March 31, 2021

WHO CARES?

Elderly Care and Female Labor Force Participation in the Mashreq

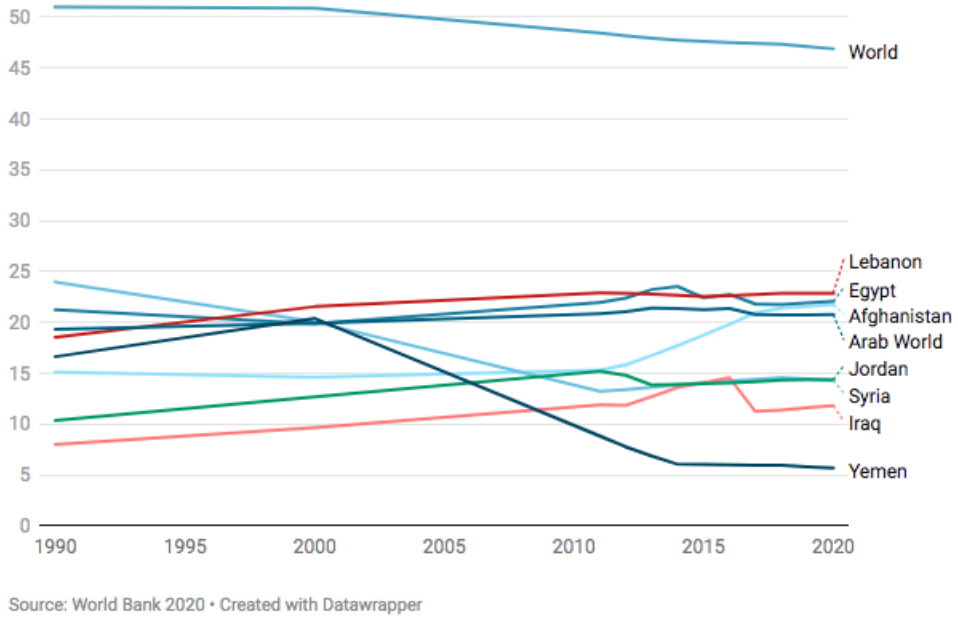
By: Rose Khattar

Image source: Unsplash

INTRODUCTION

The Arab region has amongst the lowest female labor force participation (FLFP) rates in the world (World Bank 2020). Women's economic participation is important for women's security, but it is also important for sustainable economic growth. Across the world and the Arab region, the Mashreq nations of Lebanon, Iraq and Jordan have some of the lowest FLFP rates and they have remained stable in recent times (Figure 1). In Lebanon, only 23 per cent of women are employed in the paid labor market and less than 15 percent of women are employed in Iraq and Jordan (Figure 1). There is significant heterogeneity with the most educated women the most likely to work . These statistics are likely an underrepresentation due to a lack of inclusion of women participating in informal sectors.

Figure 1: Female labor force participation in select nations (over time, %)



In response to persistently low FLFP, all three nations have committed to increasing FLFP by 2025, with Iraq and Lebanon committing to a 5 percentage point increase and Jordan committing to a 9 percentage point increase (MGF 2020b). While difficult to achieve, a clear commitment has increased the prospects that an increase is at the very least desirable. If attained and sustained, the World Bank (MGF 2020b) predicts that:

> *"annual economic growth would be increased by 1.6 percentage points in Iraq, 2.5 points in Jordan, and 1.1 points in Lebanon by 2035."*

To achieve these ambitious goals, an understanding of the barriers to FLFP is needed. In June 2020, the MGF released its first "State of the Women in the Mashreq" Report (2020b) and identified that a combination of limited jobs, persistent patriarchal norms and gender gaps in unpaid labor, amongst others, limit women's paid working opportunities (MGF 2020b). It found that an unequal distribution of caring responsibilities within the home along gendered lines was a key barrier to women entering the paid labor market. While unpaid care work is critical for households, it could also increase women's opportunity cost to work. This means that when women undertake a disproportionate amount of unpaid care work, relative to men, it can effectively lock them out of the paid labor market.

CLIENT THE WORLD BANK'S POVERTY AND EQUITY GLOBAL PRACTICE'S MASHREQ GENDER FACILITY (MGF)

The MGF (2020a) seeks to assist the Mashreq countries of Iraq, Jordan and Lebanon to "enhance women's economic empowerment and opportunities as a catalyst towards more inclusive, sustainable, and peaceful societies, where economic growth benefits all." They are looking at the barriers to women's participation and assisting the Mashreq governments in achieving their FLFP goals. Within each nation, their main partners are:

	IRAQ	JORDAN	LEBANON
Steering Committee members	- Ministry of Planning - Kurdistan Regional Government's (KRG) High Council of Women Affairs	- Ministry of Planning and International Cooperation - Jordanian National Commission for Women	- National Commission for Lebanese Women - Ministry of Economy and Trade
National Coordinator	Women's Empowerment Directorate at the General Secretariat of the Council of Ministers	Jordanian National Commission for Women	National Commission for Lebanese Women

Source: MGF (2020a)

Unpaid care work includes looking after children, the elderly or those with a disability. Time spent looking after children is likely to be the largest component of unpaid care work that acts as a barrier to women's workforce participation (MGF 2020b). Nevertheless, time spent looking after the elderly was found to also limit women's economic participation (MGF 2020b). Women who need to care for both children and the elderly tend to be referred to as the "sandwich generation" (Miller 1981) and face additional barriers to paid labor market participation, particularly in the absence of alternative caregiving options.

This report seeks to build upon the MGF's work and unpack the role of elderly care in women's workforce participation in Iraq, Jordan and Lebanon. Specifically, it answers:

Key question 1: What is the current framework for aged care?

Secondary questions: What factors affect supply and demand for elderly care? How sustainable is the current framework?

Key question 2: What is the relationship between time spent looking after the elderly and female labor force participation?

Secondary questions: Does co residency or health of the elderly impact workforce participation? Do these relationships vary by education of women?

Key question 3: What are international aged care best practice schemes?

Secondary questions: What can the Mashreq nations learn from the development of formalized aged care systems in other nations?

Key question 4: What policy options are available to creating a sustainable and equitable aged care system in the Mashreq nations?

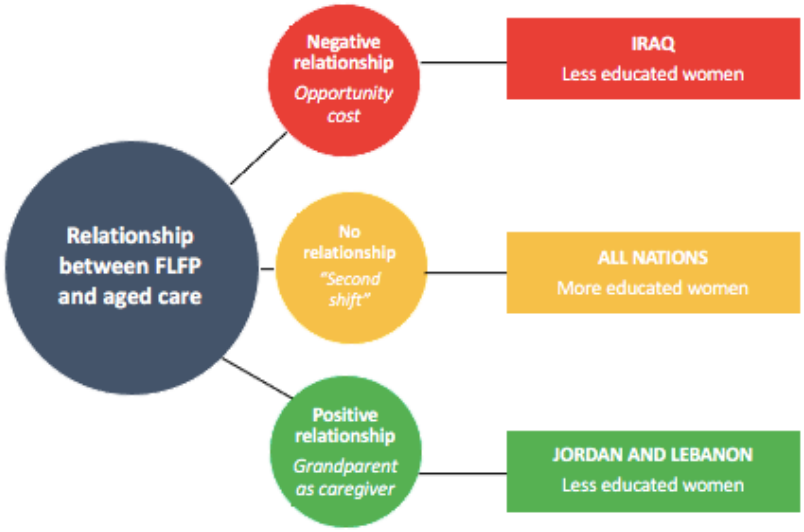
Secondary questions: How will these options increase women's labor supply and/or lead to job creation?

Looking after the elderly incudes assisting with "eating, bathing, dressing, toileting and transferring (mobility)" (Zigante 2018, p. 22). Limited literature suggests that women in Lebanon, Jordan and Iraq

tend to spend more time than men looking after the elderly for no wage (MGF 2020b, p.149). This is attributed to a combination of factors affecting the supply and demand of elderly care. In each nation, the public and private formal aged care sector is "fragmented and unregulated" (MGF 2020b, p. 149). Alongside this lack of supply of market care options, all three nations hold a dominant cultural preference that the elderly should be looked after by their families (World Values Survey 2018). With patriarchal norms prevailing, this has led to women being the most likely carers of the elderly and a consequent gender gap in unpaid care work. In the long-term, this overreliance on female unpaid carers is unsustainable. These nations will begin to transition to an ageing population, due to demographic changes, placing pressure on a smaller supply of female carers and increasingly fragile health and welfare systems.

There is a lack of quantitative evidence as to the relationship between time spent looking after the elderly and FLFP. This report seeks to fill this gap *by analysing nation-specific household survey data* that includes time-use data, household make-up by age, and labor force participation. It finds that the relationship between FLFP and both time spent looking after the elderly or living with the elderly is unclear – it is more complicated than one may expect. Across all three nations, these relationships differ and are dependent upon the working age woman's education level (Figure 2).

Figure 2: Alternative findings of the relationship between FLFP and aged care



In Iraq, amongst less educated women, a negative relationship exists suggesting that spending time looking after the elderly or living with the elderly reduces their paid labor market supply. In contrast, for less educated women in Jordan and Lebanon, providing elder care or living with the elderly tends to increase their paid labor market supply. This could be because grandparents act as caregivers for the children of these women providing a free caring option allowing them to work. In all three nations, for more educated women, there is no relationship between elder care and FLFP, signalling women's work inside the home has no impact on their work outside the home. It is unsurprising this relationship holds for the most educated women as they are by far the most likely to be in the paid labor market. While these women are not penalized in the same manner as others, they still take on physical and emotional responsibilities by providing unpaid care for the elderly, and likely do more than their male counterparts.

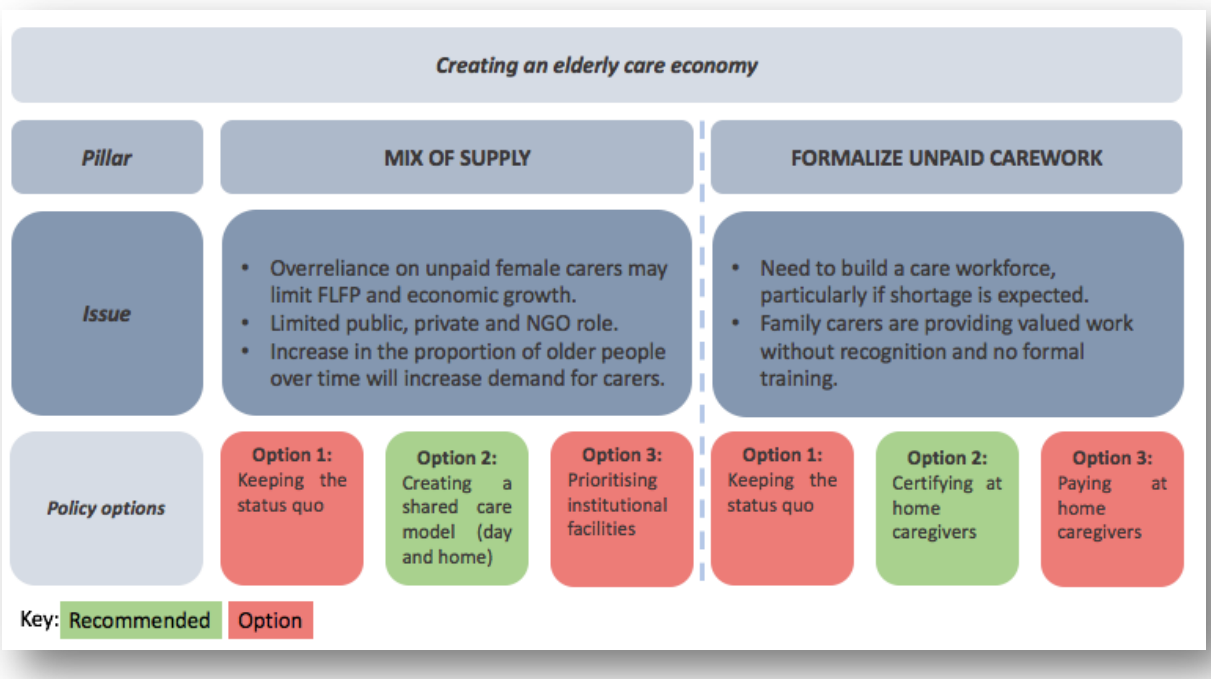
These results need to be interpreted with caution. Splitting data by education and employment status may cause sample size issues, particularly due to the limited number of women already employed. There are also primary data collection issues that need to be addressed to further unpack the relationship between FLFP and aged care. The percentage of people in the surveys who say that they are providing elder care is low. This is likely a response bias – individuals providing care without acknowledging this in their survey responses. Therefore, it is imperative that new data is collected that

includes questions specifically on elder care and reworks existing care questions in a culturally appropriate manner.

This report also assists with *a longer-term goal of creating a care economy* that recognises the provision of care as economic infrastructure for the Mashreq nations. Removing barriers to paid care work may not increase FLFP if there are no jobs for women to supply, particularly in a region with low job creation. A care economy can assist with this by both increasing women's labor supply in other sectors and creating paid care jobs for women to supply by recognizing and valuing care work.

This report looks at best practices from other nations to form the basis of policy recommendations for the Mashreq nations. The Mashreq nations are not alone in dealing with the consequences of ageism and sexism - there is no place in the world where men do more care work than women (ILO 2018, p. xxix). No nation has a perfect aged care system with most systems created reactively to the responsibilities of an ageing population (Colombo et al. 2018). High-income nations are struggling with workforce attraction and retention issues (Colombo et al. 2018), while low- and middle-income nations are struggling to prioritise ageing as an important political, economic and social issue (Scheil-Adlung 2015). However, high-income nations with high FLFP are notable for their different mix of supply of care work, moving from traditional methods of care provided by unpaid family members to external public/private providers in home, day-care and institutional settings.

Changing the mix of supply to include the provision of care by public, private and NGO partners, alongside formalizing the provision of at-home familial care is essential to a creating a valued aged care sector (Figure 3).



It is recommended that the Mashreq nations reform the aged care sector, starting with:

1. *Creating and expanding existing day-care facilities run by NGO partners;*
2. *Professionalising current unpaid caregivers through certification; and*
3. *Following certification, assisting home-based caregivers to provide care in day facilities so that they are caring for multiple members of the elderly community.*

Formalizing aged care may actually have no impact on FLFP. As explained, the relationship between unpaid labor and paid labor may not always be negative. Further, it may be difficult for women to obtain paid labor market jobs in the Mashreq nations given low job creation. This is why creating an aged care economy supplied by paid labor – and not simply closing gender gaps in unpaid labor at

home – is crucial to any reform. Furthermore, formalizing elderly care is a worthy goal in and of itself independent of increasing FLFP. It will help ensure that the elderly can live with dignity and receive high-quality care, as well as reduce the emotional and physical responsibilities placed upon women by virtue of their gender.

The Mashreq region has continually experienced fragility related to conflict and development. While having a plan to reform elderly care is difficult in most nations, it will be even more complicated in this region. The MGF should work with the Steering Committee Members and National Coordinators to create a distinct implementation plan for each nation (Figure 4). They need to start by identifying NGO partners to conduct a landscape analysis to identify best-practice day-care and certification and training programs, as well as work with social partners to build support amongst male community members to ensure women can work without backlash.

