

Annex 1: Technical note on social insurance data

Data relating to overall pension coverage (SDG 1.3.1, data series g) are from the ILO Social Security Inquiry and have been collected from the ESCWA Data Portal as well as from the ILO World Social Protection Report 2020-2022 (published in September 2021). In certain cases, the data between these two sources converge, though in other cases they do not (for instance, the ILO data available on the ESCWA Data Portal suggest that pension coverage in Egypt is 38 per cent while the World Social Protection Report 2020-2022 sets the number at 57.6 per cent). When the sources differ, the data from the ILO World Social Protection Report 2020-2022 have been used.

It should be noted that the ILO World Social Protection Report 2020-2022 does not specify years in relation to the data on pension coverage, nor whether coverage includes both contributory and non-contributory mechanisms or merely one of the two. For these reasons, the ILO data on overall pension coverage should be interpreted with great caution.

Since ILO does not publish an average coverage rate for the Arab region (including the North African countries), that number has for the purpose of this report been estimated on the basis of the country data and the total population aged 60 or above in 2020 (as reported by DESA). This threshold was used across the board since the actual statutory age differs not only from one country to another, but also frequently between different schemes within a single country as well as for men and women. For this reason, the estimated regional average should be seen as approximate.

Data relating to specific social insurance schemes presented in the chapter largely come from the funds and institutions administering the schemes, notably from their annual reports. Due to the features and parameters of the schemes as well as how data are reported in the sources, full comparability between the data reported for different schemes cannot be ensured. Interpretations should therefore be made with caution.

CNSS in Morocco, CNSS in Tunisia and PASI in Oman are limited to the private sector, while public sector

workers are covered by other schemes for which no data are available. SSC in Jordan, on the other hand, covers both public and private workers, though older persons having previously worked in the public sector are in large part covered by two special pension regimes that are now being phased out. PIFSS in Kuwait and SIO in Bahrain also cover both the public and private sector. However, gender-disaggregated data are not available for PIFSS military pensioners, who have therefore been excluded from calculations.

Since the statutory retirement age varies between countries and schemes, and since in some cases it has been revised in the recent past, the exact scope of the group “old-age pensioners” is fluid. Furthermore, this category may in some cases include a number of early retirees.

In cases where sources report data for old-age pensioners and early-retirement pensioners separately, namely SSC in Jordan and PASI in Oman, the data for the former group have been used. In the case of CNSS in Tunisia, old-age pensioners include individuals aged 50 years and up, though the overwhelming majority (91 per cent as of 2017) are older than 60. Data for old-age pensioners in Morocco, similarly, might include early retirees (aged 55-60), but they should not be expected to constitute a large portion of the total given the average age of new pensioners (61 as of 2018).

PIFFS in Kuwait and SIO in Bahrain report data on pensioners of all ages without distinguishing by type of entitlement. However, the sources provide disaggregation by age span, which has allowed for all individuals younger than 61 (PIFFS) or 60 (SIO) to be subtracted. Thus, with regard to these two schemes, “old-age pensioners” does mean pensioners above those thresholds.

Data on older persons receiving survivor benefits have in the cases of CNSS in Tunisia and SIO in Bahrain been limited to persons older than 50 and 60, respectively, to ensure the highest possible degree of comparability with the group old-age pensioners.

Annex 2: Chapter 3 methodology

This chapter employs a narrative analysis of policies and debates reflecting the emerging LTC markets in the Arab region. It draws from the experience of countries in Europe and the OECD, where care markets, structures and principles have been evolving for several decades. The analysis employs a case-study approach, which helps explore the phenomena of LTC demands and emerging markets within specific contexts. The research focuses on three country case studies from the region: the Syrian Arab Republic, Saudi Arabia and Egypt to reflect on their experiences with ageing and LTC provision. To gain an in-depth understanding of issues related to ageing populations and evolving LTC markets in the three selected country case studies, desk research included review of published statistics and data, synthesis of relevant published academic literature and a media and news search for relevant articles and commentaries in Arabic.

In addition to the desk review, the research team collected primary data. For Saudi Arabia, a workshop with key stakeholders from the Ministries of Social Development, Family Affairs, Health and Education was conducted in November 2021, followed by review of several internal documents (in Arabic) provided to the team by Saudi Government stakeholders.

For Egypt, several interviews and social media communications were conducted (during October and November 2021) with charitable organizations concerned with the welfare of older people who shared further documents, articles and announcements. A workshop was also held with stakeholders from the Ministry of Social Solidarity in November 2021.

