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LATE-LIFE LIVING ARRANGEMENTS AND INTERGENERATIONAL TIES IN EGYPT: ELDERLY SOCIO-ECONOMIC CONDITIONS FROM LABOR MARKET SURVEYS

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Abstract

The aim of this paper is to analyze dynamics in the late-life living arrangements and changes in socio-economic and health condition of the elderly in Egypt in recent years. Research questions refer to the determinants of ageing in Egypt and to the disparities existing and emerging at the gender and place of residence levels. Our focus is on the role intergenerational ties and transfers, both public and within the family, have in alleviating the precarious situations of older persons. This paper intends to help fill the gap in the study of this topic, which is still understudied in the country as well as in the MENA area more generally. The research refers to individual data from all three rounds of the Egypt Labor Market Panel Surveys (ELMPS), carried out in 1998, 2006, and 2012.

***JEL Classification*:** J11, J14, J18

***Keywords*:** Egypt, Late-life living arrangements, Intergenerational ties, Socio-economic and health conditions

ملخص

الهدف من هذه الورقة هو تحليل ديناميكية ترتيبات المعيشة في وقت متأخر من الحياة والتغيرات في الظروف الاجتماعية والاقتصادية والصحية للمسنين في مصر في السنوات الأخيرة. تشير الأسئلة البحثية إلى محددات الشيخوخة في مصر والفوارق القائمة والناشئة على النوع ومكان الإقامة. ينصب تركيزنا على دور العلاقات والتحويلات بين الأجيال، سواء العامة أو داخل الأسرة، ويكون في تخفيف الحالات الغير مستقرة لكبار السن. وتعتزم هذه الورقة المساعدة في سد الفجوة في دراسة هذا الموضوع، الذي لا يزال محل دراسة في البلاد وكذلك في منطقة الشرق الأوسط بشكل عام. ويشير البحث إلى البيانات الفردية من جميع الجولات الثلاث من المسح التتبعى لسوق العمل في مصر (ELMPS)، التي أجريت في 1998 و 2006 و 2012.

1. Introduction

The world population is experiencing rapid demographic changes towards an ageing structure. During recent decades, there has been unprecedented growth in the absolute number and proportion of older people in most countries around the world — a trend that is expected to continue —reflecting the 'globalization' of population ageing (Bengtson et al., 2003; Kinsella and Velkoff, 2001). Global ageing is diversifying individual life courses as well as family forms (Lowenstein, 2005). In many developed countries today, the number of the elderly already surpasses the number of children. By 2050, this is likely to portray the world as a whole (Weinberger, 2007). In the contemporary and changing world, the considerable increase in the number of elderly people is beginning to attract academic and non-academic interests towards emerging problems such as inter-generational gap, old age care, dependent ageing populations, and new diffusion of inequalities.

The Madrid International Plan of Action on Ageing and the Political Declaration adopted at the Second World Assembly on Ageing in April 2002 indicated a turning goal in how the world attends to the main question of building a society for all ages. The plan focuses on three priority areas: older persons and development, advancing health and well-being into old age, and ensuring enabling and supportive environments for older persons (United Nations, 2005).

The rate of population ageing is faster in developing countries than in developed countries[1]. The current aggregate growth rate of the older population in developing countries is more than double that in developed countries and also double that of the total world population (Kinsella and He, 2009). This means that developing countries will have less time to adjust to the consequences of this trend. Rapid ageing in developing countries is accompanied by dramatic changes in family structure and roles as well as in labor patterns and migration.

The World Health Organization (WHO) (2006) expects that, very soon, most civil society institutions in many developing countries will be overwhelmed by the social, economic, and health needs of this ever-increasing segment of the population.

Population ageing in developing countries is indeed occurring at lower levels of socio-economic development than in developed countries. In many cases, there is a sharp incongruence between the advance of the ageing process and the social and institutional context within which it takes place. The needs associated with rapid ageing are less likely to be met in these areas, so the well-being of the elderly is at risk. Characteristics of the ageing process in developing countries can affect patterns of co-residence, and they have an impact on the future well-being of the elderly and their families (Palloni, 2001).

Moreover, an increasingly important socio-economic aspect of ageing is the ageing of the older population itself (Kinsella and He, 2009; Lee, 2003), which can aggravate pressure on public services for transfers to the elderly for health care and pensions.

As introduced by United Nations (2015), policy discussions often assume that resources devoted to one generation are resources that are taken from another.

1.1 African ageing: regional differences

Population ageing is pervasive, affecting nearly all the countries of the world. However, the older population is growing at a faster rate than the total population, particularly in Africa, where the population is growing older faster. Even if the population is mostly youthful, the proportion of older persons has increased tremendously over the past few decades in the continent. In Africa, 9 percent of the population is projected to be 60 or over in 2050, up from 5 percent in 2009. The percentage aged 65 or over is projected to rise from 3 percent in 2010

[1] The definition of "developed" and "developing" country used in this paper is consistent with the "more developed" and "less developed" classification utilized by the United Nations.

to 6 percent in 2050 (United Nations, 2014). The African elderly population is expected to rise from 35.4 million in 2010 to 140.1 million in 2050 (+296 percent). Also of relative importance is the fact that the number of the very old in Africa is also expected to grow at a very fast rate. These trends often take place in tandem with changes in the health profile of the population: population ageing is occurring in the context of high levels of poverty and changing family structures, fragile health systems, and weak or poorly managed government institutions (Maharaj, 2013).

The change in the age structure of the African population is likely to have important consequences for all the countries in the continent. In most countries, the size of the older population in percentage terms is expected to remain small, but the absolute number of older persons is expected to increase dramatically over the next few decades (Pillay and Maharaj, 2013).

In terms of regional differences across Africa, the fastest rate of growth of the ageing population will occur in Northern and Western Africa, whose older populations are projected to increase by a factor of nearly five between 1980 and 2050. The rate of growth will be much slower in other regions. Between 1980 and 2025, the population aged 75 and over will increase by 434 percent in Eastern Africa, 385 percent in Middle Africa, 427 percent in Northern Africa, and 526 percent in Western Africa (Apt, 2000).

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. Even if the decline in fertility is expected to continue in the region, the population will continue to grow fast for several decades, as the result of "population momentum."[2]

North African demographic trends (as in MENA countries, in general) together reveal exceptional growth of the young population and the growing ageing population.

As the data in Table 1 show, by 2050 the population aged 60 years and older will comprise more than 17 percent of the total population of North Africa, more than doubling the proportion in 2010. In the same period, the proportion of those aged 65 years and older will rise 2.5 times, and the proportion of those aged 80 years and over is expected to rise by three times between 2010 and 2050 (from 0.7 percent to 2.2 percent).

The pace of ageing will vary dramatically across countries, depending on the pace and timing of fertility declines (Courbage, 1999; Hayutin, 2009; Roudi, 2001; Tabutin and Schoumaker, 2005).

Data on health, disease, and disability among the elderly are still limited in the MENA region. Some information was collected in the mid-1980s–1990s through cross-national surveys in four countries and questionnaire surveys in 11 countries. In 2002, four countries (Bahrain, Egypt, the Islamic Republic of Iran, and Lebanon) developed comprehensive country profiles on ageing issues. The INTRA (Integrated Response of Health Care Systems to Rapid Population Ageing) Project, was initiated by WHO headquarters and provided an opportunity for some countries to develop reliable databases on ageing issues (WHO, 2006).

2. Aim of the Paper

Among African countries, Egypt, with other middle-income countries (Tunisia, Mauritius, Morocco, Algeria, and South Africa), is experiencing the greatest increase in the share of persons aged 65 years and older (Mubila, 2012).

[2] "Population momentum" is the outcome of high fertility rates in the recent past leading to growth in the size of the reproductive-age population that is large enough to balance the effects of lower fertility.

Relative to other regions around the world, research on older adults has been sparse in North Africa and in MENA countries in general. As in most African countries, ageing is not visible in most policy dialogue, and thus tends to be overlooked in terms of budgetary allocations, thereby increasing the vulnerability and marginalization of the elderly (Nabalamba and Chikoko, 2011). Demographic ageing has not only received limited attention at the political level, but it is also still understudied in Arab countries and in MENA countries in general, even though ageing has been an emerging trend. In particular, there is lack of knowledge on the living arrangements and socioeconomic conditions of older persons as in most developing countries (Bongaarts and Zimemr, 2002). Demographic ageing, together with socio-economic conditions and health disparities in later life, is still understudied in Egypt as in other MENA countries. Moreover, despite the prominence of family as older persons' main source of support, studies of intergenerational co-residence and other exchanges of support are relatively rare (Yount and Agree, 2005;Yount and Khadr, 2008).

The aim of this analysis is to investigate dynamics in the late-life living arrangements and socio-economic situation of the elderly in Egypt during the period 1998–2012. We intend to verify if the first signs of the population ageing processes in Egypt can also be recognized at the household level. The paper aims at analyzing the condition of the elderly and evaluating if in recent years the household structures as well as the living arrangements of the elderly have changed. Our focus is on elderly socio-economic conditions and the role intergenerational ties and transfers, both public and within the family, have in alleviating the precarious situations of older persons. This paper aims to help fill the gap in the study of late-life living arrangements and intergenerational relationships in Egypt. Research questions refer to the determinants of ageing in Egypt and to the disparities existing and emerging at the gender and place of residence levels.

Most comparative studies of changes in intergenerational co-residence in developing countries have been mainly based on data from the Demographic and Health Surveys (DHS).[3]

This research will refer to individual data from all three rounds of the Egypt Labour Market Panel Surveys (ELMPS) — carried out in the country in 1998, 2006, and 2012 — to study dynamics in living arrangements of the elderly and changes in intergenerational relationships from a gender-based and geographic perspective. We take into account the composition of families and households containing older persons.

We consider some socio-economic dimensions: poverty conditions with attention to those living in the cities in a gender perspective, health conditions, the presence of institutional mechanisms, monthly pensions, payments from the Ministry of Social Affairs or from other associations, and the presence of exchanges within families, such as transfers from people who are not family members.

The paper is organized as follows. In Section 3, we introduce the data used to analyses ageing in Egypt. We also introduce the definition of "elderly" and the definition of "household structure" that we will utilize. In Section 4, the demographic aspects of ageing in Egypt are discussed, with attention to geographic differences. Section 5 includes a picture of the Egyptian elderly from WVS to outline their subjective evaluations about their own socio-economic condition. A portrait of the Egyptian elderly deriving from the Labor Market surveys is

[3] The DHS samples are the most broadly comparable sources available for the analysis of living arrangements; in all, 200 surveys have been undertaken in 75 developing countries. As introduced by Ruggles and Heggeness (2008), there are two major problems with these data, however. First, the chronological coverage is limited; in most countries, the available surveys span less than a decade. Second, sample sizes are limited, especially for the earlier DHS samples; the surveys taken before the mid-1990s usually have between 3,000 and 9,000 cases altogether, and they often have just 150 to 300 respondents aged 65 or older.

discussed in Section 6, while Section 7 includes a short discussion about the socio-political context of ageing in Egypt.

Trends in Egyptian household characteristics and living arrangements of the older people are included in Sections 8 and 9. Section 10 focuses on co-residential living arrangements. Section 11, starting from panel data, examines transitions in individual living arrangement from 2006 to 2012. In section 12 public and private solidarity are considered, with a focus on solitary living, which represents one of the most vulnerable situations among the elderly. In Section 13, attention is devoted to socio-economic conditions and health status of the elderly, with a short description of intergenerational relations in children and elderly care.

3. Data

3.1 Individual data from the Egypt Labor Market Panel Surveys

In this analysis, individual data derive from 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 the Economic Research Forum (ERF) and Central Agency for Public Mobilization and Statistics (CAPMAS). The surveys are nationally representative household samples, and the questionnaires for the different survey rounds are intentionally similar to ensure data comparability over time (Barsoum, 2007; Assaad and Krafft, 2013a).

All the surveys (as censuses) define a household as individuals who live under the same roof and eat from the same pot. The household is there defined as a constituted unit that can also be composed of an individual habitually living alone. As stated by Assaad and Krafft (2013a), this common definition for identifying households does not preclude difficulties in identifying household members. In Egypt, households are increasingly difficult to identify, especially in rural areas and poorer urban areas. It can be difficult to clearly distinguish households when extended families live under the same roof.

The ELMS 1998 includes 4,816 households containing a total of 23,997 individuals. The total number of households reached in 2006 is 8,351, and the surveyed individuals numbered 37,140. The 2012 ELMPS is larger, as it includes 12,060 households containing a total of 49,186 individuals. The 2006 and 2012 samples include three types of households: a) households visited in the previous survey, b) households that split from the previous sample as sons and daughters (among others) form their own households, and c) a refresher sample of households. In the 2006 ELMPS, 3,684 households were already visited in 1998, 2,168 households emerged as results of splits from the 1998 survey, and 2,498 new households were included.

Figures for the 2012 ELMPS are 6,752 households from the 2006 survey, 3,308 split households, and a refresher sample of 2,000 households.

This survey utilizes three research instruments: a household-level questionnaire, an individual questionnaire (to every individual in the household aged six and over), and a household enterprise and income module. The household questionnaire comprises three interrelated questionnaires for each household in which data on the fundamental demographic characteristics of all household members, household assets, and access to services are collected.

The surveys then collect data on individuals: demographic characteristics of all household members (gender, age, age at marriage, relation to the head of the household), education, work characteristics, migration history, housing conditions (comfort level, exploitation), households, durable goods and assets, non-work-related sources of income, and money transfers (pensions, remittances, support from non-government organizations or religious organizations).

A comparison of selected results from the ELMPS, Population Censuses, and Labor Force Surveys carried on in Egypt has been implemented by Assaad and Krafft (2013a). In particular, to illustrate the representativeness of the ELMPS, they compare the 1998 and 2006 ELMPS

rounds with the 1996 and 2006 population censuses, focusing on demographic and labor market characteristics. Results show that the different surveys and round samples have similar gender compositions, and the age distributions are generally quite similar, with a few small differences. With respect to individuals' marital status by survey and round, the distributions in the 1996 census and the 1998 ELMS are similar; the 2006 census and 2006 ELMPS find very similar distributions of marital status. Moreover, there are some small differences in household composition by survey and round.

3.2 Definitions: Who are the elderly?

First of all, it is necessary to define who the elderly are. Although there are commonly used definitions of old age, there is no general agreement on the age at which a person becomes elderly. In developed countries, old age is usually defined in relation to retirement from paid employment and receipt of a pension. Therefore, most developed world countries have accepted the chronological age of 65 years as a definition of "elderly" or older person (WHO, 2013).

In many parts of the developing world, chronological time has little or no importance in the meaning of old age. Other socially constructed meanings of age are more significant, such as the roles assigned to older people. In some cases, it is the loss of roles accompanying physical decline that is significant in defining old age.

Antoine and Golaz (2010) argue that in the developing countries, despite some differences (more or less 10 years), generally the time point marking the entrance into old age continues to be set around 60 years. An innovative approach is proposed by Sanderson and Scherbov (2008), who think about people as simultaneously having two ages. One is chronological age: the number of birthdays a person already has had. The second is prospective age, which is based on the number of birthdays a person can expect to have. That future number is their remaining life expectancy.

The more traditional African definitions of an elder or 'elderly' person correlate with the chronological ages of 50 to 65 years, depending on the setting, the region, and the particular country's socio-demographic features (WHO, 2013).

In this analysis of Egypt, we assume that the age 65 marks the threshold of old age. One reason for this assumption is that we aim to analyses household living structures, living arrangements, and intergenerational relationships. All these dimensions are strictly connected to individual life cycle stages, which happen within the context of family life. They can be affected by the health status of the population, which declines in later life. The first results from previous analyses in the 1998 and 2006 ELMPS surveys showed that only after 65 years of age did living arrangements present changes among the elderly (Angeli and Donno, 2014).

Another important piece of information involves the relevant gains in life expectancy that the Egyptian population has achieved during the last decades (this item will be discussed in the next pages). In addition, the country will face the coming health insurance and pension reform, which includes changes in the retirement age. Until now, the age at retirement was 60 years, although various categories of employees in Egypt already retire at 65, and judges at 70 (MOF, 2010). 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.[4] The new system determines the value of the

[4] More detailed information about the reform is provided in BOX A1 of the Annex.

old-age pension according to the annuity factor at the time of retirement, which allows for future improvements in life expectancy (ISSA, 2014; Jankowski, Kritzer and Rajnes 2010).

As stated by the World Health Organization (2010), when attention is drawn to older populations in many developing countries, lacking an accepted and acceptable definition, in many instances the age at which a person becomes eligible for statutory and occupational retirement pensions has become the default definition.

The improvements in life expectancy and the changes concerning the age at which Egyptians will gradually become eligible for statutory and occupational retirement suggest that we should assume 65 years as the definition for the beginning of old age in this analysis.[5] The term "oldest old" refers to people aged 80 years and older.

3.3 Definitions: living arrangements

To study changes in late-life living arrangements and assess the situations of older people, we jointly utilize many variables. To assess the characteristics of living arrangements[6], we consider the demographic characteristics of all household members (sex, age, relation to the head of the household, and marital status).

Starting from the basic comparative scheme proposed by the United Nations (2005), we have considered the following mutually exclusive categories of living arrangements:

1. Living alone
2. Living with spouse only
3. Living with children (including adopted children) or children-in-law
4. Living with children and grandchildren
5. Living with grandchildren only (skipped generation households)
6. Living with brothers/ brothers-in-law
7. Living with another relative (other than a spouse, child/grandchild, or brother)
8. Living with unrelated people only

In addition, we have classified the households by the number of generations present 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. We can distinguish complete-nuclear families (couple and children) or incomplete-nuclear families (the elderly person was a single parent). 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.

4. Ageing in Egypt: The Demographic Aspects

Egypt is still a young country, even though its population is ageing and will experience rapid and dramatic demographic changes (Fargues, 2002). Egypt's population has remarkably increased over the past decades, although the country in the past has been characterized by a demographic growth rate smaller than that of the other countries belonging to North Africa, the Arabic Peninsula, and the Middle-East region (Tabutin and Schoumaker, 2005).

[5] Moreover "older persons", "the elderly", and "ageing persons" are used as synonymous.

[6] The foreseen relationships are the following: head, spouse, son/daughter, grandchild, parent, brother/sister, son/daughter in law, brother/sister in law, other relatives, servants & others.

In the second part of the 20th century, the population sharply rose from 35.3 million in 1970 to about 59.3 million in 1996. According to the 2006 census data, the population living in the country is estimated to have reached 72.8 million. Including those living abroad, the population reached 76.5 million in 2006 at a growth rate of 37 percent over the 1996 figure. The latest figures in the 2014 Statistical Yearbook (CAPMAS, 2014a) referring to the population living inside the country report 85.8 million at the beginning of 2014. The comparison between the figures of the last Egyptian censuses (Egypt's State Information Service data online) confirms a trend of ageing in this decade: the country still has a young population, but the older people are the fastest growing part of the population (Awad and Zohry, 2005; Boggatz and Dassen, 2005; Fargues, 2002; Sinunu, Yount and El Afify, 2009).

Like other MENA countries, Egypt presents the indicators of demographic ageing proposed in the literature, such as a decrease in the time each country takes to double its population aged over 65, or the fact that the share of people aged 60 and older will soon reach over 10 percent of the whole population (Pison, 2009; Thumerelle, 2000; United Nations, 2014). United Nations population projections (2014) state that in Egypt, the proportion of the population aged 60 and older will reach over 10 percent between 2020 and 2025.

Other MENA countries as Algeria and Libya present the same trend as Egypt. The population aged 60 and older will grow to represent more than 10 percent of the population faster in Tunisia (between 2010 and 2015) and in Morocco (between 2015 and 2020). The ageing process will be more gradual, in Jordan and in the Syrian Arab Republic (in 2030–2035 in both countries) and in Yemen (2045–2050).

4.1 The driving forces in the ageing process: fertility and mortality declines

Recent years have been characterized by remarkable changes both in fertility and in survival. The most prominent historical factor in population ageing has been fertility decline, a consequence of the success and popularity of family planning programs in Egypt (Khalifa, DaVanzo and Adamson, 2000). The average number of children per woman (TFR) declined from 6.6 in 1990 to around 2.8 today. After 1980, the country also registered main improvements in life expectancy levels (e_0) for both men and women. Falling birth rates mean that nuclear families are getting smaller. Increasing life expectancy means that society is ageing (United Nations, 2015). Figure 1 shows the increase in average life expectancy—which reflects the overall mortality level of a population—during the last decades of the 20th century. Average life expectancy has risen globally to 71.7 years in 2007, and this highlights great achievements in Egyptian society (Handoussa, 2010). At the country level, an average increase in life expectancy of 16.7 years has been achieved during the period 1976–2007. During the period 1980–2005, Egypt has been the Arab country that achieved the largest absolute reduction in infant mortality rates, from 107.5/1000 to 40.6/1000 (ESCWA, 2009).

Improvements in life expectancy and the decline in fertility started the subsequent process of demographic ageing. It is therefore possible to expect that during the next years, the ageing processes will produce further significant changes in the age structure of the population in Egypt, as in many low and middle-income countries. The rising presence of the elderly in the population is coupled with a social protection system and an economic environment that is considered not oriented towards the problems generated by an ageing population (Loewe, 2000; UNFPA, 2010).

4.2 Wide differences in demographic trends within the country

Differences between the governorates and urban/rural areas persist in demographic trends (see Table A1 in the Annex). Both fertility and mortality tend to be lower in the urban areas, because their change from high to low levels usually begins earlier in urban settings.

