved from <a href="https://thearabweekly.com/lebanons-youth-bearing-brunt-unemployment-regional-instability">https://thearabweekly.com/lebanons-youth-bearing-brunt-unemployment-regional-instability</a>
- 55 Interview with Abla Sibai, President, Center for Studies on Aging. February, 2018.
- Robalino, D., & Sayed, H. (2012, December). Republic of Lebanon: Good Jobs Needed: The Role of Macro, Investment, Education, Labor and Social Protection Policies ("Miles"). Retrieved from <a href="http://documents.worldbank.org/curated/en/230521468089355499/pdf/760080ESWoGRAYoCoDisclosed030200130.pdf">http://documents.worldbank.org/curated/en/230521468089355499/pdf/760080ESWoGRAYoCoDisclosed030200130.pdf</a>
- 57 Institute for Development, Research, Advocacy and Applied Care. The Elderly Empowerment Project. Retrieved from http://www.idraac.org/english/elderly-empowerment-project
- 58 Interview with Georges Karam, Psychiatrist with IDRAAC. January, 2018.
- 59 Institute for Development, Research, Advocacy and Applied Care. The Elderly Empowerment Project. Retrieved from http://www.idraac.org/english/elderly-empowerment-project
- 60 Interview with Georges Karam, Psychiatrist with IDRAAC. January, 2018.
- 61 Interview with Georges Karam, Psychiatrist with IDRAAC. January, 2018.

- 62 Interview with Melek Nimr, Founder, Social Support Society. February, 2018.
- 63 United Nations Educational, Scientific, and Cultural Organization. Lebanon. Retrieved from <a href="http://uis.unesco.org/country/LB">http://uis.unesco.org/country/LB</a>
- 64 Robalino, D., & Sayed, H. (2012, December). Republic of Lebanon: Good Jobs Needed: The Role of Macro, Investment, Education, Labor and Social protection policies ("Miles"). Retrieved from <a href="http://documents.worldbank.org/curated/en/230521468089355499/pdf/760080ESWoGRAYoCoDisclosed030200130.pdf">http://documents.worldbank.org/curated/en/230521468089355499/pdf/760080ESWoGRAYoCoDisclosed030200130.pdf</a>
- 65 University for Seniors. Previous terms. Retrieved from https://website.aub.edu.lb/rep/cec/uni\_seniors/Pages/ArchiveSpring2018.aspx
- 66 Interview with Maya Abi Chahine, Program Manager, University for Seniors. July, 2018.
- 67 Interview with Maya Abi Chahine, Program Manager, University for Seniors. July, 2018.
- 68 Interview with Maya Abi Chahine, Program Manager, University for Seniors. July, 2018.
- 69 World Economic Forum. Networked Readiness Index. Retrieved from http://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index/#indicatorId=MOBTELTARIFF
- 70 World Economic Forum. Lebanon. Retrieved from http://reports.weforum.org/global-information-technology-report-2015/economies/#indexId=NRI&economy=LBN
- 71 Investment Development Authority of Lebanon. (2015, July 1). Lebanon 2020 Telecom Vision. Retrieved from http://investinlebanon.gov.lb/en/InformationCenter/ NewsEventDetails/131
- 72 World Economic Forum. Networked Readiness Index. Retrieved from http://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index/#indicatorId=MOBTELTARIFF
- 73 World Economic Forum. Lebanon. Retrieved from http://reports.weforum.org/global-information-technology-report-2015/economies/#indexId=NRI&economy=LBN