Figure 4: Next steps for MGF

I - THE AGED CARE LANDSCAPE

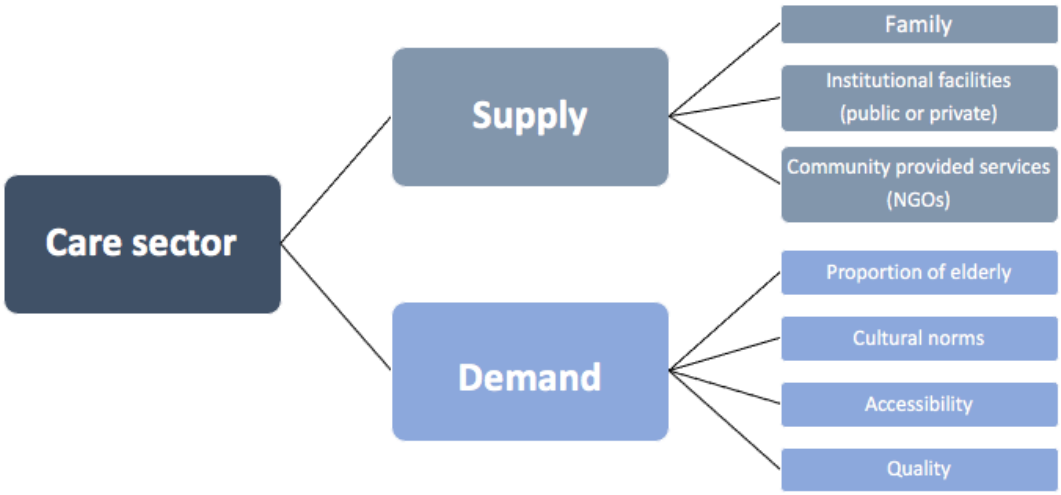
Key question 1: What is the current framework for aged care?

Secondary questions: What factors affect supply and demand for elderly care? How sustainable is the current framework?

Landscape analysis and literature review

To understand the aged care system, it's important to analyse the factors affecting the supply and demand of care (Figure 5).

Figure 5: Framework for understanding the aged care sector



Supply of aged care

Key finding: Care is mostly provided by wives, daughters and daughters-in-law, with alternative care options lacking.

Iraq, Jordan and Lebanon do not have a formalized system of elderly care. Care is provided by female family members within the home for no wage – they are informal caregivers. This section looks at the current mix of supply of aged care looking at care options inside and outside the home and who is providing this care.

By family members

There is a well-established pattern of supply of elderly care in the world - most care is provided informally within the home by one's spouse or child (see Section III).). This is usually a female caregiver, providing care work for no wage (World Bank 2018). The Mashreq region is no different. According to Hussein and Ismail (2017), elderly people in the Arab region tend to live with their offspring and are looked after by mostly their daughters or daughters-in-law. High levels of co-residency within the region may also be a reason why care is provided at home – it is costless and easily accessible.

In Lebanon, Naja (2012, p. 254) and Chemali et al. (2008), found that over 98 percent of the elderly live at home, likely with familial caregivers. In Jordan, Kamel (2015, p. 116) found that family members "provide elders with caregiving" as co-residency is their most common living arrangement.

In a sample of 489 caregivers in Jordan, 86.2 percent were women with more than half providing care to a parent or parent-in law (Kamel 2015, pp. 117-118). In Iraq, co-residency is also common and grandchildren and children highly likely to provide care for grandparents and parents (Peterson 2016).

Institutional facilities (public or private)

In all three nations, there is a shortage of institutional aged-care facilities – private or government-funded. When formal aged-care facilities exist, they are located in capital cities, largely unoccupied and employing an underqualified workforce.

In Iraq, most aged-care services are in Baghdad. A recent study identified "57 age-friendly centers in Iraq", with more than half located in Baghdad (Tariq and Lafta 2018, p. 53). There are two-state run aged-care homes, where people can live, in Baghdad. They are underutilised with 38 percent and 25 percent occupancy rates (Peterson 2018). In Jordan, Kamel (2015) identified only nine aged-care housing facilities run by private firms or charities. Aged-care homes tend to be mostly located in Amman and, similar to Iraq, are underutilised (Kamel 2015, p. 117).

In Lebanon, a 2005 analysis identified that 33 aged care facilities existed largely privately-run with small government subsidies to providers and users (Chemali et al. 2008, p. 1468). They housed "around 2660 residents (800 males and 1860 females), representing around 1.4 percent of the total elderly population" (Chemali et al. 2008, p. 1468). This review of the Lebanese elderly care system concluded that it was "inefficient and unorganized" (Chemali et al. 2008, p. 1467). An updated study found that there were 49 institutions with a total of 4,000 residents, still less than 1.4 percent of the elderly population (Naja 2012, p. 353).

Community-provided services

There are community-based services in all three nations providing care both within and outside the home. These services are usually run by charities, religious groups and NGOs with employees usually volunteers. There is not a clear understanding of the number of community-based services, nor their reach. For instance, in Lebanon, these facilities are "fragmented and non-sustainable" without government assistance (Chemali et al. 2008, p. 1470). In Jordan, while their National Health Strategy aims to increase home-care provided assistance, this has not been a reality (MGF 2020b).

Demand for elderly care

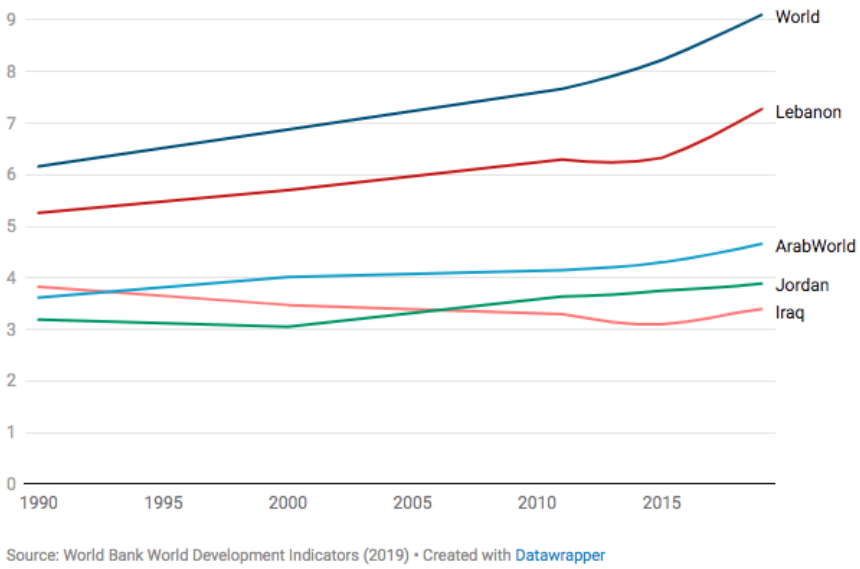
Key finding: Cultural preferences for familial care, alongside patriarchal norms and low-quality alternative care options, shape demand for elderly care.

Another important consideration in understanding the elderly care framework is demand. Demand is shaped by demographic trends which account for the proportion of the population that is considered elderly. There is a strong cultural preference that care is provided by family members. There needs to be families wanting to access alternative forms of care services, alongside those services being actually supplied. High quality, low-cost and in-home or conveniently located care facilities might assist with increasing demand for alternative care options.

Proportion of elderly

Lebanon has the highest average life expectancy in the Mashreq and Arab region at 79 years, with Jordan and Iraq lower at 74 years and 70 years respectively (World Bank 2020). Alongside differences in fertility rates, this corresponds to Lebanon having a higher than average proportion of its population aged 65 or above relative to the Arab world (Figure 6). Older people make up a lower proportion of Jordan's (at 3.9 percent) and Iraq's population (at 3.4 percent). A relatively youthful population limits demand for aged care services and thus caregivers.

Figure 6: Total population aged 65 and older (%)



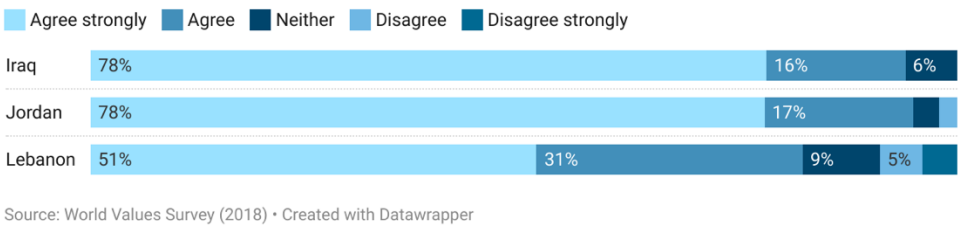
Cultural norms

Another factor affecting demand is cultural norms on care preferences. Hussein and Ismail highlight that in the Arab region a gendered distribution of elderly care is caused by patriarchal norms coinciding with the perception that care is a "family rather than societal responsibility" (Hussein and Ismail 2017). This cultural preference is likely linked to religiosity with all three nations majority-Muslim countries, with Lebanon notable for a third of its population identifying as Christian. Islam teaches respect, care and service for the elderly (Hussein and Ismail 2017):

> *"And your Lord has decreed that you worship none but Him. And that you be dutiful to your parents. If one of them or both of them attain old age in your life, say not to them a word of disrespect, nor shout at them but address them in terms of honour." (Surah Al-Isra 17:23 AS TRANSLATED BY MUHSIN KHAN).*

In Lebanon, placing a parent in an institutional facility is seen as a "last resort" measure (Chemali et al. 2008). Similarly, in Jordan alternative forms of care are "not an acceptable choice" (Kamel 2015, p. 117) and in Iraq many are "ashamed to send their aging members away [from home]" (Peterson 2016). Each nation scores highly on perceptions of a child's duty to look after a parent (Figure 7), regardless of gender.

Figure 7: Agreement with: "It is a child's duty to take care of an ill parent



As cultural norms are an underlying cause of the current overreliance on female carers, altering the gendered reliance and distribution of this work will be difficult – culture is sticky and can be hard to change (Alesina et al. 2013). This makes clear that it is unlikely there will be cultural acceptability of the elderly being looked after by or living in institutional settings. While this options may free up women to work, it will also limit familial connection that can give richness to the lives of carers and elderly and goes against clear preferences.

Accessibility of services

Accessibility of services, including cost and location, also affects demand. Family provided care is the most accessible form of care available to the elderly - they are costless and generally co-located or, at least, nearby. To compete, alternative providers of care should be relatively cheap and easy to access. However, as indicated above, this is not the case in any of the three nations. In all three nations, most services are located in the cities making quality public transportation that is also safe for women to access essential, which is mostly lacking (Tariq and Lafta 2018). In Lebanon, the government subsidies care by providing funds to providers (42 percent of the cost of beds) and users (20 percent of costs) (Chemali et al. 2008, p. 1468). However, it remains expensive and consequently inaccessible (Chemali et al. 2008, p. 1468).

Quality of services

In most countries, paid care jobs tend to be lower quality, precarious and low-pay -overwhelmingly provided by women and foreign workers (see Section III). Where they exist, the Mashreq nations also have similar issues. In Iraq, aged-care centres lack suitable drinking water and the workforce does not hold the appropriate education and training required to provide high-quality care (Tariq and Lafta 2018). A study in Jordan found that elderly residing in institutionalized settings were more likely to experience depression than those being cared for at home (Mahansneh 2000). In Lebanon, there are only 7 geriatricians and most staff working in aged-care settings are not appropriately trained (Chemali et al. 2008).

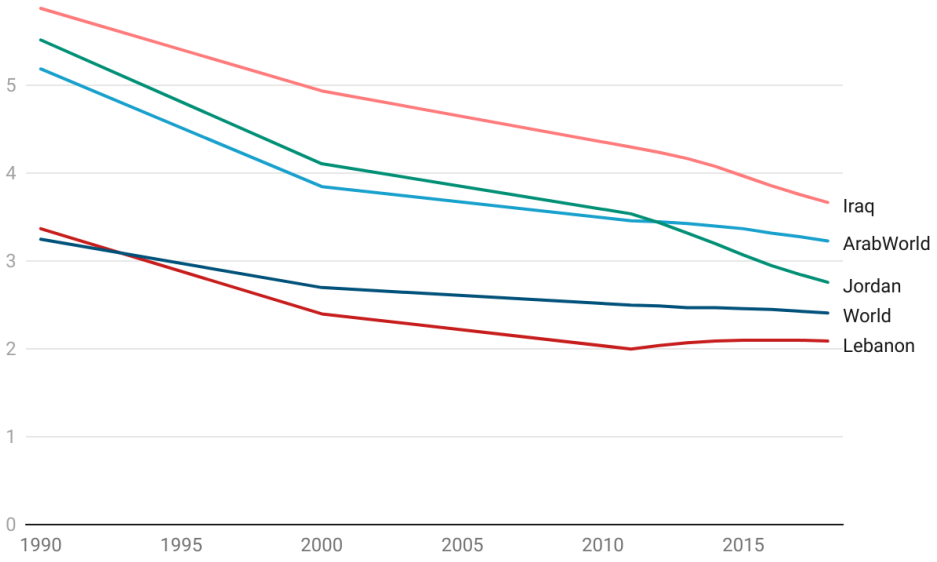
Sustainability of current framework

Key finding: Relying on unpaid female family members to provide care to the elderly is unsustainable with an expected ageing population looming.

There is a growing perception that the current reliance on female family members providing care is unsustainable due to changing demographics (Chemali et al. 2008, Kamel 2015 and Tariq and Lafta 2018). Overtime, all three nations will experience the responsibilities of an ageing population as fertility rates decline (Figure 8) and life expectancy increases. Therefore, there will be an increase in demand for carers of the elderly. Alongside this, there is likely to be a reduction in the pool of carers available within the home as there is an expectation youth migration and women's workforce participation will increase, alongside smaller sized families (Hussein and Ismail 2017).

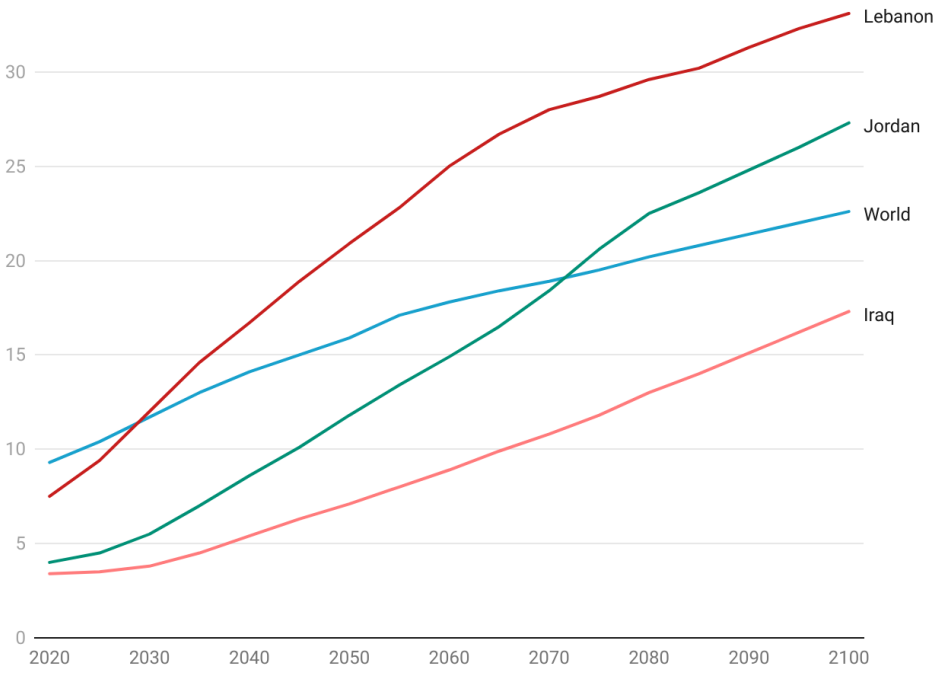
The United Nations (2019) predicts that the share of people older than 65 will increase in all three nations over the next decades (Figure 9). Notably, Lebanon will continue to out-age the other nations and the world. An increase in the proportion of elderly, suggests that creating a sustainable framework for elderly care is increasingly important. In the coming decades, the Mashreq nations will need to increase the stock of carers and change the mix of supply of elder care to respond to a growing need. Without this, there may be gap in the provision of care (Zigante 2018, p. 22). Traditional free market forces of supply and demand are unlikely to solve this issue as there is no formalized market for care at the moment – in other words, there is no formal market to react to this change. It's probable that an individual unpaid female carer will be overburdened, potentially needing to care for an increasing amount of aged people. It's likely that elder care will impact FLFP in the future given current preferences and patriarchal norms suggesting care patterns will likely persist without any catalyst for change. Without changes in the mix of care work or recognition of the value of care work, an ageing population in these nations will likely prohibit women's economic advancement and potential economic growth.