Data on fertility are not available at the governorate-level, but figures from the 2008 Demographic and Health Survey (El-Zanaty and Way, 2009) show wide inter-regional variations. The strong influence of residence on fertility in Egypt clearly emerges. Differences persist between urban and rural areas both at the country level and within regions (Table A1). The estimated total fertility rate (TFR) in 1986–1988 varied from 6.2 children per woman in Rural Upper Egypt to 3.0 in the urban governorates. By 2008, the annual total fertility rate had steadily declined, reaching the level of 3.6 children per woman in the Rural Upper Egypt governorates that still present the highest fertility levels, while the urban governorates have a total fertility of 2.6 children.

Data from Handoussa (2010) make clear that the process of convergence in life expectancy among governorates has been more dramatic than that of fertility, as outlined by data referring to the decades between 1976 and 2007. As already noted, the average life expectancy has risen globally from 55 years in 1976 to 71.7 years in 2007. During the period 1996–2007, life expectancy levels have become increasingly similar among governorates (Figure 2 and Table A1).

In 1976, the governorate of Fayoum had the shorter life expectancy (49.3 years), whereas Alexandria had the longer life expectancy (59.1 years). In 2007, the shortest life expectancy corresponds to Menia (69.3), and the most extended life spans are found in Port Said (72.7 years) and Kalyoubia (72.7 years). The governorates that in 1976 showed the shorter life expectancies had achieved the most relevant rise by 2007. The higher improvements correspond to three governorates of Upper Egypt: Beni Suef (+21.5 years), Fayoum (+20.2 years), and Aswan (+19.8 years).

4.3 A changing balance among age groups

The emerging process of ageing is contributing to a change in the country's age group composition. During the coming years, the ageing processes will produce substantial changes in the age structure of the population, with important consequences for household life and for government duties (Diamond-Smith, Bishai and El Gibaly, 2013; Nabalamba and Chikoko, 2011)[7]. The United Nations' population estimates and projections (2014) show that in 2010, the share of the population aged less than 15 years was still 31.5 percent, about 24.6 million. In 2030, young Egyptian people will amount to about 27 million (26.4 percent of the total population). The number of those aged 65 years and older will increase from 4.3 million in 2010 to 8.1 million in 2030 (5.5 percent and 7.9 percent of the total population in 2010 and 2030, respectively). In 2050, the amount of the youngest class will stay around 26 million, but the relative percentage will fall to 21.8 percent. In the opposite trend, the number of people aged 65 years and older will reach about 15 million (almost two times the amount in 2030), representing 12.4 percent of the total population. More important than the mere number of older people is the age group composition of the population (Figure 3).

In the near future, the ageing processes of the demographic structure will involve all the population age groups. As noted previously, the older population itself is ageing. The number of older people aged 80 and older who are likely to be dependent is growing. In 2010, they amounted to 0.6 million (0.8 percent of the total population), and they will increase to about 1.2 million by 2030 and more than 2.8 million by 2050 (from 1.2 percent to 2.3 percent of the total population). The population aged 80 and older is then projected to increase more than 300 percent between 2010 and 2050, compared with about 250 percent for the population aged 65 years and older (Figure 4).

[7] The list of indicators and values of demographic ageing can be found in BOX A2 of the Annexes.

The figure highlights a "double ageing" by 2030, as the higher annual growth rate[8] regards the highest age group (80 and older). In the period 2005–2010, the average annual growth rate of the total aged population (aged 65 and older) in Egypt has been 1.8 percent. In the two age-classes, the average annual growth rate was 1.6 percent for the age-class 65–79 (Figure 4). Estimation of the average annual growth rate for the oldest people aged 80 and older was 3.1 percent, starting from 3.1 percent in 2005–2010. By 2025–2030, this rate is expected to rise to 5.1 percent. After 2030, the growth rate of the oldest old is expected to decline, dropping to 3.4 percent in the period 2045–2050.

4.4 Changes in the age distribution of the population will accelerate over the coming decades

Population ageing is an aggregate phenomenon, revealed by a change in the age structure of the population. The population pyramid—a visual comparison of the entire age distribution—synthesizes the age-structure of the population as well as expected changes in the whole structure of the population in the coming decades (Figure 5). According to the United Nations' (2014) projections, the base will continue to be compressed, but in 2030, children aged 0–4 years will still be as numerous as those of the former young generations The progressive ageing process will be more and more evident when the most numerous generations, those that came into the working age in 2010, exceed 60–65 years.

When the most numerous age groups in 2030 reach old age — among others in a context of progressive life span extension — the population pyramid will be similar to those of developed countries. The 21st century should be the century of ageing for the Egyptian population, whose age structure in 2050 will be similar to that of the population of Western European countries today (Awad and Zohry, 2005).

Because disparities within and across governorates still persist in demographic trends, the age structure presents geographical differences, first of all in the proportion of the aged. Figure 6 includes data on the distribution of governorates by the level of life expectancy at birth (Handoussa, 2010) and the proportion of the elderly population, in this case, the population aged 60 years and older (CAPMAS, 2014a). Figure 6 confirms the highest proportions of the population aged 60 years and older in the urban governorates, but also in governorates with a large rural population.

At the same time, there is not a full correspondence between higher life expectancy and higher proportion of the elderly among governorates, suggesting different stages and a different pace of demographic transition.

4.5 The rural population is expected to age faster in coming decades

As in most countries in transition, rural/urban differentials in population ageing are substantial, depending on socio-economic differences between urban and rural settings. A result of the decline in infant mortality as well as in fertility, which is early and more pronounced in the cities, is that ageing is generally more advanced in urban areas. Nevertheless, rural populations may be more aged than urban ones if other factors are present (for example, rural-to-urban migration). Egypt is characterized by internal migration as well as international migration (Binzel and Assaad, 2011; Wahba, 2007). The attention is here on domestic migrants, for the most part rural to urban migrants. This migration is age-selective and comprises mostly young (and educated) adults who migrate to large Egyptian cities to escape rural poverty and to search for urban employment (Zohry, 2002). In the 80s and 90s, as Mc Cormock and Wahba (2004) demonstrate, the likelihood of rural-urban mobility declined with age. As a result, while the young migrants join the urban population, the populations left behind in the rural areas can

[8] The average annual growth rates for all the age-classes here considered are calculated on the assumption that growth is continuous.

have high proportions of older people. In addition, the rural-urban labor migration of young adults and adolescents is followed by a return to the rural areas after retirement (Jureidini et al., 2010). Figure 6 suggests that the rural population in Egypt is still younger than the urban population, but could age faster in the coming decades.

5. Ageing in Egypt: The Socio-Economic and Political Environment

The increasing number of the elderly — in absolute terms as well as with respect to the working-age population — has notable implications on the possibility to implement formal or informal assistance measures in favor of elderly people. The rising number of older people is generally associated with an increase in age-related functional limitations, that is, a decline in the ability to perform basic activities of daily living[9] (Boggatz et al., 2010). For this reason, socio-economic measures for the creation of networks for later life assistance should be implemented by public and private institutions. As population ageing increases, issues surrounding the support and care of older persons should receive more attention.

5.1 Public solidarity towards the elderly will rise

The steady increase of population in older age-groups has significant implications, particularly with regard to the future viability of existing formal and informal modalities for assistance to elderly people. The large numbers of older people expected in the next few years in Egypt, as in other MENA countries, will pose new challenges for the health and social care systems, as well as for family care (Hussein, 2013; Sibai and Yamout, 2012).

According to the evaluations of international organizations, Egypt does not have an economic structure able to fulfil the requirements of an ageing society. UNFPA (2010) considers specific policies in place for aged people and states that "…Looking at policies in place, it is clear that Egypt has not made preparations for an economy with a large proportion of aged people. The most important system supporting the aged is the pension system, but in Egypt this system is still suffering from a number of deficiencies: low and decreasing pensions, increasing cost of living, problems with the administration of the social security system, targeting and limited resources." Egypt's social protection system has been just too weak to prevent people from falling into poverty as a result of social shocks (Loewe, 2000). Formal support for the elderly and the disabled is still limited in Egypt. Health policies in Egypt — as in other developing countries — mainly focus on maternal and child health (Youssef, Osman, and Roudi-Fahimi, 2014). Other countries where policy interventions are mostly oriented towards reproductive and child health, include India, Indonesia, and the Philippines as these policies are viewed as the most "cost-effective," in terms of lives saved (Mason, Lee and Russo, 2001). The financing of long-term care in these countries is a low priority because providing primary care to all has yet to be achieved[10]. Ageing has not still become a main issue, even if some attention has lately been devoted to the ageing problems. In the last years, some public initiatives towards the elderly have been formulated in Egypt, even if the programs often suffer from limited resources. A national plan of action on ageing was implemented in 2007 and established the National Committees for Ageing (Kronfol, Sibai and Rizk, 2013)[11]. Other benefits to deprived families come from the Ministry of Social Affairs and from religious bodies and non-governmental organizations, but social protection remains weak. Other important efforts have

[9] The term "activities of daily living" (ADLs) refers to a basic set of everyday activities or tasks that an individual should be able to perform in order to live independently. They are not a measure of health status but of the functional capabilities of an individual. The most commonly used measure of functional ability is the Katz Activities of Daily Living Scale, which includes bathing, dressing, transferring, using the toilet, continence, and eating (LaPlante, 2010).

[10] The Egyptian constitution guarantees access to health care to all Egyptians. However, due to financial constraints, the Egyptian health and social affairs sectors have not specifically addressed the issue of providing homes or institutional long-term care for the elderly or the disabled (Azer and Afifi, 1992; Nandakumar, El-Adawy and Cohen 1998).

[11] A detailed picture of actions implemented in the Arab region can be found in Kronfol, Sibai and Rizk (2013) and Schwarz (2003).

recently been set out: the already cited reform of the Health Insurance System and the Pension System (MOF, 2010) and pro-poor initiatives (Ahmed et al., 2001; Cherkaoui et al. 2009).

On International Elderly Person's Day, the Central Agency for Public Mobilization and Statistics (CAPMAS) issued a press release on 30/9/2014 in which the chief data on ageing in Egypt were included. This included information on the poverty rate among the elderly[12] (according to the Household Income, Expenditure and Consumption Survey), which in 2012–2013 reached 19.2 percent, 20.0 percent for males and 18.4 percent for females (CAPMAS, 2014b).

Older people have historically been cared for within the traditional extended-family structure in Egypt. The government should develop a social security system able to ensure greater intergenerational equity and solidarity, to provide support to elderly people through multigenerational families, and to provide long-term support and services for the growing numbers of older people (Awad and Zohry, 2005).

5.2 Belief and values of the Egyptian elderly: Satisfaction about their living conditions

In a context where the number of the elderly is on the rise, but where statistical evidence from surveys and political analyses show situations of socio-economic difficulties, it is interesting to analyze data on the self-expression evaluation of the Egyptian elderly.

An initial portrait of the Egyptian elderly can be achieved from data gathered by the World Values Survey (WVS) in 2008 in Egypt (the sixth wave of the WVS, released in 2014). The WVS is a comparative investigation of socio-cultural and political change, carried out by international social scientists and coordinated by the World Values Survey Association (Stockholm) since 1981.[13] The World Values Surveys were designed to provide a comprehensive measurement of all major areas of human concern, from religion to politics to economic and social life (Welzel and Inglehart, 2010). The questionnaire includes variables on beliefs, values, economic development, religion, democratization, gender equality, social capital, and subjective well-being.

In the 2008 Egyptian survey, 3,051 people were included; among them 272 (170 males and 102 females) people were aged 65 years or over. We have here considered some of the questions included in the Value Survey to arrange a synthetic (descriptive) picture of elderly Egyptians with respect to their subjective well-being feelings. In particular, our attention has been on some questions of the survey related to the attitudes and key findings about values that lead to feelings towards family and satisfaction with one's own life, state of health, financial situation, and social relations (the analytical list and description of the considered questions is in Table A2).

We compared the responses of the elderly to the national average (already available in the WVS page) to comprehend how older Egyptians consider themselves as members of society and express needs and opportunities for certain living conditions. Views on the importance of family and friends are investigated using VS questions V4 and V5, in which people are asked to indicate the level of importance they ascribe to the family (V4) and to friends (V4) on a four-point scale from ''not at all important'' to ''very important."

When considering the items regarding "feelings of happiness" (question number V10), data highlight that the elderly present percentages of "very happy" or "quite happy" very close to those representing the national average (Figure 7 and Table A2). Among the elderly aged 65

[12] In this case the age-limit for old age was 60 years.

[13] The WVS have fielded a standardized questionnaire among nationally representative samples of residents (sampling between 1,000 and 3,000 respondents per country) in more than 90 societies on all inhabited continents, representing more than 90 percent of the world population (Welzel & Inglehart, 2010). Individual data are available at the WVS page: http://www.worldvaluessurvey.org/

years and older, 81 percent declare their condition of happiness, versus a national average of 83 percent. It is furthermore important to emphasize that the highest percentages of those responding "very happy" or "quite happy" refer to the oldest old (aged 80 years or over)[14].

Life satisfaction is addressed by VS question number V22, which asks: ''All things considered, how satisfied are you with your life as a whole these days?" Possible responses form a ten-point scale from completely dissatisfied to completely satisfied. The elderly reveal a degree of complete satisfaction with life just lower than the national average (8.1 percent versus 11.0 percent). Once more, the oldest old present a higher percentage of "complete satisfaction" with respect to both the national average and those aged 65–79 years.

Feelings of control over one's own choices are covered in the VS by question number V46, which asks: ''Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them. Please use this scale where 1 means 'no choice at all' and 10 means 'a great deal of choice' to indicate how much freedom of choice and control you feel you have over the way your life turns out.'' About 17 percent of the Egyptian elderly declare to have completely free choice and control over their lives, versus 14.0 percent of the entire population (Table A2), while 7.7 percent of them feel they have no choice at all (the national average reaches 8.4 percent).

As expected, the elderly present lower percentages of satisfaction when questions regard economic dimensions. Question number V68 of the VS, asking how people are satisfied with the financial situation of their household, can measure subjective monetary distribution (Welzel and Inglehart, 2010). One in five elderly state that they are dissatisfied with the financial situation of their household; the percentage is a little lower among the oldest old. In addition, only a small percentage of the elderly declare that their family saved money during the past year, and about 17 percent declare that they spent savings and borrowed money. This information is important if we consider that a source of old age support is represented by the savings that an individual accumulated during years of working.

The negative feeling with regard to economic aspects is confirmed by the answers about the social class to which they belong (V252) or in what group of the country's income decile their households are included (V253). One in four elderly feel that they belong to the lower social class.

The same worse situation emerges when the survey question regards the subjective state of health. Only 37 percent of them declare a good or very good state of health, a result quite similar to that obtained from the survey on self-reported health status conducted in 1995 among the Egyptian elderly (Nandakumar, El-Adawy and Cohen 1998). The limited number of questions we considered do not permit us to outline a complete picture of elderly Egyptians, but an initial idea can be summarized from these results. Data highlight the Egyptian elderly as a group rather satisfied and optimistic, though worried about the economic and financial situation of their households[15].

6. Egyptian Elderly: A Portrait and Evidence from Labor Market Surveys

Data from the 1998 ELMS and the 2006 and 2012 ELMPS confirm a trend of ageing in the country as well as a trend of ageing in the older population itself. The elderly 65 years and older included in the Egypt Labour Market panel Surveys numbered 1,177 in 1998, 1,785 in

[14] The difference is not significant, when controlled on non-weighted data by Chi-square tests. We stress in any case that the number of the oldest old included in the survey is low.

[15] We have also considered other characteristics of the elderly, such as age-classes (65–79 years and 80+ years), gender, and place of residence (urban, rural) and verified — with a Chi-Square analysis — whether the difference in proportions is significant. When considering affirmations on family savings during the year before the survey and the social class to which the household belongs, the elderly living in rural areas present higher percentages of economic difficulties, and we found a significant difference at $p < 0.01$ between rural and urban place of residence.

2006, and 2,561 in 2012[16]. They represented 4.8 percent of the total population in 1998, 4.9 percent in 2006, and 5.3 percent in 2012 (Tables 2 and 3). During the reference period, the country has been characterized by a growth in the percentage of the elderly population in the oldest groups (80 and older), while the proportion of the youngest elderly (65–79) decreases.

Among the elderly population included in the samples, the share of the oldest old (80 years and older) rose from 11.4 percent in 1998, to 12.8 percent in 2006. In 2012, 14 percent of the elderly was aged 80 years or older. The female population includes an increasing percentage of old people: this is naturally due to the longer life span of women. Mortality reduction increases the chance that a woman will end her life old and alone more often than a man. The analysis of Tabutin and Schoumaker (2005) on Arab and Muslim countries reveals that Egypt, like other countries in the region, has been traditionally characterized by a high age gap between spouses. A reduction of the average marital age gap occurred in different countries of the region after 1980, but Egypt did not follow this trend of reduced age gap, mainly in the rural areas. Whereas some countries have undergone a real "marriage revolution," Egypt (with Yemen) is a country where the age difference between spouses is still high, a pattern of family formation that involves a gendered survival among spouses.

In 2012, about 4.7 percent of men are aged 65 and older, while for women the percentage reaches 5.9 percent. As a consequence of their longer life span, women also represent an increasing portion of the older population. In 1998, 49.6 percent of the elderly aged 65 years and older were women, while the percentage has risen to 52.2 percent in 2006 and to 56.3 in 2012.

Urban areas show an older population than their rural counterparts. In 2012, 6.4 percent of the urban population was aged 65 years and older, versus a proportion of 4.5 percent in the rural areas.

Older men and women have, in some measures, different characteristics, and this variation could

have implications for the two groups' economic and physical well-being. Among urban females, 6.4 percent were aged 65 years and older in 2012; among rural women the aged were 4.5 percent. The values are conditioned by the different distribution of the two genders in the urban and rural areas and by their marital status (Table 3 and Table A3).

Two thirds of older females are widowed while 82 percent of older males are married. Although being a widow *per se* does not imply economic privation, given the lack of a comprehensive social safety net in Egypt, it is likely that at least a portion of elderly women face particular economic problems (World Bank, 2003).

The percentages of illiterate individuals among older men and women were similar in 1998 and in 2006, but they decreased in 2012, when more recent generations attained old age.

6.1 Many elderly people still work

About 25–30 percent of elderly males declare to have participated in employment during the seven days before the survey (Table 3). Even among the oldest old, 8 percent in 2012 (around 15 percent in the previous surveys) declare to have been employed during the reference week (Table A3). The participation of the Egyptian elderly in the labor market has also been outlined in other surveys. In a former analysis on a sample of older people living in two administrative units of Giza within the boundaries of Greater Cairo, Azer and Afifi (1992) found that for about 17 percent of the interviewees, the main source of income was either employed or self-employed work. Yount and Sibai (2009), analyzing living arrangements in countries for which

[16] By applying the expansion factor, we obtain estimates of the number of the elderly in the Egyptian population: that is 2,561,384 in 2008, 3,422,059 in 2006, and 4,235,647 in 2012.

national data were available from the Demographic and Health Surveys (EDHS), found that a large percentage of men continued to work after the official age of "retirement" for men in most Arab countries. From EDHS they observed substantial shares of Egyptian men aged 80 years and older who continued to work in 1998 and 2006. In the 1998 EDHS, the share was 21 percent; the proportion was 12 percent in the 2000 EDHS.

Participation in employment for women is lower, because they are generally engaged in household and family care. Evidence from ELMPS shows that percentages of the employed increased from 1998 to 2006 for both men and women of all older ages and then decreased between 2006 and 2012 (Table 3). Boggatz and Dassen (2005) discuss that apparently these older people were still able to work, but this could also be a sign that high segments of Egypt's seniors still have to work to survive because of their households' limited capacity to support them financially.

It is not only in Egypt that many older persons still need to work; it seems to be a common feature, above all, in developing countries with a lack of comprehensive social security programs. Data from the International Labour Organization (cited by the United Nations, 2013) highlight that in 2010, the labor force participation of persons aged 65 years or over was around 8 percent in the more developed regions and 31 percent in the less developed regions. In recent years, labor force participation among older men is decreasing in the less developed regions, but is increasing in the more developed regions. Data published by ILO for less developed countries are similar to the Egypt data deriving from the ELMPS surveys included in Table 3.

6.2 The elderly and their households: socio-economic conditions

The distribution of the Egyptian elderly between urban and rural areas also has consequences on their socio-economic status, as differences between urban and rural areas also emerge with respect to poverty, which is predominantly rural. While almost 56 percent of the Egyptian population lives in rural areas, 78 percent of poor people and 80 percent of the poorest households live in the countryside (Awad and Zohry, 2005; United Nations Development Programme (UNDP), 2008). Situations of extreme poverty exist in the urban areas too. For example, the situations of the poorest households living in Cairo have been included among the most serious and complicated conditions in the Egyptian urban areas (Angeli, 2009).

The information on household wealth quintile[17]— here assumed as a proxy of economic conditions — allows us to synthesize the socio-economic condition of the elderly in 2012, underlining vulnerable situations. Table 4 and Table A4 include the percentages of older people categorized by the wealth quintile their households belonged to in 2012. In the second part of the table, information regarding households headed by an older person is provided. The difficult economic situations of elderly people of both genders living in rural areas clearly emerges. Households with a household head aged 65 years or older are over-represented among the poorest families, primarily in the rural areas. Among rural households headed by an older woman, five in ten are in the poorest quintile; the percentage is between three and four in ten if the head is an older man. The distribution of the elderly-headed households in the richest quintile does not appear as highly gender differentiated as in the poorest quintile.

