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**TRANSITIONS IN LATE-LIFE LIVING ARRANGEMENTS  
AND SOCIO-ECONOMIC CONDITIONS  
OF THE ELDERLY IN EGYPT, JORDAN AND TUNISIA**

**Aurora Angeli and Marco Novelli**

**Working Paper No. 1083**

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## Abstract

Middle East and North Africa's demographic trends reveal together a growing ageing population and an exceptional growth of the youth population. Increasing elderly population leads to significant consequences for the cost and organization of health systems. The rise in life expectancy has changed the arrangement of multigenerational families; relationships in ageing families have become more unstable and less predictable. In this paper, we investigate - in a gender and geographic perspective - differences in the socio-economic situation of the elderly and the determinants of late-life living arrangements in Egypt, Jordan and Tunisia starting from Labor Market Panel Surveys. Results are in line with both the different countries' stages of the demographic transition and welfare state coverages. The family continues to be the basis for support to older people, as in general in the Arab area. A relevant socio-political group, calling for policy interventions, is represented by the elderly living alone.

**JEL Classification:** J1, N3

**Keywords:** Socio-economic conditions; elderly; demography; Egypt, Jordan; Tunisia

## ملخص

تكشف الاتجاهات الديمغرافية في الشرق الأوسط وشمال أفريقيا معا عن تزايد عدد السكان المسنين ونمو استثنائي للسكان الشباب. ويؤدي تزايد عدد المسنين إلى عواقب وخيمة على تكلفة النظم الصحية وتنظيمها. وقد أدى ارتفاع متوسط العمر المتوقع إلى تغيير ترتيب الأسر المتعددة الأجيال؛ فقد أصبحت العلاقات في الأسر المسنة أكثر استقرارا وأقل قابلية للتنبؤ. في هذا البحث، نتحرى - من منظور نوعي ومنظور جغرافي - الاختلافات في الوضع الاجتماعي والاقتصادي لكبار السن ومحددات الترتيبات المعيشية المتأخرة في مصر والأردن وتونس بدءا من المسوح التتبعية لأسواق العمل. وتتماشى النتائج مع مراحل البلدان المختلفة في التحول الديمغرافي وتغطية الدولة للرعاية الاجتماعية. ولا تزال الأسرة هي الأساس لدعم المسنين، كما هو الحال عموما في المنطقة العربية. ويمثل المسنون الذين يعيشون بمفردهم مجموعة اجتماعية - سياسية، تدعو إلى تدخلات في مجال السياسات.

## **1. Introduction**

As in many other parts of the world, most Arab countries in the Middle East and North Africa (MENA) are experiencing demographic transitions including lower fertility, lower mortality rates and longer life expectancy. Population ageing is recognized as one of the most significant developments of our century, from both a demographic and social point of view.

MENA's demographic trends reveal together a growing ageing population and exceptional growth of the youth population (Apt, 2001). The pace of ageing will vary dramatically across countries, depending on the pace and timing of fertility declines (Hayutin, 2009; Tabutin & Schoumaker, 2005).

That process is relatively a recent phenomenon in the region, and the majority of countries do not appear to be ready to address the many implications of such changes. To date demographic ageing has received limited attention and it is still understudied in the MENA countries (Yount & Sibai, 2009) and in particular there is lack of knowledge on the living arrangements and socioeconomic conditions of aged people. Characteristics of the ageing process can affect patterns of co-residence, and have an impact on the well-being of the elderly (Palloni, 2001). Topics regarding household structure and support for older adults in developing countries are becoming increasingly important as population ageing starts to influence many of these societies (Bongaarts & Zimemr, 2002 Moghadam, 2004).

Demographic ageing has also received limited attention at the political level in most MENA countries, even though ageing has been an emerging trend with increasingly socio-economic aspects and important policy implications. The dramatic growth of the elderly already demands urgent attention of policy and decision-makers, in countries still having to deal with the difficulties of their younger populations. Most countries view population ageing to be a "minor" matter (Mirkin, 2010; Hussein & Ismail, 2016), but the rapidly changing demographic situation in the Region has induced some Governments to recognize the need to reflect about the expected increases in the population of older people. One of the most important political concerns is the need for redistributive policies, as ageing can aggravate pressure on public services for transfers to the elderly for health care and pensions (Kinsella & He, 2009; Lee, 2003).

Women issues—first of all the feminization of poverty in later life—are extremely important in managing social policies for elderly population (Angeli, 2015). As ageing is not yet visible in most policy dialogue in the MENA area, it tends to be overlooked in terms of budgetary allocations, thus increasing the vulnerability and marginalization of the elderly (Nabalamba & Chikoko, 2011; Kronfol, Sibai & Rizk, 2013).

### ***1.1 Aim of the project***

The aim of the project is to analyze - in a gender and geographic perspective - dynamics in late life living arrangements and differences in the socio-economic situation of the elderly in Egypt, Jordan and Tunisia. Egypt and Tunisia, with other African middle-income countries (Mauritius, Morocco, Algeria, and South Africa), are experiencing the greatest increase in the share of population aged 65 years and older (Mubila, 2012). It is important to underline that in the three countries policy-makers' attention towards the elderly is divergent.

This research aims to help fill the gap in the study of late-life living arrangements and intergenerational relationships in the MENA area. Moreover, results could evidence groups facing higher risks of marginalization or poverty conditions in late-life, suggesting programs for their social support.

This project will address main issues referred to the three countries to highlight similarities and differences:

- 1- Patterns and trends in both living arrangements and socio-economic conditions of the elderly;
- 2- How these trends vary by gender and residence;
- 3- Which respondents' characteristics are related to the individual living arrangement. In particular, we will identify the variables associated with the elderly's household form.

### ***1.2 Data and methods***

Data from Labor Market Panel Surveys (LMPS) for Egypt, Jordan, and Tunisia will be used. The ELMPS, fielded in 2012, the JLMPS of 2010, and the TLMPS of 2014 will be used<sup>1</sup>. The surveys include detailed information to identify the situation of the elderly in terms of living arrangement (data on age, sex, marital status and relation to the head of the household). The JLMPS 2010, ELMPS 2012 and TLMPS 2014 will allow us to compare the conditions in terms of living arrangements in most recent years.

To assess the dynamics of late-life living arrangements in a gender and geographic perspective, we will present descriptive analyses as well as multivariate analyses.

The project will specifically analyze:

- 1- Differences in the structure of households, with attention to those including one or more elderly. The role the elderly play within the household will be evaluated.
- 2- In particular, attention will be devoted to the elderly living alone or with only elderly members, (aged couples represent the most frequent structure). To better understand the situation of that elderly, information on public assistance and Household wealth index will be used.
- 3- The determinants of late-life living arrangements: independent living or co-residence. A multinomial regression model, where the dependent variables are represented by the household types, will be implemented.

### ***1.3 Structure of the paper***

The paper shall be divided into seven parts. In the second chapter, the medium and long term trends in both MENA region and the three countries are analysed. In chapters three and four - after an introduction on the family in the MENA region - late-life socio-economic conditions and living arrangements are addressed. Chapter five is devoted to a comparison between countries, from a gender perspective, of the main determinants of late-life living forms (independent or co-residence). Finally, chapters six contains conclusions and policy implications. Annexes and bibliographic references are in chapters seven and eight.

## **2. Medium and Long-Term Demographic Trends**

### ***2.1 Demographic trends in the MENA Region***

MENA has experienced the highest rate of population growth of any region in the world over the past century. Between 1950 and 2000 the population of the MENA region has increased from around 100 million to around 380 million, that is 3.7 times, more than any other major world region (Roudi, 2001; Assaad & Roudi-Fahimi, 2007). Advance in human survival, particularly during the second half of the 20th century, has conducted to the rapid population growth in MENA, as in other less developed regions. Population ageing is a quite recent phenomenon in the Arab Region. Due to its higher fertility, the Arab Region has experienced a slower pace of population ageing than in developing countries as a whole.

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<sup>1</sup> A complete review of the characteristics of the Surveys can be found in Assaad & Krafft, 2013; Assaad, Ghazouani, Krafft & Rolando, 2016; Barsoum, 2007.

As MENA's total population increases, so does its **elderly population** leading to a health problem that has significant repercussions for the cost and organization of health systems (Akala & El-Saharty, 2006; Parkash, Younis & Ward, 2015). As Mirkin (2010) specifies, in 2010, the share of the population aged 60 years and over is 7 percent in the Arab Region, as compared to 9 percent for the developing countries as a whole. After 2010, however, more rapid population ageing is expected among the Arab countries. The share of older people is projected to climb to 19 percent by 2050, whereas the proportion of children under 15 will decrease. The number of aged people in the Arab Region will more than quadruple from about 22 million in 2010 to about 103 million in 2050. In nine countries of the Region (among them Algeria, Morocco, Tunisia and Lybian Arab Jamahiriya), the number of the elderly will exceed the number of children by 2050 (United Nations, 2015).

Some examples regarding countries in the area confirm long-term trends: the Egyptian population aged 60 years and older is expected to grow from 5.1 million in 2000 to 23.0 million in 2050. Saudi Arabia's elderly population is expected to grow from 0.9 million in 2000 to 9.6 million in 2050. For Algeria, figures are 2 million and 13 million respectively in 2000 and 2050. The profound demographic transformations taking place in the Arab Region affect the fundamental pillars of the society, in particular marriage and the family, childbearing and childrearing, the status of women and the care of older people (Mirkin, 2010; Hussein, 2013).

Starting from Data of the Global Burden of Disease Study, Harwood, Sayer and Hirschfeld (2004) calculated the prevalence of severe levels of disability, then estimating dependency. They found that Middle East countries are included among the countries predicted to experience very large increases in absolute numbers of dependent people. The inability to perform some activities leads to the need for human help (or care) outside. Family members and/or other “informal” care-givers give most of such help. Owing to strong cultural traditions in this Region, the family continues then to provide social support and care to the elder relatives. As stated by Parkash, Younis and Ward (2015) the economic development in Arab countries is leading to a change from extended family to urban-based nuclear families, in which wives are gainfully employed (even if with differences among countries). This means that the support network provided by the extended family is beginning to decrease. In this framework, female support and care for children and the sick, elderly, disabled and handicapped may be difficult in the absence of sufficient social support (UNDP, 2006).

Even if demographic ageing represents an emerging question in the Middle East and North Africa - as in general in the Arab world - until recently little attention has been devoted to that issue (Mirkin, 2010). Although youth unemployment has recently become the center of much political and media attention, a great attention needs to be devoted to long-term policy in the MENA countries, requested to face access to healthcare and health for the growing ageing population. Healthcare cost and access to quality healthcare are issues under assessment and discussion. The middle- and low-income countries face rising difficulty to lower the disparities among their citizens to get access to satisfactory healthcare services (Ward & Younis, 2013).

Most of the problems associated with demographic ageing are included in *the Arab Plan of Action on Ageing to the Year 2012*. The Plan calls on member countries to implement the 2002 Madrid International Plan of Action on Ageing<sup>2</sup> at the regional level (ESCWA, 2007; 2014). There are significant differences among Arab countries regarding policy actions and instruments towards the elderly.<sup>3</sup> Some countries have set up national committees for ageing:

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<sup>2</sup> Adopted during the Second World Assembly on Ageing (Madrid, April 2002).

<sup>3</sup> The age at retirement is at the present 60 years in Jordan and Tunisia (details in Appendix 1), while in Egypt the reform law ratified by parliament in June 2010 contemplates that the retirement age will increase gradually from age 60 to age 65 for all employees over the period 2012 to 2027 (MOF, 2010).