Figure 8: Fertility rates (over time, total births per woman)



Source: World Bank World Development Indicators (2019) • Created with Datawrapper

Figure 9: Population projections for ages 65 and over (over time, %)



Source: United Nations World Population Projections (2019) • Created with Datawrapper

II – FEMALE LABOR FORCE PARTICIPATION AND AGED CARE

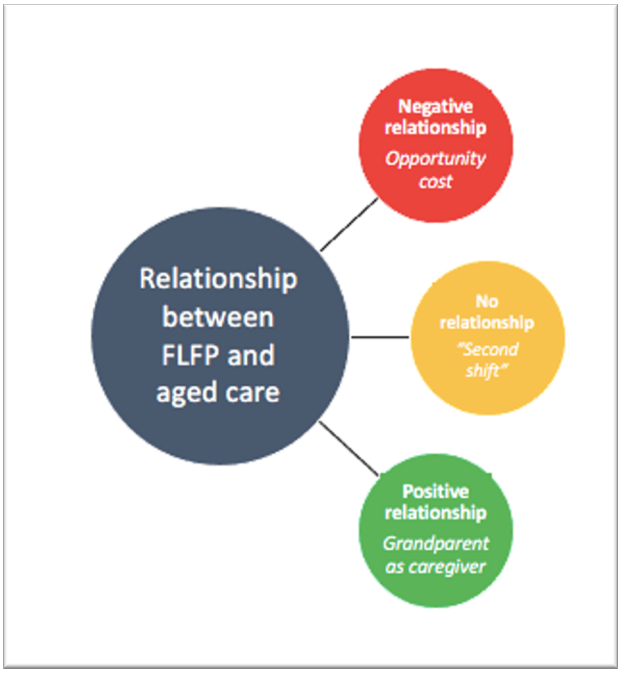
Key question 2: What is the relationship between time spent looking after the elderly and female labor force participation?

Secondary questions: Does co residency or health of the elderly impact workforce participation? Do these relationships vary by education of women?

Existing literature

The relationship between FLFP and aged care is complicated (Figure 10). There could be a positive or negative relationship between time spent looking after the elderly and FLFP – or there could be no relationship at all. This section will provide an overview of existing literature in evidence of each prediction and explain when each prediction is most likely to surface. The fact that there is not simply one prediction should not be surprising – after all, women are no a monolith.

Figure 10: Alternative predictions - female labor force participation and aged care



The MGF found that time spent looking after the elderly was limiting women's economic participation in Lebanon, Jordan and Iraq (MGF 2020b). In this instance, spending time looking after the elderly for no wage may act as a deterrent to women entering the labor market or restrict the amount of hours women can spend in paid employment by increasing the opportunity cost to paid labor. Globally, there is evidence to suggest that there is a negative relationship between unpaid elderly work and FLFP. Prior work in OECD nations has found that "a one percent increase in hours of care is associated with a reduction in the employment rate of carers by around 10 percent" (Colombo et al. 2018). This suggests that the amount of time spent caring, or "intensity of care", is likely to be a limit on women's paid labor market participation. Put another way, the more time a woman spends providing care work, the less likely they are to work in the paid labor market. Further research looking into the experience of nations with different levels of development and income found that a negative relationship between FLFP and elderly care is likely to exist in nations with "less developed formal care services" (Scheil-Adlung 2015, p. 49). This suggests that it is likely that a negative relationship holds between FLFP

and elderly care in the Mashreq nations given the lack of a formal aged care system and its current mix of supply (see Section I).

An alternative prediction is that there simply could be no relationship between FLFP and time spent looking after the elderly. This could be due to women having no alternative options but to both work in the paid labor market and look after parents. This is known as women working a "second shift" – women are working their first shift in the paid labor market, and then working their second shift at home by providing care work for no wage. Hochschild (1989) introduced this term "second shift" when discussing women's labor market participation in the United States. She found that women who entered the labor market continued to look after their children and/or parents essentially working another shift at home. While these women are not penalized in the paid labor market for unpaid care work, they take on considerable physical and emotional responsibilities by juggling two jobs, and continue to do more than their male counterparts. Women in the Mashreq nations could also be working a "second shift". This could be expected for more educated women who are overwhelmingly the most likely to be in paid employment.

A third prediction is that there is a positive relationship between FLFP and elderly care. This means that women looking after the elderly are more likely to be in the paid labor market. In Europe, a cross-country study found that informal carers are more likely to be in paid employment than non-carers in most nations (Zigante 2018, p. 20). One potential reason for this could be that the elderly are providing a means of costless and easily accessible childcare (ILO 2018, p. 18). They could be effectively freeing up mothers return to, enter for the first time or increase the amount of hours they are able to spend in the paid labor market. For instance, grandparents could be looking after their grandchildren assisting their daughters or daughters-in-law. This could be even more true in nations with high-levels of co-residency where the elderly live with their children and grandchildren, older parents living nearby married children or where there is a familial preference for caregiving – all aspects commonly found in the Mashreq region.

The direction of the relationship between FLFP and time spent on elderly care is dynamic. For instance, a grandparent may be looking after a grandchild when they are relatively healthy and have the physical, mental and emotional capacities to provide assistance. However, as they age and are presumably more likely to experience adverse health outcomes the situation could shift. Therefore, while elderly people can provide valuable assistance in some situations, they also require help from other adults – usually women – in some other situations. The dynamic relationship between unpaid elderly care work and FLFP suggests that regardless of whether a subset of the female population is not prevented from participating in the paid labor market today, they may be prevented from doing so in the near future.

Methodology and data sources

This report uses a combination of household survey datasets – the Jordan Labor Market Panel Survey (JLMPS), the Iraq Household Socio-economic Survey (IHSS) and the Lebanon Household Budget Survey (LHBS) – to analyse the relationship between FLFP and elderly care in each nation (Table 1).

All three datasets are country-specific surveys of individuals and their households on a range of factors. They include relevant individual specific characteristics such as age, sex and employment status, as well as relevant household characteristics such as size, relation to the head of household and age structure. For the purposes of this report working age is defined as those aged 15 to 44 (inclusive) and elderly is defined as those aged 65 or older.

This report is not a cross-country empirical study – each nation has its own dataset and all regression results presented in subsequent sections are for each individual nation. This is partly because questions in each survey about time use are asked differently. More importantly, each nation has different political, economic and social institutions that are difficult to accurately control for. Therefore, while results are presented for each nation, any comparison made across nations should keep this in mind.

DATA SOURCE 1
JORDAN LABOR MARKET PANEL SURVEY

The JLMPS is a nationally representative longitudinal survey collected in 2010 and 2016 by the Economic Research Forum of those aged 6 or more. This report restricts the sample to 2016. The survey includes 33,450 individuals from 7,229 households. For the purposes of this report, 7,662 working age women are the most relevant subset of the population, alongside the 1,547 people 65 or older comprising 4.63 per cent of the sample (Table 1).

The location of respondents is identified by their governorate. The JLMPS relevantly includes time use data, information on the health of the elderly, household age structure, and whether or not working age women are employed (Table 1). Time use data aggregates time spent on the elderly with time spent caring for the sick.

DATA SOURCE 2
IRAQ HOUSEHOLD SOCIO ECONOMIC SURVEY

The IHSS is a nationally representative survey collected in 2006 2007 and 2012 covering 176,042 individuals from 24,944 households stratified at the gadah (district) level. It is not a panel dataset meaning that the same individuals and households are not necessarily observed in both surveys. For the purposes of this report, the sample is restricted to those responding in 2012. This report is focussed upon the 39,236 working age women, alongside the 5,431 people 65 or older who make up 5.38 per cent of the sample (Table 1).

Similar to the JLMPS, the IHSS also includes time use data, information on the health of the elderly, household age structure and whether or not working age women are employed (Table 1). Time used data aggregates time spent caring for children and the elderly.

DATA SOURCE 3
LEBANON HOUSEHOLD BUDGET SURVEY

The LHBS was conducted in 2011 2012 stratified across nine regions it covers 2,467 households. The survey was intended to cover nearly twice as many households but experienced significant non responses implying that the dataset is not necessarily an accurate reflection of the Lebanese community. This report is interested in the 2,725 working age women and the 1,111 people 65 or older comprising 12.82 per cent of the sample (Table 1).

Significantly, the LHBS does not include any time use data. However, similar to the above datasets, it includes information on the health of the elderly, household age structure and whether or not working age women are employed (Table 1).

Table 1: Summary of datasets

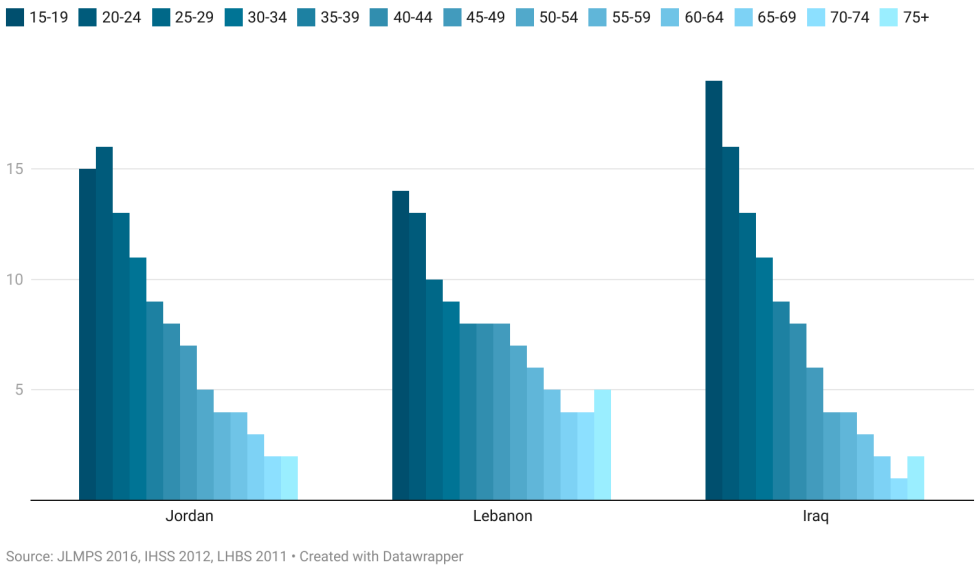
DATA SOURCE	YEAR	WORKING AGE WOMEN	SAMPLE AGED 65 OR MORE	RELEVANT QUESTIONS FROM DATASET			
				EMPLOYED	TIME USE	CO-RESIDENCY	HEALTH
JORDAN LABOR MARKET PANEL SURVEY (JLMPS)	2016	7,662	1,547 (4.63%)	Yes Employed in the last 7 days.	Yes Did you spend time caring for the sick or the elderly in the past seven days?	Yes Each member of each households age and relation to head of household.	Yes How is your health in general? Five point scale from "very good" to "very bad".
IRAQ: HOUSEHOLD SOCIOECONOMIC SURVEY (IHSS)	2012	39,236	5,431 (5.38%)	Yes Employed in the last 7 days or looked for work.	Yes What's the average number of hours that you daily spent in caring for the children and elderly during the past 7 days?	Yes Each member of each households age and relation to head of household.	Yes Did you suffer from any acute disease or injury during last 90 days?
LEBANON: HOUSEHOLD BUDGET SURVEY (LHBS)	2011-2012	2,725	1,111 (12.82%)	Yes Employed in the last 7 days. *Note: results robust for including those looking for work.*	Not available.	Yes Each member of each households age and relation to head of household.	Yes Difficulties with either seeing, hearing, walking, remembering self-care or communicating.

Elderly

Key finding: Lebanon has the oldest population and Iraq has the youngest population.

The age-structure of Iraq, Jordan and Lebanon is consistent with expectations. Lebanon has an older population relative to Jordan and Iraq (Figure 11). In contrast, Iraq has the youngest population. Both Iraq and Jordan have a fairly low proportion of their population defined as elderly (aged 65 or older). Youthful populations likely limit the extent to which elder care or living with the elderly will impact FLFP in the aggregate.

Figure 11: Sample, by age groups (%)

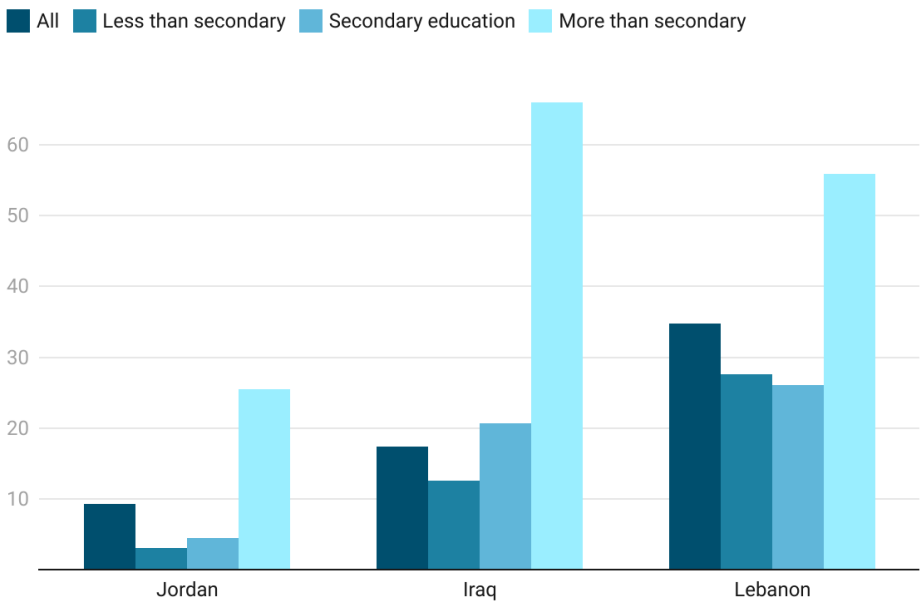


Female labor force participation

Key finding: Women's participation in paid employment varies by education, with tertiary educated women most likely to be employed.