If we compare (chi-square test) percentages in the wealth distribution of elderly males and females, we see that differences between the two genders are not statistically significant in the same manner in the urban and rural areas. When all the elderly are considered (Table A4), the difference in proportions is significant among men and women in the urban areas, but it is not significant in the rural areas. If only the households headed by an elderly person are considered,

[17] The household wealth quintiles are based on an asset index (Assaad and Krafft, 2013b).

the differences in the distribution among wealth quintiles of the households headed by men and women are significant in both urban and rural areas (Table A5).

Results are in agreement with other findings obtained from other sources. A study jointly produced by the World Bank and Egypt's National Council for Women (World Bank, 2003) starting from various Egyptian data sources analyzes the situation of female-headed households. The study concludes that “females heading households are older than males, less likely to participate in the labor force and heavily dependent on income transfers from pensions and remittances. Most females heading households are widowed and widowed women heading households with children are the most disadvantaged in terms of the incidence, depth and severity of poverty.”

In section 12, the analysis of the wealth quintile distribution of the elderly will be studied in depth, considering their living arrangements.

7. Older People, Living Arrangements, and Intergenerational Ties: Problems and Assumptions

Ageing has deep consequences for society and entails many changes in family life, intergenerational relationships, and the social security system. The living arrangements of the elderly are key determinants of their needs for socioeconomic, physical, and emotional assistance. Among the determinants of poverty, the size and the structure of the households as well as the characteristics of the head of the households appear to be the most important elements allowing households to break out of the poverty trap. Modifications in the demographic structure of the population have recently caused important changes both in the living arrangements of the older and in cross-generational ties.

7.1 Demographic trends factor on late-life living arrangements

The socio-demographic trends described will have a sustained and irreversible impact on the nature of the support system on which the elderly can rely (Mason, Lee and Russo, 2001). Recent demographic trends can induce a number of consequences on ageing processes and behaviors. Increased life expectancy, the pace and timing of fertility decline, and changes in society combine their effects to induce trends regarding household structure and dynamics.

Longer life expectancy raises the proportion of older married couples by postponing widowhood. Increasingly, many elderly rely on their marital partner both for personal and financial support. Women are much more likely to be widowed than men for several reasons. First, men are subject to higher mortality risks and on average die at a younger age than do women. Second, wives are normally younger than their husbands, adding further to the number of years by which they can expect to outlive their husbands. Third, older women are relatively unlikely to remarry in most countries when their husband dies.

Fertility decline can reduce the number of children with whom elderly parents could potentially reside. Health and disability status can be thought of as a further type of constriction. Improvements in the health of the elderly diminish infirmity and improve their capacity to live independently. Potential rising incomes and monetary resources and the establishment of social security and private pensions can greatly increase the financial well-being of older adults, enabling the elderly to afford privacy and independent living.

Living arrangements can also change as a function of the increase in the aged population itself: as the ageing of societies proceeds, the growth of the elderly population itself could create conditions for changes in the norms of co-residence and of relations between generations (Palloni, 2001; Wolf 1994). Marked changes have been evident in family structures (Lowenstein, Katz and Biggs, 2011), implying that changes in population structure have important effects for intergenerational ties (Bengtson et al., 2003). Socio-demographic

modifications also alter people's expectations and the duration of specific roles, including those within the family that involve intergenerational ties.

7.2 Living arrangements and intergenerational support

Intergenerational support from family members plays an important role during all the stages of the life cycle. Especially during periods of crisis, the family can serve as a buffer from negative shocks in the economy. In most world regions — both in most developed countries and in the developing world — the ongoing population growth, the rural exodus of younger people to cities and towns, the urbanization processes, and the decline of agricultural productivity have challenged the traditional family support system, leaving more elderly people without traditional support and care from their families (Mason, 1992; Schwarz, 2003).

As stated by the United Nations (2005), the analyses of the living arrangements of older persons usually emphasize the benefits and costs associated with different household compositions, pointing out the interplay of constraints and preferences. In most recent periods, living arrangements may be quite different from the cultural ideal for many reasons in both developed and developing countries. For instance, some older persons may be single, widowed, or childless (particularly women), in which case other relatives may be expected to provide care and a home. In general, older persons who are single, widowed, or childless face an even higher risk of destitution. Thus, it is to be expected that older persons will be found in a variety of living arrangements in all societies, but that the relative frequency of different arrangements will vary among different populations.

Other factors can play a role in affecting both elderly and non-elderly living arrangements. Migration of younger adults, the progressive nuclearization of families, and increasing female labor force participation can reduce the traditional economic support system based on the family, which often cannot be recovered in the future. Changing family structures affect the need for formal support organizations.

Decisions about living arrangements thus reflect the balance between the costs and benefits of co-residence or living in an autonomous shelter for both the older individuals and their family members. These choices can be influenced by cultural norms and values and by economic and social conditions, and they can change over time. A large number of the elderly in developing countries are poor or at risk of poverty because they lack access to pensions and have few other resources.

Many factors play a role in choices about separate residence or cohabitation. Co-residence and other interactions mainly realized within the household are generally assumed to represent the context in which most support takes place. The household arrangements of the older people have been a systematic theme in historical research on the family. The discussion about the importance and the meaning of intergenerational co-residence started in the 19th century, but in the last decades of the 20th century, the belief that intergenerational co-residence is common in traditional agricultural societies and diminishes with industrialization, migration, and economic expansion has been widely accepted (Bongaarts and Zimmer, 2002; Ruggles and Heggeness, 2008).

Bengtson (2001) discusses that the existence of multigenerational households, where multiple types of solidarity can be relied on, represent significant "latent networks" that can be activated to provide support and wellbeing for family members during times of need. Adult children and their parents are related through many forms of intergenerational solidarity that involve both emotional and practical aspects. Among intergenerational flows, we can recognize affective solidarity (strong emotional closeness and affection), associational solidarity (frequent contact and shared activities), and/or functional solidarity, which involves giving and receiving money, time, and space. In fact, in addition to financial transfers, help, and care, the provision of

(living) space is an aspect of functional solidarity that should not be underestimated. Other types of solidarity refer to agreement in opinions and values (consensual solidarity), to expectations regarding filial and parental obligations (normative solidarity), and to structural solidarity represented by cross-generational interactions fostered by geographic proximity between family members (Bengtson, 2001). Late-life living arrangements as well as intergenerational ties could smooth heterogeneity in socio-economic conditions and the poverty risks of the elderly.

7.3 Separate living or cohabitation

Separate residence is likely to offer more privacy and control over household decisions but less companionship and sharing of household tasks. Maintaining separate residences also entails added costs for household maintenance (rent, fuel, furnishings), but usually implies less condivision than co-residence. However, the system of family networks may not always fully shelter older persons against poverty, because these networks can also be income limited.

As pointed out by Ruggles and Heggeness (2008), most of the literature on living arrangements from about 1970–1980 has focused on the importance of persistent cultural norms and on the costs and benefits of co-residence for each generation, and they generally agree that intergenerational co-residence is declining in most countries as a result of economic development.

An important piece of data when households are analyzed is represented by the declaration of the head of the household. In most African countries, because of the social influence of the patriarch, the role of the head of the household is in most cases assigned to the oldest man living in the household, even when he is not the supplier of the household economic resources or the individual with the highest level of authority (Locoh, 2007; Pilon et Vignikin, 1996). Even if headship cannot always be considered as an indicator of authority or dependence, it is generally assumed that in older-head families, the older generation typically retains more authority than they do in younger-head families (Ruggles and Heggeness, 2008). Moreover, it is difficult to comprehend to what degree home ownership or other measures such as headship are indicators of power relationships between household members (Glaser, 1997). The degree to which the household head exercises control over resources and decision making is likely to vary according to cultural values and norms. In most censuses and surveys, the “head of household is defined as that person in the household who is acknowledged as such by the other members” (United Nations, 2005).

It is fundamental to know the socio-demographic features and living arrangements of the elderly to understand if new forms of social vulnerability of aged people are growing in the country by considering that, most of the time, co-residence can be considered as a type of intergenerational transfer (Vignikin, 2007; Antoine et Golaz, 2010; United Nations, 2005).

Family support systems can involve multiple support relations among family members, and can imply that family relationships are not limited by their residential arrangements.

Heterogeneity is on the rise across eastern and western African countries with respect to the proportion of the elderly population, living arrangements of the elderly, and household headship by age. The variations in household types and living arrangements presumably reflect the variations in the traditional extended family system and household coping strategies across countries (Kakwani and Subbarao, 2005). In the same manner, changes are on the rise in Asia, where family based support systems are prevalent, but they are clearly eroding in many countries (Mason, Lee and Russo, 2001).

In a changing context, we see the need for special attention to welfare provision for aged people through public, private, and informal sectors as well as the need to make health services readily available for older persons (Velkoff, 2001). When the public funded social security system is

not able to offer socio-economic protection to aged people, the welfare of the elderly requires the strengthening of the family support system—which becomes the main source of security and protection—and the development of community-based programs concerning health, nutritional and medical care, housing, and living arrangements (Ajiboye, Olurode and Atere, 2012).

Changes in both the structure (by sex and age) of the population and cohabitation behaviors affect the variations in household size. In the literature, it is almost accepted that the global trend following changes in fertility and in mortality is a trend towards declining household size. In particular, mortality decline in later life has been associated with rising proportions of one and two person households, therefore contributing to a fall in household size. Indeed, the discussion about these relationships in some cases has been contradictory (Leiwen and O'Neill, 2007). In some cases, other cultural norms or economic constraints can influence trends in household size despite demographic development. For example, Locoh (2002) emphasizes that exceptions to the positive relationship between decline in fertility and household size can be found in Western Africa and also in Northern Africa and discusses the maintenance of co-residential behaviors despite trends in fertility and mortality. For example in Algeria, the dramatic housing shortage maintains a high average household size in spite of the decrease in fertility.

The concurrent impact of modernization, with its weakening of family bonds, combined with the increased numbers of elderly suggests an urgent need to address the issue of old age security in developing countries.

With respect to the current situation, given the systemic nature of the recent crisis, the ability of family support to compensate for the reduction of labor and asset income seems to be rather limited in many countries. Thus, governmental social protection programs should be maintained or strengthened to effectively counter the impacts of the crisis and to improve social protection in the future (United Nations, 2009).

8. Egyptian Households from 1998 to 2012

As already seen, almost all of the Egyptian elderly included in the 2008 Egypt World Values survey declare that family is very important for them (see more Figure 7 and Table A2). Family ties and households are crucial units of investigation for research on social, demographic, and economic processes. The evolution of household structure — including size and composition — is decisive for understanding the combined impact of social, economic, and demographic factors on living assets' dynamics. Demographic behaviors and social adjustments are reflected in wide changes in household characteristics.

Much attention has been given to the fiscal and macro-economic challenges represented by population ageing, which governments must certainly confront and prepare for (United Nations, 2013). As Leiwen and O'Neill (2007) point out, changes in the number, size, and composition of households are related to many issues of economic, policy, and social concern. From a policy perspective, they represent central inputs to the development of housing policies for central and local governments.

Household characteristics, especially those linked to household life cycle stages, are also important to understand patterns of consumption and saving. From an ecological point of view, shifts in the distribution of households by size and type through their effects on consumption patterns also induce environmental consequences. As societies age, they also bring about changes in the living arrangements of older people vis-à-vis younger family members and in the private and public systems of economic support for children, adults, and most critically, older persons. However, detailed analyses of household demographic characteristics — such as the size, structure, composition and headship of households — are not readily undertaken,

and these analyses are lacking for many developing countries despite emerging trends in household formation and composition.

8.1 Towards a declining household size

Data from the Egypt Labor Market Surveys show that Egyptian households have undergone impressive changes over time in both size and structure. In the period 1998–2012 covered by the surveys, this evolution has been characterized by an increasing trend towards smaller household sizes, which can constitute the first sign of the passage from the large family towards a smaller nuclear model (Table 5a; Table A6).

The rising diffusion of smaller households emerges first of all in the urban context. Among urban households, the most prominent trend regards the rise in solitary living, which represents almost one in ten households in 2012. 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 in ten urban households had a size smaller than four members in both 2006 and 2012. The percentage was less than 30 percent in 1998. At the same time, the proportion of the largest households (those with 10 or more members) was reduced more and more.

In the rural areas, changes were less important, even though the trend towards a smaller household size was confirmed. In 1998, the highest percentages were in correspondence to household sizes from 5 to 7 members; in 2012, the highest importance corresponds to 3–5 component households (Table A6). In the rural areas, the decrease in the largest households (including 10 or more members) was also dramatic: from 8.4 percent in 1998 to 1.6 percent in 2012.

If we turn to the distribution of the Egyptian people among households by size, we observe remarkable changes across the country (Table 5b). The proportion of the population living in one person households rose from 1 percent to 1.7 percent in the period 1998–2012. Conversely, the proportion of the population living in 7–9 person households decreased by about 50 percent.

Data show a concentration of the Egyptian population inside households smaller than seven members, with about 62 percent of the population included in 4–6 member households. In 2012, a little less than half of the population lived in a 4–5 member household (Table A6).

More impressive have been changes in the percentage of the population living in the largest households: only 3 percent of the Egyptian population lives in a household with 10 or more members in 2012, a quarter of the percentage in 1998 (Table 5b).

The increasing trend towards smaller household sizes has seen the average household size in Egypt fall from 6.2 people per household in 1998 to 5.6 people in 2006, and then to 4.1 people in 2012.

Data released by CAPMAS (2014a,Tables 2–15) for 2006, according to the final results of the population census, show the same average household size in the urban context (3.9 members) but rather different figures for the rural context (4.4 members versus 5.1 in 2006) and for the whole country (4.2 in the census result versus 4.5 members from ELMPS).

At the same time, a great deal of variability in the size of the households persists in 2012among regions in the country and rural and urban areas (Table 6).

In Cairo, the average size changes from 5.1 in 1998 to 4.5 in 2006 and 3.6 in 2012. In 2012, more than 28 percent of the households are one-person or two-person. In the rural areas of Upper-Egypt, the household average size in 2012 is equal to 4.8, versus 7.8 in 1998 and 7 in 2006. Changes in household size take place jointly with the structure of the domestic aggregate and the age structure of the members. The size and structure of the households affect co-residence of the generations. Individual data from Labor Market Surveys show that around 18-

22 percent of Egyptian households include at least one member aged 65 or older in the three surveys (Table 7).

In the 1998 and 2006 surveys, a large number of households include 3–4 generations, but the trend is towards a sharp reduction. In 2012, the share reaches 9.7 percent at the country level. Between 2006 and 2012 we see a rising percentage of single generation households, including those living alone and with spouse, siblings, and siblings in-law. The number of generations within the household provides an indication of the relation lines it encloses. In multi-generational households a range of relations are vertical, crossing generational line and some individuals occupy the role of both parents and children. Also, in households including a low number of generations, a variety of intra-generational relationships (most horizontal family ties) can subsist.

Geographic differences emerge (Table 8): the highest share of households including at least one aged individual is found in the urban governorates (Cairo, Alexandria, Port-Said, Suez). Also, in the other regions of Egypt, the urban areas always present a wider diffusion of households hosting at least an elderly.

9. Older People, Living Arrangements, and Intergenerational Ties in Egypt

In many developing countries, the on-going population growth, the rural exodus of younger people to cities and towns, the urbanization processes, and the decline of agricultural productivity have challenged the traditional family support system, leaving more elderly people without traditional support and care from their families (Mason, 1992; Schwarz, 2003).

9.1 In Arab countries, the family continues to be the basis for support of older people

The family continues to be the main source of support for older people in the MENA region, and co-residence is a principal means by which families meet the needs of the elderly (Sibai and Yamout, 2012), particularly in countries where systems of public support are just emerging. The number of institutionalized older adults remains low in most countries of the region - less than 1 percent of older persons (Kronfol, Sibai and Rizk, 2013).

Religious norms and cultural values in Egypt — as in Arab countries in general — strongly acknowledge and affirm the vital role of family and informal support channels (in particular sons) in the care of older parents. Attention to ageing issues is only just emerging, and support for older people is still considered a private matter.

The phase of rapid demographic and socio-economic transformations the country is experiencing implies substantial changes to the traditional joint-family structure. When the elderly live in extended households they share the living standards of larger population groups, which may include young people as well as working-age members. Previous results outlined that the extended family system is changing towards a more nuclear family structure, including the risk of an increase in the vulnerability of older people in the country.

9.2 The role the elderly play in the household

Information on age, sex, marital status, and relation to the head of the household for each household member allows us to understand the structure of the household in which older people live. A comparison of the social and economic situation of the elderly as well as the role they play in their household can be included in the analysis. As already indicated, an important variable is represented by the household head. In multigenerational households, the older or the younger generation can assume this role. We consider the position of the elderly in the household, dividing those who retain the headship of the household from those who are parents in the family of a child or those living in the household of a brother or other relative. According to the Labor Market Surveys data, in Egyptian households, widowed women living in the family of a child also sometimes assume the role of head.

Among men aged 65 to 79 years, about 9 out of 10 were head of the household both in 1998 and in 2006. In 2012, the percentage is higher (Table 9). Among women in the same age group (65–79 years), the observed percentage is lower, but the position of head of the household became more and more frequently held by women, and the number of female heads increased by 59 percent between 1998 and 2012.

This trend is, above all, due to the growth of the number and the relative weight of women living alone. In 2006, about one in five women aged 65 to 79 lived alone; in the oldest age-class the percentage reaches 22 percent. The share of women aged 65-69 years living alone has risen to 23 percent in 2012; among the oldest old the amount is remarkably high. Older women are the parent of the household's head more frequently than older men in all the older age-classes. Indeed, from 1998 to 2012, percentages declined for both genders among the elderly aged 65–79. The gender gap in the position of parent of the household head was also reduced in this age-class, whereas it continued to be large among the oldest old.

As already stated, widowhood is more frequent among women, who are often younger than their husbands and have a higher life expectancy. Hence, older women are also more likely to live without a spouse and to live alone than older men. As a result, older women are less likely than older men to receive assistance from close relatives, including spouses. In most countries, the major concern about providing adequate support to the oldest-old primarily focuses on older women's need for support (United Nations, 2010a).

Differences in survival between spouses noticeably emerge from the distribution among the relationships with the household head. Men more frequently assume the role of head of the household; women are more likely to live as a parent in the family of a son. The share of households headed by an individual aged 65 and older amounts to 14–15 percent in 1998, 2006, and in 2012, but living arrangements of the elderly change during the reference period (Tables A7, A8 and A9). The role of household head is also high among the oldest old, aged 80 years and more, in particular for men. In the latter age class, women are more frequently designated as parents in the family of a son. For married couples living alone, it is almost always the man who is regarded as the head (Table 9).

9.3 Late-life living arrangements

To deeper assess the situations of older people and the ways in which family members support their needs, we consider the characteristics of and changes in living arrangements between 1998 and 2012. As previously stated, it is important to analyze household structures; our attention is focused on parent-child co-residence, on the spread of living alone, and on other family patterns. Tables 10 and 11 show the distribution of the elderly aged 65 and older among different living arrangements.

The analysis of Egyptian household features by gender shows that considerable differences in co-residential ties exist among men and women.

During the reference period, there has been a rise in the percentage of men living with the spouse only, a result of both gains in the survival model and in new choices about late-life living arrangements.

The nuclear family[18] remains the most diffused form of living arrangement, but the share of aged people living with relatives decreases, when the oldest ages are analyzed too (see Tables A7, A8 and A9).

Older Egyptian men (head of the household or not) live with children and grandchildren more often than older women do, but the percentage is decreasing. The percentage reached 75 percent in 1998 and has fallen to about 60 percent in 2012. Men in couples often live in complex

[18] Elderly parent(s) and unmarried child(ren).

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.

The large increase in the percentage of those living alone or in elderly couples — for both men and women — is joined with the falling percentage of those living with descendants. If we also consider men and women living in elderly couples, we find that about 45 percent of the urban elderly live in 'older households.'

Although independent living is more and more common among elderly Egyptians, there is also an emerging trend of relatives within the households that have a 'more remote' relationship with the household head, such as siblings, siblings-in-law, or other relatives (Table 10, Table 11; note 6).

We can recognize this trend in the whole population, but it is stronger among the elderly. If we do not consider brothers and brothers-in-law among 'other relatives' but only more remote kinships, people (of any age) living in households where the relationship with the head is a remote kinship represented 0.7 percent of the total population in 2012 (the weighted number is equal to more than 527,000 individuals), whereas they represented 0.4 percent of the total population in 2006 (a weighted number of nearly 130,000 individuals). Among the elderly aged 65 years and older, the percentage reaches 1.65 percent in 2006 and 2 percent in 2012. Elderly women are especially involved in the phenomenon: 2.9 percent of elderly women in 2012 lived in households with a remote kinship to the head (the weighted number is almost 70,000 people). The trend first concerns elderly rural women, who reached 3.5 percent. We can see in this trend both an intra-generational and an inter-generational solidarity primarily oriented towards older people who perhaps cannot receive help and hospitality from closer relatives.

It has been proposed (Hagestad, 1992) that women, throughout their adulthood, invest more time and energy in intergenerational ties than men because they must rely on help from both children and close relatives as well as from more remote relatives.

It is difficult to assess whether the recent financial and economic crisis has played a role in the emerging trends in Egypt.