Egypt and Jordan, as well as Bahrain, Kuwait, Lebanon, Qatar and Saudi Arabia, the Syrian Arab Republic. In addition, some countries have formulated new or improved existing legislation relating to the elderly. Relevant activities include both starting health insurance provisions that cover the needy elderly (as in the case of Egypt, Jordan and Oman) and establishing day centers for the aged, as in Egypt, Jordan and Lebanon.

## ***2.2 Demographic trends in fertility and survival: Egypt, Jordan and Tunisia***

Demographic trends in the three analyzed countries showed important changes from the last decades of the twentieth century. Each country has experienced marked decline in fertility, with the most important reduction in Tunisia, from over 6.3 children per woman of reproductive age (total fertility rate [TFR]) to around the replacement level (Table 1). Currently, Jordan presents the highest TFR, similar to that of Egypt.

Fertility in Egypt - after a rapid decline since the 1980s - seemed to be stalling during the second half of the 1990s and then it recovered in more recent years. The average number of children per woman declined from 6.6 in 1990 to 3.0 in 2008 and then to around 3.5 in 2014 (UNICEF, 2015).

Dramatic improvements in life expectancy at birth have also emerged in each country over the period (Table 2), as most Arab countries from the mid-twentieth century (Yount & Sibai, 2009).

Detailed data on life expectancy at older ages show that the Egyptian elderly can expect to live a lower number of years prior to death than Jordanian and Tunisian elderly. Jordanian older males and Tunisian older females present the most favorable life expectancies in late life. Jordanian males can expect to live 17.8 years when reaching the exact age 60 (versus 16.1 and 17.7 for Egyptian and Tunisian males); for females figures at the age 60 are 21.2 in Tunisia and 20.2 and 18.4 in Jordan and Egypt, respectively. Sanderson and Scherbov (2008), state that the prospective age, which is based on the number of birthdays a person can expect to have, can be proposed to better comprehend the age people have, in addition to chronological age.<sup>4</sup>

Changes and gains achieved from the last decades of the twentieth century, as well as differences in life expectancy in later life, are the results of policy action in health and social domains. At the same time, trends in life expectancy at birth, as well as life expectancy in old ages, drive to important changes at the individual level in both family structures and relationships between family members and between generations.

A short review of the main macro-level demographic trends, focused on population ageing in the three countries, can help to better comprehend dynamics in micro-level behavior related to late-life living arrangements and intergenerational relationships, that are included in the following sections of the paper.

To identify the elderly, we assume that the age 65 marks the entry into old age. The first results from previous analyses referred to Egypt from the 1998, 2006 and 2012 Egyptian LMPS surveys showed that only after 65 years of age did living arrangements present relevant changes among the elderly (Angeli & Donno, 2014; Angeli, 2015). In this report “elderly”, “older people” and “older population” refer to people aged 65 and older; the “oldest old” refers to people aged 80 and older, except otherwise noted.

### ***2.2.1 Ageing trends in Egypt***

The comparison between the figures of 1996 and 2006 Egyptian censuses (Egypt’s State Information Service data online) confirms a trend of ageing in the decade: the country has still a young population but the older people are the fastest growing part of the population (Awad & Zohry, 2005; Boggatz & Dassen, 2005; Sinunu, Yount & El Afify, 2009). Disparities within

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<sup>4</sup> The number of birthdays a person already has had.



and across governorates persist in demographic trends. During the coming years the ageing process will produce substantial changes in the age structure of the population, with important consequences for household life and for government duties (Boggatz et.al, 2010; Diamond-Smith, Bishai & El Gibaly, 2013). United Nations (2015) population estimates and projections show that in Egypt the number of those 65 years and over will increase from 4.0 million in 2010 to 7.9 million in 2030 (5.2% and 6.7% of the total population in 2010 and 2030, respectively). Between 2030 and 2050 the ageing process will accelerate and the number of those 65 years and over will reach 15.7 million in 2050, 10.5 percent of the total population. The older population itself is ageing. The number of oldest people, likely to be dependent, is growing: in 2010 people aged 80 and more represent 0.8 percent of the total population and they will increase up to about 1.9 percent by 2030 and 4.8 percent by 2050. The rising presence of the elderly in the population is coupled with a social protection system and an economic environment not oriented toward the problems generated by an ageing population (Loewe, 2000; UNFPA, 2010). For Egypt there exists very little analysis on living arrangements and their modifications as well as on late-life dynamics (Yount & Sibai, 2009; Angeli & Alberani, 2011).

### *2.2.2 Ageing trends in Jordan*

Over the next 50 years, Jordan's demographics will change dramatically, since the demographic transition the country is undergoing moves from high fertility and mortality, to low fertility and mortality. The country's population is growing rapidly. In Jordan fertility has declined between 1990 and the start of the XXI century. Since then fertility remained relatively constant at a rate exceeding 3.5 children per woman (Cetorelli & Leone, 2012; Department of Statistics [Jordan] and ICF International, 2013). Population is still young and quickly growing (ESCWA, 2014). The Jordan's population age composition shows that in 2010 the youth bulge is underway: the proportion of people 65 years and over reaches 3.4 percent and it is expected to reach 5.8 percent in 2030 (Hayutin, 2009).

The country has formulated the National Plan of Action in line with the principles of 2002 Madrid International Plan of Action on Ageing (ESCWA, 2007; 2014). The National Jordanian Strategy for Senior Citizens was published in 2008. In spite of these recent legislative developments towards the elderly, the society does not have sufficient awareness nor the resources to face issues linked with population ageing (Al-Makhamreh, Hasna & Al-Khateeb, 2011). Jordan—as its population ages—must face several issues: for example, the epidemiological transition from infectious to chronic diseases and the effects on savings and pensions induced by the demographic transition (Canning et al., 2001).

### *2.2.3 Ageing trends in Tunisia*

Tunisia is a young, rapidly ageing country. Compared to other Arab countries, Tunisia is in an advanced stage of the demographic transition. The country (as Algeria, Lybian Arab Jamahiriya and Morocco in Northern Africa) has had dramatic drops in fertility to approximately replacement level (see again Table 1).<sup>5</sup> The country faces the dual challenges of being both still young and rapidly transitioning (Hayutin, 2009). As Tunisia has entered the last stage of the demographic transition, the preponderance of the working age population starts to diminish with the appearance of the first signs of ageing as life expectancy improved markedly (Yount & Rashad, 2008). The number of older people remains relatively low, since they belong to much less numerous generations, characterized by a very high infant and child mortality, but the country is expected to show faster ageing trends by 2050 (Troisi & Von Kondratowitz, 2013). The number of people 65 years and over is expected to almost double between 2010 and 2030 (from 0.8 million to about 1.7 million) and the share on the total

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<sup>5</sup> United Nations (2015) projections state that in Tunisia the TFR will decrease from 2.16 children per woman in 2010-15 to 1.93 in 2025-2030 and then to 1.83 in 2045-2050.

population will change from 7.6 to 12.4. In 2050 around one in five Tunisian will be in this older age bracket (United Nations, 2015).

As for other countries in North Africa and Middle East, results on living arrangements and intergenerational relationships are scarce for Tunisia, even if the country is considered a pioneer in formulating policies in support of its elder people (Gouiaa & Sibai, 2013).

In spite of modifications in its structure and size, the Tunisian family continues to play a crucial role as a supportive social system for the majority of its elderly. The family is seen as the institution considered responsible for the care, protection and well-being of the older people (Troisi & Von Kondratowitz, 2013). The Tunisian law<sup>6</sup> declares that the family is responsible for the protection of its older members and the satisfaction of their needs. The State can aid the family in fulfilling its role in this field, and it also works for the development of services for older people.

In the next section, we shall analyze the different patterns in living arrangements and intergenerational relationships, especially for aged people.

### **3. The Family in the MENA Area**

As already stated, the analysis of living arrangements in the MENA countries are scarce, but the existing literature highlights that family is the main source of support for older adults, although patterns of co-residence and marital laws differ across countries. Great attention has been devoted to the choice of independent living among the elderly and the increase of female-headed families which were rare events in the past Arab societies. Trends towards increasing independent living in late-life as well as different behaviors between males and females have been documented in many countries. For example, Shah et al (2002) showed that in Kuwait only 0.3 percent of older men and 1.9 percent of older women lived alone in 2000. Older women had two times higher odds than men of living without their children. In the same country, older women were three times more likely to live alone than men in 2005 (15.2% and 4.9%, respectively).

Results from the 2004 data of the 'Pan Arab Project for Family Health', explained that in Lebanon solitary living in later life was positively associated with being a woman. A considerable proportion of elderly women were living alone (18%) at the time of the survey; they were almost four times more likely than men to live alone (Tohme et al, 2011). Results for Lebanon have been confirmed by Abdulrahim, Ajrouch & Antonucci (2015). A body of the analyses regards Egypt and Tunisia: the focus is on living arrangements, gender roles and changing intergenerational ties (Angeli, 2015; Sinunu, Yount & El Afify, 2009; Yount & Agree, 2005; Yount & Khadr, 2008). In Tunisia, the trend towards nuclear living has been well detailed, but women in Tunisia often live near and visit their natal and marital kin (Yount & Agree, 2005; Amara & Jemmali, 2015). In Egypt 3.1 percent of men and 12.3 percent of women lived alone in 2000 (Yount & Khadr, 2008). The results obtained by Mahasneh (2000) indicate that in Jordan at the start of the XXIth century the majority of the elderly population lived within a family unit and usually have someone to help them. The percentage of older adults living alone was around 6.1 percent.

#### ***3.1 Main characteristics of the households in Egypt, Jordan and Tunisia. Insights from Labour Market Surveys***

In this paragraph, we analyse patterns and trends in living arrangements, intergenerational relationships and socio-economic conditions of the elderly. We aim to analyse household living structures to outline similarities and differences (if any) among the three countries. Moreover, we will consider if trends vary by gender and residence.

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<sup>6</sup> Loi n° 94 – 114 du 31 octobre 1994 (<https://intergenerationsfax.wordpress.com>).

First comparative data from Labor Market Surveys carried out in the three countries suggest that households present different characteristics (Table 3). The average number of persons per household presents relevant differences: 5.1 components in Jordan versus 4.1 in Egypt and 3.6 in Tunisia. The already introduced trends in fertility and survival can explain most part of the differences among the countries. The most significant difference appears in the rural context: the average household size in Jordan is larger than in Egypt by 1.2 components and by 1.9 components in Tunisia.

The size and structure of the households in general follows the life cycle of families. In the three countries, it emerges a great difference with respect to the gender of households' head between rural and urban residence.

In addition, households with a female head represent a particular interest and has important policy implications. Relevant differences emerge when considering all the households or only elderly headed households. Among the households with an elderly head, at least one household in three is headed by a woman, with the higher percentage in urban Egypt (about four households in ten).

Living arrangements and intergenerational relationships are strictly connected to individual life cycle stages, which happen within the context of family life (Bengtson et al., 2003). One of the main dimension influencing the living arrangement of the elderly can be individuate in their health status, which declines in later life.

The 2010 JLMPS includes 25,969 people: of them 95.2 percent are Jordanian, 1.2 percent are Egyptians and 3.6 percent belong to other Arab countries. Only 0.1 percent of the sample is represented by non-Arab people. The average size of Jordanian and non-Jordanian households is quite similar. In the following elaborations, we will jointly consider all the households and individuals included in the 2010JLMPS.