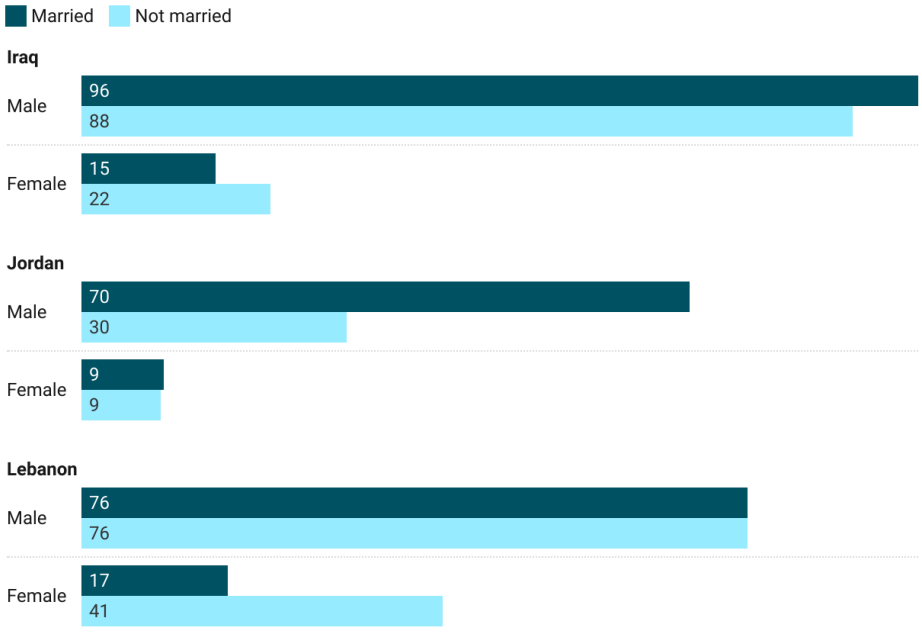
Consistent with expectations, most working age women (aged 15 to 44) are not employed – defined as those who did not work in the seven days prior to the survey collection (Figure 12). Women in Jordan have the lowest attachment to the paid labor market with less than 10 percent having been employed. Whether a woman is employed varies by education with the majority of working age women with tertiary education employed in both Iraq and Lebanon, and 25 percent of these women employed in Jordan (Figure 12). Education is less of a factor in male's employment in all three nations. In Iraq and Lebanon, more unmarried women are employed than married women, unlike Jordan where there is no difference (Figure 13). In contrast, across all three nations, married men are more likely to be employed.

Figure 12: Proportion of female working age population employed, by education (%)



Source: JLMPS 2016, IHSS 2012, LHBS 2011 • Created with Datawrapper

Figure 13: Proportion of working age population employed, by married or not married (%)



Source: JLMPS 2016, IHSS 2012, LHBS 2011 • Created with Datawrapper

Time use

Descriptive statistics

Key finding: Women are more likely to spend time providing unpaid care work within the home in Jordan and Iraq.

Differences in care provision tend to best be reflected in time use data. Formally, economists have modelled that people spend their time between work or "leisure". Distribution of time can be represented by the following equation:

$$time_i = paidlabor_i + unpaidlabor_i + leisure_i$$

Where: $unpaid\ labor_i = housework_i + childcaring_i + elderlycare_i + othercare_i$

Data from Jordan and Iraq includes time use data. They do so by asking respondents to recall whether and how much time they spent in the last week on a specific type of care. A one week recall period limits recollection issues that tend to be found with longer period time-use data.

Jordan

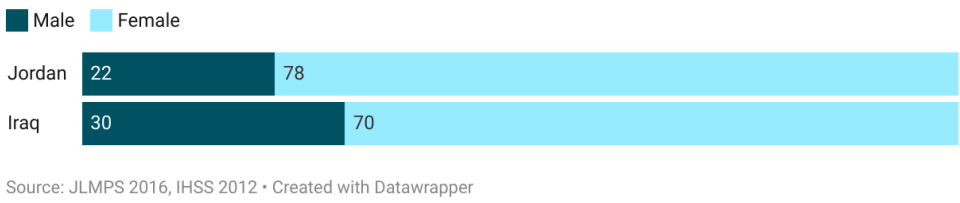
In Jordan, respondents are asked whether they spent time caring for the sick or the elderly in the past seven days. *Women comprise 78 percent of respondents who have spent time looking after the elderly or the sick (Figure 13).* Women who do spend time looking after the elderly spend, on average, 13 hours and are looking after partners or parents/parents-in-law suggesting it is high-intensity work (Table A1). These women are more likely to be younger, married, less educated and spend time on chores and caring for children (Table A1).

In Jordan, for spending time on unpaid labor does not seem to be related to paid labor supply (Table A1). This suggests there is evidence of a women working a "second shift". For Jordan, this could be true for the limited amount of women in the paid labor market. However, in the overall sample a low proportion identify as having spent time on this care work. Less than 0.5 percent of all surveyed men have looked after the elderly in the week prior to the survey, compared to around 1.5 percent of all women. As will be explained further below, this low response suggest results should be interpreted with caution – *there is a small sample variation issue.*

Iraq

In Iraq, respondents are asked whether they have spent time look after children or the elderly in the prior 7 days. Of respondents, 70 percent of women have spent time looking after children or the elderly, compared to only 30 percent of men (Figure 14). This is likely higher than estimates in Jordan due to the combination of child care with elder care. *Women who do spend time on care work spend, on average, 3 hours, compared to men who spend 1.7 hours suggesting it is low-intensity work (Table A2).* Women who look after children or the elderly, are more likely to be married, have more kids and less education (Table A2). Of note, they are also more likely to have older people, those aged 65 or over, living with them. Unlike Jordan, women in Iraq who spend time in unpaid labor are less likely to be in paid employment (Table A2).

Figure 14: Jordan and Iraq - Time spent on care, by sex (%)



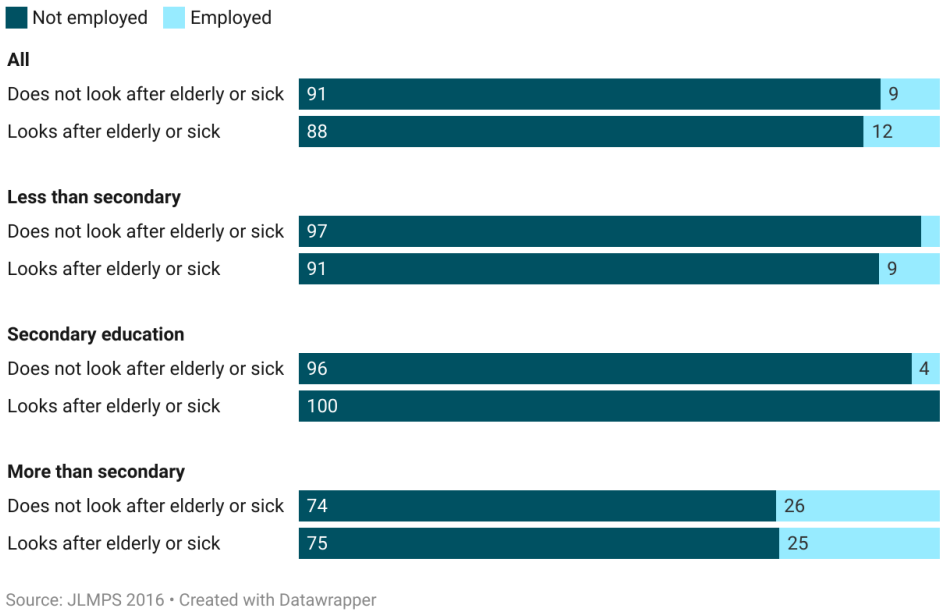
Relationship to FLFP

Jordan

Key finding: There is no statistically significant relationship between time spent on care work and FLFP.

For Jordan, most women do not work regardless of whether or not they spend time on care work (Figure 15).

Figure 15: Jordan - Time spent caring for elderly or sick, by employment status (%)



To further understand this relationship, the following equation using probit modelling is estimated:

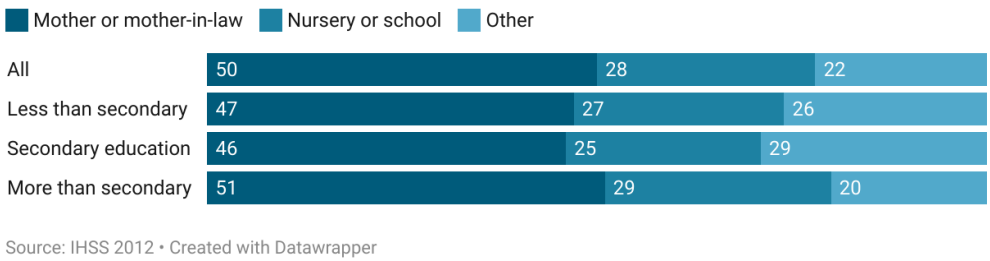
$$\text{Equation 1:} \quad y_{ig} = \Phi(\beta_0 + \beta_1 Care_{ig} + X_{ig} + \delta_g + \varepsilon_{ig})$$

Where y_{ig} is the probability a working age female *i* living in governorate *g* has spent time in paid work in the last seven days. $Care_{ig}$ is whether an individual has spent time looking after the elderly or sick. X_{ig} is a vector of individual specific characteristics that tend to affect labor supply, namely age, age squared, marital status, number of children, education and whether one is living in rural area. δ_g is a vector of governorate dummies.

Due to significant differences by education for FLFP this equation is estimated three times separately: for all women, those with less than secondary education and those with more than secondary education. Results are not provided for those with secondary education as there are no working age women identified as both employed and looking after the elderly. Robust standard errors are computed but all results below are robust to standard errors clustered at the governorate level, unless otherwise stated.

Results for Jordan are provided in Table A3 with average marginal effects shown. They show that women who spend time on care work are actually more likely to spend time in the paid labor market. This holds true for those with less education. This may be because these older people are offering a source of free childcare, particularly for those who may not be able to afford external providers. In essence, grandparents are likely also caregivers themselves. The JLMPS asks women who is the primary caregiver of their children under the age of 12 when they are working. The data reveals that of the women who work in the survey and have kids under the age of 12, half indicate that their children's "primary caregiver while at work" is their mother or mother-in-law, followed by less than 30 percent of women who are placing their children in school or a nursery (Figure 16). This lends some credibility to the likelihood that elderly are offering a source of childcare.

Figure 16: Jordan – Primary caregiver while working age woman is at work, by education (%)



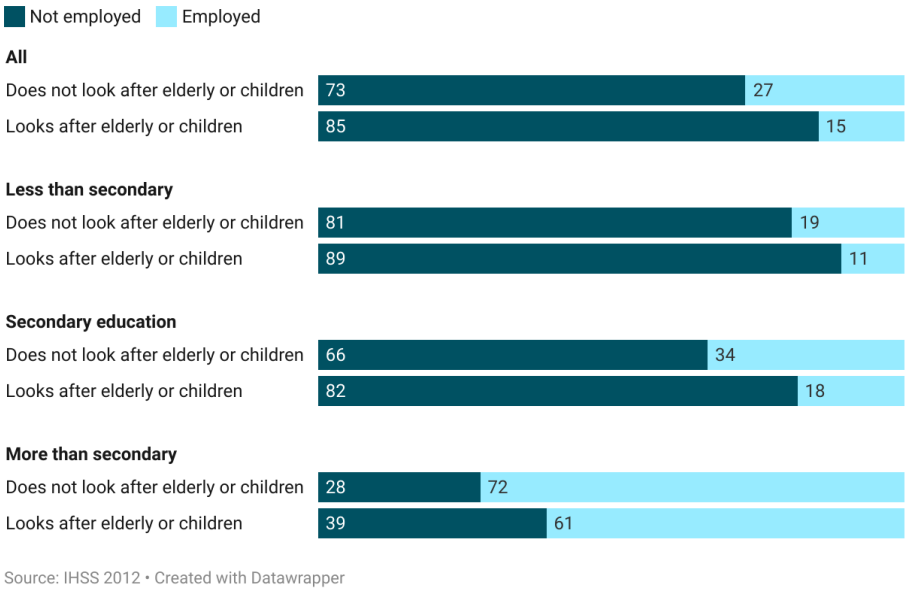
For women with more than secondary education, there is no statistically significant relationship. This is likely evidence of a second shift. However, these results should be treated with caution as the sample size of those looking after the elderly is small, as is the proportion of women who are working.

Iraq

Key finding: Women are less likely to spend time in the paid labor market if there is an older person living in their household and they spend time caring for them or their children.

For Iraq, whether one looks look after their children or the elderly seems to impact their employment status. Regardless of education level, those who spend time on this care work are more likely to not be employed and less likely to be employed (Figure 17).

Figure 17: Iraq - Time spent caring for elderly or children, by employment status (%)



As above, Equation 1 is estimated with an added interaction term, accounting for the fact child and elder care is added together:

$$\text{Equation 2: } y_{ig} = \Phi(\beta_0 + \beta_1 Care_{ig} \times Elderly_{ig} + X_{ig} + L_g + \delta_g + \varepsilon_{ig})$$

Where $Care_{ig}$ is average hours an individual has spent looking after the elderly or looking after their children in the past seven days and $Elderly_{ig}$ is whether there is at least one person aged 65 or older living in the household. L_g is a vector of proxies for labor market conditions, namely governorate female unemployment rate and male and female unemployment rate. Unlike Jordan, four regressions

are run as there are women women identified in the sample size across all education levels regardless of employment status or time spent on care work. Thus, Equation 2 is estimated separately for: all women, those with less than secondary education, those with secondary education and those with more than secondary education. All results below are robust to clustered standard errors.

Average marginal effects are provided in Table A4. They show that the more time a woman spends providing care within the home the less likely they are to participate in the paid labor market – consistent with a rising opportunity cost to paid work . *They are even more likely to not participate if there is an older person living in their household, suggesting a negative relationship between elder care and FLFP.* This holds true regardless of education level, except for highly educated women. Further, when the elderly are living with women with a secondary education, these women are actually more likely to be employed. This could be because the elderly are providing childcare. This relationship is less true when these women are themselves actually spending time looking after children or the elderly.

Specific limitations

Lebanon does not have time-use data. Jordan and Iraq also do not ask about elder care separate to other forms of care making it difficult to understand the nature of the relationship. The *wording of the time use questions may not be culturally sensitive with individuals not necessarily thinking about the time they spend looking after their parents*. In essence, they do not see this time as care work per se. Obtaining time use data in a manner that is culturally appropriate and distinguishes between different forms of care is best practice and should pursued by the Mashreq governments or partners. This could include obtaining more qualitative data, including asking how individuals spend time with the elderly to discern whether time spent is indeed care work (see Data Recommendations for further details).

Co-residency

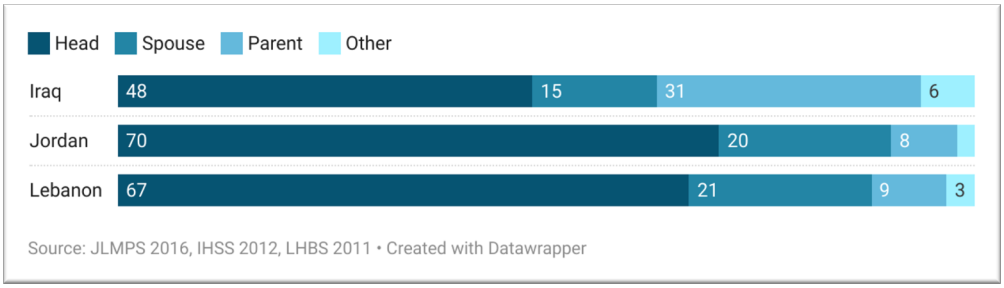
Given issues with time-use data, this report looks at another way to model the relationship between elder care and female labor supply with already available data - intergenerational co-residency. All three datasets include information about the age composition of each individual in each household and the relation of each individual in each household to the designated head of the household. This report exploits these features by assessing the impacts of elderly per household.