9.4 Independent living of the elderly: a long lasting tendency

Living alone or in a couple is a trend in line with a general propensity towards independent living, which is already widespread in more developed countries and also increasing in some developing countries (Glaser, 1997). The age pattern of solitary living is affected by many factors deriving from demographic, social, and economic behaviors. We can recall the level of widowhood; married older persons usually do not live alone. The gendered patterns of survival imply that men live longer with a spouse and in multi-family households, where the cohabitation of a higher number of generations is more frequent. On the other hand, older women live alone more frequently than elderly men, and older women also live more frequently in extended-family households.

In addition, the patterns of kin availability (for example, the spatial proximity of the elderly to their kin, especially their adult children) can affect choices of solitary living or co-residence.

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 society. Older Arabs living alone are a relevant socio-political group because they may more often need external assistance when ill or disabled, face greater risk of social isolation, and may more often be poor.

However, living alone or in a couple may not always be the result of an independent choice. For some older Egyptians, it could be a forced condition induced by the increasing urbanization and job migration of younger relatives (Angeli and Alberani, 2011).

In Egypt, nearly three in ten urban elderly women lived alone in 2012; in the rural areas more than two in ten. Among women aged 65 to 79 years, the percentage of those living alone shows growth during the reference period, rising from 15 percent in 1998 to about 19 percent in 2006. In 2012, more than one woman in five lived alone in this age-class. As in other countries, men living with their spouse in their old age are more numerous than women.

Egyptian households also present wide geographic differences in their structure (Tables A7, A8, A9). The distribution of living arrangements by residence shows that in the urban context, one in four women aged 65–79 lived alone in 2006, whereas the figure reached 28.6 percent in 2012. In the rural areas, the percentage has grown from about 12 percent in 2006 to 18.5 percent in 2012. It is important to note that percentages of living alone are also high among the oldest elderly women. We estimate[19] that about 298,000 older Egyptian women (aged 65 and older) lived alone in 2006; the figure for 2012 is over 560,000 women. For men, percentages of living alone remain at low levels. As shown in Table 10 and Table 11, also living with a child and/or grandchild presents different percentages for men and women and changes in the period here considered.

The female tendency towards living alone has been long lasting in Egypt. Table 12 includes percentages of aged people[20] living alone from many Demographic and Health Surveys in selected Arab countries (Yount and Sibai, 2009, p. 292).

Since the late 1980s, the gender gap in the percentage living alone has become more marked in Egypt than in the other countries. In the age-class 70–79, 7 percent more Egyptian women than men were living alone in 1988, compared to 16 percent more women than men in 2005. 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 21st century, this gap tended to increase. Demographic and Health survey data outline that between 1988 and 2000 rates of solitary living rose faster among older men than older women, and rose especially quickly among the oldest and most economically ‘‘vulnerable’’ men (Yount and Khadr, 2008).

10. Elderly Co-Residential Living Arrangements in 2012

If we consider the structure of the households in terms of both conjugal units and kinship ties of the elderly, we can observe the household “complexity,” which is often coupled with the presence of the number more or less high of generations in the household. Households where elderly components co-reside with other people can be classified by different conditions of “complexity:” independent living (living with the spouse only); nuclear family[21]; extended family household; and multi-family household. Table 13 shows the distribution of the elderly males and females aged 65 years and older among different types of co-residential living arrangements, other than living with the spouse only.

More than 50 percent of the elderly live in co-residential arrangements, with higher propensities in the rural areas. The two genders show a dissimilar distribution among different co-residential living arrangements, which depends on gender roles, dynamics in relationships, and gendered patterns of survival. Gender-related differences in the distribution inside nuclear families induce dissimilar percentages of men and women living with younger generations (Table 10 and Table 11).

Data in Table 13 reflect the average distribution in the whole old ages, but conditions change as age advances, because passages in late-life cycles are connected with family cycles. Figures

[19] Utilizing the variable ‘expansion factor’ included in the survey.

[20] 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.

[21] Elderly parent(s) and unmarried child(ren). We have here also included skipped-generation households.

8 and 9 outline the proportion of people by age group and selected household types. Even if the chances of living with a relative increase for both genders as people age, data confirm that men and women ―in the same age-class― live in quite different positions with respect to living arrangements and modifications in household types. The preliminary distribution among households is different between the two genders, and as age advances, the trends are also different.

The proportion of those living only with a spouse has a different pattern between genders. It rises until middle old age — because of the exit of adult children from home — after which it diminishes due to the growing share of widowhood. The share of couples living with children begins to drop at 60 years for both genders, but that drop is more severe for men because they start from a higher level.

The most important difference is represented by the dissimilar importance for the two genders of multiple-family living arrangements and extended families. Multi-family households are more common among men. The share of elderly males living in multiple-family households rose in ages 70 and above; among men aged 75–85 years, about one in four is included in a household where at least two conjugal units cohabitate. Females more frequently live alone or are included — more and more in the higher ages — in extended households.

As expected these figures imply that, with age, older people prefer to become a member in a household of one of their children as an alternative to living alone. The share of women living with only a spouse sharply declines with increasing age after 65 years, while we observe an increase in other living arrangements, especially living alone.

10.1 Living in extended households and multi-family households

As people grow older, the need to live with their grown children or other relatives can increase due to health reasons, especially if they are living on their own following the death of their partner.

Co-residence of elderly parents and adult children is a special form of intergenerational relations that can therefore be seen as an especially close form of intergenerational exchange in adulthood. Sharing the same apartment is likely to go along with frequent contact, mutual help, and financial benefits.

Filial responsibility to older parents — an aspect of the concept of familism — refers to the generalized normative expectation that adult children have the duty to support their ageing parents. At the policy level, social policies and services often fail to recognize intergenerational solidarity and therefore tend to weaken it, by allowing adversarial relationships to develop between generations (United Nations, 2015)

We recall the importance of demographic changes. In particular, decreases in fertility can have a direct effect on the availability of relations for intergenerational co-residence.

Burholt and Dobbs (2013) argue that in cultures where multigenerational households are common, caring for parents has been discussed often in terms of filial obligation, which is described as a sense of duty towards one’s parents. In countries that emphasize interdependence or filial obligation, just “being old” is sufficient for a younger generation to provide help, whereas in countries that call attention to independence as a goal, help is only supplied in case of need. Indeed, intergenerational solidarity is not limited to co-residence; intergenerational relations involve various aspects of exchange, but when the elderly are frail, sharing the same apartment also involves relatives taking in their parents to provide permanent help and care (Isengard and Szydlik, 2012).

10.2 Who lives in extended or multi-family households?

Our aim is to investigate the individual factors that determine the type of living arrangements the elderly have. The effect of individual variables on the co-residential arrangements of the elderly was estimated through a binary logistic regression model in which the dependent variable was the inclusion in a 'complex' household.

Two composite categories were constructed. The first category includes the 'extended-family households' and 'multi-family households' in a group representing more composite and complex housing arrangements. The second category combines the other types of living arrangements. Living in complex households has been contrasted with each of the other co-residential arrangements (alone, couple-only, nuclear household, and other). The dependent variable has the value '1' if the elderly person lives in a complex household and '0' otherwise.

We have performed a logistic model in which we estimated the influence of individual characteristics on the propensity of older persons to live in extended or multi-family households (complex households).

As explicative variables, we have introduced individual characteristics of the elderly: sex (female as the reference category), older age-class (65–79 years as the reference category vs. 80+), type of residence (urban as the reference category vs. rural), and the presence and severity of health limitations the elderly person claims to suffer from (not limited as the reference category vs. strongly limited, limited to some extent).

Table 14 shows the odds ratios of the explicative variables. The gender pattern for living in extended or multi-family households, as already observed in the bivariate analysis, is one of decreased likelihood for elderly men in comparison with elderly women. Elderly persons aged 80 years or older (possibly affected by age-related health problems) present a propensity to live in complex households twice as often as the elderly aged 65–79 years. In addition, living in a rural context significantly increases the probability of living in a complex household (o.r. = 3.1). The presence of (declared) health limitations has no fully significant effects on the likelihood of being included in co-residential arrangements.

11. Transitions in Living Arrangements from 2006 to 2012: Insights from the Panel Data

11.1 Panel data follow individuals and households over time

The 2012 ELMPS survey includes a large group of individuals who were already included in the 2006 survey. Of the 37,140 individuals interviewed in the 2006 survey, 28,770 (77 percent) were successfully re-interviewed in 2012. These individuals represent 6,752 households (Assaad and Krafft, 2013a). These repeated observations on the same units over two years determine the panel data. The availability of repeated cross-sectional surveys not only allows researchers to analyze over-time change but also to make use of these data for longitudinal study. Microdata panel sets offer the potential for the construction of more flexible and richer statistical models of transition dynamics than do those based on cross sectional information (Pelzer, Eisinga and Franses, 2001). Obviously, an important advantage to using a matched panel is that it provides a measure of major individual change for each sample unit, and it enables us to use each unit as its own control (Assaad and Krafft, 2013a).

On the other hand, the limits of this type of information are well known: we can only know the situation with respect to each sample unit at specific points in time (in this case at the 2006 and 2012 surveys), but we do not know the changes that occurred between the two dates, if any. The living arrangement information obtained from the 2012 survey data could be the final result of other changes in individual life we cannot observe.

Demographic information (age, marital status, household size, and relationship to the head of the household) about each member of the household included in the panel sample allows us to compare living arrangements in 2006 and 2012. As already stated, the questionnaires for the different survey rounds are analogous to ensure data comparability over time.

11.2 Transitions in living arrangements between 2006 and 2012: differences by gender and residence

To compare the characteristics of individual living arrangements in the two surveys, we have selected from the panel sample individuals aged 65 years and older in 2012. We have then fixed the cohorts under observation, a time-invariant attribute. The analysis[22] included 1,725 elderly people: 831 males and 894 females.

If we consider the same synthetic distribution of household typology in 2006 and 2012, starting from individual-level observations, we can observe a measure of mobility in which elderly persons depart from the individual living arrangement in 2006 and move toward another living arrangement in 2012. Estimates of transition probabilities are derived from the sample proportions[23].

Thus, the probability of transition *Pij* from any given state *i* (living arrangement in 2006) is equal to the proportion of individuals that started in state i and ended in state j (living arrangement in 2012) as a proportion of all individuals that in 2006 started in state i. Table 15 can then be viewed as a matrix of transition rates in which the cell probabilities sum to unity across rows. The matrix records the probabilities of making each of the possible transitions from one time period to the next, namely the probabilities of moving from one living arrangement in 2006 into the various other living arrangements in 2012.

In 2012, high proportions of individuals were still being placed in the same type of living arrangement as in 2006. The highest rate of non-change in living arrangement was found among those already living alone in 2006 (85 percent). Those living as a couple with the spouse only in 2006 presented the same condition in 72 percent of cases in 2012, while 17.5 percent of them lived alone in 2012.

The transition rates of those living in a nuclear family (couple with children or parent alone with children) in 2006 are very interesting: about half of these families still live in a nuclear family, one in five live with the spouse only (clearly the child(ren) left the household during the considered period). Moreover, about 15 percent are included in complex households (presumably the elderly have been included in the new household of a married child), and about one in ten lived alone in 2012.

If we compare male and female changes in living arrangement over time, many differences emerge. In Figure 10, a synthesis of transitions in living arrangement by gender are included. To verify the main transitions, only rates equal to or higher than 5 percent are included in the figure (in Tables A10a, A10b the complete data).

Trends are conditioned by both different average ages of men and women and different nuptial behavior in later ages.

The probability of still being in a solitary living arrangement is high for both genders, although, as expected, women present a probability higher than 85 percent. Differences in ages of the spouses imply that for men, the probability of remaining in a nuclear family is higher than for

[22] We have excluded cases for which there were inconsistencies in individual characteristics between 2006 and 2012; furthermore, we have excluded the elderly classified as servants.

[23] P*ij* = $P(Yt = j|Yt - 1 = i)$. Let *Yt* be the state of the process at time *t*. Since this is a Markov chain, this probability depends only on *Yt*−1, so it can be estimated by the sample proportion (Kalbfleish and Lawless, 1985). This approach has been proposed for studies of social mobility (Goldthorpe, Llewellyn and Payne 1987; Goldthorpe, 2007).

women. The probability of male transition from the extended family to living with the spouse only is one in four, and the probability of male transition from the extended family to the multi-family is about one in ten. Women present a more complex picture; they transition toward solitary living (17.6 percent of women vs. 3.5 of men, as stated in Table A10a), extended households and — like men — towards multi-families. In addition, the estimated probability that women starting in a multi-family in 2006 live alone in 2012 is nearly one in ten.

11.3 Urban and rural women: transitions to solitary living

The confirmed changes of older females' living arrangements towards solitary living can be better analyzed taking into account urban and rural residence. Figure 11 shows inflow rates of living arrangement mobility between 2006 and 2012 towards living alone in 2012 for urban and rural women. We can consider data as estimations of the probability of living alone in 2012 starting from the individual various living arrangements in 2006.

Among women aged 65 years and older included in the panel sample, 30 percent lived alone in urban areas in 2012, whereas 22 percent lived alone in rural areas. Values are the same as those obtained analyzing late-life living arrangements on the whole 2012 sample (see again Table 11), supporting the analyses of the panel sample.

For women, the higher risks of living alone in 2012 derive from the situation of living alone in 2006 for both urban and rural residence. Half of urban women living alone in 2012 were in the same condition in 2006.

For both urban and rural women, the following higher rates correspond to the inclusion in a nuclear family and then being part of a couple living alone in 2006. Although the sequence is the same, women present different behavior with respect to urban/rural residence that can be appreciated by examining absolute values (see note below figure).

Among those women who lived in complex households in 2006, the risk of living alone in 2012 was higher for rural women than for urban women. Once more, it is important to recall that panel data refer to specific points in time and do not detail changes realized between the two surveys. It is possible that women who were in complex households in 2006 underwent previous transitions before arriving at their 2012 living arrangements.

A multinomial logistic regression analysis was used to better identify the gender-related influence of the main individual variables on the probability of living alone in 2012, starting from a living arrangement in which the elderly person lived with a relative other than their spouse in 2006.

As a response variable, we have created the variable 'alone in 2012 from other living arrangements in 2006' with the following categories: a) alone in 2012 while living in a complex household (extended family, multi-family, skipped-family) in 2006; b) alone in 2012 while living with the spouse and child(ren) in 2006; c) alone in 2012 while living with child(ren) in 2006. Nuclear families were then considered separately depending on whether they were complete-nuclear families (couple and children) or incomplete-nuclear families (the elderly person was a single parent) in 2006. 'Alone in 2012 while living in a complex household in 2006' was included as reference category.

We model the effects of the following covariates associated with the occurrence of living alone in 2012: age in 2012, urban/rural residence in 2012, and gender. Results in Table 16 show that there are significant relationships between the dependent variable and the set of independent variables. In this model, the variables of age and sex are significant contributors to explaining differences in transitions toward living alone in 2012.

The two equations in the Table of parameter estimates are labelled according to the group they contrast to the reference group. The first logistic regression equation was used to compute a

logistic regression score that would test whether or not the subject is more likely an elderly living alone in 2012 while living as parent alone in 2006 rather than living in a complex-family household.

In the first regression equation, the variables age and urban residence have a statistically significant relationship to distinguishing the elderly living in incomplete-nuclear family relative to living in a complex household in 2006. Increases in age made an elderly living as parent alone in 2006 to be about 15 percent less likely to live alone in 2012 than those living in a complex household. Those living in an urban setting were more than three times as likely to live alone than the rural elderly (o.r. = 3.5). In the second regression equation (model for living with spouse and children relative to living in a complex household in 2006), the variables age and sex (male) have a statistically significant relationship to distinguishing the elderly living with the spouse and children in 2006 from the reference category.

Although transition rates from nuclear families to solitary living were lower for males than for females (Tables A13a and A13b), being a male — while holding all other variables in the model constant — increased the likelihood of transitioning to solitary living from a complete nuclear family than from a complex family.

12. Public and Private Support Schemes

The welfare of the ageing population requires the strengthening of family support and the development of community-based programs concerning matters such as health, nutritional and medical care, housing, living arrangements, and personal social services.

Data included in the section on 'Transfers & Other Sources of Income' from ELMPS 2012 provide information about public and private transfers the households received in the 12 months before the survey. The considered forms of public transfers are Normal pension, Sadat's/Mubarak's pension, Social assistance from the Ministry of Social Solidarity, and Social assistance from religious/non-governmental institutions (in Table A11, there is a detailed list of the survey's questions about public support).

Table 17 shows that 57.3 percent of households with at least one elderly member received a pension in 2012. Higher percentages characterize the urban areas as a result of the patterns of labor force participation. Other forms of public assistance — for example, those more devoted to people in weak socio-economic conditions — are more diffused in the rural areas.

The questions about public support activities are directed to the households,[24] and the 2012 survey does not include information about the individuals who received the public transfers. We cannot obtain detailed data about all the elderly beneficiaries of public aid; it is only possible to obtain this information about people living alone or living with a spouse only.

12.1 Public support for elderly persons living alone

Figure 12 and Table A12 include data on men and women living alone who received public transfers in 2006 and 2012. In the period under analysis, the percentage of older people receiving public transfers has been reduced among both genders, with the exception of social assistance from the Ministry of Social Solidarity. Women are more likely to be beneficiaries of social pensions (Sadat and Mubarak pensions) and support from the Ministry of Social Affairs, and women are more likely than men to receive help from religious and non-governmental organizations. Between 2006 and 2012, assistance from the Ministry of Social Affairs to elderly persons living alone increased, more so for women than for men. Geographic differences and changes between 2006 and 2012 clearly emerge when taking into account information about the type of residence (Table A12).

[24] The questions are: 'Over the past year, did the household receive… .' See table A11.

About 70 percent of the urban elderly aged 65 years and older receive a retirement pension. In the rural areas, this figure only reaches about 45 percent, a higher value than in 2006, when it was 35 percent (Angeli and Donno, 2014). Older individuals living alone in rural areas more frequently **receive both** social pensions and aids for the poor (Sadat's/Mubarak's pension, Ministry of Social Affairs support). Assistance from private associations—which was much less in 2012 than in 2006—does not differ between urban and rural setting.

12.2 Private solidarity with elderly persons living alone

As previously stated, demographic changes in Egypt, together with socio-economic transformations, urbanization, and increasing migration, cause the weakening of the traditional multi-generational family structure. The number of elderly living as dependents declines, whereas the number of those living alone or in households with only elderly members increases. Thus, older persons living in nuclear households have to support themselves financially and are more likely to live in poor conditions. Their level of vulnerability increases. When the public funded social security schemes are not able to address the needs of the elderly, the family remains the main care provider and plays the most significant role in preventing many older people from living in poverty.

The engagement in multiple support schemes among family members is made possible by the fact that relations within families are not limited by their residential arrangements. Therefore, in spite of family breaks due to migration or new choices or constraints about living arrangements, old people living alone (or living in skipped-generation households) can count on remittances from relatives living abroad.

Even if parents and adult children no longer live in the same household, they can help each other by providing financial support, care, and other forms of assistance.

Indeed, as Wolf (1994) discusses, the 'access' to family relations could have two manifestations: either the face-to-face access implied by co-residence, or the less intense or sustained access implied by close spatial proximity. Many older parents who live separately can interact with children every day or at least several times a week; there can be 'intimacy at a distance.' If co-residence of elderly people with their younger relatives can be evaluated as a form of intergenerational solidarity, the elderly living in independent arrangements can rely on assistance from non-cohabiting family members. Indeed, as many researchers on other countries have pointed out, older persons living apart from children often have children living nearby, and strong ties of affection and feelings of mutual obligation tend to persist.

Sherif-Trask (2006) writes that most Egyptian people live with or near their natal families, and the extended families are in constant contact. The centrality of family emerges despite class and regional differences. Most Egyptians continue to feel that family and extended kin provide for their security in an increasingly unfamiliar world.

Individual data included in the Egypt Labor Market Panel surveys allow us to analyze informal support from relatives and other non-cohabitants. The question q12201 asks: 'During the past twelve months, has your household or any of its members received any money or goods from persons who are not members of your household or who are former members of your household?'

As for public support, the question is focused on the households. It is then possible to utilize the information to investigate private solidarity towards the elderly living alone or with spouse only.

In 2012, about 12 percent of households with at least one elderly individual (65 or older) received informal support from family members (living both in Egypt and abroad). A higher percentage of rural households received informal transfers (about 15 percent) than urban

households (10 percent). However, older persons living alone, above all in rural areas, are more vulnerable and need to receive assistance (financial assistance above all) from family members living elsewhere. There are no appreciable differences between the proportions of households hosting at least one elderly person who has received private help in 2006 and in 2012. The comparison between the 2012 and 2006 figures (Angeli and Donno, 2014) suggests that among older people living alone, women are more likely than men to receive support from relatives, even if intergenerational support has declined for both genders. In 2012, 14.1 percent of women declared receiving support from relatives versus 3.7 percent of men (the figures were 26.7 percent for women versus 10.7 percent for men in 2006).

The spread of private forms of support for the elderly provided by relatives significantly varies with individual, demographic, and socio-economic characteristics. We aim to examine the effects of some selected socio-demographic variables on the likelihood of receiving assistance from relatives — a proxy of intergenerational solidarity — for older people living alone and for couples in which at least one of the spouses is aged 65 years or older (elderly couples).

We specify two models for the elderly living alone: the first referred to 2006 and the second to 2012. The dependent variable is the likelihood of receiving support from relatives during the 12 months before the survey. The variable has the value '1' if the elderly person affirms having received private support and '0' otherwise.