Finally, for the Syrian Arab Republic, we consulted a recent fieldwork study conducted by the Syrian Commission for Family Affairs and Population (2019) evaluating the needs of older people in the country between 2011 and 2019.

To estimate the current cost of LTC in the three case studies, a costing model proposed by Ismail and Hussein (2021) was used, which improves an existing estimation model previously adopted by the Organisation for Economic Co-operation and Development (OECD). The earlier OECD attempt used a regression model to estimate the likely cost of LTC for its members.¹⁴¹ The same model was followed by Costa-Font and others (2015) to estimate the impact of GDP on LTC spending. The model by Ismail and Hussein (2021), used for the analysis in this chapter,¹⁴² improves over the previous models by first adopting Bayesian estimation methods instead of a maximum likelihood approach to cope with the small sample size. Bayesian estimation methods are known to cope well with small sample sizes, assuming a proper choice of prior distributions.¹⁴³ Second, the model assumes that even though there are commonalities between all countries in the sample, there are cultural and policy differences. These differences are reflected in the modelling by employing a hierarchical random intercept. Each country has its intercept to reflect its individuality. However, all intercepts are related to each other as they are all drawn from a joint distribution.

The model variants sought to estimate the share of long-term care expenditure in GDP (source OECD stats) as a function of the following determinants:

- GDP per capita is used to represent total productivity.
- The female labour force participation rate is used to proxy informal care provision.
- The population aged 65 (OECD uses the 80 years threshold) and above relative to the total population is a control parameter.

Based on the model proposed by Ismail and Hussein (2021), we carried out estimations on the log scale, and we used leave-one-out cross-validation (LOO) and the widely applicable information criterion (WAIC) to compare several models. We implemented additional calculations of the log-likelihood evaluated at the posterior simulations of the parameter values as explained in Vehtari and others (2017). All model variants and comparison calculations were developed using CmdStan (Stan Development Team, 2018). All other calculations and graphs were generated using the R statistical environment (R Core Team, 2020).

Case selection

Figure 38 presents key demographic and socioeconomic factors for the three selected case studies. The Syrian Arab Republic presents a case

of moderate ageing, low income and relatively low health care expenditure per capita, transitioning from a prolonged conflict. In comparison, Egypt presents a case of a low-middle income populous country in the North Africa region. Finally, Saudi Arabia represents the experience of a high-income GCC country. Figure 38 shows that of the three case studies the average life expectancy at birth (in 2019) was highest in Saudi Arabia at 75 years, while the old-age dependency ratio and percentage of the people aged 65 or more were highest in Egypt (in 2020). Both Egypt and the Syrian Arab Republic had high levels of out-migration in 2017, linked to economic emigrants in the case of Egypt and refugees and asylum seekers in the case of the Syrian Arab Republic. On the other hand, Saudi Arabia had positive net migration with more people immigrating into the country than emigrating out. However, the three countries are projected to start their ageing transition by the middle of the next decade (mid-2030), with different ageing speeds. Saudi Arabia presents a situation of a relatively short duration of only 12 years, while Egypt is projected to take a considerably more extended period of 42 years, linked to observed and projected higher fertility rates than in the other two countries.

Demographic and socioeconomic characteristics for the three case studies

Characteristics	Syrian Arab Republic	Saudi Arabia	Egypt
Average life expectancy at birth (2019)			
Total	73 years	75 years	72 years
Males	68 years	74 years	70 years
Females	78 years	77 years	74 years
Percentage of the population 65+ (n) in 2020	4.9% (853,056)	3.5% (1,217,949)	5.3% (5,456,144)
Old age dependency ratio in 2020	7.6	4.9	8.8
Total fertility rate (2019)	2.8	2.3	3.3

Female employment rate in 2019	16.7%	15.8%	20.6%
Net migration (2017)	-2,136,954	674,895	-190,164
GDP per capita (2019)	\$1,194	\$23,337	\$3,153
Health care expenditure as a percentage of GDP (year)	3.57% (2012)	6.36% (2018)	4.95% (2018)
Year ageing transition start (years to complete)	2035 (17 years)	2033 (12 years)	2036 (42 years)
Context	Low income; political conflict; Levant region	High income; high levels of in-migration; Gulf region	Low-middle income; most populous; North Africa

Sources: Chapter 1, DESA (2019a); World Bank, n.d.