- 74 Wittgenstein Centre. Wittgenstein Centre data explorer. Retrieved from <a href="http://www.oeaw.ac.at/fileadmin/subsites/Institute/VID/dataexplorer/index.html">http://www.oeaw.ac.at/fileadmin/subsites/Institute/VID/dataexplorer/index.html</a>
- 75 Harfouche, A., & Robbin, A. (2010). Antecedents of the Digital Divide in Lebanon. Retrieved from https://pdfs.semanticscholar.org/b039/2540f2a00c38b123cefaf743b 818ddf14785.pdf
- 76 Harfouche, A., & Robbin, A. (2010). Antecedents of the Digital Divide in Lebanon. Retrieved from https://pdfs.semanticscholar.org/b039/2540f2a00c38b123cefaf743b 818ddf14785.pdf
- 77 Interview with Abla Sibai, President, Center for Studies on Aging. February, 2018.
- 78 Interview with Maya Abi Chahine, Program Manager, University for Seniors. July, 2018.
- 79 Interview with Maya Abi Chahine, Program Manager, University for Seniors. July, 2018.
- 80 Interview with Maya Abi Chahine, Program Manager, University for Seniors. July, 2018.
- 81 Interview with Maya Abi Chahine, Program Manager, University for Seniors. July, 2018.
- 82 Arabnet. The State of Digital Investments in MENA. Retrieved from http://sme.ae/
  StudiesAndResearchDocument/The-State-of-Digital-Investments-in-MENA-2013-2017.pdf
- 83 Tibi, M. (2017, September 25). What Is the Impact of Banque du Liban's Circular 331 on the Lebanese Economy? Retrieved from <a href="http://calert.info/details.php?id=1582">http://calert.info/details.php?id=1582</a>
- 84 Tibi, M. (2017, September 25). What Is the Impact of Banque du Liban's Circular 331 on the Lebanese Economy? Retrieved from <a href="http://beirut-today.com/2017/09/25/what-is-the-impact-of-banque-du-libans-circular-331-on-the-lebanese-economy/">http://beirut-today.com/2017/09/25/what-is-the-impact-of-banque-du-libans-circular-331-on-the-lebanese-economy/</a>
- 85 Anderson, B. (2018, March 27). Lebanese Health Startup Heads to Silicon Valley. In The Daily Star (Lebanon). Retrieved from <a href="https://www.pressreader.com/lebanon/the-daily-star-leban">https://www.pressreader.com/lebanon/the-daily-star-leban</a> on/20180327/281621010883130

- 86 Bonasio, A. (2016, March 23). How to Save a life: Lebanese Startups Bring Big Data and IoT to Healthtech. In The Next Web. Retrieved from https://thenextweb.com/insider/2016/03/23/save-life-lebanese-startups-bring-big-data-iot-healthtech/
- 87 Butcher, M. (2015, April 3). Beirut's Bright Future as a Tech Hub for MENA, if its Politicians Will Allow It. In TechCrunch. Retrieved from https://techcrunch.com/2015/04/03/beiruts-bright-future-as-a-tech-hubfor-mena-if-its-politicians-will-allow-it/
- 88 World Health Organization. Life Expectancy and Healthy Life Expectancy: Data by Country. Retrieved from http://apps.who.int/gho/data/view.main. SDG2016LEXv?lang=en
- 89 Sibai, A.M., Rizk, A., & Kronfol, N.M. (2015). Aging in Lebanon: perils and prospects. J Med Liban, volume 63 (issue 1). Retrieved from https://www.ncbi.nlm.nih.gov/pubmed/25906507
- 90 Kechichian, J.A. (2017, January 1). Lebanon ranked third globally in smoking. In Gulf News Lebanon. Retrieved from https://gulfnews.com/news/mena/lebanon/lebanon-ranked-third-globally-in-smoking-1.2036815
- 91 Sibai, A.M., et al. (2016). Cigarette Smoking in Middle Eastern Country and its Association with Hospitalisation use: A Nationwide Cross-Sectional Study. BMJ Open, volume 6 (issue 4). https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4838686/
- 92 Salloum, R.G., et al. (2013). Point-of-sale Tobacco Advertising in Beirut, Lebanon Following a National Advertising Ban. BMC Public Health, volume 13. Retrieved from https://bmcpublichealth.biomedcentral.com/ articles/10.1186/1471-2458-13-534
- 93 World Bank, Global Practice for Macroeconomics & Fiscal Management, Middle East and North Africa Region (2017). Lebanon Economic Monitor.
- 94 The World Bank. Out-of-pocket Expenditure (% of Current Health Expenditure). Retrieved from <a href="https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS">https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS</a>