Covariates are represented by age (65–79 years as the reference category vs. 80 years or older), sex, residence (with rural as the reference category vs. urban), and the existence of public support for elderly people living alone (institutional support[25] and social assistance from religious/non-governmental institutions). The logistic regression results are displayed in Table 16 with reference to 2006 and to 2012. The probability of receiving help is significantly determined by sex: older women were more likely than men to be assisted by family relations in both years. Results underline that the behavior of informal support for elderly people living alone seems to have changed in the period between the two surveys with respect to other covariates. In 2006, elderly people living alone in the urban context were less likely to receive private support from family members than those living in rural areas (Angeli and Donno, 2014), whereas in 2012, the type of residence did not have a significant impact.

Furthermore, in 2012, the existence of public or social transfers appears to have had a significant (negative) impact on the likelihood of receiving informal support for elderly people living alone. This result partially confirms the hypothesis that family is the most important source of care and protection for older people when the public welfare system is not able to meet their needs.

A regression model, with the same set of covariates, has been performed with respect to the elderly couples. In 2006, the most important covariates explaining the probability of receiving assistance from relatives were the type of residence and the availability of public support (Angeli and Donno, 2014). However, in 2012, none of the considered explicative variables appear to have had a significant impact on the dependent variable.

It is very difficult to understand these changes, which could be explained both by new living arrangement behaviors and by new constraints induced by the economic crisis. As Assaad and Krafft (2013b) state, the economic crisis accompanying the revolution of January 25th, 2011, was bound to severely affect labor market conditions in Egypt. On the other hand, we recall new co-residential behaviors of Egyptian households, in which extended families live in the same building. Assaad and Krafft (2013a) write that '…Increasingly, these households live in multiple story buildings containing separate apartments with their own kitchens. These families may be sharing some but not all meals and may be pooling some of their consumption budgets

[25] Normal pension, Sadat's/Mubarak's pension, Ministry of Social Affairs support. See Table A11.

but not all… .' Even if data from the 2012 ELMPS allow us to determine the structure of the households, this new behavior could induce difficulties in the clear identification of informal support among relatives.

These findings recall assertions of Schwarz (2003) who introduces a further problem in dealing with unclear living arrangements: he affirms that the high degree of co-residence between the elderly and other generations can itself be included among the factors that make it difficult to find an appropriate response as it can induce some difficulties to recognize situations at risk of poverty.

13. Socio-Economic and Health Conditions in Later Life 2012 ELMPS

In the following pages, we consider the elderly included in the 2012 ELMPS, taking into account the typology of the households where they are included and the percentages of these households belonging to the first wealth quintile. Data from 2012 ELMPS include information about household wealth quintiles, based on an asset index.

13.1 Living arrangements and poverty: some evidences on the elderly

Table 19 includes the percentages of elderly people who live in households belonging to the poorest wealth quintile[26]. The living arrangements are classified taking into account the co-residential kinship ties of the elderly.

As already stated, rural residence implies a more difficult economic situation for the Egyptian elderly than urban residence (see again Table 4). In the rural areas, households headed by elderly people present higher percentages of those belonging in the first quintile of household wealth.

With respect to gender, we find evidence of a worse situation for females than for males in both rural and urban contexts, above all when the elderly do not live with descendants. Among urban women, 29 percent belong to the first wealth quintile, versus 19.6 percent of urban males. In the rural areas, percentages are 27 percent and about 34 percent for males and females, respectively.

If we consider the type of household in which the elderly are included, starting from the relationships between members, the table suggests a worse situation for both genders in the rural areas than in the urban areas with respect to every household form. Moreover, some household types represent more intense situations of economic poverty for the elderly (as well as for the other members of the households). For females, the poorer situations involve living alone in the rural context or with remote relatives (other than children/children-in-law, grandchildren/grandchildren-in-law, and siblings). Among women living alone in the rural areas, 63.4 percent belong to the first wealth quintile; among urban women living with "other relatives" the percentage reaches 68 percent[27].

Former results suggested that older women may have a wider network of co-residential support than older men, because they — more often than older men — tend to live with "other relatives" or with an unrelated person. Indeed, these conditions are frequently found in situations of poverty, especially in the urban context. If we consider those living in nuclear households (or family households), the data suggest that among both the urban and the rural elderly, those living with descendants[28] are in the most favorable conditions, whereas those in less favorable conditions are living with the spouse only.

[26] ELMPS classify households in classes of urban or rural wealth quintile.

[27] The number of cases is low.

[28] A family household has at least two members related by birth, marriage, or adoption, one of whom is the householder, in this case, elderly parent(s) and unmarried child(ren).

Data from ELMPS 2012 confirm the worse situation of the elderly living in the rural areas, as well as of people living in households with an aged head (Table 18).

People living in households headed by women face poorer economic situations than households headed by men, whatever the age of the household head. If the head is older households are more likely to be in the poorest wealth quintile for both males and females headed households. Moreover, one in two rural households headed by an old female are in the poorer wealth quintile; the share is 28 percent for households headed by an old man.

El-Laithy (2001) has studied the gender characteristics of poverty in Egypt (she does not refer specifically to older people) utilizing data from the Household Income, Expenditure and Consumption Survey (HIECS) conducted by CAPMAS in 1999–2000. She found that females were overrepresented among all (income based) poor in both urban areas and rural areas. They constituted 50.1 percent of poor persons, which exceeded their share in the population by 0.9 percentage points. Poor women depended greatly on charity from relatives and neighbors, and they get monthly income transfers from mosques, on which they rely for medical care and private lessons for their children. At the family level, other results from HIECS that focused on the period from 1999–2000 to 2004–2005 released by the World Bank (2007) stated that poverty risk was lower among the elderly above 60 years than any other age-class, but poverty among households headed by elderly persons was higher than among those with heads aged 20–34 in urban areas and were found to be relatively constant in rural areas.

Elderly living alone in rural settings are at **higher risk of poverty**. Older persons who live alone are more likely to be poor than older persons who live with their spouses and/or their descendants, and they have greater health care needs (Leiwen and O'Neill, 2007).

13.2 Living arrangements and health profile

About one percent of elderly Egyptians, men and women, are indicated in the 2012 survey as "permanently disabled." A set of questions in the survey asks people to assess their health status, allowing for analysis of how the elderly perceive their own health and the incidence of particular diseases.

In particular the questions:

- q1401: "How is your health in general?" Response are on a five-point scale: Very good/Excellent; Good; Fair; Bad; Very bad.
- q1402: "Have you been limited in the activities people usually do because of a health problem or a disability in the past six months or more?" Response is a three point scale: Strongly limited; Yes, limited (to some extent); No, not limited.
- q1404: "Do you have any longstanding illness / chronic diseases?" Responses are Yes/No.

In Table 21, some results about the self-perceived health status of the Egyptian elderly from the ELMPS 2012 are given. This information includes the percentages of affirmative responses about chronic diseases (Table 21a) and limitations (Table 21b) among the elderly living in each household type. Gender differences in health status among the elderly provide information on one main dimension of wellbeing. Very high percentages of the elderly declared a situation of disability, always exceeding 40–50 percent for both genders and for each type of living arrangement. Women present higher average rates of disability than men. Results are in agreement with the assumption in the international literature that women tend to live longer than men, but that elderly women are likely to experience higher levels of morbidity and health limitations. Many of the **additional years** of life women live may be spent in conditions of disability or illness (WHO, 2003).

Also among those living alone and those living in elderly couples, over 40 percent declare longstanding illness or limitations. As expected, due to the typical age-gap between spouses, men living with the spouse declare worse health conditions than women.

Mobility disability represents the most diffused kind of disability among the elderly aged 65 and older. Among males who declared to suffer from a disability, 37.8 percent presented mobility problems, whereas for women, the share was 56.8. For visual disability, the percentages were 32.7 and 18.9 for men and women, respectively. The presence of such problems seems not to influence the modalities of living arrangements with respect to living alone or in co-residence with descendants or other relatives, even among the oldest old aged 80 years and older (Table A13). Indeed, these evidences are in agreement with results of the multivariate analysis (Table 14) showing that the presence of (subjective) health problems had no significant effects — for the elderly — on the likelihood of living in complex households.

Results that refer to individuals recorded in the 2012 survey as 'permanently disabled' are also interesting. Most older permanently disabled men live in couples, either alone with their spouse or in nuclear families with children (the spouse may be absent). One in four older, permanently disabled women live alone; their other living arrangements are more frequently extended or multi-family households.

Additional data could further clarify the importance of health among the Egyptian elderly. Other interesting results have been achieved by Abegunde et al. (2007), who analyzed healthy life expectancy and the costs of chronic diseases[29] in 23 low-income and middle-income countries, which account for around 80 percent of the total burden of chronic disease mortality in developing countries. In this group of countries — which includes Egypt — chronic diseases were responsible for 50 percent of the total disease burden in 2005.

Egypt presents the second highest age-standardized death rate for chronic diseases after Russia (the highest value), followed by the Ukraine, the Democratic Republic of the Congo, Nigeria, Ethiopia, and South Africa. Egypt is also included among the countries in which sex differences in age-standardized death rates were lower. Moreover, the gap between rich and poor increases when life expectancy is divided into years in good health and years of disability. The poor have shorter lives than the non-poor, and a larger part of their lifetime is also affected by disability (WHO, 2000).

Following WHO (2000, p. 86) estimates, Egypt has the lowest total health expenditure per capita compared to other middle-income countries,[30] a high ratio of physicians to patients as well as a high level of drug consumption. The analysis reveals that both physicians and drugs in Egypt are primarily paid for by patients out of pocket, and households finance close to 60 percent of total drug costs through direct payments. According to estimates, the poorest households in Egypt spend over 5 percent of their income on drugs alone.

WHO estimates of disability-adjusted life expectancy (lifespan without disability) show that in 1999, the expectation of total years lived in disability at birth in Egypt were 6.4 years for men and 7.4 years for women. That is a percentage of lifespan lived with disability equal to 9.8 percent and 11.0 percent for men and women, respectively[31].

[29] Healthy life expectancy is a type of health-expectancy indicator that summarizes the average health in a population in terms of equivalent years of full health, accounting for the distribution of health states. The costs of chronic diseases represent the macroeconomic costs—or the costs to a country as a whole—of chronic diseases (Abegunde et al., 2007).

[30] South Africa, Mexico, Thailand.

[31] Values highlight a worse health behavior for Egypt with respect to other Northern Africa countries; for example, the percentage of lifespan lived with disability in Morocco was 7.4 percent and 11.0 percent for men and women, respectively. In Tunisia, the values were 7.2 percent and 10.6 percent for men and women, respectively (WHO, 2000).

13.3 Child care and elderly care

Exchanges between the elderly, their adult children, their grandchildren, and a larger kin group are complex. Giving money or other goods is a significant form of exchange, but other forms of material aid within or between generations are also important. Services — such as child care, elderly care, or care for frail individuals in general — could be significant sources of support and represent main sources of intergenerational exchange (Haraven and Adams, 1995). The elderly can receive support from younger generations as well as provide parental care.

Labour Market surveys include some information on the giving and receiving of child and elderly care. In the survey questionnaire, working women with children who were less than 12 years old were asked about receiving assistance in caring for children while they are at work.

In the 2012 questionnaire, these questions were as follows:

- - Who looks after your young children while you are at work? - primary helper (q8113_1)
- - Who looks after your young children while you are at work? - secondary helper (q8113_2)

Answers to the two questions underline a good deal of reciprocity in exchanges both within and between families and generations. On average, mother and mother-in-law are indicated as the primary helpers, and in many cases they are indicated together as primary (mother) and secondary helpers (mother-in-law). Furthermore, grandmothers, sisters, and other less close relatives are also mentioned. When the woman lives in an extended or multi-family household, other co-resident women appear as the main helpers. When child care is provided inside multi-family or extended-family households, this implies that co-residence meets the needs of the children as well us it could meet the needs of the parents, in intergenerational exchange across the life course.

In complex households ,sisters are the most common caregivers followed by mothers and mothers-in-law. When the woman lives in a couple with child(ren), mothers and grandmothers — in these cases not co-residents — appear as the main caregivers, followed by grandmothers.

Hareven and Adams, (1995) state that having an older parent or other relative watch one's children may have quite negligible consequences for a younger couple, or it may enable a young woman to maintain paid work and therefore increase the family's economic status.

Another set of questions (applied to all household individuals aged 6–64) deals with provided support. In the 2012 questionnaire the questions were:

- - Did you spend time caring for children, the sick or the elderly in the past seven days? (while not doing other chores) ? (q4307).
- - Did you spend time on childcare, caring for the sick or the elderly at the same time that you were doing other activities in the past seven days? (q4308).

When individuals affirm having spent time caring for someone it is difficult to comprehend who is receiving the care. In particular when both children and the elderly are included in the household, it is impossible to discern whether the care has been given to the youngest or the oldest individuals. If the household includes a permanently disabled older person, we can suppose that the care has (also) been given to him or her.

A further complication is that provided support could be given to non-co-resident individuals.

Indeed, in many households (more than 3,000 in 2012) in which no elderly people or children were included, individuals declared having spent time on childcare and caring for the sick or the elderly. Such information confirms that family relationships across generations continue to be strong and that intergenerational care is not restricted to co-resident relatives. Support proceeds in both directions.

14. Concluding Remarks

The recent population ageing across the globe represents one of the most significant changes in human history. There is a great deal of alarm about population ageing and its consequences for nations, for governments, and for individuals. The increase in life expectancy in most nations implies a rise in the likelihood that several generations will be alive at the same time. There is no historical precedent for the majority of middle-aged and older adults having living parents.

It has often been noted that population ageing will inevitably affect the economic stability of most countries and the policies of most state governments. It is important to underline that these transformations entail a lot of domains: social, economic, demographic, political, and private.

Indeed, as Bengtson et al. (2003) emphasize, it is less obvious — but equally important — that population ageing will profoundly affect families. The question is, who will care for the growing numbers of tomorrow's very old members of society? Many actors will be involved: governments, elderly persons themselves, and their families. Familial support and caregiving among generations usually run in both directions. Older people habitually supply care for a multiplicity of others (spouses, older parents, children, grandchildren, and/or non-family members), while adult children — and often grandchildren — are the primary sources of aid and care for their older relatives (WHO and US National Institute of Aging, 2011).

Like most world regions, many Middle Eastern and North African (MENA) countries are experiencing a demographic transition, albeit at different stages. Although the decline in fertility rates is expected to continue in the MENA region, the population will continue to grow rapidly for several decades as the result of 'population momentum.'[32] As total population increases, so does the elderly population, and with it social and health burdens that have important implications for social and political systems. Issues related to household structure and support for the elderly in most countries of the region are becoming more and more important as population ageing clearly emerges in many of these societies.

Older people in the Arab countries face common vulnerabilities that have important repercussions for their care (Sibai and Yamout, 2012). Challenges in the demographic, socio-economic, and cultural behavior induced by modernity can compromise family cohesion and old-age security. Arab countries need to invest in policies that build on intergenerational solidarity and support and empower caregivers with both financial and non-financial benefits. These support policies must promote caregivers as a resource for older persons while at the same providing caregivers with health care and social services.

In this analysis, dynamics in Egyptian living arrangements have been analyzed, with a deeper analysis of late-life trends and transitions starting from Labor Market Surveys. First of all, the work on ELMS 1998, ELMPS 2006, and ELMPS 2012 confirms that Labor Market Surveys represent a satisfactory data source for analyzing these issues. In addition, as the research on ageing is scarce in the MENA region, these surveys meet the need of population databases to track the emerging demographic and socio-economic changes that involve older adults. They represent a standard set of surveys where definitions and measurements are harmonized, allowing for the analysis of trends and changes over time and space.

Individual data on people as well as data on households allow us to recognize living arrangement structures as well as the role individuals play within their household. In addition, the analysis of household structures as well as information about private help provided to elderly people allow us to identify behaviors of intergenerational support. To some extent,

[32] The outcome of high fertility rates in the recent past leading to a growth in the size of the reproductive-age population that is large enough to balance the effects of lower fertility.

intergenerational ties can be further analyzed through the questions about care for children and the elderly[33].

As in most Arab countries, co-residence is one of the ways by which Egyptian families traditionally have provided support to their older relatives. In spite of the influence of tradition, data from ELMPS confirm that the relevant changes that have occurred in the demographic structure of the Egyptian population in the last decades have had an effect on living arrangements and intergenerational relationships. Gender roles, dynamics in relationships, and gendered patterns of survival induce, in Egypt, — as in most developed and developing countries — a different distribution among different co-residential living arrangements of men and women.

Modifications are relevant: among them we can underline the rise in female-headed households and a new trend toward independent living of the elderly. Data from the Egypt Labor Market Surveys show that the percentages of households including at least one individual of 65 years or older are similar in 1998, 2006, and 2012 and stay around 20 percent in both surveys.

The percentage of households in which all members belong to the same generation is on the rise, as is the percentage of households in which two generations cohabit. This implies a decrease in the relative importance of households in which three or more generations live together.

The percentage of households including at least one elderly person is evidently higher in the urban context, as a consequence of the spread of elderly people living alone, and in general for the different distribution of the elderly within the households, as a result of multiple demographic and social factors. The most common living arrangement for the elderly remains living with their children (and/or grandchildren), but parent-child co-residence has become less widely practiced, whereas there is a large increase in the percentage of elderly people living alone.

Men and women spend the latter part of their lives in different living arrangements and relationships. Most older women are widows living alone; most older men live with their spouse. The dissimilarities between men and women have strong implications for their family members. Gendered divergences in widowhood and remarriage imply that men are likely to maintain important, horizontal intergenerational interactions until the end of their life. At the time when men cope with serious health problems, they are likely to have a wife caring for them. On the contrary, frail and ill older women are typically widows; consequently, they rely more on other intergenerational relationships for help and support in old age.

Differences between rural and urban areas are also important; among rural households, the percentage of those including three or more generations is nearly double that in the urban context.

Also, differences between urban and rural areas in the distribution of the households by internal structure and co-residential living arrangements are on the rise. This important change primarily involves women and the urban context. Among women aged 65 or older, one in five lived alone in 2006; in 2012 this figure rose to almost one older woman in four.

Data also confirm situations of poverty and frailty among the elderly, despite the fact that public transfers and assistance for the older population have risen, mostly between 2006 and 2012. The case of women in poverty is of major significance, not only because of their intensely restricted life opportunities, but also because of the increasing number of female-headed households and the extension of their poverty to their relatives. More than a third of Egypt's female-headed households belonged to the first household wealth quintile in 2012. Data from

[33] This point could be easily improved by adding some questions in possible future surveys.

2012 ELMPS on the spread of poverty among the elderly clearly outline that among rural elderly, the percentages of those in the poorest household wealth quintile are very high, especially among women. Moreover, among rural households headed by an older woman, five in ten are in the poorest quintile; the percentage is between three and four in ten if the head is an older man.

Results are not always in accord. On poverty rates among the elderly (in this case the age-limit for old ages was 60 years), referring to 2012–2013 obtained from the Household Income, Expenditure and Consumption Survey, show higher values for men than for women (CAPMAS, 2014b).

ELMPS data show that older women present higher average rates of disability than men, in agreement with previous results obtained on 2008 Egyptian Demographic and Health Survey (Khadr et al., 2012).

Intergenerational ties are strong, and the care of the elderly is still pervasive, even in a context of fast changing living arrangements. Results from the 2012 ELMPS are sometime less clear than results from the 2006 ELMPS for example, with respect to private support towards the elderly living alone. In particular, it was not possible to comprehend the role, if any, of the recent financial and economic crisis.

Data suggest that parents and children both benefit from living together as emerged from other analysis (Bongaarts and Zimemr, 2002). The elderly receive the social, financial, and health support they require from the younger generation. Reciprocal exchanges take place when older adults assist with caretaking of younger children or look after the home when other adults are away.

A good deal of reciprocity among generations emerges, even if the elderly are not cohabiting, as well as the childcare contributions of the elderly; although the data in this area are not complete, the data do imply extended activities in intergenerational relationships.

Intergenerational relationships could alleviate frail conditions, first of all, for the elderly living alone. Egyptian elderly women living alone emerge as a frail group, but, on the other hand, they may expect more than men from family networks and intergenerational relationships. Among older individuals living alone in 2012, women were more likely to receive informal support from relatives than men. Rural areas, where older women are in more precarious conditions, show higher differences between genders than urban areas.

15. Policy Implications

The economic and social impact of the population ageing processes provide both an opportunity and a challenge. Policies should be re-examined in light of the principle that elderly people constitute a valuable and important component of a society's human resources (United Nations, 2009).

In this study, we have examined in depth the problems of the elderly living alone — which represent a socio-demographic and policy problem — in particular where public systems for the care of older people are not pervasive.

Older people represent a valuable element of society, but it is vital to discover the channels for meeting their long term needs, taking into account the raising trend toward living alone or in households with only elderly members.

Information from Egyptian Labor Market Surveys evidence that two main domains ask for policy interventions towards the elderly: problems related to poverty and health.

The data fully confirm a need for policy interventions in rural areas of the country to protect the elderly from poverty, as many researchers have already pointed out (Adams and Richard, 2000; Cherkaoui et al., 2009; El-Laithy and Kheir-El-Din**,** 2006; Fargues, 2002; Fergany, 1993; Galal, 2003; Handoussa, 2010; Loffredo, 2004Marotta and Yemtsov, 2010; World Bank, 2005).

Population growth and ageing induce substantial growth in projected numbers of deaths and in trends in age-specific mortality rates. The effects of population growth are particularly relevant for chronic diseases. The rising rates of chronic disease will be especially serious in low-income and middle-income countries, which will cause health-related slowing in development. The effect of chronic diseases on health and on economic welfare is evidently significant.