The ageing path, coupled with health status of the elderly as well as cultural norms affect and are affected by the size, the structure of the households and co-residence of the generations.

Individual data from Labour Market Surveys show that in the three countries the percentage of households hosting at least one elderly is divergent (Figure 1).

Around 16-18 percent of Egyptian and Jordanian households included at least one member aged 65 or older. In Tunisia, the percentage is higher: about three households in ten host at least an older component. Once more, the share of households hosting a generation only is similar in Egypt and Jordan (between 16 and 18 percent) while in Tunisia it reaches nearly 29 percent. About one in ten household includes three generations in Egypt versus 4-5 percent in the other countries, suggesting that multigenerational and complex households are more common in this country.

The modifications in the demographic behavior of the three countries hint at important micro-level changes in both family structures and relations among family members and among generations.

#### **4. Late-life Living Arrangements in the MENA Region at the Beginning of the XXI Century**

##### ***4.1 Data on ageing from labor market surveys***

Table 4 and Table 5 inform about the demographic and socio-economic structure of the elderly included in the surveys. In Tunisia, more than 10 percent of the rural population is aged 65 years and over.<sup>7</sup> Age profiles of older population vary considerably among the countries here

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<sup>7</sup> The share of people aged 60 and older over 10 percent of the whole population is proposed in the literature among the indicators of demographic ageing (Pison, 2009; Angeli, 2015).

considered. The elderly age distribution, as expected, show a higher percentage of the oldest old in Tunisia (23 percent of the elderly was aged 80 years and over) than in Jordan (16.8 percent) and Egypt (14 percent).

The distribution of marital status characteristics over the elderly population is directly associated with the nuptiality and survival patterns of the populations we study. In particular, Egypt has the lowest percentage of married people among the older, especially for women. Indeed, only 27.3 percent of Egyptian elderly women are married against 39.3 percent and 43.5 percent in Jordan and Tunisia, respectively. Considering instead the proportion of widows, the sorting of the countries is reversed. Egypt shows the highest percentage of widowed people in both sexes, with a predominance of women, which reaches 69.5 percent. The survival models and life expectancy in later life (see again Table 2) may explain in large part the differences between the countries. The remarkable countries' differences between older men and older women in the proportion married versus the proportion widowed—as the following results will confirm—affect late-life living arrangements. The survival models and life expectancy in later life for the most part also explain the gendered distribution of households' heads in late life. Although most of the heads of the family are males, Egypt has the highest proportion of elderly female-headed households (see again Table 3). Differences arise even considering the proportion of older people living in urban areas: more than 80 percent in Jordan, about 65 percent in Tunisia and about 50 percent in Egypt.<sup>8</sup> With regard to the elderly living alone, Tunisia has the highest percentage in both sexes, while Jordan the lowest, 3.5 percent and 16.4 percent, respectively for males and females. The percentage of women living alone is approximately three or four times that of men. This may be due to the increased life expectancy and to the difference in age at marriage.

While the percentage of women who worked in the last week is almost stable for the three countries and stood at 3.2 percent, for men there are substantial differences. In fact, in Egypt about 26 percent of older men have worked in the last week compared to 16 percent and 14 percent in Jordan and Tunisia, respectively. Results on older people, who continue to work during their later years, are confirmed by those from Demographic and Health Surveys carried out in many Arab countries. Yount & Sibai (2009) state that even a substantial share of men aged 80 years and older continued to work in many countries and at different survey years (Egypt: 21 percent in 1988 and 12 percent in 2000; Jordan: 11 percent in 1990; Lebanon: 14 percent in 1996; Yemen: 21 percent in 1991).

If a high proportion of working people among the elderly can indicate a (average) good health status in late life (Boggatz & Dassen, 2005; Angeli, 2015), we must recall that this could also be a sign that high segments of older people still have to work to survive, because of their households' limited capacity to support them financially. The proportion of working people among the older could also represent a proxy of the efficiency of supporting policies for elder people (United Nations, 2013a).

The proportion of elderly who are illiterate shows divergent trends: Tunisia has the highest values for both sexes, while Jordan the most content. In particular, women show much higher rates than men in all countries. A relevant information concerns the holding of medical/health insurance (not included in the Jordanian survey), which can to some extent be an indication of the welfare state of the country. The comparison between Egypt and Tunisia shows very divergent situations: while in Egypt the percentages are low and gendered differentiate, in Tunisia they are high for both men and women.

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<sup>8</sup> The results about urban and rural residence of the three countries are close to data published by United Nations (2015): this is a confirmation of the representativeness of the samples considered.

#### ***4.2 Patterns in late-life living arrangements and socio-economic conditions of the elderly***

As in most developed and developing countries, progresses in life expectancy have changed the arrangement of multigenerational families (Silverstein & Giarrusso, 2010). Dual survivorship within and across generations has resulted in prolonged periods of support exchanges (including caregiving) and affective networks over the life span. At the same time, relationships in ageing families have become more unstable and less predictable: reduced fertility and increased rates of divorce, remarriage, and stepfamily formation have altered the micro context in which intergenerational, spousal, and sibling relationships function.

To study changes in late-life living arrangements and conditions of older people in Egypt, Jordan and Tunisia, we jointly utilize many variables. To assess the characteristics of living arrangements, we consider the demographic characteristics of all household members, namely sex, age, relation to the head of the household and marital status. All data sets of the three countries contain information on the relationship of each household member to the household head, necessary to calculate the distribution of living arrangements. In particular, for our scope, it is possible to individuate the residential arrangements of the elderly.

It should be noted that the number of relationships to household head provided in each survey varies. The 2010 Jordanian survey has the smallest number of relationships, with the most notable absence being the category of son/daughter-in-law and brother/sister-in-law. The Egyptian and Tunisian surveys are richer in details. The richest survey is 2014 TLMPS where also the presence of grandparents, father/ mother-in-law and nephew/niece is documented (in Annex 2 details on the relationships to household head scheduled in each country). However, some issues affect the ability to compare results among countries.<sup>9</sup>

Living arrangements of the elderly are determined by many factors. Among the driving factors, we can find dynamics influenced by cultural aspects, the individual inclination to live with other people, policy interventions, and demographic aspects (Merli & Palloni, 2006; Bumpass, Sweet & Martin, 1990; De Jong Gierveld, De Valk & Blommesteijn, 2001). Residential propensities are influenced by life circumstances (such as widowhood, declining health or poverty) and can also be influenced by public support networks for the elderly.

#### ***4.3 The role the elderly play within the household***

The role the elderly play in their household, deriving from the relation to the household head, can represent a relevant information to comprehend the situation of the elderly and intergenerational ties. The headship rate by age and gender can be assumed as a global measure of household structure. The position of the elderly in the household allows one to distinguish those who retain the headship of the household from those who are classified (as parents) in the family of a child or those living in the household of a brother or other relative (Table 6).

In multigenerational households, the older or the younger generation can assume the role of household's head. According to the Labor Market Surveys data, also widowed women living in the family of a child sometimes assume the role of head in each of the three countries. Among men aged 65 to 79 years, more than 9 out of 10 were head of the household in all the surveys; for women around 45 percent were head of the household in Tunisia and Egypt, while the share was lower for Jordan. Once more we can recall the different survival model in the oldest ages to comprehend differences in the percentage of women who were defined in the survey as "Household head's spouse", mostly at the highest ages. In Tunisia, 18.5 percent of women aged 80 years and over play this role at the 2014 survey, versus 2.2 percent in Egypt and 7.7 percent

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<sup>9</sup> For example, the variable "perceived health status" is not included in the Jordanian survey; moreover, although the 2014TLMPS presents detailed definitions and information, there are some problems with missing values (Assaad, Ghazouani, Krafft & Rolando, 2016).

in Jordan. Therefore, also the shares of older men and women hosted in the household of a child as “parent” are different in the three countries.

#### ***4.4 Households’ structure and intergenerational cohabitation***

We have considered mutually exclusive categories of living arrangements, starting from the basic comparative scheme proposed by the United Nations (2005).<sup>10</sup> In addition, we have classified the households by the number of present generations and by the “complexity” of the household to identify multi-generational households and extended households. Complexity is analyzed as function of the number of conjugal units, not the number of generations in the household. A nuclear household (or family household) has at least two members related by birth, marriage, or adoption, one of whom is the head of the household.<sup>11</sup> A multi-family household contains two or more family units. An extended family household consists of one family plus at least one other relative such as a parent/parent-in-law, brother/brother-in-law, or other less close relatives when these other relatives do not form a separate family unit within the household.

As shown in Table 7, living with descendants (with a child and/or grandchild) represents the most diffused living arrangement in late life in all the countries, but it presents different percentages for men and women and among the countries here considered. Older men (head of the household or not) live with children and grandchildren more often than older women do, but the percentage is decreasing from Jordan to Egypt and to Tunisia.

The data for (married) men indicate a high percentage living with a spouse and without others in each of the three countries. In Tunisia, the share is higher than in Egypt and Jordan, for both older (married) men and women. This evidence can be the result of both the most favorable survival model in late life and a propensity toward independent living the older couples of the country has attained.

In Tunisia –the country at the more advanced stage of the demographic transition– more than half of the older women live in independent arrangements, while for men the share reaches 50 percent. In Egypt figures are close to 40 percent for both men and women while for Jordan only 25-30 percent of men and women live alone or with the spouse only.

Men in couple often live in complex households, where they assume the role of family head even if data outline that they are not the providers of the household’s economic resources.

Indeed, a large proportion of the older population consists of widowed people, particularly among women. Among elderly women, the proportions living alone are very high in Tunisia and Egypt and considerably lower in Jordan. The same pattern holds for widows.

For older women, being widowed means either that they co-reside with their children and, perhaps, also grandchildren (the most widespread living arrangement among older women in both three countries) or that they live alone. For example, mostly Tunisian widows live alone (52 percent) or in the family of a child (38 percent).

Turning to consider the elderly who live in coresidential arrangements (Table 8), we see that the nuclear family remains the most diffused form of living arrangement in the three countries, but the share of aged people living with relatives shows differences among countries.

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<sup>10</sup> The considered household structures are the following: Living alone; Living with a spouse only; Living with children (including adopted children) or children-in-law; Living with children and grandchildren; Living with grandchildren only (skipped generation households); Living with brothers/ brothers-in-law; Living with another relative (other than a spouse, child/grandchild, or brother); Living with unrelated people only. Living alone or with a spouse only represent “independent living”.

<sup>11</sup> In the following pages, we will not distinguish between married couples without children and complete-nuclear families (couple and children) or incomplete-nuclear families (the elderly person was a single parent).

Data also outline dissimilarity between countries when considering extended or multi-family households. The pathways to co-residence are diverse and complex to describe. Data for Egypt and Jordan seem to suggest a behavior still more oriented towards traditional family patterns and the idea that children are obliged to support their parents, in the form of co-residence too. Data for Tunisia confirm that co-residence emerges as a less favorable option in late-life living arrangements. Moreover, data outline a common attitude with respect to residence: in all the countries cohabitation with descendant is more diffused in the rural areas than in the urban context (Tables A8a,b,c in Annex 3 of the Appendix). Tunisia and Egypt show very high proportions of elderly women living alone in the urban context: about one woman in three in Tunisia and 28 percent in Egypt.