- 95 Khalife, J., et al. (2017, January 1). Hospital contracting reforms: the Lebanese Ministry of Public Health Experience. Health Systems & Reform, volume 3 (issue 1). Retrieved from https://www.tandfonline.com/doi/pdf/10.1080/23288604.2016.1272979?needAccess=true
- 96 World Health Organization. (2018, May). Country Cooperation Strategy at a Glance: Lebanon. Retrieved from http://apps.who.int/iris/bitstream/handle/10665/136909/ccsbrief\_lbn\_en.pdf;jsessionid=0 DA0670F1C99E889997FE4FD666618E1?sequence=1
- 97 Alameddine, M. et al. (2017). The Workforce Trends of Nurses in Lebanon (2009-2014): A Registration Database Analysis. PloS One, volume 12 (issue 8). Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5553929/
- 98 Republic of Lebanon Ministry of Public Health. Laws & Regulations. Retrieved from https://www.moph.gov.lb/en/laws#/Laws/view/24
- 99 National Social Security Fund. Memo Number 559 Dated 24/07/2017. Retrieved from <a href="https://www.cnss.gov.lb/index.php/pubcirculars/pubcirc0559">https://www.cnss.gov.lb/index.php/pubcirculars/pubcirc0559</a>.
- 100 Interview with Georges Karam, psychiatrist with IDRAAC. January, 2018.
- 101 The World Bank. Lebanon Health Resilience
  Project. Retrieved from <a href="http://projects.worldbank.org/">http://projects.worldbank.org/</a>
  P163476/?lang=en&tab=overview
- 102 Global Concessional Financing Facility. (2017, September 28). Lebanon Health Resilience Projects. Retrieved from https://globalcff.org/dt\_gallery/gcff-photos-05/; The World Bank. Lebanon Health Resilience Project: overview. Retrieved from http://projects. worldbank.org/P163476/?lang=en&tab=overview
- 103 The World Bank. (2017, June 13). International bank for Reconstruction and Development Project Appraisal Document on a Proposed Financing in the Amount of US\$120 million (Including an IBRD Loan and Support from the Concessional Financing Facility) to the Lebanese Republic for a Lebanon Health Resilience Project. Retrieved from http://documents.worldbank.org/curated/en/616901498701694043/pdf/Lebanon-Health-PAD-PAD2358-06152017.pdf

- The World Bank. Lebanon Health Resilience Project: Overview. Retrieved from http://projects. worldbank.org/P163476/?lang=en&tab=overview; The World Bank. Lebanon Health Resilience Project: Results. Retrieved from http://projects.worldbank.org/P163476/?lang=en&tab=results
- 105 Interview with Abla Sibai, President, Center for Studies on Aging. February, 2018.
- 106 Interview with Georges Karam, psychiatrist with IDRAAC. January, 2018.
- 107 Shideed, O., Sibai, A., & Tohme, R. (2013). Living Arrangements of Older Adults in Lebanon: Correlates of Living with Married Children. Eastern Mediterranean Health Journal, volume 19 (issue 12). Retrieved from http://applications.emro.who.int/emhj/v19/12/EMHJ\_2013\_19\_12\_1026\_1034.pdf?ua=1
- 108 Naja, N. (2012). Long-term Stay Institutions in Lebanon. Lebanese Medical Journal, volume 60 (issue 4). Retrieved from https://pdfs.semanticscholar.org/924b/69 d3457ccc87fe967d3dd7c592402d6be8d6.pdf
- 109 Interview with Nabil Naja, Dar Al Ajaza Al Islamia Association. February, 2018.
- 110 (2017, October 24). Social Affairs Ministry Launches Elderly Care Advisory. In The Daily Star (Lebanon). Retrieved from http://www.dailystar.com.lb/News/Lebanon-News/2017/Oct-24/423819-social-affairs-ministry-launches-elderly-care-advisory.ashx
- 111 (2017, October 24). Social Affairs Ministry Launches Elderly Care Advisory. In The Daily Star (Lebanon). Retrieved from http://www.dailystar.com.lb/News/Lebanon-News/2017/Oct-24/423819-social-affairs-ministry-launches-elderly-care-advisory.ashx
- 112 Global Burden of Disease Collaborative Network. Global Burden of Disease Study 2016 (GBD 2016) Results. Seattle, United States for Health Metrics and Evaluation (IHME), 2017.
- 113 Nicaise, S., et al. (2016). Alzheimer and the Mediterranean report 2016. Retrieved from http://ampamonaco.com/files/MAA\_Rapport\_GB\_web\_sml.pdf

- 114 Alzheimer's Association Lebanon. Overview.
  Retrieved from https://web.archive.org/
  web/20180109153724/http://alzlebanon.org/en/aboutthe-association/
- 115 Alzheimer's Disease International. MetLife-ADI Awards for Dementia Care Education. Retrieved from https://www.alz.co.uk/metlife-adi-awards
- 116 Alzheimer's Association Lebanon. Alzheimer's Association Lebanon's won the "ADI-MetLife Foundation Award" for its "Capacity Building & Outreach" program. Retrieved from https://web.archive.org/web/20130720054340/http://www.alzlebanon.org/blog/2013/04/23/alzheimers-association-lebanons-won-the-adi-metlife-foundation-award-for-its-capacity-building-outreach-program/
- 117 Nicaise, S., et al. (2016). Alzheimer and the Mediterranean Report 2016. Retrieved from <a href="http://ampa-monaco.com/files/MAA\_Rapport\_GB\_web\_sml.pdf">http://ampa-monaco.com/files/MAA\_Rapport\_GB\_web\_sml.pdf</a>

© 2018. This report was produced by FP Analytics, in collaboration with and underwritten by AARP. FP Analytics is the independent research and analytics arm of The FP Group.