Descriptive statistics

Key finding: Co residency is a living arrangement in all three nations.

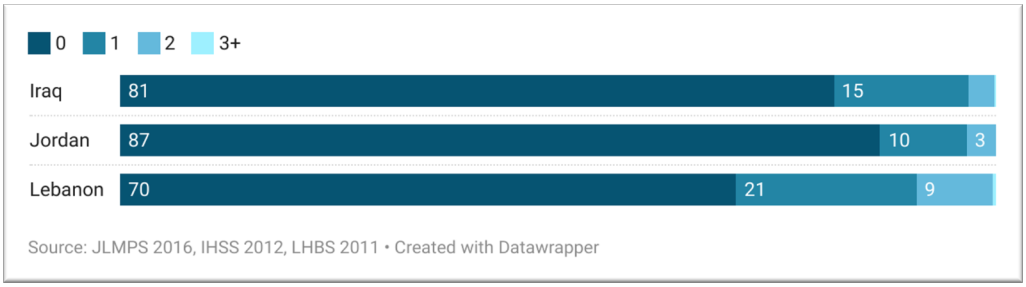
The elderly living with their children is an aspect of life – but is not the most dominant form of living (Figure 18). In Iraq, 32 percent of individuals aged 65 or older live in a household with their child who is the designated head of their household and 15 percent live with their partner. The remainder identify as the head of their household. In Lebanon and Jordan, less than 10 percent of the elderly live with their children, most identify as the head of their household or live with their partner.

Figure 18: Relationship to head of household for those aged 65 or older (%)



In these nations it could be that parents are residing near children, or they are identifying as the head of the household. Further analysis with data specifically designed to uncover this would be needed to look at where the elderly are living in proximity to children. With the available dataset, to capture those who may identify as the head of their household but are elderly and living with their children who may be caregivers, analysing the proportion of people aged 65 or older in all households is another useful proxy. Looking at the distribution of households, consistent with age structure of the nations, most people do not have people aged 65 or older living with them (Figure 19). Those that do, tend to have one elderly person living with them (Figure 19). Lebanon has the highest proportion of elderly in a household, a function of its older population.

Figure 19: All individuals in households, by how many people aged 65 or older they live with (%)

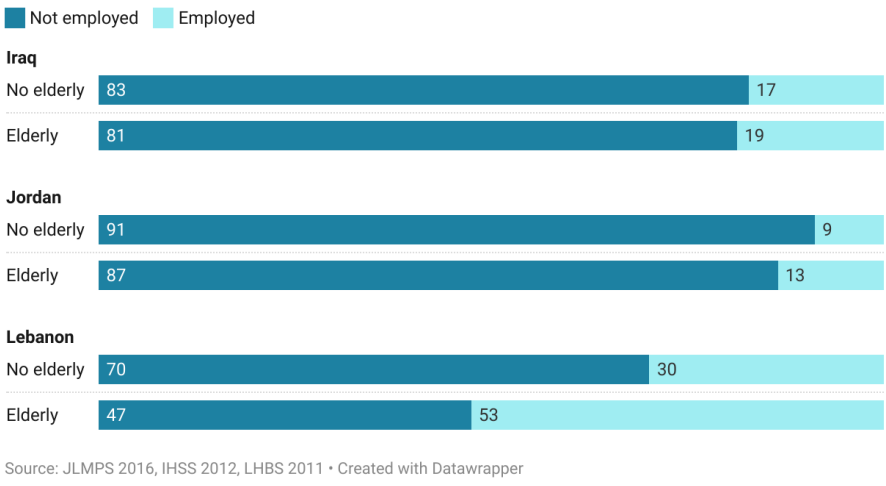


Relationship to FLFP

Key finding: The impact of living with the elderly on women's employment depends upon their education and whether the elderly identify as the parent of the head of the household

Across Lebanon and Jordan, people living with the elderly are slightly more likely to be working, compared to those not living with elderly. In contrast, in Iraq there are no differences (Figure 20).

Figure 20: Employment status, by co-residency (%)



To further unpack the relationship between co-residency and FLFP, elderly care is now proxied for either:

- *Proxy 1: whether there is at least one individual living in the household aged 65 or older, or*
- *Proxy 2: whether there is at least one individual living in the household who identifies as the parent of the head of the household.*

Jordan

In Jordan, Equation 1 is re-estimated with $Care_{ig}$ now proxied for either proxy 1 or proxy 2. There is no statistically significant relationship between living with the elderly and paid labor supply, regardless of which proxy is used (Table A5). Consistent with prior results, living with an older person increases the likelihood a woman is in paid employment for those with less than secondary education.

Iraq

In Iraq, Equation 2 is re-estimated with $Care_{ig}$ now proxied for either proxy 1 or proxy 2. Consistent with the time-use results, the relationship is different to that found in Jordan (Table A6). The mere presence of elderly does not have a statistically significant impact on paid labor supply. However, when women live with an individual who identifies as the parent of the head of the head of household they are less likely to work, particularly for less educated and secondary educated women consistent the above.

Lebanon

In Lebanon, Equation 1 is estimated with $Care_{ig}$ replaced with either proxy 1 or proxy 2. In addition, local male and female unemployment rates are included to account for local labor market conditions. Unlike above, results are not robust to clustered standard errors which is not surprising, there are only 7 clusters.

Average marginal effects are provided in Table A7. In Lebanon, women are more likely to work if there is an older person living with them. This is true for those with less than secondary education. For this with secondary or more than secondary education there is no statistically significant relationship between a working age women's employment and either co-residency variable. In essence, Lebanon seems to experience the same outcomes as Jordan and the elderly may be acting as caregivers to grandchildren (Table A7). Breaking down the dataset into further small subsets (for instance, comparing whether the relationship between living with elderly and employment varies by education and whether one has a children) leads to a small sample issue. To further understand the relationship between whether elderly offer childcaring a wider sample size is needed. Further data needs to be collected to understand the mechanism behind this relationship.

Health of elderly

Another potential proxy is the health of the elderly per household. This may be a better indication of their dependency on others in the household or externally provided care services than merely living with the elderly.

Descriptive statistics

Key finding: The elderly have poorer health outcomes than the general population.

All datasets include different assessments on the health of respondents, including by age (Table 2). In all three nations, the health of the elderly is worse than the health of the rest of the population (Table 2). It is expected that working age people living with elderly with poorer health are likely to be spending time providing care, and more intense care. It could then follow that this would act as a limit on their capacity to work in the paid labor market. Using health of elderly, could rule out elderly looking after their grandchildren as a channel – elderly with poor health may be less able to assist.

Table 2: Health status by Mashreq nation and age

COUNTRY	HEALTH QUESTION	PROPORTION OF (%):		
		Elderly (65+)	*Those aged 15-64*	*Working age population living with elderly with health issues*
JORDAN	How is your health in general? Very bad or bad.	11	1.22	1.24
IRAQ	Did you suffer from any acute disease or injury during last 90 days? Yes	36	26	13
LEBANON	Difficulties with either seeing, hearing, walking, remembering, self-care or communicating? Yes	46	16	10

Relationship to FLFP

In Iraq, living with older people with adverse health has no impact on female labor supply (Figure 21). In contrast, for Lebanon, working age women living with older people with adverse health are still more likely to be in paid employment (Figure 22). This indicates these individuals could still be providing child caring regardless of their health status.

Figure 21: Iraq - Health of elderly in household, by employment status (%)

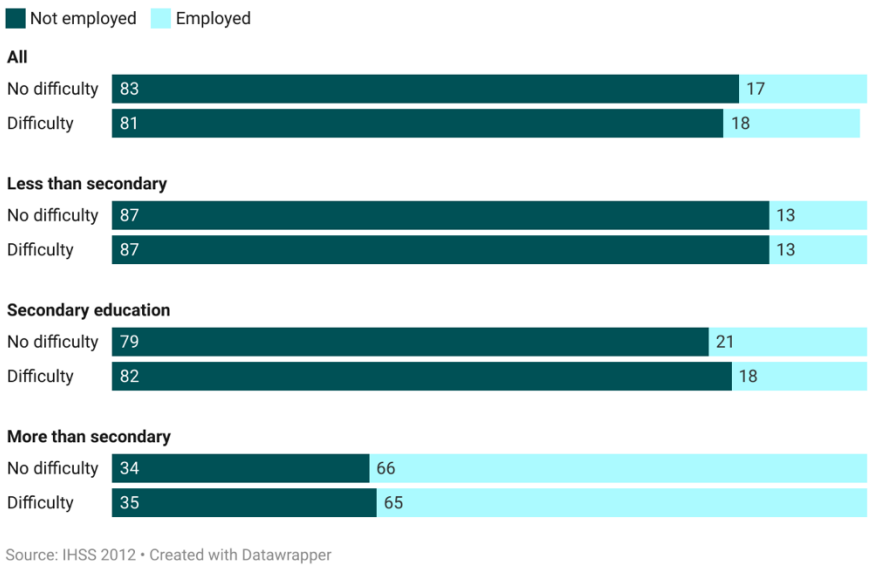
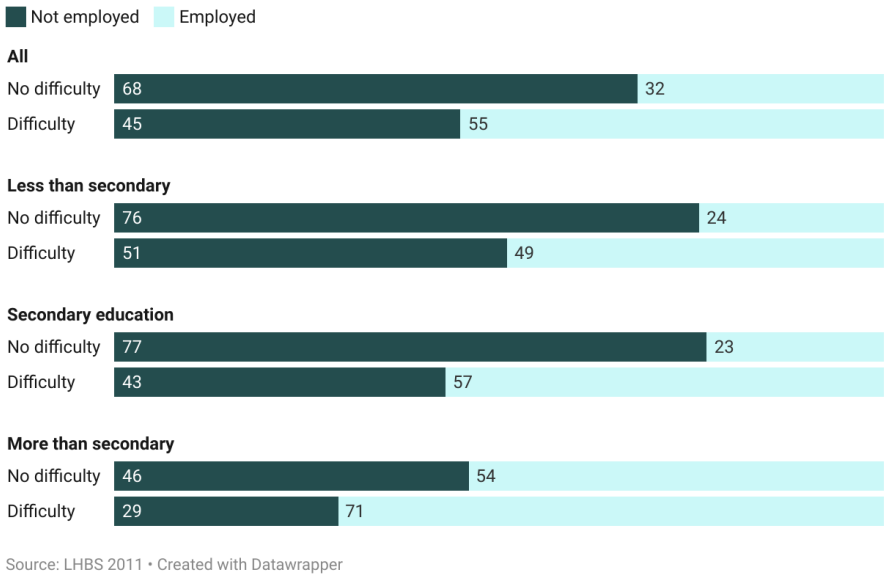


Figure 22: Lebanon - Health of elderly in household, by employment status (%)



As above, for Iraq and Lebanon, the same equations are re-estimated with $Care_{ig}$ proxied for a health variable. For Iraq, this is whether an elderly member of the household has suffered acute disease or injury in the last 90 days. For Lebanon, this is whether an elderly member of the household has had difficulties with seeing, hearing, walking, remembering, self-care or communicating. Results are not provided for Jordan as only seven employed women live with an older person with bad health.

The relationships found are consistent with the above. In Iraq, women are less likely to participate in the paid labor market if they spend time on child or elderly care and more so if they live with an older person who has been unwell (Table A8). In Lebanon, the positive relationship between living with an older person, regardless of their health status, and FLFP continues to hold (Table A9).

Overall limitations with datasets

Key finding: Existing data has significant issues limiting the capacity to understand the extent of the relationship between FLFP and elderly care.

The percentage who say that they are providing elder care is remarkably low. This is likely a response bias, individuals providing care without acknowledging this in the survey. This may require a new survey which asks questions about time is spent with the elderly in more disaggregated and even a qualitative manner. Nevertheless, there is simply a low proportion of elderly in Iraq and Jordan. This means that the current extent to which elder care prohibits FLFP will likely be limited. It suggests the data may suffer a statistical power issue, with a small sample size of interest.

However, as explained above, the proportion of the elderly is likely to change with growth in the proportion of older people in both nations. This means that even though the impact of elder care may be unclear now, it is expected to be a limit on women's labor supply in the future given patriarchal norms and familial care preferences. More data from a culturally informed survey is needed to better understand whether the relationship between FLFP and elder care. Of note, even if elder care does not impact FLFP there are other reasons to formalize it, namely ensuring elderly receive quality care and caregivers emotional wellness is prioritised and time spent recognized.

Notably, results provided are descriptive evidence that cannot be used for causal analysis. There is no variation, or random assignment, in the dataset to be exploited. It is unclear if women providing care at home would otherwise be in the workforce. In the Mashreq region, it's important to remember that job creation is limited. This implies that a key barrier to increasing women's labor supply, regardless of the distribution of unpaid labor, will be whether there are jobs for women to take up. It may be that women look after the elderly because there are no paid jobs available. Women care, and men (are more likely to) work - it is the pattern everywhere. Further, reverse causality is likely present: individuals who are employed may spend less time looking after the elderly, and individuals who look after the elderly may spend less time employed, that is, the relationship holds in either direction.

Data recommendations

Key finding: Culturally sensitive data that separates aged care from other forms of care is needed to understand the impact of elderly care on female labor supply.

There is a lack of comprehensive data to understand the relationship between time spent looking after the elderly and FLFP and the underlying drivers behind the alternative predictions. While the aged care sector should be formalized for reasons independent of FLFP, it is important to understand its relationship to FLFP. To better unpack this relationship, it is recommended that data collection standards are improved.

Firstly, *questions around care need to be explicit and disaggregated*. Time-use data needs to be collected around elderly care for all three nations – currently there is no data for Lebanon. Time spent looking after the elderly must be separated from time spent looking after other individuals, including one own's children or someone with a disability (Figure 23).

Figure 23: Different types of care work

Secondly, the wording of care related time use questions need to be culturally sensitive. It may be useful to reword existing questions by asking: *"Have you spent time with the elderly in the last 7 days providing [activity] assistance? If so, how much time?"* where an activity would include facets of care work such as physical, food, mobility and medical assistance without explicitly using the word care. This would include administering medication, taking an older person to seek medical assistance and assisting an older person with eating, walking and running errands (Figure 24). More granular data would then require data analysts to collate and aggregate different types of aged care work into a single aged care measure. While this would require more time spent by analysts, it would improve the reliability of the aged care measures and minimise measurement error. Further, consistent with the methodology used in the existing surveys a 7 day time limit will assist with minimising recall bias.

Figure 24: Different aspects of aged care

Thirdly, it is important to continue to collect alternative measures/proxies of care work such as co-residency. This will assist with verifying time use results but also help with understanding the different channels at play here, including whether co-residency leads to positive FLFP due to childcaring by the elderly. Further, co-residency is not be the most common-arrangement for the elderly in the Mashreq. It could be that older people are living close to their children or other relatives who are providing some care work or are themselves caregivers. To capture this, it would be useful for *data to be collected on physical proximity to elderly* in addition to co-residency for each household.

Overall, the results are suggestive of the fact that unpaid labor potentially locks women out of the labor market, which in and of itself is expected. They also suggest that for less educated women with perhaps less means to access externally provided child care elderly offer a source of free child caring for mothers. Irrespective of the impact of elderly care on FLFP there is still a need to formalize elderly care to recognize the work women are likely doing as valid, as well as ensure care provided is high quality.

III - INTERNATIONAL EXPERIENCES

Key question 3: What are international aged care best practice schemes?