Previous results for Egypt (Angeli, 2015) obtained from the three surveys carried on in the country in 1998, 2006 and 2012<sup>12</sup> underlined that the rising diffusion of smaller households emerged first in the urban context, where the most prominent trend regards the rise in solitary living. The rise in the percentage of urban households composed of a person living alone has been 36 percent between 1998 and 2006 and 31 percent between 2006 and 2012. More than four urban households in ten had a size smaller than four members in both 2006 and 2012. The percentage was less than 30 percent in 1998. In the same time, the proportion of the largest households (those with 10 or more members) was more and more reduced. In the rural areas, changes were less important, although the trend towards a smaller household size was confirmed.

#### ***4.5 Socio-economic conditions in late-life***

To better identify the socio-economic conditions of the households where the elderly live, we utilize the household wealth index, a composite measure of a household's cumulative living standard. We refer to wealth quintiles, which are expressed in terms of quintiles of individuals in the population<sup>13</sup>, a way of looking at relative poverty. In Table 9, we take into account specifically the elderly belonging to the first (poorer) wealth quintile in each country.

Referring to first wealth quintile, poverty could be defined as being one of the poorest 20 percent of people in the population, or in other words, having material living standards that are lower than 80 percent of the people in the population. Thus, relative poverty is dependent on which population the person lives in.

When all the elderly are considered, in all the countries, as expected, gendered as well as geographical differences emerge. The percentages of older people categorized by the poorest wealth quintile are always higher for women and among the rural population. Data for women appear critical in particular in Jordan (Table 9.1) and in Tunisia (Table 9.2) where the percentages of older women belonging to the first wealth quintile stay around 50 percent. The measure of relative poverty indicates worse situations in the rural areas for elderly males too, and in particular, in Jordan and in Tunisia the percentages (representing 43 and 47 percent of the rural elderly in the two countries, respectively) are almost three times those of the urban elderly. The elderly headed households—and within them the elderly living alone—represent other groups disadvantaged in terms of relative poverty. Exceptionally high percentages relate to women living alone in rural areas: from 53 percent in Egypt to 90 percent in Jordan.<sup>14</sup> Not

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<sup>12</sup> The "Egypt Labor Market Survey" of 1998 (ELMS 98) and the "Egypt Labor Market Panel Survey" of 2006 (ELMPS 2006) and 2012 (ELMPS 2012) directed by ERF and CAPMAS.

<sup>13</sup> The wealth index is based on asset ownership and household characteristics rather than monetary income. It is calculated using easy-to-collect data on a household's ownership of selected assets; materials used for housing construction; and types of water access and sanitation facilities (Fry, Firestone and Chakraborty, 2014). Data on housing assets, have been parameterized in the wealth index by Principal Components Analysis.

<sup>14</sup> In the latter country, the number of cases is low.

only women living alone presented the more critical situations: this is true in general for female-headed households.<sup>15</sup>

Tables A9a, A9b and A9c (Annex 3 in the Appendix) include also some data on the elderly belonging to the richest quintile. The distribution of the elderly-headed households in the richest quintile does not appear as highly gender differentiated as in the poorest quintile.

To better deepen the hardest situations in late-life, we have then considered only the rural populations in the three countries. Data in Table 10 enable a better understanding of difficult situation of many the rural elderly: the share of the elderly on the total rural population and the share of the elderly on the total rural population belonging to the first wealth quintile. A common outcome across countries is the overrepresentation of the elderly among the poorest segment of the rural population for both genders. For example, in rural Egypt the elderly aged 65 years and over represent 4.5 percent of the total population, but the share of the elderly belonging to the poorest wealth quintile reaches 7.4 percent of the total poorest population.

If we compare data for men and women, the relative difference between the two percentages confirms worse socio-economic conditions for older females in Egypt and Jordan with respect to males. In Tunisia, it emerges that the overrepresentation of the elderly among the poorest segment of the rural population – more similar for men and women than in Egypt and Jordan – is higher for men.

Results are in line with those obtained from previous analysis on poverty in the MENA region. World Bank (2010) results show that the region has a low rate of poverty when compared with other developing regions, but it is experiencing a steady increase in inequality, as poverty is concentrated among groups, which are the last ones to benefit from growth. Among the most disadvantaged groups are included illiterate people and rural dwellers.

Data Obtained by Iqbal (2006) concerning the level of poverty<sup>16</sup> confirm our results. Differences in gender-specific poverty rates were notable in the case of Egypt in 1999/2000, both in metropolitan areas and in the rural areas of Upper Egypt. Data referring to Jordan in 2002/2003, confirm that the level of poverty was higher in female-headed households (15 percent versus 14 percent for male-headed households), but the difference was not statistically significant. In Tunisia in 2000 around 11.8 percent of the population living in female-headed households in rural areas was poor as compared to 17.2 percent in urban areas.

## **5. Living Arrangements in Late-Life: Living Alone or With Other People**

### ***5.1 Independent living of the elderly: differences and similarities in the MENA countries***

Previous data highlight emerging changes in late-life living arrangements in the countries here analyzed: among them the independent living of the elderly. Living alone or in a couple with the spouse only is already common in more developed countries and increasing in developing countries (Glaser, 1997; United Nations, 2005).

Data from Demographic and Health Surveys show that the female tendency towards living alone has been long lasting in MENA countries. Table 11 includes percentages of aged people<sup>17</sup> living alone in selected Arab countries, showing the age and gendered pattern of living alone (Yount & Sibai, 2009).

Since the late 1980s, the gender gap in the percentage living alone has become more marked in Egypt than in Jordan or Tunisia. In the age-class 70–79, older Egyptian women were almost

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<sup>15</sup> These figures are not included in a table of this report, but available upon request.

<sup>16</sup> Measured at the \$1 or \$2 level (Iqbal, 2006)

<sup>17</sup> We have considered age-groups 60 years and older, but the paper shows the percentages of adults who were living alone from 50 years of age.



three times more likely to live alone than older men in 1988 (11.4% versus 4.2%) while in 2005 the female percentage (19.8%) was five times the male percentage (3.8%).

Data outline that, in Jordan and Tunisia, percentages of the elderly living alone were lower for both men and women than in Egypt, but the differences between genders were higher. For example, in Jordan 2.1 percent of men and 13.7 percent of women lived alone in 1997. The results also outline a tendency for the gender gap in living alone to decrease over time in Egypt (more than in other countries) among the oldest old aged 80 years and older, although at the beginning of the XXI century, this gap tended to increase.

In what follows, the determinants of independent living or with other people will be investigated through a multinomial logit regression model.

## ***5.2 Living alone or with other people: the determinants***

To investigate the determinants of late-life living arrangements, we perform a multinomial regression analysis, where the household types represent the dependent variables. We carried out a separate analysis for males and females in order to disentangle the possible differences between the two sexes. Table 12 shows the dependent variables used in the analysis. In particular, the proportion for all the different household types are reported for the three countries. We considered the categories: independent living, including living alone and in couple; nuclear family; and complex household, constituted by the multifamily and extended household. The chosen reference category for all the three countries is independent living.

### *5.2.1 Variable definitions*

In order to analyze the relationships between elderly's characteristics and their living arrangements, we employ fixed-effects multinomial logit regressions. We estimate models of late-life living arrangements for males and females in the three countries, Egypt, Jordan and Tunisia. We use a model that compares the independent living form with any other household type, that is, nuclear and complex family. Our objective is to summarize and describe the individual-level characteristics of the elderly associated with the different household types. Table 13 describes the independent variables included in the model. More specifically, we consider basic socio-demographic characteristic such age with two socioeconomic variables: educational level and employment status. Educational level is included as an indicator of socioeconomic status and past earning potential, while the employment status (in the reference week) can be considered as an indicator of poverty. The educational level is divided into three categories: illiterate (reference category); primary education; intermediate and above education. Furthermore, we take into account the area of residence of the elderly, that is, urban or rural. For Egypt and Tunisia, we also take into account the perceived health status of the aged person which is divided into three categories: strongly limited in the everyday activities (reference category); limited to some extent; not limited. We also consider "formal" sources of income, which include social assistance and pensions, this is a variable at the household level. In what follows, the results of the regression analyses will be presented.

### *5.2.2 Estimation results*

The results are shown in the form of odds ratios. Tables 14, 15 and 16 present results for Egypt, Jordan and Tunisia, respectively. In each table, the dependent variable is the household type where the aged person lives, that is, independent living, nuclear family, and complex family. In all regressions, independent living is the excluded category.

As for Egypt (Table 14), it is observed that, for both genders, residing in rural areas is associated with complex families. The age of the older person seems to have an opposite behavior for the two genders: for males, we found a positive association with nuclear family and a negative one with complex household; for females instead, we found a positive relation

with the complex families. As expected, for both genders, elderly living alone or in couple are more likely to be employed, than elderly living in a complex family. No statistically significant difference with the nuclear family emerges. For what concerns the level of education, we find strong relationship with the complex family type. In particular, compared to the reference category (illiterate), all other categories show negative associations, meaning that illiterate aged people are more associated with the complex families for both sexes. The perceived health status shows a negative relationship with both categories but only for males. This means that, with respect to an elderly male living alone or in couple, there is higher odds of finding elderly with strong limitation in both nuclear and complex families. Moreover, as expected, results outline a positive and significant relation between formal sources of income and independent living.

Table 15 reports the estimation results for the Jordanian elderly. Aged people living in rural areas are most likely to live in nuclear families, for both sexes. The oldest old are less likely to live in nuclear families for males and more likely to live in complex families for females. The employment status of the elderly and the formal sources of income do not show significant relationships, in contrast to what happened for Egypt. The level of education, instead, follows the results obtained for Egypt, showing a significant association with the complex household. We recall that these results point out that illiterate aged people of both genders are more likely to live in complex families.

For what concerns Tunisian elderly (Table 16), those living in rural areas show some higher odds of living in complex families for males and in nuclear households for females. The age of the elderly is an important variable: we find a negative association for elderly males and females living in nuclear families and a strong positive relation with complex households for females. We do not find significant relationship with the employment status, while the level of education shows a significant negative relationship for females. Following the results obtained for the other countries, illiterate Tunisian females are more likely to live in complex households. For what concerns formal sources of income, we found that, only for males, receiving an external income is positively associated with independent living arrangement. The results for the perceived health status highlight that, an elderly male with strong limitations is less likely to live alone or with the spouse only.

The results obtained allow us to summarize the characteristics of the elderly associated with independent living or co-residence. We find common traits and differences between countries. Age seems to be an important discriminating factor between genders. As age increases, older females are more likely to live in complex households in the three countries; males, in line with their survival model, are more likely to live independently, mostly with their spouse. The geographic area of residence presents a different impact in the countries analysed. As expected, having a formal source of income is more associated with the independent living arrangements. Moreover, results on the educational level underline a common trait: a preponderance of illiterate aged people in complex families. In the same manner, for Egypt and Tunisia, the perceived health status shows a clear pattern towards co-residence in case of strong limitations.

## **6. Conclusions and Policy Implications**

Populations are rapidly ageing in the Arab countries. Although ageing is a recent trend, the rapid demographic transition in some of the states is projected to produce major changes in the age-sex structure of their populations as well as in household structures.

Our results on living arrangements and socio-economic conditions of the elderly in Egypt, Jordan and Tunisia are in line with both the different countries' stages of the demographic transition and welfare state coverages. The analysis confirms that the family continues to be the basis for support to older people, as in general in the Arab area.