As Sabri et al. (2012) state, this issue is not well valued and addressed by Arab social policy makers who propose poverty reduction policies and social safety nets. This problem is particularly urgent for Egypt, where results from ELMPS data as well as from previous researches have outlined a rising diffusion of chronic diseases among an ageing population, dealing with high proportion of poverty among the elderly. In Egypt, some population segments are vulnerable to catastrophic health expenditures. Inadequate social health protection can itself exacerbate impoverishment, and contribute to more social exclusion.

As already stated (see Table 19), high percentages of Egyptian elderly declare a situation of (perceived) chronic disease and disability, including those living alone or in older households, implying a need for both private and public support. Moreover, results (reported in chapter 12) from a range of analyses on the diffusion of chronic diseases and the state of health and health expenses (WHO, 2000; Abegunde et al., 2007) stress that Egyptian households — poor households, in particular — suffer the consequences of health problems in late life.

Governments have a key role in stimulating the generation of information to reduce the risk of chronic diseases and in ensuring access to preventive and treatment services, especially for poor people. Gaps in social health security have negative repercussions on the right to health and health equity, in particular for poor and vulnerable groups.

From ELMPS data, we have realized the rise in medical health insurance among the elderly, even if Egyptian older women once more were excluded from gains. In this context, the rise in the elderly population will necessitate policy and health system reforms and more extended coverage.

Other results obtained from the same Labor Market Surveys (Assaad and Krafft 2013b) highlight that between 2006 and 2012, there has been a substantial weakening in employment conditions in Egypt, in particular for women who tended to withdraw from work. Irregular employment — most closely associated with vulnerability and poverty — has risen substantially.

Even if intergenerational ties and mutual exchanges and contribution among relatives are strong, Egyptian households may face increasing problems when asked to meet the needs of an ageing population without improvements in public assistance.

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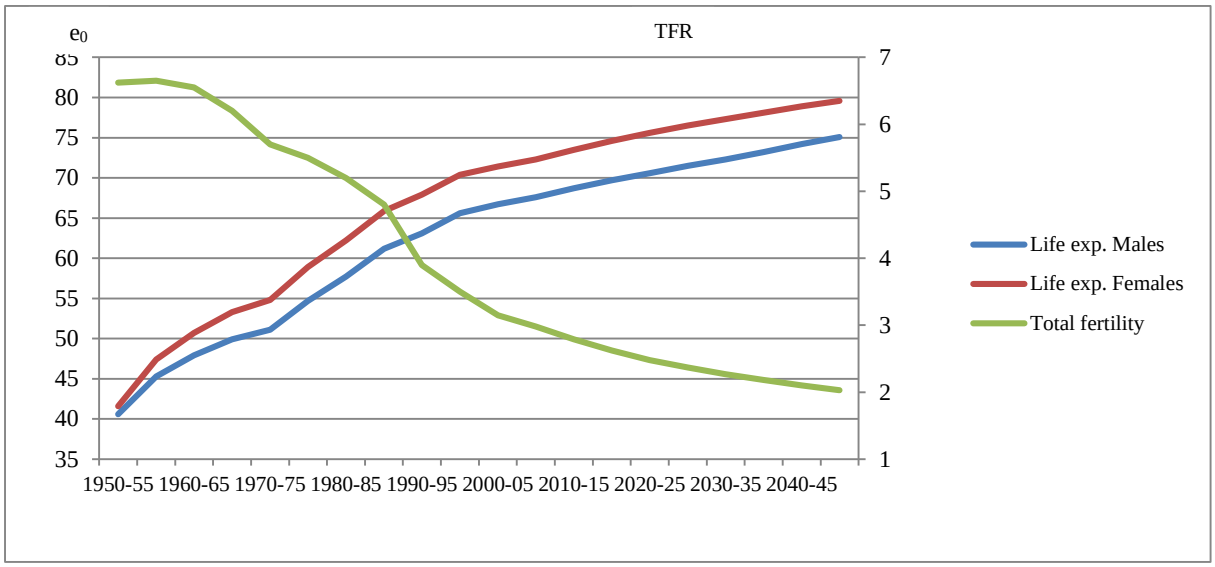
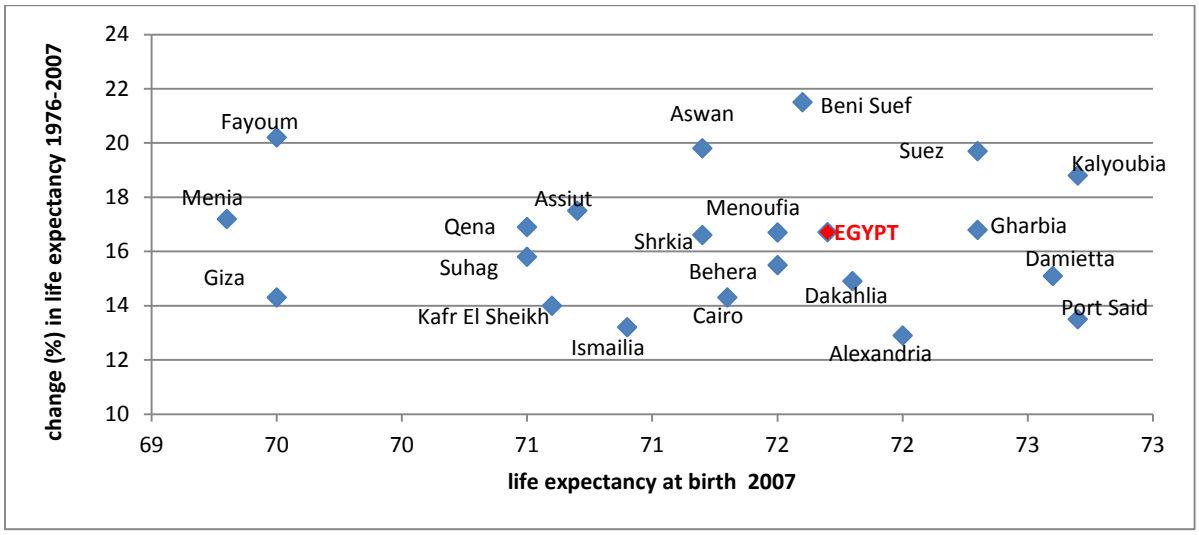
Figure 1: Life Expectancy (e_0) and Total Fertility Rate (TFR.): Egypt 1950–2050



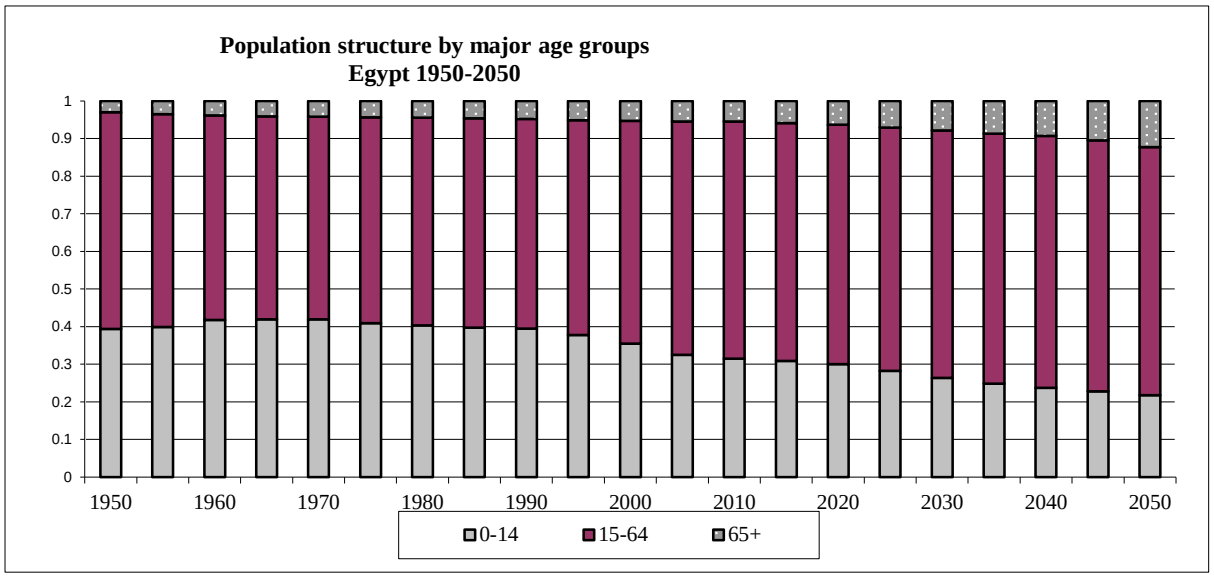
Source: data from United Nations 2014, World Population Prospects: The 2012 Revision.

Figure 2: Life Expectancy at Birth in 2007 and Changes between 1976 and 2007 by Governorate



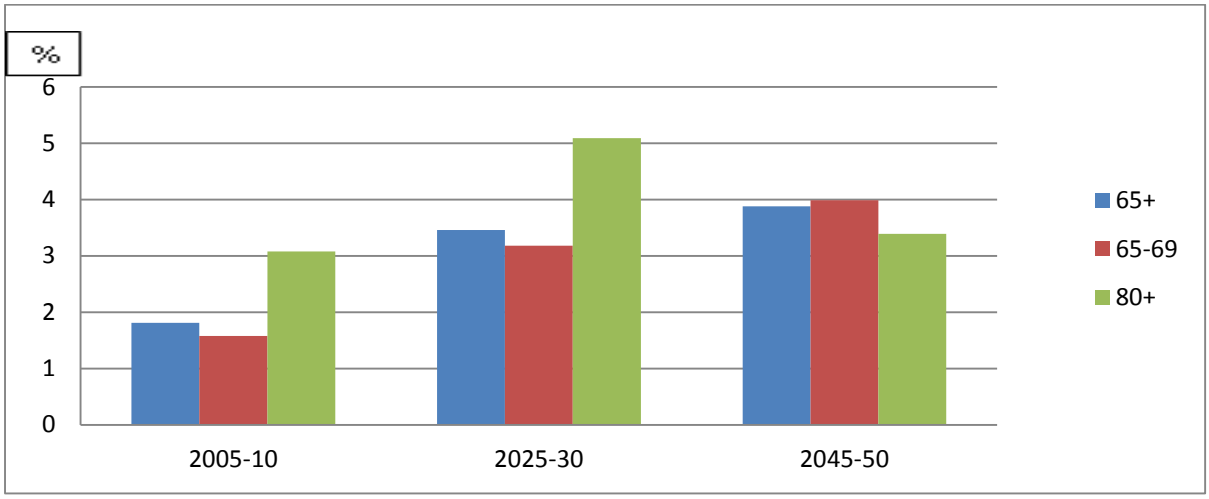
Source: data from Handoussa, 2010.

Figure 3: Evolution in Population Age Structure: Egypt 1950-2050



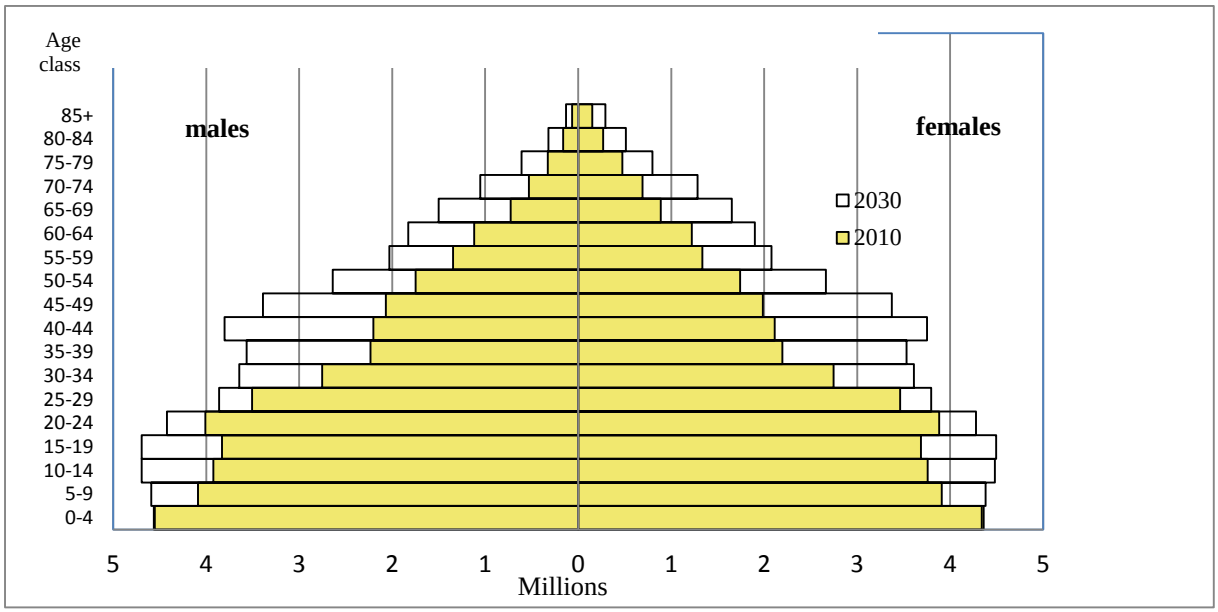
Source: data from United Nations 2014, World Population Prospects: The 2012 Revision.

Figure 4: Average Annual Growth Rate (%) of Population 65 and Older by Age Classes: Egypt 2005–2050



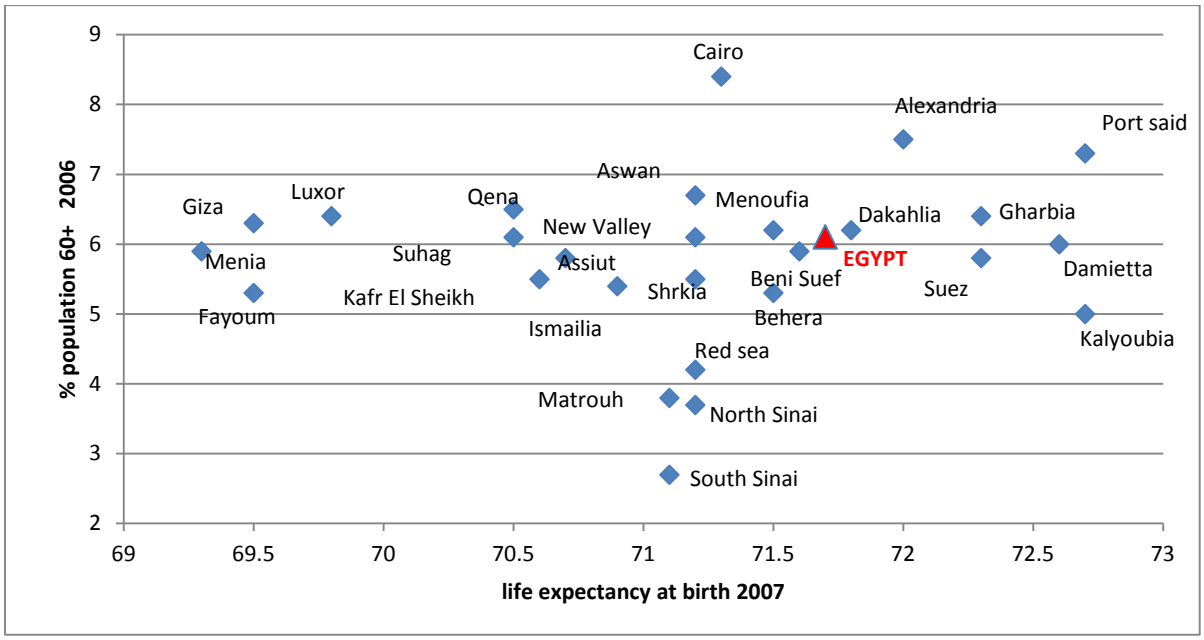
Source: our elaborations from United Nations 2014, *World Population Prospects: The 2012 Revision.*

Figure 5: Population Pyramid, Egypt 2010 and 2030



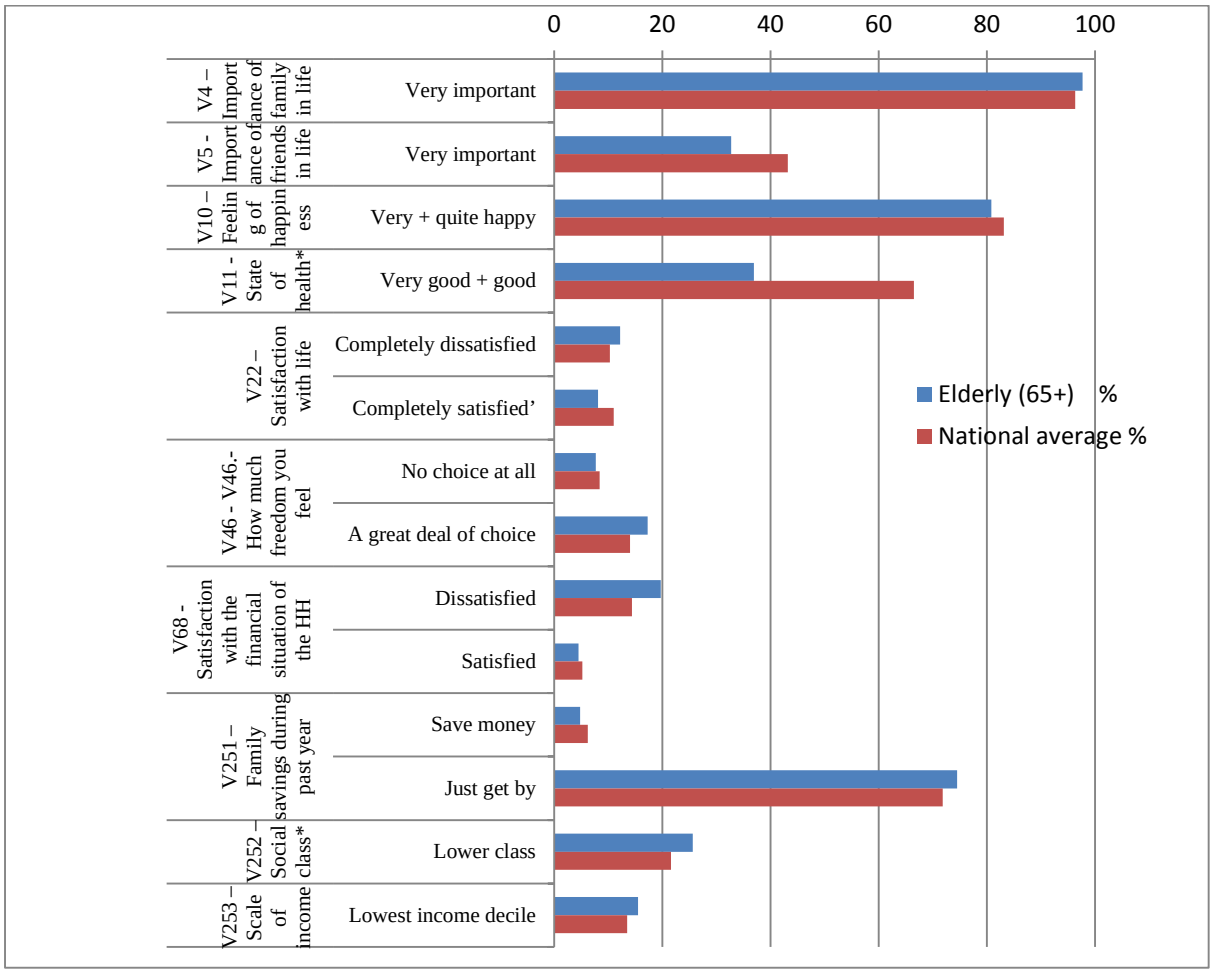
Source: our elaborations from United Nations, World Population Prospects: The 2012 Revision.

Figure 6: Life Expectancy at Birth 2007 and Share of Population 60 Years and Older in 2006 by Governorate



Source: CAPMAS, 2014a; Handoussa, 2010.

Figure 7: Self-Expression Values by Selected Survey Questions. Percentages of Selected Responses. Elderly Egyptian included in 2008 World Values Survey and National Average



Source: our elaboration on WVS individual data on Egypt available at the WVS page. Table A2 includes figures and detailed descriptions of the questions.