Secondary questions: What can the Mashreq nations learn from the development of formalized aged care systems in other nations?

Methodology

This section provides a high-level overview of international experiences with respect to aged care. It looks at cross-country studies and existing literature reviews of the experiences of nations with more formalized aged care systems. Analysing the measures of other nations provides a basis for both what to do, and also what not to do. There may be models of care in other countries that could provide insights into potential strategies for supporting the elderly and doing so without compromising cultural norms. This review forms the basis for policy options and recommendations in Section IV.

Existing literature is largely concentrated in high-income nations. Ageing population and its consequences have been seen to be an issue for developed nations, with OECD nations offering many examples of public policy responses to elderly care. In particular, Europe has had the "longest experience with publicly supported long-term care services" making nations experience within Europe particularly noteworthy and discussed in the most detail below (World Bank 2018, p. 215). There are two main reviews that have looked at low and middle income nations and are referenced below. Firstly, Scheil-Adlung (2015, pp. 42-44) reviews 46 mixed-income countries but does not include Arab nations. Secondly, the ILO (2018) conducted a review of the paid and unpaid care sector of a range of nations across the development spectrum, include Arab nations.

The Triple R Framework

Globally, aged care systems have developed on an ad-hoc and reactive basis and lack sustainability and transparency (Colombo et al. 2018). All systems are incomplete and, at best, 'works in progress'. The ILO recommends nations implement a Triple R Framework – recognizing, reducing and redistributing unpaid care work to increase quality of care and value caregivers, underpinned by hearing from those receiving and providing care (ILO 2018, p. xliv). While no nation meets the complete Triple R Framework, high-income nations have taken steps in that direction.

Supply of aged care

Key finding: Most nations rely upon the unpaid labor of female caregivers within the home. Those with more developed aged care systems tend to have a different supply mix utilising alternative caregiving options to supplement familial carers.

Globally, most people aged 65 or older continue to reside at home and are likely to have a family caregiver, usually a female family member (World Bank 2018, pp. 216-217). Scheil-Adlung (2015, p. 1, 40) argues that ageism and sexism has led most, if not all, nations to neglect the elderly and perceive that they can rely on "'free' care provided by female family members." Across most nations, reliance on family carers is pervasive and continues to be viewed as a "cost-effective" care option while allowing the elderly to stay in their homes – despite the likely negative economic impact on family carers (Zigante 2018, p. 7). The ILO (2018, p. 18) found that across the world, 27.4 percent of older people live with children under 15 years of age – including 42 percent in the Middle East. This suggests

co-residency is a common living arrangement. These grandparents may be caring for grandchildren and/or being cared for by their children.

Supply-mix changes

Nations with more developed aged care systems have seen a recognisable increase in the role of public, private and NGO players over time in a government led effort to create a more equitable and sustainable system (World Bank 2018, pp. 216-217 and Zigante 2018, p.7). These different players tend to supply care in day-care facilities, institutional settings or in the home of the elderly. High-income nations, while they do rely on family carers, rely on them less than other-income nations (Scheil-Adlung 2015, p. 22). *A key lesson from high-income nations is the development of alternative suppliers of care to relieve family caregivers, alongside the provision of at-home care by a paid or unpaid care worker.* Scheil-Adlung 2015 (p. 50) makes clear that developing day-care facilities are an important part of the supply mix but need public funding and support to be viable. Further, building a workforce that can provide care for multiple elderly people within the home of the elderly is an important solution. In the OECD, around 65 per cent of older people that require long-term care receive this care at home (Colombo et al. 2018).

However, the development of the long-term care workforce of high-income nations has led to the *creation of low-quality, low-paid jobs that have been largely taken up by women*, usually the most marginalised women. Their paid care workforce is struggling with workforce attraction and retention issues (Colombo et al. 2018). They are also dealing with growing budgetary issues for aged care systems that are increasingly becoming expensive – and will continue to do so as these nations transition to ageing populations (World Bank 2018, p, 219). Low-quality and low-paid care work has led to high turnover and a shortage of carers in most nations (Colombo et al. 2018, p. 15). The experiences of these nations signal the importance of policies that are aimed at attracting and retaining workers within the elderly care sector by building a high-quality workforce. To do this, studies recommend that nations train and certify workers and carers to lift the status of the occupation, and seek a wider pool of carers not just young women (Scheil-Adlung 2015).

Formalizing the provision of unpaid care

Key finding: Formalizing care provided by family members is crucial to creating a sustainable and equitable aged care system. Familial care is formalized through training and certification and/or some form of carer payment.

Training and certification

The ILO (2018, p. xii) argues that nations should be "promoting professionalization." Some nations requires carers to be certified and also conduct additional and ongoing on-the-job training to upskill over time. Zigante (2018) looks at how to formalise "the role and status of informal carers in a subset of European countries". It makes clear that across Europe most nations offer some form of direct training for family caregivers (Zigante 2018, p. 28). This care is usually provided by NGO partners. However, the system is largely "fragmented" and seems to be piecemeal (Zigante 2018, p. 28). By professionalising care work, governments can be raising its status and perception. Certification and upskilling may also be a solution to dealing with the high labor force turnover experienced in the paid care sectors of the OECD nations.

Carer payments

All OECD countries have public cash benefits – some go to carers, some go to recipients of care (Colombo et al. 2018, p. 21). The way these payments are administered, who is eligible and what rate is set varies across nations. Some nations provide a low wage to carers, whilst others provide a means-

tested payment to carers (Colombo et al. 2018, p. 21). Most European nations that have carer payments do not have a high rate of payment and they do not "replace income in a meaningful way" - they are usually less than minimum wage (Zigante 2018, pp. 25, 34). Looking beyond Europe, the ILO reports that carer payments in most nations tend to be too small to offset the costs of care, or the opportunity cost associated with the time spent on care (ILO 2018, p. 148).

Research suggests that carer payments "can become counter-productive" if they are "badly designed" by disincentivising female carers from entering paid employment (Colombo et al. 2018, p. 14). Scheil-Adlung (2015 p. 50) explains that the existence of carer payments in systems without alternative caregivers providing care at-home or in other localities will reduce women's paid labor market participation, particularly amongst low-skilled women. Based upon the potentially adverse impacts on female labor supply, Colombo et al. (2018) recommends a lower payment to mitigate against adverse labor market implications and having family carers "employed under formal contracts" (2018, p. 22). Another mitigator is to ensure carer payments are provided in the context of a complete aged care system – where alternative options exist and there is basic training for the family member" (Colombo et al. 2018, p. 22). Similarly, Zigante (2018) explains that making cash benefits conditional minimise labor supply effects.

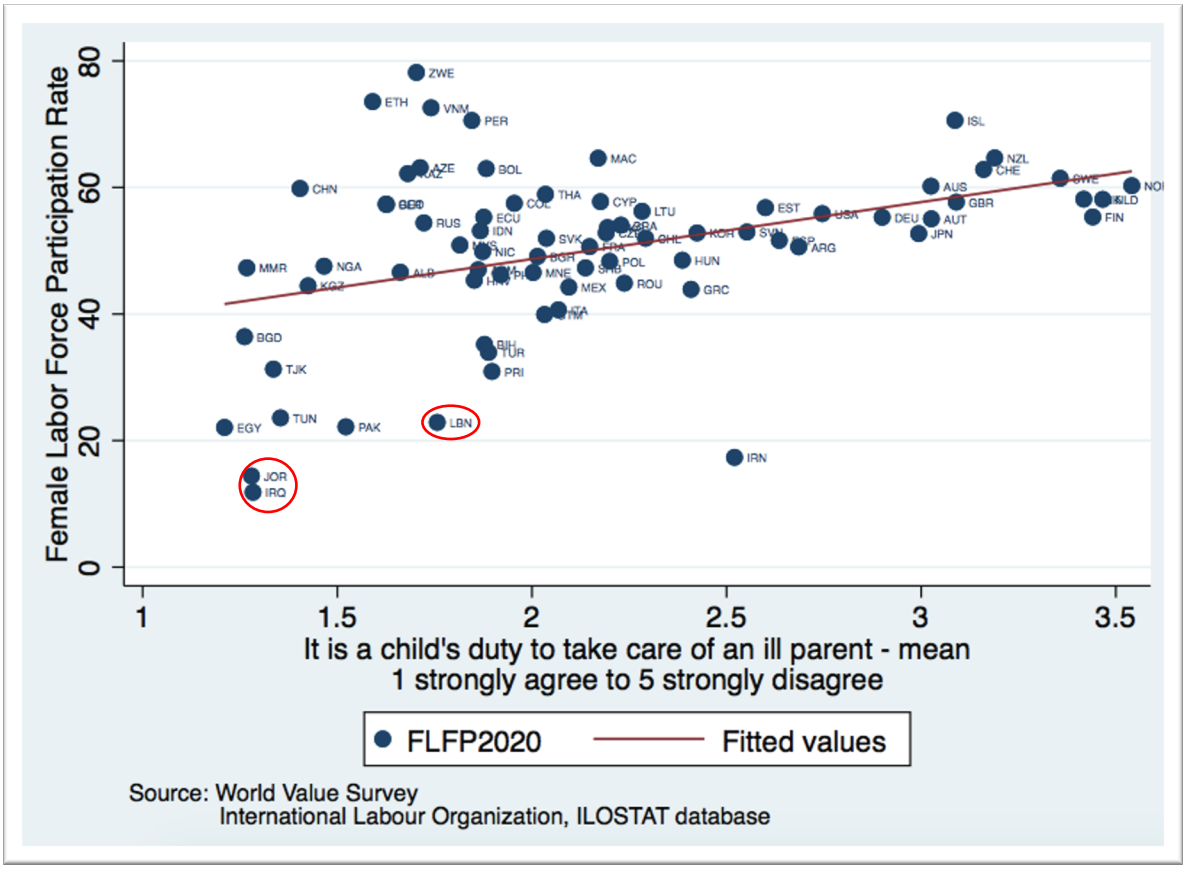
Demand for aged care

Across most parts of the world, receiving care in institutional settings is not a preferred option (Scheil-Adlung 2015, p. 51). The fact that the overwhelming proportion of the elderly still reside at home is a likely indication of them and their family's preferences. The World Value Survey asks residents in a range of nations their agreement on a five point scale – Strongly Agree (1) to Strongly Disagree (5) – with the statement:

"*It is a child's duty to take care of an ill parent.*"

No country has an average above 3.5 indicating most countries have a preference for familial care (Figure 25). Notably, nations with high FLFP tend to have lower preferences for familial care, relative to nations with low FLFP and high preferences for familial care like the Mashreq nations (Figure 25). This suggests that a strong familial preference for care can be a barrier to women's paid labor market participation.

Figure 25: Correlation between FLFP (%) and elderly care preference (mean)



IV – POLICY OPTIONS

Key question 4: What policy options are available to creating a sustainable and equitable aged care system in the Mashreq nations?

Secondary questions: How will these options increase women's labor supply and/or lead to job creation?

Methodology and criteria

Policy options are made with lessons from the international experiences described in Section III. The development, economic, political and cultural context of the Mashreq nations differs compared to developed nations where the bulk of the aged care framework has been developed. While having a plan to increase women's paid labor supply and reform elderly care is difficult in most nations, it will be even more complicated in this region. Policy options for the Mashreq governments are made with the understanding that the region has continually experienced fragility related to conflict and development. This means a wholesale, immediate and expensive reform would not be appropriate.

When choosing policy options this report uses the following four key considerations:

1. **Increase FLFP:** Does the policy free up women to work in the paid labor market? Does the policy lead to job creation for women in the paid labor market?
2. **Culturally appropriate:** Is the policy culturally sensitive to the preference in the region for care to be provided by family members?
3. **Political feasibility:** Will national governments want to implement this? Is this a priority? Can the policy be linked to women's paid labor supply to assist with generating success?
4. **Fiscal sustainability:** Who bears the cost? How expensive is the policy? Will this be fiscally sustainably given the fiscal constraints of the nations?

Overview

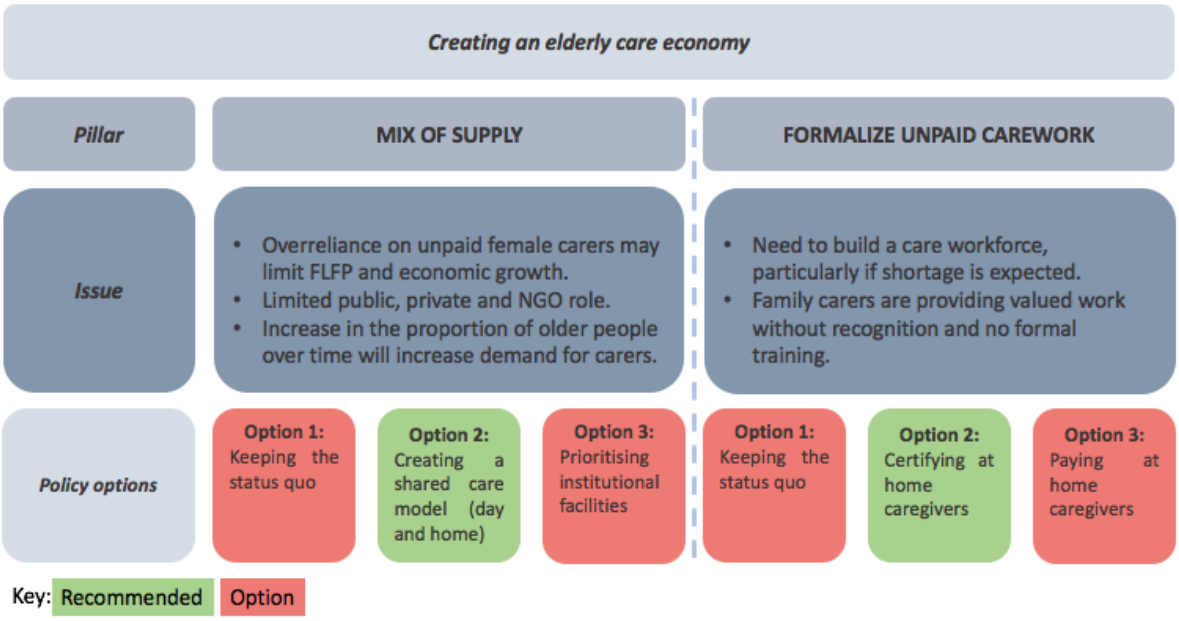
There is no silver bullet to increasing women's labor supply and creating a formalized care sector. A comprehensive policy response is needed to achieve the **twin goals** of increasing women's labor force participation and economic growth by:

1. *Providing paid jobs for women to supply in the care sector; and*
2. *Freeing up women's time to work in other paid sectors.*

To create an elderly care economy the Mashreq nations need to each change the mix of supply and formalize unpaid carers. Doing this, may actually have no impact on FLFP. As explained in Section II, the relationship between unpaid labor and paid labor may not always be negative. Further, it may be difficult for women to obtain paid labor market jobs in the Mashreq nations given low job creation. This is why creating an aged care economy supplied by paid labor – and not simply closing gender gaps in unpaid labor at home – is crucial to any reform. Furthermore, formalizing elderly care is a worthy goal in and of itself independent of increasing FLFP. It will help ensure that the elderly can live with dignity and receive high-quality care, as well as reduce the emotional and physical responsibilities placed upon women by virtue of their gender. The cost of inaction – keeping the status

quo – is high as it will lead to an increased reliance on a possible shrinking supply of female unpaid carers as these nations transition to an ageing population and potentially limit FLFP.