A common tendency towards independent living in late-life, mostly in the urban context and among older women, emerged, even if differences in patterns of intergenerational co-residence in the three countries persist. For example, in Tunisia, about one in three urban older women live alone in 2014. A similar situation emerges in 2012 Egypt (28%) while in 2010 Jordan - the country at the earlier stage of the demographic transition - only 19 percent of the urban older women live alone.

As already achieved in researches on developed and developing countries, findings confirm that older women are at higher risk of poverty than older men are. Moreover, female-headed households are more likely to be poor compared to male-headed counterparts, even if differences are relevant between the countries here considered. If living alone, the risk of poverty is higher for both older women and men, but particularly so for women. A common outcome across countries is the overrepresentation of the elderly among the poorest segment of the rural population for both genders, but particularly so for women. The overrepresentation of the elderly women among the rural poor is somewhat less pronounced in Tunisia, a country considered advanced in supporting policies for its elder people (Gouiaa & Sibai, 2013).

In addition, socio-demographic changes alter people's expectations and the duration of specific roles, including those within the family involving intergenerational ties.

As already stated, Egyptian elderly seem to face greater risks of vulnerability. Furthermore, an important difference between countries is represented by the employment status of the elderly: Egyptian elderly living independently are more likely to work. This could suggest the weakness of both formal and informal network of support towards the older.

The study of levels, patterns and changes of living arrangements among the elderly has been an important aspect of sociology and demography of the family. Moreover, a synthesis of trends is essential to clarify important issues with policy relevance. As Palloni (2001) states, the study of patterns of elderly co-residence is not just a theoretical exercise to understand the historical evolution of families and households. It is also an area of concrete concern for policy makers, as variations in elderly co-residence with kin can induce modifications of elderly levels of well-being. Information on the composition of households and living arrangements is crucial to formulate evidence-based strategies about how to meet the needs of older people (Tohme et al, 2011). The growing numbers of older people in the three countries here analyzed - as in other MENA countries - will pose new tasks for the health and social care systems, as well as for family care (Azer & Afifi, 1992; Awad & Zohry, 2005; Hussein, 2013; Nandakumar, Chawla & Khan, 2000; Sibai & Yamout, 2012). As introduced by Yount and Sibai (2009), variations and changes over time in intergenerational co-residence suggest increasing heterogeneity in norms about living arrangements and the expression of intergenerational support in Arab societies. In particular, older Arabs living alone represent a relevant socio-political group and call for policy interventions because they may more often need external assistance when ill or disabled and face greater risk of social isolation, and may more often be poor.

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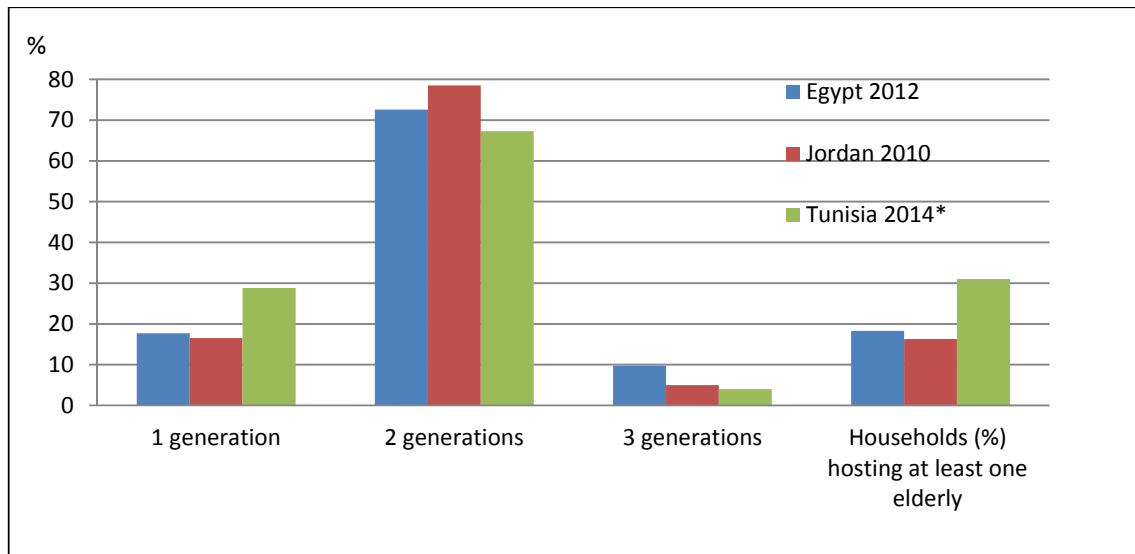
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**Figure 1: Distribution (%) of the Households by the Number of Generations: Egypt, Jordan and Tunisia \***



Notes: \*For Tunisia, the number of generations as well as the share of the households including at least one elderly has been calculated on 4337 Households. Weighted data.



**Table 1: Total Fertility Rate (TFR): from 1970-75 to 2010-15**

| Total fertility rate        | Egypt | Jordan | Tunisia |
|-----------------------------|-------|--------|---------|
| 1970-75                     | 5.70  | 7.79   | 6.38    |
| 1990-95                     | 4.12  | 5.09   | 2.98    |
| 2010-15                     | 3.50  | 3.51   | 2.16    |
| 1970-75-2010-15 decline (%) | -38.6 | -55.0  | -66.1   |

Source: United Nations, 2015

**Table 2: Life Expectancy at Birth and at Old Ages by Gender: from 1970-75 to 2010-15**

| Life expectancy at birth | Egypt                                 |        | Jordan |        | Tunisia |        |
|--------------------------|---------------------------------------|--------|--------|--------|---------|--------|
|                          | Male                                  | Female | Male   | Female | Male    | Female |
| 1970-75                  | 51.1                                  | 54.8   | 60.8   | 63.0   | 53.0    | 55.2   |
| 1990-95                  | 63.1                                  | 67.9   | 69.1   | 71.9   | 68.1    | 72.7   |
| 2010-15                  | 68.7                                  | 73.1   | 72.2   | 75.5   | 72.3    | 77.0   |
|                          | Life expectancy at exact age* 2010-15 |        |        |        |         |        |
| At age 60                | 16.1                                  | 18.4   | 17.8   | 20.2   | 17.7    | 21.2   |
| At age 65                | 12.8                                  | 14.7   | 14.2   | 16.2   | 14.1    | 17.1   |
| At age 70                | 9.9                                   | 11.4   | 11.0   | 12.6   | 10.9    | 13.3   |
| At age 80                | 5.6                                   | 6.4    | 6.0    | 6.8    | 6.0     | 7.3    |

Source: United Nations, 2015. \*The life expectancy at a given age indicates the number of years a person of a certain exact age can expect to live prior to death.

**Table 3: Characteristics of the Households Included in Labor Market Surveys by Residence: ELMPS 2012, JLMPS 2010, TLMPS, 2014**

|   | Egypt 2012 |        |        | Jordan 2010 |       |        | Tunisia 2014 |       |        |
|---|------------|--------|--------|-------------|-------|--------|--------------|-------|--------|
|   | Urban      | Rural  | Total  | Urban       | Rural | Total  | Urban        | Rural | Total  |
| N. of HH in the sample                            | 5,681      | 6,379  | 12,060 | 3,772       | 1,330 | 5,102  | 2,014        | 2,505 | 4,519  |
| N. of individuals in the sample                   | 21,468     | 27,718 | 49,186 | 18,586      | 7,383 | 25,969 | 7,054        | 9,373 | 16,627 |
| Average household size <sup>o</sup>               | 3.7        | 4.4    | 4.1    | 4.9         | 5.6   | 5.1    | 3.5          | 3.7   | 3.6    |
| <b>Percentage of households headed by females</b> |            |        |        |             |       |        |              |       |        |
| All the households* <sup>o</sup>                  | 20.3       | 18.3   | 19.2   | 14.9        | 11.9  | 14.4   | 17.9         | 17.7  | 17.8   |
| Elderly headed households** <sup>o</sup>          | 39.8       | 37.0   | 38.6   | 30.1        | 23.9  | 29.0   | 34.5         | 25.8  | 31.8   |

Notes: \*All HH regardless of age of the head; \*\* HH headed by individuals aged 65 years and over; <sup>o</sup>Weighted data.

**Table 4: Percentages of the Elderly Aged 65 Years and Older in The Total Population<sup>o</sup>, by Sex and Residence: Egypt, Jordan, and Tunisia.**

|                         | Egypt 2012 |            |            | Jordan 2010 |            |            | Tunisia 2014 |            |            |
|-------------------------|------------|------------|------------|-------------|------------|------------|--------------|------------|------------|
|                         | 65-79      | 80+        | Tot. 65+   | 65-79       | 80+        | Tot. 65+   | 65-79        | 80+        | Tot. 65+   |
| <b>Sex</b>              |            |            |            |             |            |            |              |            |            |
| Male                    | 4.1        | 0.6        | 4.7        | 3.5         | 0.6        | 4.1        | 6.8          | 1.8        | 8.7        |
| Female                  | 5.0        | 0.9        | 5.9        | 3.3         | 0.8        | 4.1        | 7.0          | 1.9        | 8.8        |
| Male and Female         | 4.6        | 0.7        | 5.3        | 3.4         | 0.7        | 4.1        | 6.9          | 1.8        | 8.7        |
| <b>Residence</b>        |            |            |            |             |            |            |              |            |            |
| <b>Urban</b>            | <b>5.6</b> | <b>0.8</b> | <b>6.4</b> | <b>3.5</b>  | <b>0.7</b> | <b>4.2</b> | <b>6.6</b>   | <b>1.5</b> | <b>8.1</b> |
| Rural                   | 3.8        | 0.7        | 4.5        | 3.0         | 0.8        | 3.8        | 7.5          | 2.6        | 10.1       |
| Number of observations  | 2,183      | 378        | 2,561      | 862         | 178        | 1,040      | 1,415        | 428        | 1,843      |
| Elderly age distributio | 86.0       | 14.0       | 100        | 83.2        | 16.8       | 100        | 76.8         | 23.2       | 100        |

Notes: <sup>o</sup>= Each percentage represents the share of people of the age-class on the total population. Source: our elaborations from JLMPS2010, ELMPS 2012 and TLMPS2014. Percentage distribution on weighted data. Some differences also emerge in main socio-economic characteristics of the elderly (Table 5).

**Table 5: Old Egyptians, Jordanians and Tunisians Aged 65 Years and Older, by Selected Variables**

|                                   | Egypt 2012 |        | Jordan 2010 |        | Tunisia 2014 <sup>18</sup> |        |
|-----------------------------------|------------|--------|-------------|--------|----------------------------|--------|
|                                   | Male       | Female | Male        | Female | Male                       | Female |
| <b>Marital status*</b>            |            |        |             |        |                            |        |
| never married                     | 0.6        | 0.9    | 0.9         | 2.4    | 0.9                        | 1.0    |
| Married                           | 82.5       | 27.3   | 90.8        | 39.7   | 88.5                       | 44.4   |
| Divorced                          | 0.6        | 2.3    | 0.4         | 1.8    | 0.3                        | 1.5    |
| Widowed                           | 16.3       | 69.5   | 7.8         | 56.1   | 10.3                       | 53.1   |
| Total                             | 100        | 100    | 100         | 100    | 100                        | 100    |
| <b>Residence**</b>                |            |        |             |        |                            |        |
| Urban (%)                         | 53.1       | 49.5   | 82.1        | 84.4   | 61.9                       | 64.4   |
| Elderly living alone (%)          |            |        |             |        |                            |        |
| Urban                             | 7.4        | 27.8   | 4.0         | 18.1   | 6.5                        | 29.4   |
| Rural                             | 3.5        | 19.5   | 1.2         | 7.2    | 6.5                        | 19.6   |
| Total                             | 5.6        | 23.7   | 3.5         | 16.4   | 6.5                        | 25.9   |
| <b>Current work status</b>        |            |        |             |        |                            |        |
| Employed last seven days (a) **   | 25.8       | 3.0    | 16.0        | 2.8    | 13.7                       | 2.6    |
| Illiterate (%)**                  | 46.9       | 78.5   | 29.9        | 76.4   | 64.7                       | 88.0   |
| Medical/health insurance (YES) ** | 49.6       | 16.9   | -           | -      | 86.3                       | 80.5   |
| Number of cases**                 | 1,153      | 1,408  | 526         | 514    | 937                        | 906    |

Notes: \* Percentage distribution among the modalities of the variable;\*\* Percentage on the total of the elderly in the age-class; (a): employed in the last seven days. <sup>19</sup> Source: our elaborations from ELMPS 2012, JLMPS 2010, TLMPS 2104. Weighted data.