Figure 8: Percentage Distribution of Males Aged 60 and Older in Selected Household Types by Age, 2012

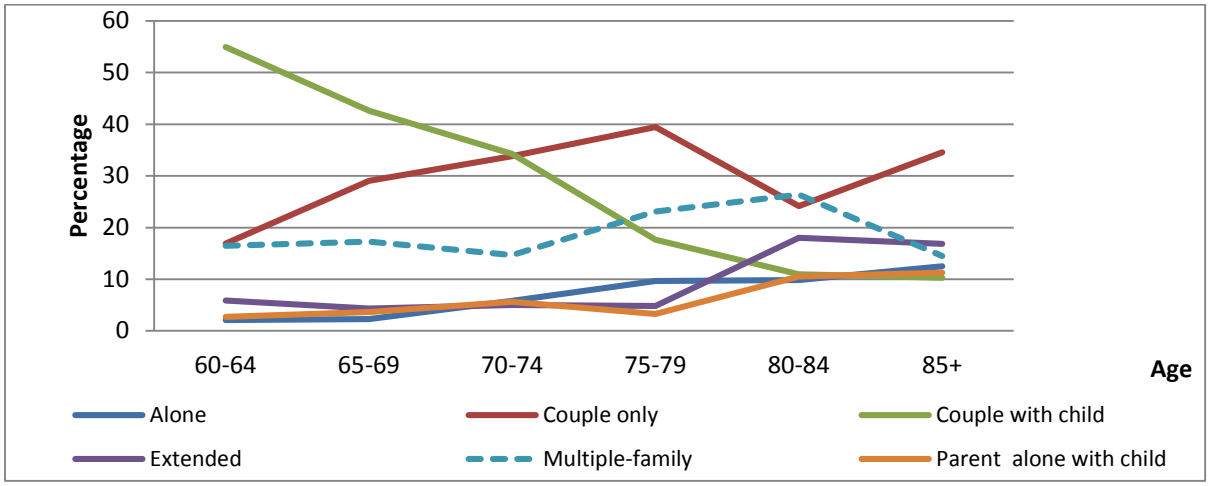


Figure 9: Percentage Distribution of Females Aged 60 and Older in Selected Household Types By Age, 2012

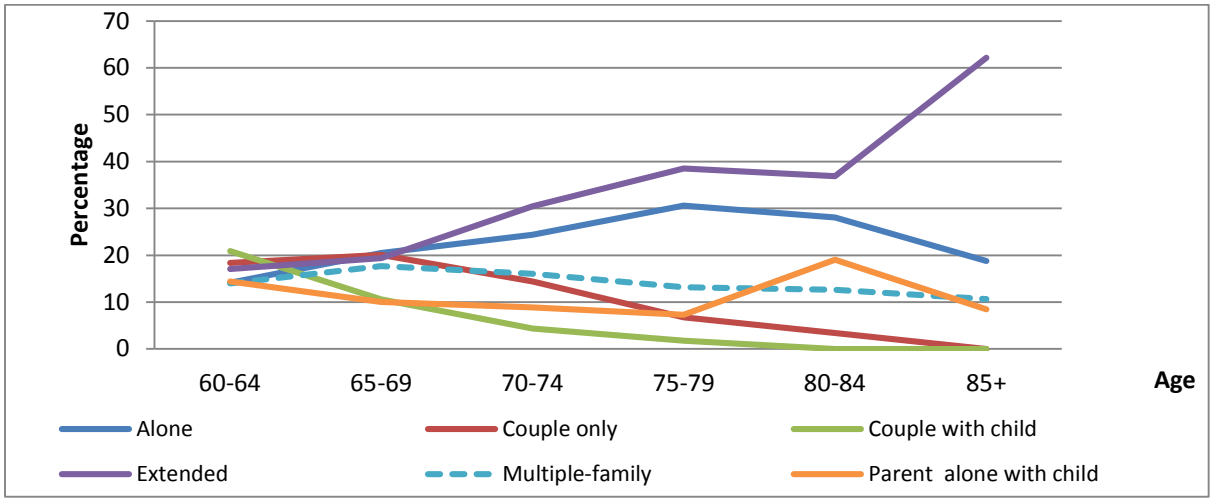


Figure 10: Transition Rates (Percent) in Living Arrangements from 2006 to 2010 by Gender, People Aged 65 and Older in 2012

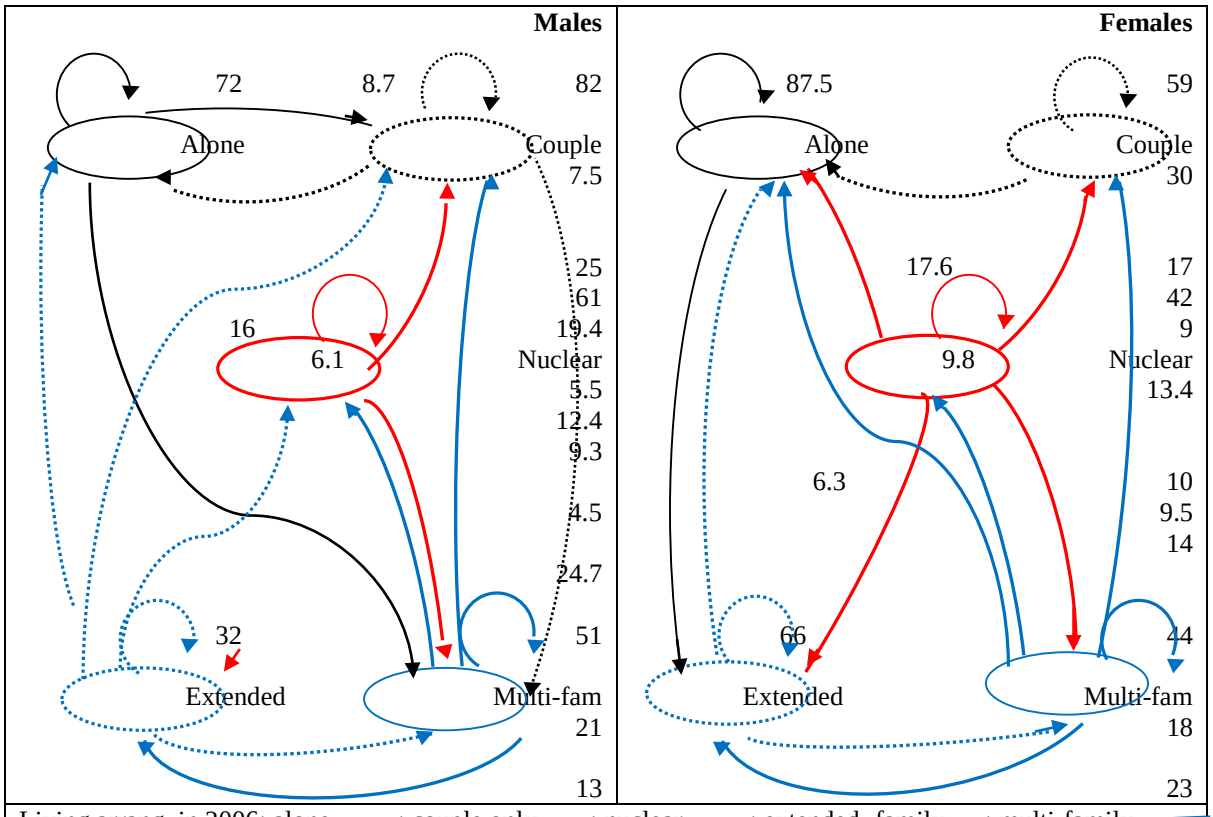
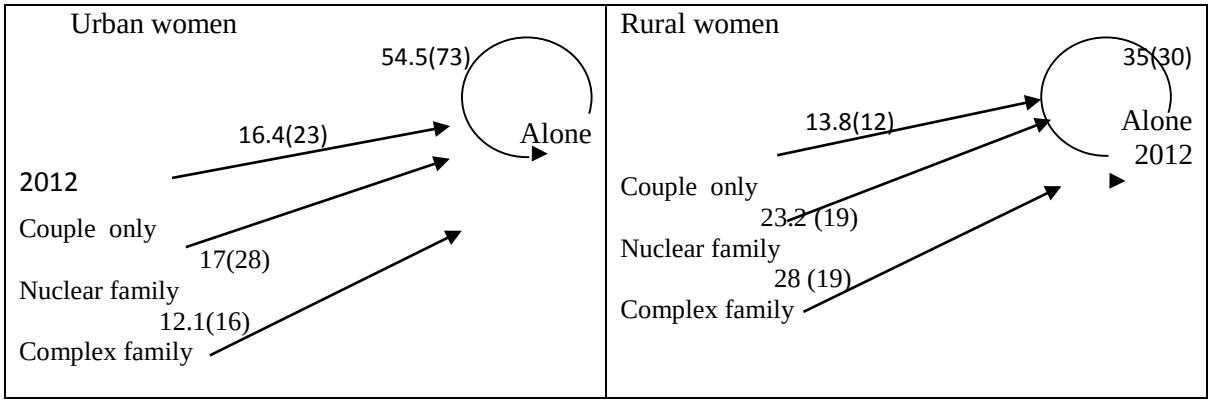
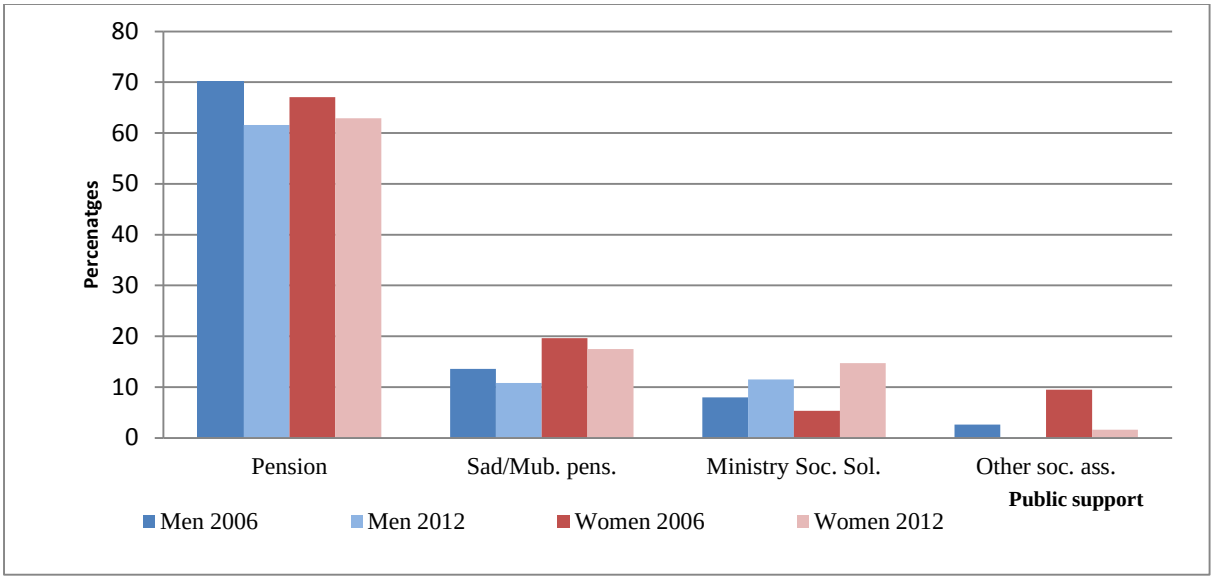


Figure 11: Inflow Rates (%) of Mobility between 2006 and 2012 by Type of Residence, Living Arrangement Destination: Living Alone



Note: Not weighted absolute values in parenthesis. Rates were computed on weighted data.

Figure 12: Percentages of Men and Women Receiving Public Support Among Those Living Alone by Type of Public Support* 2006 and 2012



Notes: * Individuals can receive more than one public transfer. Detailed data are included in Table A12.

Table 1: Percentage of the Elderly in the Total Population Northern Africa 2010, 2030 and 2050

	60 years and older	65 years and older	80 years and older
2010	7.3	4.9	0.7
2030	11.2	7.5	1.0
2050	17.3	12.1	2.2

Source: data from United Nations, World Population Prospects: The 2012 Revision.

Table 2: Percentages of Old Egyptians Aged 65 Years and Older in the Total Population, by Sex and Residence. 1998, 2006 and 2012

	1998			2006			2012		
	65-79	80+	Tot. 65+	65-79	80+	Tot. 65+	65-79	80+	Tot. 65+
Sex									
Male	4.1	0.6	4.7	4.0	0.6	4.6	4.1	0.6	4.7
Female	4.3	0.5	4.8	4.5	0.7	5.1	5.0	0.9	5.9
Male and female	4.2	0.6	4.8	4.2	0.6	4.9	4.6	0.7	5.3
Residence									
urban	4.7	0.5	5.2	5.1	0.7	5.8	5.6	0.8	6.4
rural	3.9	0.6	4.5	3.6	0.6	4.2	3.8	0.7	4.5
Number of observations	1,043	134	1,177	1,553	232	1,785	2,183	378	2,561
Elderly age distribution	88.6	11.4	100	87.2	12.8	100	86.0	14.0	100

Notes= Each percentage represents the share of people of the age-class on the total population.
Source: our elaborations from ELMS1998, ELMPS2006 and ELMPS 2012. Weighted data.

Table 3: Percentages of old Egyptians Aged 65 Years and Older, by Selected Variables

	1998		2006		2012	
	Male	Female	Male	Female	Male	Female
Marital status*						
never married	1.0	1.4	0.4	1.7	0.6	0.9
married	79.9	24.4	81.8	23.7	82.5	27.3
divorced	0.5	1.1	0.3	1.0	0.6	2.3
widowed	18.6	73.1	17.4	73.6	16.3	69.5
Total	100	100	100	100	100	100
Residence**						
Urban (%)	64.4	60.3	51.4	49.6	53.1	49.5
Rural	35.6					
Head of the household**	90.0	28.9	92.8	38.6	95.2	46.5
Current work status						
Employed last seven days (a) **	26.3	1.4	30.5	6.1	25.8	3.0
Illiterate (%)**	49.3	86.1	53.1	81.6	46.9	78.5
Medical/health insurance (YES) **	7.3	7.4	8.9	2.8	49.6	16.9
Number of cases	593	584	854	931	1,153	1,408

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 (variable crwrkst1in the data set). In 2012 the question is: "Have you participated in any employment during the past seven days?" Source: our elaborations from ELMS 1998, ELMPS 2006, and ELMPS 2012. Weighted data.

Table 4: Percentage Distribution by the Wealth Quintile and Residence of: a) All the Elderly 65 Years and Older by Sex; b) Elderly Headed Households by Sex of the Head, 2012

Quintiles of household wealth	Males		Females	
	Urban	Rural	Urban	Rural
a) Older people 65 and older				
Poorest quintile	19.6	27.1	28.9	32.1
Richest quintile	21.4	10.3	18.5	11.7
b) Elderly headed households				
Poorest quintile	19.7	28.0	35.2	49.0
Richest quintile	21.1	10.1	13.8	8.7

Table 5: 5a) Households (HH) According to the Total Number of Individuals in the HH According to the Residence; 5b) Surveyed People by Household Size, 1998, 2006 and 2012

	5a) Households by size (%)									5b) People by household size (% of total population)		
		1998			2006			2012				
HH size	**Total**	**Urban**	**Rural**	**Total**	**Urban**	**Rural**	**Total**	**Urban**	**Rural**	**1998**	**2006**	**2012**
1	5.2	5.0	5.3	5.1	6.8	3.4	6.9	8.9	5.2	1.0	1.1	1.7
2	10.0	12.0	8.2	12.9	15.5	10.4	14.3	16.7	12.1	3.9	5.8	7.0
3	10.4	13.7	7.3	17.4	20.5	14.4	17.4	17.9	16.8	6.1	11.6	12.7
4-6	50.0	55.8	44.6	49.4	50.4	48.5	52.9	52.4	53.5	48.3	52.7	61.7
7-9	19.2	11.7	26.2	12.0	6.1	17.7	7.5	3.7	10.7	28.7	20.4	13.9
10+	5.2	1.8	8.4	3.2	0.7	5.6	1.0	0.4	1.6	12.0	8.4	3.0
Total	100	100	100	100	100	100	100	100	100	100	100	100
Average size	5.1	4.5	5.7	4.5	3.9	5.1	4.1	3.7	4.4	**Surveyed people**		
Surveyed HH	4816	3290	1526	8350	4900	3450	12060	5681	6379	23997	37140	49186

Table 6: Average Size of the Households by Region and Urban and Rural Areas, 2012

Regions	**Urban**	**Rural**	**Total**	**Number of households**
Gran Cairo°	3,6	3,8	3,6	1,525
Alx, Sz C. °°	3,8		3,8	1,073
Urban Lower	3.7		3,7	1,463
Rural Lower		4,1	4,1	3,406
Urban Upper	4,2		4,2	1,638
Rural Upper		4,8	4,8	2,955
Egypt	**3,7**	**4,4**	**4,1**	**12,060**

Notes: °=Cairo, Kalyoubia, Giza; .°°=Alexandria, Port Said, Suez, Ismailia. Weighted data

Table 7: Distribution (%) of the Households by The Number of Generations, 1998, 2006 and 2012

Survey year	**1 generation**	**2 generations**	**3 generations**	**Number of cases**	**Households (%) hosting at least one elderly**
1998	16.4	70.6	13.0	4,816	21.7
2006	15.1	71.0	13.9	8,350	19.0
2012	17.7	72.6	9.7	12,060	17.9

Notes: Weighted data.

Table 8: Characteristics of Egyptian Households by Regions, 2012

	Number of generations (%)*		**At least one elderly in HH (%)***	**Average size**
	2	**3 or more**		
Urban governorates				
Cairo	69.9	6.2	22.4	3.6
Alexandria, Port Said, Suez, Ismailia	74.8	6.4	19.4	3.8
Lower Egypt				
Urban	73.1	6.5	21.7	3.7
Rural	73.0	11.4	16.4	4.1
Upper Egypt				
Urban	75.2	7.8	18.0	4.2
Rural	72.7	14.3	17.7	4.8
EGYPT	**72.6**	**9.7**	**18.3**	**3.7**

Notes: *Percentages on total households. Weighted data.

Table 9: Individuals Aged 65 Years and Older by Relation to The Household Head, by Gender and Age, Percentages

	1998		2006		2012	
65-79 years old	**1998M**	**1998F**	**2006M**	**2006F**	**2012M**	**2012F**
Head of a HH with at least two components	87.6	15.1	88.1	20.1	92.2	21.3
Living alone	4.3	14.3	5.8	19.0	4.8	23.4
Household head (including those living alone)	91.9	29.4	93.9	39.1	97.0	46.7
Household head's spouse	0.2	23.4	0.4	23.6	-	30.1
Parent (living with descendants)*	7.3	37.8	5.0	29.7	2.3	19.5
Brother/sister (and-or brother/sis in law)	0.3	2.3	0.1	1.5	0.2	1.2
Other relations (living with relatives)	0.2	3.8	0.0	0.2	0.5	2.5
Living with no relatives (servant, unrelated people)	-	3.2	0.6	4.5	-	0.1
Total	100	100	100	100	100	100
Number of observations	526	517	746	807	991	1192
80 years and older						
Head of a HH with at least two components	69.7	6.0	79.3	13.5	71.7	16.9
Living alone	9.6	19.2	5.6	22.1	11.4	28.1
Household head (including those living alone)	79.3	25.2	84.9	35.6	83.1	45.0
Household head's spouse	-	-	0.4	1.3	-	2.2
Parent (living with descendants)*	16.7	56.7	13.7	55.6	13.8	46.2
Brother/sister (and-or brother/sis in law)	3.5	1.3	-	0.5	0.3	0.4
Other relations (living with relatives)	0.4	8.9	1.0	3.8	2.1	5.8
Living with no relatives (servant, unrelated people)	-	7.9	-	3.3	0.7	0.4
Total	100	100	100	100	100	100
Number of observations	67	67	108	124	162	216
Total observations						

Notes: *= recorded as "parent" in the household of a child; Source: own elaborations from ELMPS1998, 2006 and 2012. Weighted data.

Table 10: Living Arrangements of the Elderly Aged 65 and Older by Gender, 1998 and 2006

	1998 Survey			2006 Survey		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Living alone	5.0	14.8	9.9	5.7	19.4	13.0
Living with spouse only	18.5	9.0	13.7	24.4	10.2	16.9
Living with child(ren), child-in-law, or grandchild	75.0	64.8	69.8	68.7	62.3	65.4
Living with other relatives	1.3	7.5	4.5	0.9	6.4	3.8
Living with unrelated people only°	0.2	3.9	2.1	0.2	1.7	1.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of observations	593	584	1,177	854	931	1,785

Notes: Those living with a servant are included. Source: our elaborations from ELMS1998 and ELMPS2006. Weighted data.

Table 11: Living Arrangements of the Elderly Aged 65 and Older by Gender and Type of Residence, 2012

	2012 Total Egypt			2012 Urban			2012 Rural		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Living alone	5.6	23.7	15.8	7.4	27.8	18.5	3.5	19.5	12.8
Living with spouse only	32.0	13.8	21.7	36.3	17.1	25.8	27.1	10.5	17.5
Living with child(ren), child-in-law, or grandchild	60.8	57.5	58.9	54.2	49.8	51.8	68.3	65.0	66.4
Living with other relatives+	1.5	4.8	3.4	1.9	4.8	3.5	1.0	4.7	3.1
Living with unrelated people only°	0.1	0.1	0.1	0.2	0.3	0.2	0.1	0.3	0.2
Total	100	100	100	100	100	100	100	100	100
Number of observations	1,153	1,408	2,561	613	708	1,321	540	700	1,240

Notes: + Other than spouse, children (in-law), grand-children. Siblings are included. °Those living with a servant are included. Weighted data.

Table 12: 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		
		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
	2005	3.1	11.3	8.2	3.8	19.8	15.8	7.5	13.5	6.0
Jordan	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
	2002	0.4	1.9	1.5	1.3	4.2	2.9	0.5	7.7	7.2
Morocco	1992	1.2	4.6	3.4	1.9	8.8	6.9	2.3	5.5	3.2
	2003	0.8	2.9	2.1	2.0	5.0	3.0	0.3	4.8	4.5
Tunisia	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 and Sibai, 2009.

Table 13: Percentage Distribution of the Elderly 65 Years and Older by Co-Residential Arrangements*, Residence and Sex, 2012

	Males			Females		
	Urban	Rural	Total	Urban	Rural	Total
Nuclear family (parents and children)°	41.4	32.5	37.2	20.2	10.9	16.0
Extended-family household	4.0	8.9	6.2	22.5	34.6	28.2
Multi-family household	10.2	26.8	18.0	9.7	21.0	15.1
Total co-resident elderly on total cases (%)*	55,6	68,2	61,4	52,4	66,5	59,3

Notes: *=Other than living alone or with the spouse only. ° Both complete or incomplete nuclear families. Weighted data.