Figure 26: How to create an elderly care economy



Changing the mix of supply

The Mashreq nations do not have the right mix of supply in the aged care sector with an overreliance on informal female carers – their elderly care systems are fragmented and limited (see Section II). Consistent with best practices, there is a need to stop exclusively relying upon the invisible work of female family members. Instead, Lebanon, Iraq and Jordan need to create adequate complements and substitutes to these carers by building out alternative supply options.

Table 3 provides a list of options for consideration and an evaluative criterion aimed at ensuring care is redistributed from unpaid caregivers to a formal aged care sector. It makes clear that the mix of supply dependent upon location of care should prioritise a mix of care at home and in day-care settings.

Table 3: How to change the mix of supply

POLICY OPTIONS	CRITERIA			
	Increase FLFP	**Culturally appropriate**	**Political feasibility**	**Fiscal sustainability**
OPTION 1: KEEPING THE STATUS QUO – *There would be no change in the current mix of supply in the care sector. In essence, this would mean that each nation continues to reply upon the unpaid care work of female caregivers providing care within the home. The role of public, private and NGO providers in caregiving within homes, day-care or institutional facilities would remain limited and fragmented.*	Neutral. This will have no impact on FLFP. It will do nothing to change the way women spend their time, particularly low-educated women in Jordan and Lebanon, and most women in Iraq whose participation is negatively impacted by their unpaid care work.	Yes. Relying on family caregivers meets the cultural norms of the Mashreq nations and the preferences of the population to be looked after within their home.	No. All three governments have committed to increasing FLFP and need to deliver. Doing nothing will not increase FLFP so is not politically feasible.	No. While this would have no *direct* fiscal impacts, it will have indirect adverse impacts on all three governments' budgets in the long-run as there will be: a reduced pool of female caregivers; and no change in FLFP limiting economic growth.
OPTION 2: BUILDING A SHARED CARE MODEL USING DAY CARE FACILITIES – *This shared-care option allows care to be provided in: day care facilities that tend to be run by community groups, churches or NGOs; and after hours at home by family members. Workers from day-care facilities could also provide at-home care. The role of these suppliers in the provision of care is existent but fragmented. They likely have untapped potential for government partnerships and scaling-up. To do this, a landscape analysis should be conducted to understand what providers currently exist in each nation. Care provided in day-facilities needs to be high-quality, accessible and not concentrated in capital cities to ensure demand preferences are met.*	Yes. A shared-care model would achieve the twin goals of: creating jobs for women to supply in the care sector by developing work in day-care facilities; and freeing up women to work in other sectors, contingent upon jobs existing in other sectors for women to supply.	Unclear. The elderly have a safe and enjoyable place to go near their homes during the day but are still living with their families or where they currently reside. Day-care workers may also be able to provide care at-home. This will be an appropriate option for those without extensive health issues that may still need institutional care.	Yes. This is consistent with the commitment to increase FLFP, while mostly meeting the cultural preference of each nation. For political support, this cannot be too expensive as it could be perceived as taking away from other important issues, particularly given the crises each nation faces.	Unclear. In the short-term, a landscape analysis being undertaken would not be expensive. However, in the medium to long-term scaling up day-care facilities will be a *directly* expensive option as it requires providing funding to partners. In the longer-term, doing so will assist with increasing FLFP and economic growth. This is cheaper than creating institutional facilities.
OPTION 3: PRIORITISE INSTITUIONAL LIVING ARRANGEMENTS – *Older people would be living in and provided care in institutional settings full-time. This would have no involvement of family carers or community providers. Most current facilities are low-quality with low-occupancy rates and located in capital cities. To ensure demand preferences are met, as this goes against cultural norms, a complete reform of existing facilities would need to occur, emphasising accessibility (cost and location), alongside their expansion to other localities.*	Yes. As Option 2, this will free up women to work in other sectors and create jobs for them to supply in these settings.	No. This would not be culturally appropriate for the Mashreq nations and goes against clear preferences for care to be provided at home.	No. While this should increase up FLFP, it would go against cultural norms ensuring it would not be politically successful.	No. Long-term care settings are expensive and require the elderly to have 24/7 support from a 24/7 workforce. While in the long-term it may assist with increasing FLFP that benefit may not outweigh the cost of prioritising this type of care option.

Key: Positive impact | Negative impact | Neutral/Unclear impact

Recommendation

RECOMMENDATION: It is recommended that *Option 2 – Building a Shared Care Model Using Day-Care Facilities* is pursued by the Mashreq Governments with the assistance of the MGF. This is the most likely option that will assist with both lifting FLFP and can be designed in a way that is culturally appropriate.

Building a Shared Care Model Using Day-Care Facilities will expand caregiving options and assisting with changing the mix of supply without disrupting cultural norms in an adverse manner. Paid care workers at day-care facilities can also provide at-home care for those who are unable or unwilling to travel to day-care facilities. Due to the persistence of patriarchal norms, ensuring women take up these roles will require additional work. Evidence in parts of the Middle East suggest this tends to change when women begin to work, particularly when fathers and husbands are comfortable there will be no community backlash (Bursztyn et al. 2020). This option also ensure that grandparents or other elderly people providing childcaring can still do so if that is the option chosen by the family as a whole.

While Options 2 and 3 are not mutually exclusive, for the Mashreq nations given considerable fiscal constraints it is not feasible to pursue them both simultaneously. For those with higher levels of need, institutional settings may be the most appropriate to ensure the receive high quality care – but this will not be the case for all individuals and pursuing this exclusively would not be culturally appropriate.

Formalizing the unpaid caregiver

The Mashreq nations do not formally recognize or reward familial caregivers. Consistent with best practices, Iraq, Jordan and Lebanon need to formalize the provision of care within the home and as such formalize the informal female carer. The informal care provided is valuable to society as a whole and may reduce a burden placed upon government budgets. Female carers at home are providing care for no pay and are doing so without any formal training or assistance.

Table 4 provides a list of policy options for consideration and an evaluative criterion in an effort to ensure the Mashreq region heads in the right direction to valuing the work of these women and lifting FLFP. It provides evidence that formalizing unpaid carers should commence with training and certification.

Table 4: How to formalize the informal carer

POLICY OPTIONS	CRITERIA			
	Increase FLFP	**Culturally appropriate**	**Political feasibility**	**Fiscal sustainability**
OPTION 1: KEEPING THE STATUS QUO – *There would be no change in the treatment, recognition and quality of the care provided by familial caregivers. The Mashreq governments would do nothing and continue to rely upon the provision of care by family members.*	Neutral. The status quo will have no impact on FLFP. It will continue to limit women's time, and not create new jobs for them to supply.	Yes. This relies upon family members, consistent with the dominant preferences of all Mashreq nations.	No. Doing nothing will not increase FLFP and see each government failing to meet its commitments.	No. There are no *direct* fiscal impacts. However, in the long-run inaction limits FLFP and thus economic growth.
OPTION 2: CERTIFYING AT HOME CAREGIVERS – *Current caregivers could certify their skills and formalize their existing provision of care to enable them to care for more than one elderly person and obtain a wage in the labor market. This would be effective if pursued with another option that enhances alternative provisions of elderly care to build out a care market. For instance, women could work in day-care facilities. As a first step, partnering with NGOs and creating a certification process is essential.*	Yes. This leads to upskilling and, if pursued in tandem with expanded care options, jobs for women to supply. However, it would lock someone into caregiving – and potentially limit their capacity to access other occupations.	Unclear. This relies upon family members to continue to provide care. There may be some discomfort when female family members provide care in other localities. However, given how tight-knit many of these communities are it may be feasible. Building male support is crucial.	Yes. This is both culturally appropriate and will likely increase FLFP in line with commitments.	Unclear. Identifying current caregivers will be a costly administrative task for constrained Mashreq governments. However, if this is pursued in conjunction with existing on-the-ground NGOs who are likely able to easily identify caregivers it would be easier to implement. There are positive fiscal benefits to increased FLFP.
OPTION 3: PAYING AT HOME CAREGIVERS – *The Mashreq governments would each directly pay carers, disproportionately women, for looking after the elderly within their own home. Best practice recommends a conditional or contractual payment that is low enough to not disincentivise other paid labor market work but high enough to recognize the value of this work.*	No. This could reinforce patriarchal gender norms, particularly for low-skilled, low-educated women who may leave or not enter the paid labor market.	Depends. This would allow the elderly to remain at home and signal government's and society's value for caring. However, a contractual arrangement between carers and the elderly is not appropriate.	No. This will not lift FLFP or be culturally appropriate.	No. This would be expensive to administer: both the identification process of figuring out who are caregivers, as well as the payment rate themselves. It would have no added benefit to FLFP.

Key: Positive impact | Negative impact | Neutral/Unclear impact

Recommendation

RECOMMENDATION: It is recommended that *Option 2 – Certifying At-Home Caregivers* is pursued by the Mashreq Governments with the assistance of the MGF. As above, it is the most likely option that will assist with both lifting FLFP and can be designed in a way that is culturally appropriate

Certifying At-Home Caregivers will formalize the work provided by female family members. Certifying these carers may also assist in building out a workforce that can supply new jobs created by expanding and creating day-care facility options. Due to the persistence of patriarchal norms, ensuring women are able to take part in a certification process that may lead to them working in other localities apart from their home will require a process of ensuring minimal backlash. This will needs the MGF and governments to gain the support of both women and men across each country.

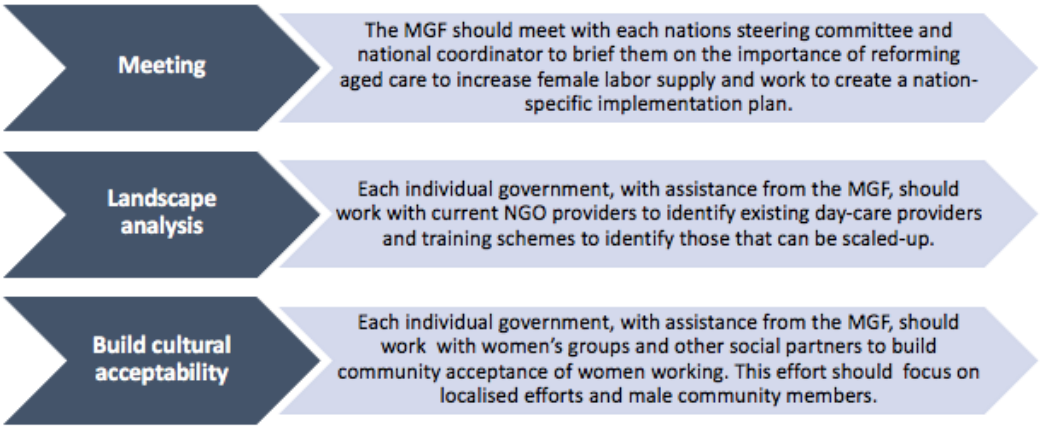
While Options 2 and 3 are not mutually exclusive, for the Mashreq nations given considerable fiscal constraints it is not recommended that they are both pursued. Further, a carer payment can limit women's paid labor supply and as such may be detrimental to gender equity goals and the current commitments of the nations.

Implementation considerations

Realistically, pursuing a change in the mix of supply and formalizing unpaid carers simultaneously is an up-front costly reform that would need to be incremental and phased-in over a period of time. Implementation of any of these policy options will require a clear pathway linking the policy to women's labor outcomes.

As a next step, the MGF needs to meet with each nation separately to gauge their appetite and create a nation-specific implementation plan. While Iraq, Lebanon and Jordan are culturally similar they also have had different development experiences. In particular, Iraq has had decades of armed conflict that has caused a substantial reduction in its population size. Lebanon is also undergoing its most severe financial crisis in its history with more than half its population now living in poverty (UN ESCWA 2020). All three nations are dealing with the health and economic consequences of the COVID-19 pandemic, which has disproportionately adversely affected the elderly. Nation-specific considerations are important for consideration in next steps. Figure 27 represents three immediate steps the MGF can take with their partners from Mashreq governments to begin creating a valued aged care sector.

Figure 27: Next steps for MGF



V - CONCLUSION

Across the Mashreq aged care work is invisible, unpaid and undertaken mostly by women. There is a lack of supply of formalized care services, with care overwhelmingly being provided at home by female family members. Cultural preferences for the elderly to be looked after by their family, alongside patriarchal norms, has meant that female family members are the most likely carers of the elderly. These women are providing valuable care work to their husband, parents or their husband's parents for no wage.

The future of elderly care in the Mashreq nations is likely increased demand and increased pressure on these unpaid female carers. With lower fertility rates and rising life expectancies an ageing population is likely to put pressure on the fragile system of elderly care. FLFP in Jordan, Lebanon and Iraq is persistently low limiting their economic growth and women's economic security – and time spent on unpaid elderly care is likely a contributor to this low FLFP.

Analysing nation-specific household survey data, this report provides evidence of the complicated relationship between both time spent looking after the elderly or living with the elderly and FLFP. While time spent on unpaid elderly care work is not always a barrier to FLFP, many women are undertaking this work with no recognition or reward. Some women are working in the paid labor market and then coming home and working a second shift. These women are dealing with added emotional and physical responsibilities placed upon them by virtue of their gender.

Jordan, Lebanon and Iraq cannot wait for elderly care to become a pressing issue to act. Prioritising elderly care in an effort to achieve an increase in women's labor supply and ensure older people are able to live out the remainder of their lives with dignity will be difficult amidst conflict-related fragility, economic crises and a global health pandemic. However, in order to recover equitably and achieve economic growth these nations need a comprehensive formalized aged care system. Lifting women's economic participation has been proven to increase economic growth which will pay dividends into the future for all Mashreq people.

Policy options discuss how to change the supply mix of care to redistribute care away from unpaid family caregivers and how to formalize the provision of unpaid care work in the home to recognize female carers. This reports recommends that the MGF work with each nation to create and expand day-care facilities, as well as certify and train women providing at-home care.

It is imperative all three nations recognize that reforms to aged care can increase FLFP and be a source of sustainable economic growth. Reform can increase women's paid labor market participation by creating paid care work for women to supply and free them up to work in other sectors. It will also reduce the responsibilities placed upon women and help ensure the elderly are able to live the remainder of lives where they like while receiving high-quality care.

LIST OF REFERENCES

Alesina, Alberto, Nathan Nunn, and Paola Giuliano, "On the origins of gender roles: women and the plough", The Quarterly Journal of Economics, vol. 128, no. 2, 2013, pp. 469-530.

Bisin, Alberto and Thierry Verdier. "The economics of cultural transmission and the dynamics of preferences," Journal of Economic Theory, vol. 97, no. 2, 2001, pp. 298-319.

Bursztyn, L, Alessandra L. González, and David Yanagizawa-Drott, 2020, "Misperceived Social Norms: Women Working Outside the Home in Saudi Arabia", American Economic Review, vol. 110, no. 10, pp. 2997-3029.

Chemali, C, L.M. Chahine and A.M. Sibai, "Older adult care in Lebanon: towards stronger and sustainable reforms", Eastern Mediterranean Health Journal, vol. 14, no. 6, 2008, pp. 1466 - 1476.

Colombo, Francesca, Ana Llena-Nozal, Jerome Mercier and Frits Tjadens, 2018, "Help Wanted? Providing and Paying for Long-Term Care", OECD Health Policy Studies, <https://read.oecd-ilibrary.org/social-issues-migration-health/help-wanted_9789264097759-en#>, accessed February 2021.

Elsaman, Radwa and Mohamed Arafa, "The rights of the elderly in the Arab Middle East: Islamic theory versus Arabic practice", Marquette Elder's Advisor, vol. 14, no. 1, 2012, pp. 1- 53.