**Table 6: Individuals Aged 65 Years and Older by Relation to the Household Head, Gender and Age (%)**

|   | 2012 Egypt |         | 2010 Jordan |         | 2014 Tunisia |         |
|---|------------|---------|-------------|---------|--------------|---------|
|   | Males      | Females | Males       | Females | Males        | Females |
| <b>65-79 years old</b>                        |            |         |             |         |              |         |
| Household head (including those living alone) | 97.0       | 46.7    | 96.7        | 38.9    | 98.6         | 43.7    |
| Household head's spouse                       | -          | 30.1    | -           | 39.9    | 0.7          | 49.6    |
| Parent (living with descendants) *            | 2.3        | 19.5    | 2.9         | 16.8    | 0.2          | 3.4     |
| Other relations                               | 0.7        | 3.7     | 0.4         | 4.4     | 0.5          | 3.3     |
| Total   | 100        | 100     | 100         | 100     | 100          | 100     |
| Number of observations                        | 991        | 1192    | 447         | 415     | 711          | 704     |
| <b>80 years and older</b>                     |            |         |             |         |              |         |
| Household head (including those living alone) | 83.1       | 45.0    | 82.1        | 37.2    | 95.3         | 53.2    |
| Household head's spouse                       | -          | 2.2     | -           | 7.7     | 0.8          | 18.5    |
| Parent (living with descendants) *            | 13.8       | 46.2    | 16.4        | 49.4    | 2.5          | 19.4    |
| Other relations                               | 3.1        | 6.6     | 1.5         | 5.7     | 1.4          | 9.0     |
| Total   | 100        | 100     | 100         | 100     | 100          | 100     |
| Number of observations                        | 162        | 216     | 79          | 99      | 226          | 202     |

Notes: \*= recorded as "parent" in the household of a child who is the head of the HH. Weighted data.

**Table 7: Living Arrangements of the Elderly Aged 65 and Older by Gender and Type of Residence, 2012**

|   | 2012 Egypt |        |       | 2010 Jordan |        |       | 2014 Tunisia |        |       |
|---|------------|--------|-------|-------------|--------|-------|--------------|--------|-------|
|   | Male       | Female | Total | Male        | Female | Total | Male         | Female | Total |
| Living alone  | 5.6        | 23.7   | 15.8  | 3.5         | 16.4   | 10.0  | 6.5          | 26.3   | 16.6  |
| Living with spouse only                             | 32.0       | 13.8   | 21.7  | 21.5        | 13.0   | 17.2  | 41.9         | 26.6   | 34.1  |
| Living with child(ren), child-in-law, or grandchild | 60.8       | 57.5   | 58.9  | 73.5        | 67.6   | 70.5  | 50.1         | 42.2   | 46.3  |
| Living with other relatives <sup>+</sup>            | 1.5        | 4.8    | 3.4   | 1.5         | 2.1    | 1.8   | 1.1          | 4.1    | 2.4   |
| Living with unrelated people only <sup>o</sup>      | 0.1        | 0.1    | 0.1   | -           | 0.9    | 0.5   | 0.3          | 0.8    | 0.6   |
| Total   | 100        | 100    | 100   | 100         | 100    | 100   | 100          | 100    | 100   |
| Number of observations                              | 1,153      | 1,408  | 2,561 | 526         | 514    | 1,040 | 937          | 906    | 1,843 |

Notes: + Other than spouse, children (in-law), grandchildren. Siblings are included. <sup>o</sup>Those living with a servant are included. Weighted data

<sup>18</sup> Tunisian elderly present some missing data for sex and age.

<sup>19</sup> For Egypt 2012, we refer to the question q4101: "Have you participated in any employment during the past seven days?"; for Tunisia and Jordan we refer to the question crwrkst2: "Work status during ref. week, extend. def. (search is not required)".

**Table 8: Percentage Distribution of the Elderly 65 Years and Older by Coresidential Arrangements\*, Residence and Sex**

|  | Egypt 2012 |         | Jordan 2010 |         | Tunisia 2014 |         |
|--|------------|---------|-------------|---------|--------------|---------|
|  | Males      | Females | Males       | Females | Males        | Females |
| Nuclear family (parents and children) <sup>°</sup> | 37.2       | 16.0    | 56.6        | 36.9    | 43.7         | 29.7    |
| Extended-family household                          | 6.2        | 28.2    | 5.9         | 23.6    | 2.5          | 10.6    |
| Multi-family household                             | 18.0       | 15.1    | 12.3        | 9.0     | 4.9          | 4.7     |
| Other  | 1.0        | 3.2     | 0.4         | 1.3     | 0.5          | 2.1     |
| Total co-resident elderly on total cases (%)*      | 62.4       | 62.5    | 75.1        | 70.7    | 51.6         | 47.1    |

Notes: \* Other than living alone or with the spouse only; <sup>°</sup> Elderly parent(s) and unmarried child(ren). Weighted data

**Table 9: Percentages of the Elderly Belonging to the Poorest Wealth Quintile by Sex and Residence: (a) all the elderly 65 years and older by sex; b) elderly living alone; c) elderly headed households by sex of the head)**

| 1) Egypt 2012                         |                       |       |         |       |  |
|---------------------------------------|-----------------------|-------|---------|-------|--|
| Poorest quintiles of household wealth | Males                 |       | Females |       |  |
|                                       | Urban                 | Rural | Urban   | Rural |  |
| a) Older people 65 and over           | 19.6                  | 27.1  | 28.9    | 32.1  |  |
| b) Elderly living alone               | 20.2                  | 47.6  | 41.8    | 63.4  |  |
| c) Elderly headed households*         | Sex of household head |       |         |       |  |
|                                       | Males                 |       | Females |       |  |
|                                       | Urban                 | Rural | Urban   | Rural |  |
|                                       | 19.7                  | 28.0  | 35.2    | 49.0  |  |
| 2) Jordan 2010                        |                       |       |         |       |  |
| Poorest quintiles of household wealth | Males                 |       | Females |       |  |
|                                       | Urban                 | Rural | Urban   | Rural |  |
| a) Older people 65 and over           | 15.1                  | 43.4  | 20.1    | 53.3  |  |
| b) Elderly living alone               | 34.2                  | -     | 39.7    | 92.5  |  |
| c) Elderly headed households*         | Sex of household head |       |         |       |  |
|                                       | Males                 |       | Females |       |  |
|                                       | Urban                 | Rural | Urban   | Rural |  |
|                                       | 15.6                  | 43.3  | 28.1    | 68.4  |  |
| 3) Tunisia 2014                       |                       |       |         |       |  |
| Poorest quintiles of household wealth | Males                 |       | Females |       |  |
|                                       | Urban                 | Rural | Urban   | Rural |  |
| a) Older people 65 and over           | 12.9                  | 46.8  | 1.9     | 49.5  |  |
| b) Elderly living alone               | 55.4                  | 68.5  | 23.5    | 73.2  |  |
| b) Elderly headed households*         | Sex of household head |       |         |       |  |
|                                       | Males                 |       | Females |       |  |
|                                       | Urban                 | Rural | Urban   | Rural |  |
|                                       | 12.4                  | 47.1  | 19.2    | 59.8  |  |

Source: \*including elderly living alone; Weighted data.

**Table 10: Rural Elderly 65 Years and Over: Percentages on the Total Rural Population and on Rural People Belonging to the First Wealth Quintile**

|  | Egypt 2012 |      |      | Jordan 2010 |      |      | Tunisia 2014 |      |      |
|--|------------|------|------|-------------|------|------|--------------|------|------|
|  | M          | F    | M+F  | M           | F    | M+F  | M            | F    | M+F  |
| a) Elderly 65+ on the total rural population (%)                   | 3,8        | 5,2  | 4,5  | 4,0         | 3,5  | 3,8  | 10,6         | 9,9  | 10,2 |
| b) Elderly 65+ among rural people in the first wealth quintile (%) | 5,7        | 8,9  | 7,4  | 5,9         | 6,4  | 6,2  | 16,4         | 14,8 | 15,5 |
| Percent difference (b/a)   | 50,0       | 71,2 | 64,4 | 47,5        | 82,9 | 63,2 | 54,7         | 49,5 | 52,0 |

**Table 11: Percentages of Those Living Alone in Selected MENA Countries by Age, Gender, Year of the Survey: DHS 1990–2000**

|         |      | Age group |         |     |       |         |      |              |         |     |
|---------|------|-----------|---------|-----|-------|---------|------|--------------|---------|-----|
|         |      | 60-69     |         |     | 70-79 |         |      | 80 and older |         |     |
| Country | Year | Males     | Females | F-M | Males | Females | F-M  | Males        | Females | F-M |
| Egypt   | 1988 | 1.4       | 9.3     | 7.9 | 4.2   | 11.4    | 7.2  | 3.3          | 12.8    | 9.5 |
|         | 1992 | 1.7       | 9.2     | 7.5 | 5.0   | 15.8    | 10.8 | 7.0          | 10.4    | 3.4 |
|         | 1995 | 2.2       | 11.0    | 8.8 | 6.0   | 17.2    | 11.2 | 6.8          | 11.9    | 5.1 |
|         | 2000 | 2.8       | 9.4     | 6.6 | 4.7   | 17.8    | 13.1 | 8.7          | 13.2    | 4.5 |
|         | 2003 | 2.7       | 11.3    | 8.6 | 5.4   | 16.1    | 10.7 | 12.1         | 16.2    | 4.1 |
| Jordan  | 2005 | 3.1       | 11.3    | 8.2 | 3.8   | 19.8    | 15.8 | 7.5          | 13.5    | 6.0 |
|         | 1990 | 0.2       | 2.4     | 2.2 | 1.0   | 5.6     | 4.6  | 3.7          | 6.3     | 2.6 |
|         | 1997 | 1.1       | 5.6     | 4.5 | 2.1   | 13.7    | 11.6 | 6.0          | 15.5    | 9.5 |
| Morocco | 2002 | 0.4       | 1.9     | 1.5 | 1.3   | 4.2     | 2.9  | 0.5          | 7.7     | 7.2 |
|         | 1992 | 1.2       | 4.6     | 3.4 | 1.9   | 8.8     | 6.9  | 2.3          | 5.5     | 3.2 |
| Tunisia | 2003 | 0.8       | 2.9     | 2.1 | 2.0   | 5.0     | 3.0  | 0.3          | 4.8     | 4.5 |
|         | 1988 | 0.9       | 5.4     | 4.5 | 1.7   | 11.1    | 9.4  | 2.1          | 8.8     | 6.7 |
| Yemen   | 1991 | 2.1       | 5.6     | 3.5 | 2.1   | 6.6     | 4.5  | 3.3          | 7.8     | 4.5 |

Source: Yount & Sibai, 2009, p. 292; Angeli, 2015.

**Table 12: Dependent Variables: Percentage Distribution**

| Country<br>Variable                         | Egypt<br>%  |             | Jordan<br>% |             | Tunisia<br>% |             |
|---|-------------|-------------|-------------|-------------|--------------|-------------|
|   | Males       | Females     | Males       | Females     | Males        | Females     |
| <i>Dependent variables (household type)</i> |             |             |             |             |              |             |
| <b>Independent living</b>                   | <b>36.5</b> | <b>35.5</b> | <b>23.6</b> | <b>29.0</b> | <b>45.0</b>  | <b>48.9</b> |
| Alone                                       | 5.6         | 22.2        | 2.9         | 15.6        | 6.9          | 23.6        |
| Couple                                      | 30.9        | 13.3        | 20.7        | 13.4        | 38.1         | 25.3        |
| <b>Nuclear</b>                              | <b>37.4</b> | <b>16.1</b> | <b>58.4</b> | <b>37.7</b> | <b>40.8</b>  | <b>30.0</b> |
| <b>Complex</b>                              | <b>26.1</b> | <b>48.4</b> | <b>18.0</b> | <b>33.3</b> | <b>14.2</b>  | <b>21.1</b> |
| Multifamily                                 | 7.1         | 30.4        | 5.1         | 21.1        | 5.2          | 13.3        |
| Extended                                    | 19.0        | 18.0        | 12.9        | 12.2        | 9.0          | 7.8         |
| N. of observations                          | 1150        | 1400        | 523         | 512         | 936          | 900         |

Notes: We did not include elderly whose living form was not precisely determined. Unweighted data.

**Table 13: Independent Variables**

| Country   |                | Egypt        | Jordan        | Tunisia        |
|---|----------------|--------------|---------------|----------------|
|   | <b>Males</b>   |              |               |                |
| <b>Variable</b>                                     | <b>Type</b>    | <b>Mean</b>  | <b>Mean</b>   | <b>Mean</b>    |
| Urban/rural (urban = 0; rural = 1)                  | Dichotomous    | 0.468        | 0.279         | 0.609          |
| Age of the elderly                                  | Discrete       | 72.052       | 72.411        | 74.573         |
| Elderly's occupation (not empl. = 0; employed = 1)  | Dichotomous    | 0.245        | 0.152         | 0.177          |
| Elderly's education                                 | Categorical    |              |               |                |
| Illiterate (ref. cat.)                              |                | 0.469        | 0.354         | 0.743          |
| Primary   |                | 0.373        | 0.523         | 0.241          |
| Intermediate and above                              |                | 0.158        | 0.124         | 0.016          |
| Pension and other sources of income (no source = 0) | Dichotomous    | 0.873        | 0.148         | 0.574          |
| Perceived health status                             | Categorical    |              |               |                |
| Strongly limited (ref. cat.)                        |                | 0.154        |               | 0.178          |
| Limited to some extent                              |                | 0.252        |               | 0.189          |
| Not limited   |                | 0.594        |               | 0.633          |
|   | <b>Females</b> |              |               |                |
| <b>Country</b>                                      |                | <b>Egypt</b> | <b>Jordan</b> | <b>Tunisia</b> |
| <b>Variable</b>                                     | <b>Type</b>    | <b>Mean</b>  | <b>Mean</b>   | <b>Mean</b>    |
| Urban/rural (urban = 0; rural = 1)                  | Dichotomous    | 0.497        | 0.255         | 0.570          |
| Age of the elderly                                  | Discrete       | 72.262       | 72.949        | 74.161         |
| Elderly's occupation (not empl. = 0; employed = 1)  | Dichotomous    | 0.028        | 0.029         | 0.072          |
| Elderly's education                                 | Categorical    |              |               |                |
| Illiterate (ref. cat.)                              |                | 0.777        | 0.829         | 0.926          |
| Primary   |                | 0.178        | 0.149         | 0.067          |
| Intermediate and above                              |                | 0.045        | 0.022         | 0.007          |
| Pension and other sources of income (no source = 0) | Dichotomous    | 0.878        | 0.128         | 0.595          |
| Perceived health status                             | Categorical    |              |               |                |
| Strongly limited (ref. cat.)                        |                | 0.173        |               | 0.188          |
| Limited to some extent                              |                | 0.269        |               | 0.197          |
| Not limited   |                | 0.558        |               | 0.615          |

**Table 14: Estimation Results for Egypt**

| Country: Egypt                                     |                | Males              |                    | Females            |                    |
|--|----------------|--------------------|--------------------|--------------------|--------------------|
| Variable   | Household Type | Nuclear Odds ratio | Complex Odds ratio | Nuclear Odds ratio | Complex Odds ratio |
| Intercept  |                | 22.184***          | 0.495*             | 2.070*             | 0.159**            |
| Urban/rural (urban = 0; rural = 1)                 |                | 1.121              | 2.649***           | 0.872              | 1.887***           |
| Age of the elderly                                 |                | 1.031*             | 0.958***           | 0.982              | 1.038***           |
| Elderly's occupation (not empl. = 0; employed = 1) |                | 1.229              | 0.713*             | 0.626              | 0.506**            |
| Elderly's education                                |                |                    |                    |                    |                    |
| Primary  |                | 1.049              | 0.578***           | 0.662**            | 0.490***           |
| Intermediate and above                             |                | 0.902              | 0.274***           | 0.623              | 0.279***           |
| Pension and other sources of income                |                | 0.688              | 0.493***           | 0.969              | 0.249***           |
| Perceived health status                            |                |                    |                    |                    |                    |
| Limited to some extent                             |                | 0.640**            | 0.637*             | 1.054              | 0.771              |
| Not limited  |                | 0.776              | 0.719              | 1.247              | 1.027              |

**Table 15: Estimation Results for Jordan**

| Country: Jordan                                    |                | Males              |                    | Females            |                    |
|--|----------------|--------------------|--------------------|--------------------|--------------------|
| Variable   | Household Type | Nuclear Odds ratio | Complex Odds ratio | Nuclear Odds ratio | Complex Odds ratio |
| Intercept  |                | 17.161***          | 1.926*             | 2.630*             | 0.039**            |
| Urban/rural (urban = 0; rural = 1)                 |                | 2.019***           | 1.209              | 1.785**            | 1.093              |
| Age of the elderly                                 |                | 0.901***           | 0.987              | 0.981              | 1.047***           |
| Elderly's occupation (not empl. = 0; employed = 1) |                | 0.797              | 1.437              | 0.897              | 0.465              |
| Elderly's education                                |                |                    |                    |                    |                    |
| Primary  |                | 1.114              | 0.658*             | 0.913              | 0.419**            |
| Intermediate and above                             |                | 0.906              | 0.520*             | 0.678**            | 0.819***           |
| Pension and other sources of income                |                | 1.378              | 1.236              | 1.112              | 1.368              |

**Table 16: Estimation Results for Tunisia**

| Country: Tunisia                                   |                | Males              |                    | Females            |                    |
|--|----------------|--------------------|--------------------|--------------------|--------------------|
| Variable   | Household Type | Nuclear Odds ratio | Complex Odds ratio | Nuclear Odds ratio | Complex Odds ratio |
| Intercept  |                | 27.522***          | 0.186**            | 3.317*             | 0.095***           |
| Urban/rural (urban = 0; rural = 1)                 |                | 1.155              | 1.895**            | 1.575***           | 1.262              |
| Age of the elderly                                 |                | 0.930***           | 0.999              | 0.969**            | 1.079***           |
| Elderly's occupation (not empl. = 0; employed = 1) |                | 1.066              | 1.084              | 1.392              | 1.403              |
| Elderly's education                                |                |                    |                    |                    |                    |
| Primary  |                | 0.777              | 1.478              | 0.863              | 1.163              |
| Intermediate and above                             |                | 0.675              | 1.390              | 0.534*             | 0.487***           |
| Pension and other sources of income                |                | 0.799*             | 0.652*             | 0.866              | 0.778              |
| Perceived health status                            |                |                    |                    |                    |                    |
| Limited to some extent                             |                | 0.457***           | 0.461**            | 1.054              | 0.898              |
| Not limited  |                | 0.637**            | 0.410***           | 0.825              | 0.856              |

## 7. Appendix

### Annex 1: Old Age, Disability, and Survivors Regulatory Framework

#### Egypt

##### *Social security system*

The government instituted a social security program in the early 1960s to provide pensions, through forced savings, for employees. Coverage also included unemployment, disability, and death benefits, but in 1990 less than half of the work force participated in the program. The current social security system in Egypt was established by the Law 79 of 1975, which covers civil servants and employees in public and private sector enterprises. The system was subsequently extended to the self-employed (Law 108 of 1976), Egyptian workers abroad (Law 50 of 1978) and casual workers (Law 112 of 1980).

Some intervention:

- Cash transfers by Ministry of Insurance and Social Affairs to specific groups, including social security payments, Sadat pensions and Mubarak pensions. They regard poor families who do not have recourse to the labor market for income whether due to old age, disability, or because the family is headed by a woman with limited employment opportunities. These transfers are effective in reducing poverty, but suffer from being under funded.
- The Social Fund for Development (SFD) is a semi-autonomous governmental agency under the direct supervision of the Prime Minister. Financed by the Government of Egypt, the World Bank, the European Union and other donors. The objectives of the SFD are primarily achieved through promoting income and employment generating activities, providing basic social services, and enhancing local participation and awareness. The targets groups are: women, new graduates, unemployed youth and start-up entrepreneurs.

##### *Health System*

Access to health services improved in the 1990s. The coverage of health insurance raised to 76.6 percent of the population by 2001 (Galal, 2003). 2002-03: A pilot effort, the project sought to integrate delivery and financing of primary health care (PHC) in three governorates with high infant, child and maternal mortality rates. It introduced a *Family Health (FH)* approach, providing integrated services under the same contain for the entire family.

##### *Old Age, Disability and Survivors*

First laws: 1950 (social assistance) and 1955 (provident and insurance fund).

Type of program: Social insurance system.

Coverage: Employed persons.

Exclusions: Self-employed persons.

##### *Old-age Pension: (base and variable)*

Age 60 with at least 120 months of contributions. According to the reform law ratified by parliament in June 2010—which engaged the Egyptian social security system in an important process of reform—the retirement age will increase gradually from age 60 to age 65 for all employees over the period 2012 to 2027. The reform contemplates that every Egyptian aged 65 or older will be entitled to a pension, whether or not he/she is subscribed to the pension system.

Other forms: Early pension, Disability pension, Survivor pension

## **Jordan**

Social security in Jordan is largely delivered through four major programmes:

- a public social insurance programme administered by the Social Security Corporation (SSC),
- a public program for the civil service and military which is currently being phased out,
- a publicly funded social assistance program through the National Aid Fund (NAF) and
- an assistance programme for Palestinian Refugees delivered through the UN Relief and Works Agency (UNRWA).