Fernández, Raquel, Alessandra Fogli and Claudia Olivetti, "Mothers and Sons: Preference Formation and Female Labor Force Dynamics", The Quarterly Journal of Economics, vol. 119, no. 4, 2004, pp. 1249-1299.

Hochschild, Arie, 1989, "The Second Shift: Working Parents and the Revolution at Home", Penguin Books.

Hussein, Shereen and Mohamed Ismail, "Ageing and Elderly Care in the Arab Region: Policy Challenges and Opportunities", Ageing International, vol. 42, 2017, pp. 274-289.

International Labor Organization, 2018, "Care work and care jobs: for the future of decent work",<https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_633135.pdf>, accessed October 25, 2020.

Kamel, Andaleeb M. Abu, "Who are the elder's caregivers in Jordan: A cross-sectional study", Journal of Nursing Education and Practice, vol. 6, no. 3, 2016, pp. 116-121.

Leszko, Magdalena, Ludmila Zając-Lamparska and Janusz Trempala, "Aging in Poland", The Gerontologist, vol. 55, no. 5, 2015, pp. 707–715.

Mahasneh, Sawsan "Survey of the Health of the Elderly in Jordan", Medical Journal of Islamic Academy of Sciences, vol. 13, no. 1, 2000, pp. 39-48.

Mashreq Gender Facility, 2020a, "Overview", <https://www.worldbank.org/en/programs/mashreq-gender-facility#1>, accessed October 21, 2020.

Mashreq Gender Facility, 2020b, "State of the Mashreq Women", 23 June 2020, <https://www.worldbank.org/en/country/lebanon/publication/state-of-the-mashreq-women>, accessed October 21, 2020.

Miller, Dorothy, "The 'sandwich' generation: adult children of the aging", Social Work, Vol. 26, No. 5, 1981.

NAJA, N "LONG-TERM STAY INSTITUTIONS IN LEBANON", LEBANESE MEDICAL JOURNAL, VOL. 60, NO. 4, 2012, PP. 252-257.

OECD, 2020, "WHO CARES? ATTRACTING AND RETAINING CARE WORKERS FOR THE ELDERLY", <HTTPS://WWW.OECD.ORG/HEALTH/WHO-CARES-ATTRACTING-AND-RETAINING-ELDERLY-CARE-WORKERS-92C0EF68-EN.HTM>, ACCESSED FEBRUARY 1, 2021.

PETERSON, SCOTT, 2016, "IN IRAQ, DISRUPTIONS OF WAR FRAY FAMILIES' SUPPORT FOR THE ELDERLY", <HTTPS://WWW.CSMONITOR.COM/WORLD/MIDDLE-EAST/2016/1228/IN-IRAQ-DISRUPTIONS-OF-WAR-FRAY-FAMILIES-SUPPORT-FOR-THE-ELDERLY>, ACCESSED FEBRUARY 8, 2021.

SCHEIL-ADLUNG, XENIA, 2015, "LONG-TERM CARE PROTECTION FOR OLDER PERSONS: A REVIEW OF COVERAGE DEFICITS IN 46 COUNTRIES", EXTENSION OF SOCIAL SECURITY WORKING PAPER NO. 50, INTERNATIONAL LABOR ORGANIZATION, <HTTPS://WWW.ILO.ORG/WCMSP5/GROUPS/PUBLIC/---ED_PROTECT/---SOC_SEC/DOCUMENTS/PUBLICATION/WCMS_407620.PDF>, ACCESSED FEBRUARY 2021.

TARIQ, ESRAA AND RIYADH LAFTA, "A PROFILE ON HEALTH-CARE SERVICES FOR OLD IN BAGHDAD", MUSTANSIRIYA MEDICAL JOURNAL, VOL 17, 2018, PP. 52-56.

UNITED NATIONS ECONOMIC AND SOCIAL COMMISSION FOR WESTERN ASIA, 2020, "ESCWA WARNS: MORE THAN HALF OF LEBANON'S POPULATION TRAPPED IN POVERTY", 19 AUGUST, <HTTPS://WWW.UNESCWA.ORG/NEWS/LEBANON-POVERTY-2020#:~:TEXT=THE%20BRIEF%20INDICATES%20THAT%20THE,LESS%20THAN%20%2414%20A%20DAY>, ACCESSED 1 FEBRUARY 2021.

UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, POPULATION DIVISION (2019), WORLD POPULATION PROSPECTS 2019, ONLINE EDITION. REV. 1.

WORLD BANK DATA, 2020, "LIFE EXPECTANCY AT BIRTH, TOTAL (YEARS) - MIDDLE EAST AND NORTH AFRICA", <HTTPS://DATA.WORLDBANK.ORG/INDICATOR/SP.DYN.LE00.IN?LOCATIONS=ZQ&MOST_RECENT_VALUE_DESC=TRUE>, ACCESSED OCTOBER 21, 2020.

WORLD BANK, 2018, "OPTIONS FOR AGED CARE IN CHINA: BUILDING AN EFFICIENT AND SUSTAINABLE AGED CARE SYSTEM", <HTTP://DOCUMENTS1.WORLDBANK.ORG/CURATED/EN/171061542660777579/PDF/132213-PUB-PUBLIC-PUBATE-11-19-18.PDF>, ACCESSED FEBRUARY 2, 2021.

WORLD BANK, 2019, "POPULATION AGES 65 AND ABOVE (% OF TOTAL POPULATION)", <HTTPS://DATA.WORLDBANK.ORG/INDICATOR/SP.POP.65UP.TO.ZS?LOCATIONS=LB-JO-IQ-1A>, ACCESSED OCTOBER 23, 2020.

ZIGANTE, VALENTINA, "INFORMAL CARE IN EUROPE: EXPLORING FORMALISATION, AVAILABILITY AND QUALITY", LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE, APRIL 2018.

Appendix

Table A 1: Jordan - Descriptive statistics, by looking after elderly or sick

	Female (looks after elderly or sick)					Female (does not look after elderly or sick)					Elder/sick care vs. no elder/sick care	
	n	Mean	S.D	Min	Max	n	Mean	S.D	Min	Max	Diff. of means	t-stat of diff
PANEL A - Characteristics												
Age	172	0.50	0.50	0	1	9,642	0.59	0.49	0	1	0.09	2.50**
Married	172	38.85	11.37	15	65	9,642	33.27	13.48	15	65	-5.58	-5.39***
Employed last 7 days	172	0.10	0.31	0	1	9,626	0.08	0.28	0	1	-0.02	-0.95
No. of children	172	3.10	2.00	0	8	5,169	3.20	1.86	0	14	0.10	0.49
PANEL B - Education												
Less than secondary education	172	0.66	0.47	0	1	9,640	0.58	0.49	0	1	-0.08	-2.16**
Secondary education	172	0.12	0.32	0	1	9,640	0.17	0.37	0	1	-0.05	1.77*
More than secondary education	172	0.22	0.42	0	1	9,640	0.25	0.43	0	1	0.03	0.94
PANEL C - Spent time in the last 7 days on: (Yes=1;No=0)												
Chores	172	0.99	0.11	0	1	9,629	0.74	0.44	0	1	-0.25	-7.52***
Caring for children	172	0.31	0.46	0	1	9,624	0.22	0.42	0	1	-0.09	-2.71***
PANEL D – Hours spent in last 7 days on:												
Chores	170	20.62	13.83	0	68	7,081	20.55	14.21	0	189	-0.08	-0.07
Caring for children	53	20.02	19.31	1	84	2,129	21.37	20.07	0	160	1.35	0.49
Caring for elderly	172	13.25	13.79	0	70	N/A					N/A	

*Notes: Elderly is defined as those aged 65 or older. This is for the entire sample . ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.*

Table A 2: Iraq - Descriptive Statistics, by looking after elderly or kids

	Female (looks after elderly or kids)					Female (does not look after elderly or kids)					Elder/Child care vs. no elder/child care	
	n	Mean	S.D	Min	Max	n	Mean	S.D	Min	Max	Diff. of means	t-stat of diff
PANEL A - Characteristics												
Age	11,497	32.20	12.21	15	64	4,991	31.79	14.85	15	64	-0.32	-40.49***
Married (%)	11,497	0.71	0.45	0	1	4,991	0.39	0.49	0	1	0.40	-1.81*
Employed (%)	8,961	0.15	0.35	0	1	2,596	0.27	0.44	0	1	0.12	14.78***
Elderly lives in home (%)	11,497	0.15	0.36	0	1	4,991	0.10	0.31	0	1	-0.05	-8.06***
No. of children or grandchildren	10,922	4.61	2.70	1	22	3,822	3.54	2.22	1	22	-1.06	-21.91***
PANEL B - Education (%)												
Less than secondary education	11,497	0.81	0.40	0	1	4,991	0.62	0.49	0	1	-0.19	-26.18***
Secondary education	11,497	0.12	0.32	0	1	4,991	0.24	0.43	0	1	0.12	20.18***
More than secondary education	11,497	0.07	0.25	0	1	4,991	0.14	0.34	0	1	0.07	14.41***

Notes: As Table A 1

Table A 3: Jordan - Female labor supply and time spent on care

	(1) All	(2) Less than secondary education	(3) More than secondary education
Mean of dependent variable	0.09	0.03	0.25
Care	0.067*** (0.028)	0.042*** (0.013)	-0.018 (0.125)
Individual characteristics	Yes	Yes	Yes
Governorate fixed effects	Yes	Yes	Yes
Observations	3,767	2,069	1,118

*Notes: The table reports probit average marginal effects. Column 1 presents results where the dependent variable is whether working age women are in the labor market. Columns 2 to 3 presents these results for different education levels. 'Care' is whether a woman has spent looking after the elderly or the sick in the past seven days. Individual characteristics are: age, age squared, marital status, number of children, education and whether they are living in rural area. Education is not included in Columns 2 and 3. All regressions are with a constant. Robust standard errors are in parentheses. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.*

Table A 4: Iraq - Female labor force participation and time spent on care

	(1) All	(2) Less than secondary education	(3) Secondary education	(4) More than Secondary Education
Mean of dependent variable	0.174	0.12	0.207	0.661
Care	-0.019***	-0.016***	-0.006	-0.030***
	(0.002)	(0.002)	(0.008)	(0.012)
Elderly in household	0.019	0.007	0.084*	0.055
	(0.013)	(0.013)	(0.050)	(0.072)
Care x Elderly in household	-0.012***	-0.008*	-0.029*	-0.022
	(0.004)	(0.004)	(0.017)	(0.019)
Individual characteristics	Yes	Yes	Yes	Yes
Labor market conditions	Yes	Yes	Yes	Yes
Governorate fixed effects	Yes	Yes	Yes	Yes
Observations	10,250	8,477	952	762

Notes: As Table A3. 'Care' is average hours a woman has spent looking after the elderly or looking after their children in the past seven days. 'Elderly in household' is whether there is at least one person aged 65 or older living in the household. Local labor market conditions are the Nahiya's female unemployment rate and male and female unemployment rate.

Table A 5: Jordan - Female labor supply and co-residency

	(1)	(2)	(3)	(4)	(5)	(6)
	Proxy 1: Aged 65 or older living in household			*Proxy 2: Individual in household is parent to head*		
	All	**Less than secondary education**	**More than secondary education**	**All**	**Less than secondary education**	**More than secondary education**
Elderly in household	0.024 (0.019)	0.018* (0.010)	0.061 (0.072)	0.009 (0.024)	0.006 (0.011)	0.032 (0.098)
Individual characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Governorate fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,780	2,075	1,123	3,780	2,075	1,123

Notes: Same as Table A3, except care is replaced with 'elderly in household'. For Columns 1 to 3 this is a dummy variable for whether there is at least one individual living in the household aged 65 or older. For Columns 4 to 6 this is a dummy variable indicating whether there is at least one individual living in the household who identifies as the parent of the head of the household

Table A 6: Iraq - Female labor force participation and co-residency

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Proxy 1: Aged 65 or older living in household				*Proxy 2: Individual in household is parent to head*			
	All	**Less than secondary education**	**Secondary education**	**More than secondary education**	**All**	**Less than secondary education**	**Secondary education**	**More than secondary education**
Elderly in household	-0.006 (0.005)	-0.006 (0.005)	-0.009 (0.019)	-0.017 (0.027)	-0.016*** (0.006)	-0.011* (0.006)	-0.066*** (0.024)	0.002 (0.036)
Individual characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local labor market conditions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Governorate fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	30,361	25,259	2,773	2,148	30,361	25,259	2,773	2,148

Notes: Same as Table A5, except care is replaced with 'elderly in household'. For Columns 1 to 4 this is a dummy variable for whether there is at least one individual living in the household aged 65 or older. For Columns 4 to 7 this is a dummy variable indicating whether there is at least one individual living in the household who identifies as the parent of the head of the household.

Table A 7: Lebanon - Female labor supply and co-residency

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Proxy 1: Aged 65 or older living in household				*Proxy 2: Individual in household is parent to head*		
	All	**Less than secondary education**	**Secondary education**	**More than secondary education**	**All**	**Less than secondary education**	**More than secondary education**
Mean of dependent variable	0.348	0.276	0.261	0.559	0.348	0.276	0.559
Elderly in household	0.112*** (0.029)	0.132*** (0.032)	-0.042 (0.076)	0.025 (0.064)	-0.085 (0.057)	0.004 (0.060)	-0.148 (0.124)
Individual characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local labor market conditions	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Governorate fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,079	1,252	283	544	2,079	1,252	544

Notes: Same as Table A3, except rural is not included. Secondary education is not included in Column 7 as there are no women employed with an individual in household identifying as the parent to the head of the household. Local labor market conditions refer to the local male and female unemployment rate.

Table A 8: Iraq - Female labor force participation and health status of elderly

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	With time use				*Without time use data*			
	All	**Less than secondary education**	**Secondary education**	**More than secondary education**	**All**	**Less than secondary education**	**Secondary education**	**More than secondary education**
Health of elderly	0.014	0.003	-0.031	0.163	-0.007	-0.003	-0.043*	-0.028
	(0.017)	(0.017)	(0.058)	(0.107)	(0.006)	(0.006)	(0.023)	(0.031)
Care	-0.020***	-0.017***	-0.011	-0.028**				
	(0.002)	(0.002)	(0.008)	(0.012)				
Care x Health of elderly	-0.013*	-0.009	0.001	-0.067*				
	(0.007)	(0.007)	(0.020)	(0.038)				
Individual characteristics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local labor market conditions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Governorate fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	30,361	25,259	2,773	2,148	30,361	25,259	2,773	2,148

Notes: Same as Table A5 except 'health of elderly' is whether the individual lives with someone aged 65 or more who suffered from an acute disease or injury during the prior 90 days to when the survey was taken.

Table A 9: Lebanon - Female labor supply and health status of elderly

	(1) All	(2) Less than secondary education	(3) Secondary education	(4) More than secondary education
Health of elderly	0.136***	0.128***	0.062	0.087
	(0.035)	(0.037)	(0.090)	(0.079)
Individual characteristics	Yes	Yes	Yes	Yes
Local labor market conditions	Yes	Yes	Yes	Yes
Governorate fixed effects	Yes	Yes	Yes	Yes
Observations	2,079	1,252	283	544

Notes: Same as Table A7, except 'health of elderly is whether individual lives with someone aged 65 or older who experiences difficulties with either seeing, hearing, walking, remembering self-care or communicating.