While social security still covers a limited share of the population, Jordan is strongly committed to the extension of social security. In 2007, about 40% of the economically active population were covered in the pension system, which is partly explained by a lack of coverage for workers in small enterprises. Due to the low employment ratios, this corresponded to a coverage rate of 30% of working-age men, and 11% of working-age women. A new provisional Social Security Law was adopted by the Council of Ministers in 2010 and provides for the extension of social insurance coverage for workers in small enterprises and agriculture, and the introduction of maternity insurance benefits. Approximately 67% of the population is covered by health insurance, 63% of the uninsured being either economically inactive or unemployed.

### *Old Age, Disability and Survivors*

First law: 1978.

Previous law: 2001 (Social Security Law No. 19).

Current law: 2010 (Temporary Social Security Law No. 7), implemented in 2011, and 2014 (Social Security Law No. 1).

Type of program: Social insurance system. Coverage: employees working in private firms with at least one worker; employers; most government and public-sector workers; and Jordanian citizens working at diplomatic missions or for international organizations.

### *Old-age Pension*

Age 60 (men) or age 55 (women) with at least 180 months of coverage, including 84 months of paid contributions. Eligible dependents include a dependent wife; a dependent, disabled husband; a son up to age 23 or disabled; an unmarried, unemployed, dependent daughter; and dependent parents, brothers, and sisters.

Other forms: Early pension, Disability pension



## Tunisia

The Tunisian social security system is essentially State-run. There are two funds under State supervision which manage the statutory social security schemes:

- - the 'Caisse Nationale de Retraite et de Prévoyance Sociale' (CNRPS - National Pension and Social Contingency Fund) for the public sector and
- - the 'Caisse Nationale de Sécurité Sociale' (CNSS - National Social Security Fund) for the private sector.

The boards of administration of these funds are composed on a tripartite basis (State, employers and employees).

Social development and social assistance programmes are intended for low-income categories and persons who are not covered by any social security schemes. These include of programmes of aid for needy families, programmes targeting the elderly and disabled, the granting of an allowance to families who agree to take in an elderly person and free medical assistance.

More than 80% of the Tunisian population has health coverage (in 2006) that allows access to medical care either through social health insurance or public medical assistance program. This percentage is particularly high for a middle-income country like Tunisia. In order to increase coverage measures have been taken with varying success: inspection and compulsory affiliation procedures; free medical assistance subject to verification that the applicant was not insured under a social security scheme; and schemes being adapted to the needs of injured persons.

### *Old Age, Disability and Survivors*

First law: 1960.

Current laws: 1960-2002

#### *Old-age pension:*

Age 60 with at least 120 months of contributions; age 50 with at least 180 months of contributions if prematurely aged due to arduous work, involuntarily unemployed for at least six months, or the mother of three or more children.

#### *Death allowance:*

Paid to the insured for the death of a spouse or dependent child. The insured must have had at least 50 days of employment in the last two quarters or 80 days of employment in the last four quarters at the time of death.

Other forms: Early pension, Disability pension, Survivor pension

#### *Restructuring of health insurance: 2004*

The process of health insurance reform has resulted in the adoption of a law which reorganizes the health insurance system. The new system, consisting of a compulsory basic scheme and optional supplementary schemes, will replace all the existing statutory health insurance schemes and will ensure greater coherence between basic statutory cover and the various other forms of supplementary cover, which are not well coordinated at present.

Sources: Galal, 2003; ISSA ([www.issa.int](http://www.issa.int)); MOF-Ministry of Finance, 2010; United Nations, 2013b.

## **Annex 2: Definitions and Questions**

Question on relationship to HH head.

The Tunisian question on relationship to household head includes: head; spouse; son/daughter; son or daughter-in-law; grandchild; brother/sister; brother/sister-in-law; parent; father/ mother-in-law; nephew/niece; other relatives; other individuals; servants/servants relatives.

The Jordanian question on relationship to household head includes: head; spouse; son/daughter; step son/daughter; grandchild; brother/sister; parent; grandparent; other relative; other individual; servant.

The Egyptian question on relationship to household head includes: head; spouse; son/daughter; son or daughter-in-law; grandchild; brother/sister; brother/sister-in-law; parent; other relatives; servant and others

### Annex 3: Tables

**Table A6: Individuals Aged 65 Years and Older by Relation to the Household Head, Gender and Age. (%)**

|   | 2012 Egypt |         | 2010 Jordan |         | 2014 Tunisia |         |
|---|------------|---------|-------------|---------|--------------|---------|
|   | Males      | Females | Males       | Females | Males        | Females |
| Household head (including those living alone) | 95.2       | 46.5    | 94.7        | 38.5    | 97.9         | 46.2    |
| Household head's spouse                       | -          | 25.9    | -           | 33.5    | 0.7          | 42.6    |
| Parent (living with descendants)*             | 3.7        | 23.4    | 4.7         | 23.4    | 0.7          | 6.6     |
| Other relations                               | 1.1        | 4.2     | 0.6         | 4.6     | 0.7          | 4.6     |
| Total   | 100        | 100     | 100         | 100     | 100          | 100     |
| Number of observations                        | 1153       | 1408    | 526         | 514     | 937          | 906     |

**Table A7: Percentage Distribution of the Elderly 65 Years and Older by Coresidential Arrangements\*, Residence and Sex**

| <b>Egypt 2012</b>                                  |       |       |       |         |       |       |
|--|-------|-------|-------|---------|-------|-------|
|  | Males |       |       | Females |       |       |
|  | Urban | Rural | Total | Urban   | Rural | Total |
| Living alone                                       | 7.4   | 3.5   | 5.5   | 28.0    | 19.5  | 23.7  |
| Living with spouse only                            | 36.2  | 27.0  | 31.9  | 17.0    | 10.5  | 13.7  |
| Nuclear family (parents and children) <sup>°</sup> | 41.4  | 32.4  | 37.2  | 20.2    | 11.9  | 16.0  |
| Extended-family household                          | 3.3   | 7.9   | 5.8   | 22.0    | 35.6  | 28.9  |
| Multi-family household                             | 10.3  | 27.0  | 18.1  | 10.2    | 21.2  | 15.7  |
| Other <sup>°°</sup>                                | 1.4   | 2.2   | 1.5   | 2.6     | 1.3   | 2.0   |
| Total  | 100   | 100   | 100   | 100     | 100   | 100   |
| Total co-resident elderly on total cases (%)*      | 56.4  | 69.5  | 62.6  | 55      | 70    | 62.6  |
| <b>Jordan 2010</b>                                 |       |       |       |         |       |       |
|  | Males |       |       | Females |       |       |
|  | Urban | Rural | Total | Urban   | Rural | Total |
| Living alone                                       | 4.0   | 1.2   | 3.5   | 19.1    | 7.2   | 17.3  |
| Living with spouse only                            | 21.9  | 19.4  | 21.4  | 12.8    | 13.8  | 12.9  |
| Nuclear family (parents and children) <sup>°</sup> | 55.8  | 62.9  | 57.1  | 34.7    | 48.8  | 36.9  |
| Extended-family household                          | 4.3   | 5.5   | 4.5   | 22.6    | 16.0  | 21.6  |
| Multi-family household                             | 12.5  | 11.0  | 12.3  | 8.6     | 13.7  | 9.4   |
| Other <sup>°°</sup>                                | 1.6   | -     | 1.3   | 2.2     | 0.4   | 1.9   |
| Total  | 100   | 100   | 100   | 100     | 100   | 100   |
| Total co-resident elderly on total cases (%)*      | 75.4  | 79.4  | 76.1  | 69.9    | 79.4  | 71.4  |
| <b>Tunisia 2014</b>                                |       |       |       |         |       |       |
|  | Males |       |       | Females |       |       |
|  | Urban | Rural | Total | Urban   | Rural | Total |
| Living alone                                       | 7.3   | 7.9   | 7.5   | 32.4    | 21.6  | 28.9  |
| Living with spouse only                            | 45.2  | 38.1  | 42.6  | 26.7    | 26.5  | 26.6  |
| Nuclear family (parents and children) <sup>°</sup> | 41.8  | 43.7  | 42.5  | 24.6    | 34.8  | 27.9  |
| Extended-family household                          | 2.6   | 2.7   | 2.6   | 9.3     | 10.6  | 9.8   |
| Multi-family household                             | 2.9   | 6.7   | 4.3   | 4.2     | 4.9   | 4.4   |
| Other <sup>°°</sup>                                | 0.3   | 1.0   | 0.6   | 2.8     | 1.6   | 2.4   |
| Total  | 100   | 100   | 100   | 100     | 100   | 100   |
| Total co-resident elderly on total cases (%)*      | 47.6  | 54.1  | 50.0  | 40.9    | 51.9  | 44.5  |

Notes: \* Other than living alone or with the spouse only; <sup>°</sup>Both complete or incomplete nuclear families. <sup>°°</sup>Brothers, unrelated people without a family structure. Weighted data.

**Table A8: Percentage Distribution by the Wealth Quintile and Residence: A) All the Elderly 65 Years and Older by Sex; b) Elderly headed households by sex of the head**

| <b>Egypt 2012</b>             |                       |       |         |       |  |
|-------------------------------|-----------------------|-------|---------|-------|--|
| Quintiles of household wealth | Males                 |       | Females |       |  |
|                               | Urban                 | Rural | Urban   | Rural |  |
| a) Older people 65 and over   |                       |       |         |       |  |
| Poorest quintile              | 19.6                  | 27.1  | 28.9    | 32.1  |  |
| Richest quintile              | 21.4                  | 10.3  | 18.5    | 11.7  |  |
| b) Elderly headed households  | Sex of household head |       |         |       |  |
|                               | Males                 |       | Females |       |  |
|                               | Urban                 | Rural | Urban   | Rural |  |
| Poorest quintile              | 19.7                  | 28.0  | 35.2    | 49.0  |  |
| Richest quintile              | 21.1                  | 10.1  | 13.8    | 8.7   |  |

| <b>Jordan 2010</b>            |                       |       |         |       |  |
|-------------------------------|-----------------------|-------|---------|-------|--|
| Quintiles of household wealth | Males                 |       | Females |       |  |
|                               | Urban                 | Rural | Urban   | Rural |  |
| a) Older people 65 and over   |                       |       |         |       |  |
| Poorest quintile              | 15.1                  | 43.4  | 20.1    | 53.3  |  |
| Richest quintile              | 32.1                  | 6.2   | 25.4    | 2.7   |  |
| b) Elderly headed households  | Sex of household head |       |         |       |  |
|                               | Males                 |       | Females |       |  |
|                               | Urban                 | Rural | Urban   | Rural |  |
| Poorest quintile              | 15.6                  | 43.3  | 28.1    | 68.4  |  |
| Richest quintile              | 31.1                  | 6.6   | 26.8    | -     |  |

| <b>Tunisia 2014</b>           |                       |       |         |       |  |
|-------------------------------|-----------------------|-------|---------|-------|--|
| Quintiles of household wealth | Males                 |       | Females |       |  |
|                               | Urban                 | Rural | Urban   | Rural |  |
| a) Older people 65 and over   |                       |       |         |       |  |
| Poorest quintile              | 13.9                  | 47.5  | 15.8    | 50.5  |  |
| Richest quintile              | 23.2                  | 2.6   | 19.3    | 1.9   |  |
| b) Elderly headed households  | Sex of household head |       |         |       |  |
|                               | Males                 |       | Females |       |  |
|                               | Urban                 | Rural | Urban   | Rural |  |
| Poorest quintile              | 13.2                  | 47.3  | 20.5    | 62.1  |  |
| Richest quintile              | 23.7                  | 2.3   | 9.1     | -     |  |