Table 14: Logistic Regression Analysis of the Risk to Be Included in a "Complex-Family Household." People Aged 65 Years and Older, Egypt 2012

	Reference category	Odds Ratio	*P*-value
Sex	**Female**		
Male		0.361	0.000
Age-class	65-79		
80+		2.082	0.000
Type of residence	Urban		
Rural		3.110	0.000
Health limitations	NO limitation (Ref.)		
YES strongly limited		1.186	0.161
YES limited (to some extent)		0.843	0.046
Constant		0.215	0.000

Table 15: Transition Rates: Household Structure in 2006 and 2012. Total Individuals Aged 65 and Older in 2012 in Panel Households

Household typology	Household typology in 2012							
in 2006	Alone	Couple only	Nuclear family	Extended family	Multi-family	Step-family	Total	N. of cases (2006)
Alone	0.849	0.014	0.023	0.058	0.049	0.006	1	142
Couple only	0.175	0.715	0.028	0.032	0.043	0.007	1	260
Nuclear family	0.089	0.221	0.536	0.059	0.094	0.001	1	698
Extended family	0.092	0.042	0.070	0.599	0.187	0.010	1	280
Multi-family	0.048	0.166	0.124	0.176	0.474	0.012	1	327
Skipped-family	0.399	--	0.070	--	0.054	0.477	1	18
N. of cases (2012)	271	392	453	290	307	20		1,733

Notes: Weighted data.

Table 16: Parameter Estimates for the Multinomial Logistic Regression Analysis

Reference category: Alone in 2012 while living in a complex household in 2006			
Variable name	**Reference modality**	**Odds Ratio**	***P*-value**
Alone in 2012 while living as parent alone with child(ren) in 2006			
Age 2012		**0.852**	**0.04**
Gender	Female		
Male		1.346	0.686
Type of residence	Rural		
Urban residence		**3.514**	**0.021**
Intercept			0.07
Alone in 2012 while living with the spouse and child(ren) in 2006			
Age 2012		**0.869**	**0.018**
Gender	Female		
Male		**4.9**	**0.020**
Type of residence	Rural		
Urban residence		1,676	0.356
Intercept			0.028

Table 17: Households including at Least One Elderly Person Aged 65 Years or Older, Percentages Receiving Public Transfers by Type of Transfer and Residence, 2012

Variable name	**Label**	**Urban**	**Rural**	**Total**
q12301a	Normal pension	74.5	39.8	57.3
q12301b	Sadat's/Mubarak's pension	6.7	26.2	16.4
q12301c	Social assistance from the Ministry of Social Solidarity	8.1	17.6	12.8
q12301d	Social assistance from religious/non-governmental institutions	1.2	1.3	1.3

Table 18: Logistic Regression Results, Odds-Ratios of Receiving Support from Relatives, Elderly Living Alone, 2006 and 2012

Variable name	**Reference category**	**Model 1 2006**		**Model 2 2012**	
		Odds Ratio	***P*-value**	**Odds Ratio**	***P*-value**
Sex	Female				
Male		**0.187**	**0.0019**	**0.181**	**0.024**
Age-class	65-79				
80+		0.879	0.7756	0.655	0.380
Public support	NO				
Yes public support		0.894	0.7505	**0.157**	**0.01**
Residence	Rural				
Urban		**0.344**	**0.000**	0.785	0.471

Table 19: Percentages of People Aged 65 Years and More Living in Households Belonging to the First Wealth Quintile by Type of the Household, Sex and Residence, 2012

Living arrangements	**Males**		**Females**	
	Urban	**Rural**	**Urban**	**Rural**
Living alone	20.2	47.6	41.5	63.4
With spouse only	21.9	35.5	24.9	40.9
With descendants	17.0	22.8	21.7	22.9
Skipped-family*	47.6	24.2	47.6	-
With other relatives	45.3	-	67.8	10.0
With unrelated people	100.0	-	44.8	40.4
Total	19.6	27.3	29.0	33.9
Number of elderly in first quintile	130	151	219	225

Notes: *=Elderly(s) with grandchild(ren). Weighted data.

Table 20: Households in the First Household Wealth Quintile by Residence[34], Sex and Age of the Head, 2012

Age of the household head	Head of the household			
	Male		Female	
	Urban	Rural	Urban	Rural
All the ages	17.8	17.5	28.7	31.2
65 years and older	19.7	28.0	35.2	49.0

Notes: Weighted data.

Table 21: Elderly 65 Years or over Who Declared a) A Disability, b) A Situation of Limitation, Percentages among Those Included in Different Living Arrangements, by Sex, 2012

	a) YES Disability		Limited/strongly limited	
Living arrangements	M	F	M	F
Living alone	68.3	78.2	46.7	56.4
With spouse only	72.7	74.4	46.4	44.0
With descendants	64.4	69.7	41.0	44.6
Stepfamily	74.0	71.2	48.3	66.9
With other relatives	54.7	83.3	54.7	53.8
With unrelated people	100.0	53.1	--	30.1
Total	67.5	72.6	43.2	47.8
Number of cases declaring health problems	727	906	552	571

Notes: Weighted data.

[34] Households are classified in classes of urban or rural wealth quintile.

Annex

(All data in the Tables are weighted)

Box A1: International Update: Recent Developments in Foreign Public and Private Pensions, Egypt

On June 13, the Egyptian Parliament passed a pension reform law that will replace the current public pay-as-you-go (PAYG) pension system with a system of individual accounts on January 1, 2012. Specific regulations concerning the system are due before Parliament by the end of 2010. According to the Ministry of Finance, the reforms are intended to encourage greater savings for retirement and improve the pension system's long-term sustainability. In the coming decades, the Egyptian population is projected to age rapidly because of improvements in life expectancy (from 71.1 years in 2010 to 77.7 years in 2050) and declining fertility rates (from 2.68 children per woman in 2010 to 1.92 in 2050). As a result, the share of the population aged 65 or older is projected to increase from 4.6 percent in 2010 to 13.1 percent in 2050—an increase that would place significant strain on the existing pension system.

Key elements of the new system include the following:

- The contribution rate will be set at 16.5 percent of earnings for employees and 10 percent of payroll for employers. Employees will be able to make additional voluntary contributions.
- The retirement age will increase gradually from age 60 at present to 61 by 2015, to 62 by 2018, to 63 by 2021, to 64 by 2024, and to 65 by 2027. The increase will affect all new entrants to the workforce on or after January 1, 2012.
- A minimum pension—equal to 15 percent of the national average wage and funded from the state budget—will be available to all resident citizens of Egypt aged 65 or older, including individuals who have not contributed to the pension system.
- A new investment board, expected to include specialized advisers and portfolio managers, will be created to administer and invest the assets from the individual accounts.

The current public PAYG program in Egypt covers approximately 80 percent of employed persons, one of the highest levels among developing countries. Contributions are based on two components: (1) base earnings, or earnings up to 775 Egyptian pounds (US$136) a month, and (2) variable earnings, or earnings exceeding 775 Egyptian pounds a month plus certain other forms of compensation, including bonuses, incentives, and commissions. Employees contribute 13 percent of base earnings and 10 percent of variable earnings, employers contribute 17 percent of base earnings and 15 percent of variable earnings, and the government contributes 1 percent of earnings plus the cost of any deficit.

Source: Jankowski, Kritzer and Rajnes (2010)

Table A1: Demographic Indicators by Governorate, Egypt 1976-2008

Governorates	Population (thousands) 2008	life expectancy at birth 1976	2007	crude birth rate (*1000) 2008	Total Fertility Rate (TFR) 15-49 1986-1988	1997-2000	2008	Pop. aged 60 + (%) 2006
Cairo	8128,7	57.0	71.3	28.7				8.4
Alexandria	4230,6	59.1	72.0	26.1				7.5
Port said	585	59.2	72.7	23.4				7.3
Suez	529,6	52.6	72.3	28.9				5.8
Urban Govs	**13473,8**	**57.6**	**72.2**	**27.6**	**3.0**	**2.9**	**2.6**	
Damietta	1136,3	57.5	72.6	30.2				6.0
Dakahlia	5139,5	56.9	71.8	26.8				6.2
Shrkia	5529,6	54.6	71.2	27.4				5.5
Kalyoubia	4386,8	53.9	72.7	26.4				5.0
Kafr El Sheikh	2705,7	56.6	70.6	24				5.5
Gharbia	4125,9	55.5	72.3	25.3				6.4
Menoufia	3374,2	54.8	71.5	27.5				6.2
Behera	4900,9	56.0	71.5	28.5				5.3
Ismailia	988,5	57.7	70.9	30.9				5.4
Lower Egypt	**32287,5**	**55.6**	**71.5**	**27**	**4.5**	**3.2**	**2.9**	
Urban	**9045**	**-**	**-**	**-**	**3.8**	**3.1**	**2.6**	
Rural	**23242,5**	**-**	**-**	**-**	**4.7**	**3.3**	**3.0**	
Giza	6490,8	55.2	69.5	27.8				6.3
Beni Suef	2371	50.1	71.6	30.3				5.9
Fayoum	2605,2	49.3	69.5	30.1				5.3
Menia	4308,4	52.1	69.3	30.4				5.9
Assiut	3560,1	53.2	70.7	30.5				5.8
Suhag	3874	54.7	70.5	29.3				6.1
Qena	3096,9	*53.6	70.5	26.3				6.5
Luxor	469,5	0	69.8	26				6.4
Aswan	1222,3	51.4	71.2	25.5				6.7
Upper Egypt	**27998,4**	**53**	**70.2**	**28.9**	**5.4**	**4.2**	**3.4**	
Urban	**8938**	**-**	-	**-**	**4.2**	**3.4**	**3.0**	
Rural	**19060,4**	**-**	-	**-**	**6.2**	**4.7**	**3.6**	
Red sea	296,8	-	71.2	21.9				3.7
New Valley	193	-	71.2	25.2				6.1
Matrouh	337,4	-	71.1	31.4				3.8
North Sinai	357,9	-	71.2	31.3				4.2
South Sinai	152,5	-	71.1	14				2.7
Frontier Govs	**1337,6**	**-**	**71.1**	**26.4**	**-**	**3.8**	**3.3**	
Urban	**908**	**-**	**0**	**-**				
Rural	**429,6**	**-**	**0**	**-**				
EGYPT	**75097,3**	**55**	**71.7**	**27.8**	4.4	3.5	**3.0**	6.1
Urban	32325	-	-	-	3.5	3.1	2.7	
Rural	42773	-	-	-	5.4	3.9	3.2	

Notes: *Qena and Luxor combined. Sources: CAPMAS (2014a); Handoussa (2010); El-Zanaty and Way (2009).

Box A2: Indicators Demographic of Ageing

The **ageing index** is expressed as the proportion of the number of persons in 65 and over age group per 100 persons 0-14 years old. Ageing index indirectly represents economic aspects of ageing, which could be related to the allowances and pensions.

Potential support ratio is obtained as the number of people in the working ages of 15-64 per 100 persons 65 or older.

Parental support is defined as the ratio of the number of persons in the age group of 85 years and older and the number of persons in the age group of 50-64. Population with the higher index is characterized as older; there are a higher proportion of people who are, theoretically the children of the people in age category of 85 years and older.

The **old age dependency coefficient** represents the number of people in 65 and older per 100 people in 15-64 years old and measure the relative balance between those who might be potential, dependents" (65 and older) and those who may be marked as a possible supporters (15-64).

Longevity index is the ratio between the number of people in the age group 90-99 and the total population over 65years old. The **centenarian index** symbolizes the prevalence of centenarians (100 +) within the ultra-nonagenarians (90-99).

A lot of papers compare statistical data about ageing in the context of the proportion of young-old group aged (65-74), old-old aged (75-84) and oldest-old aged (85 +) from the total population

Other alternative indicators of age and ageing are both based on conventional life tables.

The "**proportion of the population that has a remaining life expectancy of 15 years or less**" is calculated in the following way: from a period life table we select all single-year age groups that have a remaining life expectancy of 15.0 or less years and calculate what proportion of the total population has ages that fall into this category. This new measure can be viewed as the complement of indicators such as the proportion of the population above age 65 measured in the conventional way.

The "**population average remaining years of life**" is the complement of the conventional mean age of the population in reflecting the average years to death of persons alive today. It is calculated by weighting the remaining life expectancy of all ages in a period life table with the proportions of people at those ages in the population under consideration

Source: Lutz, Sanderson and Scherbov, 2008 in: http://www.oeaw.ac.at/vid/datasheet/box1.shtml.

Table A2: Self-Expression Values by Selected Survey Questions Percentages of Selected Responses, Elderly Egyptian Included in 2008 World Values Survey and National Average

Survey questions		Elderly (65+) %	National average %
V4 – Importance of family in life	Very important	97.7	96.3
V5 - Importance of friends in life	Very important	32.7	43.2
V10 – Feeling of happiness	Very + quite happy	80.8	83.1
V11 - State of health (subjective)	Very good + good	36.9	66.5
V22 – Satisfaction with life	completely dissatisfied	12.2	10.3
	completely satisfied'	8.1	11.0
V46 - V46.- How much freedom you feel	No choice at all	7.7	8.4
	A great deal of choice	17.3	14.0
V68 - Satisfaction with the financial situation of the household	Dissatisfied	19.7	14.4
	Satisfied	4.5	5.2
V251 – Family savings during past year	Save money	4.8	6.2
	Just get by	74.5	71.8
V252 – Social class (subjective)	Lower class	25.6	21.6
V253 – Scale of income	Lowest income decile	15.5	13.5

Source: our elaboration on WVS individual data on Egypt available at the WVS page. Weighted data

Selected Survey questions

V4 - *How important family is in your life*? Four-point scale from ''not at all important'' to ''very important.''

V5.- *How important friends are in your life*? Four-point scale from ''not at all important'' to ''very important.''

V10 *Feeling of happiness*. Four-point scale: Very happy; Quite happy; Not very happy; Not at all happy.

V11 - State of health (subjective): *All in all, how would you describe your state of health these days*? Four-point scale: Very good; Good; Fair; Poor.

V22.- Satisfaction with own life: *All things considered, how satisfied are you with your life as a whole these days*? Ten-point scale from 1 'Completely dissatisfied' to10 'Completely satisfied'.

V46.- How much freedom each person feels: *Some people feel they have completely free choice and control over their lives, while other people feel that what they do has no real effect on what happens to them.* Ten-point scale from 1 "No choice at all" to 10 "A great deal of choice".

V47.- Do you think most people try to take advantage of you: *Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair*? Ten-point scale where 1 means that "People would try to take advantage of you," and 10 means that "People would try to be fair" .

V67.- *I decide my goals in life by myself : People pursue different goals in life?* Four-point scale : Strongly agree, Agree, disagree or Strongly disagree with it.

V68.- Satisfaction with the financial situation of household : *How satisfied are you with the financial situation of your household*? 1-10 Ten point scale from 1 "The least satisfied position" to 10 "The most satisfied position".

V125.- How much do you trust your family?

V251.- Family savings during past year. Four-point scale: Family save money; Just get by; Spent some savings and borrowed money; Spent savings and borrowed money

V252.- Social class (subjective): *Would you describe yourself as belonging to the*.. Five-point scale : Upper class; Upper middle class; Lower middle class; Working class; Lower class.

V253.- Scale of incomes: Ten-point scale on which 1 indicates the "Lowest income decile" and 10 the "Highest income decile" in the country. "*We would like to know in what group your household is. Please, specify the appropriate number, counting all wages, salaries, pensions and other incomes that come in*".

Table A3: Percentages of Old Egyptians Aged 65 Years and Over, by Selected Variables

	1998				2006				2012			
	Male		Female		Male		Female		Male		Female	
	65-79	80+	65-79	80+	65-79	80+	65-79	80+	65-79	80+	65-79	80+
Marital status*												
never married	0.6	-	1.6	1.0	0.5	-	1.8	1.1	0.7	-	1.0	0.6
married	83.7	64.9	30.0	1.7	84.3	64.7	26.8	2.6	86.1	54.7	31.5	3.5
divorced	0.3	-	1.5	-	0.3	-	1.2	-	0.6	0.7	2.5	0.9
widowed	15.5	35.1	66.9	97.3	14.9	35.3	70.2	96.3	12.6	41.9	65.0	95.0
Total	100	100	100	100	100	100	100	100	100	100	100	100
Residence*												
Urban (%)	64.9	61.1	61.3	53.7	51.5	50.5	50.5	47.1	54.6	42.3	49.9	47.4
Head of the household**	97.3	92.6	49.0	49.6	93.9	84.9	39.1	35.6	97.0	83.1	46.7	45.0
Current work status												
Employed (ref. 1-Week - Mrkt Def.) **	26.5	16.4	5.1	-	33.0	12.7	6.9	0.9	28.3	8.2	3.5	0.6
Illiterate**	42.9	53.2	75.3	83.6	51.4	64.6	80.9	86.4	45.3	58.4	76.3	91.0
Individual medical/health insurance (YES)	9.6	6.0	6.5	--	9.1	5.0	2.8	--	51.8	33.7	17.4	13.9
Number of observations	526	67	517	67	746	108	807	124	991	162	1,152	216

Notes: *Percentage distribution among the modalities of the variable; ** Percentage on the total of the elderly in the age-class. Source: our elaborations from ELMS1998 and ELMPS2006.

Table A4: Percentage Distribution of The Older Persons (65 Years and Over) by Household Wealth Quintile, Sex and Residence, 2012

Quintiles of household wealth	Males		Females		Total	
	Urban	Rural	Urban	Rural	Urban	Rural
Poorest	19.6	27.1	28.9	32.1	24.7	30.0
Second	18.6	25.2	17.1	23.1	17.8	24.0
Third	17.8	22.4	16.5	16.7	17.1	19.1
Fourth	22.6	15.0	19.0	16.3	20.6	15.8
Richest	21.4	10.3	18.5	11.7	19.8	11.1
Total	100	100	100	100	100	100
N. of cases	613	540	708	700	1,153	1,408

Notes: Chi-square tests on the distribution of males and females by household wealth quintile indicate that we have a significant difference in the urban areas (p=0.001) but not in the rural ones.

Table A5: Percentage Distribution of the Households Headed by and Older Person (65 Years and Over) by Wealth Quintile, Sex and Residence, 2012

Quintiles of household wealth	Males		Females		Total	
	Urban	Rural	Urban	Rural	Urban	Rural
Poorest	19.7	28.0	35.2	49.0	25.9	35.8
Second	18.8	25.6	19.5	22.5	19.1	24.5
Third	18.1	21.5	17.7	11.1	18.0	17.6
Fourth	22.3	14.7	13.9	8.8	18.9	12.5
Richest	21.1	10.1	13.8	8.7	18.2	9.6
Total	100	100	100	100	100	100
N. of cases	595	493	359	268	954	761

Notes: Chi-square tests on the distribution of males and females headed households by household wealth quintile indicate a significant difference both in the urban areas (p=0.001) and in the rural ones (p=0.001) .

Table A6: a) Households (HH) According to the Total Number of Individuals in the HH by Residence; b) Surveyed People by HH Size, 1998, 2006 and 2012

	a) Households by size (%)									b) People (%) by household size		
	1998			2006			2012					
HH size	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	1998	2006	2012
1	5.2	5.0	5.3	5.1	6.8	3.4	6.9	8.9	5.2	1.0	1,1	1,7
2	10.0	12.0	8.2	12.9	15.5	10.4	14.3	16.7	12.1	3.9	5,8	7,0
3	10.4	13.7	7.3	17.4	20.5	14.4	17.4	17.9	16.8	6.1	11,6	12,7
4	17.0	21.7	12.7	21.3	23.9	18.7	23.4	25.7	21.5	13.3	19,0	23,0
5	18.7	21.8	15.8	17.8	18.3	17.4	19.2	18.5	19.9	18.3	19,9	23,6
6	14.2	12.3	16.1	10.3	8.2	12.4	10.3	8.2	12.1	16.7	13,8	15,1
7	10.2	6.7	13.6	6.3	3.8	8.8	4.5	2.4	6.3	14.0	9,9	7,8
8	5.7	3.2	7.9	3.5	1.6	5.3	2.0	0.7	3.0	8.8	6,2	3,8
9	3.3	1.8	4.7	2.2	0.7	3.6	1.0	0.6	1.4	5.9	4,3	2,3
10+	5.2	1.8	8.4	3.2	0.7	5.6	1.0	0.4	1.6	12.0	8,4	3,0
Total	100	100	100	100	100	100	100	100	100	100	100	100
Average size	5.1	4.5	5.7	4.5	3.9	5.1	4.1	3.7	4.4	surveyed people		
Surveyed HH	4,816	3,290	1,526	8,350	4,900	3,450	12,060	5,681	6,379	23,997	37,140	49,186

Table A7: Living Arrangements of the Elderly Aged 65 and Over by Age-Class, Gender and Type of Residence, 1998

1998		Urban			Rural		
		Male	Female	Total	Male	Female	Total
65-79 years							
Independent living	Alone	5.0	13.7	9.1	3.7	14.7	9,6
	In couple only	20.5	11.3	16.2	14.7	9.1	11,6
Head of the household	In couple with child(ren) /granchild(ren)	57.1	16.2	37.9	61.1	11.3	34,1
	Alone with child(ren) /granchild(ren)	9.0	17.0	12.5	11.4	14.1	12,9
Parent in the HH of child	In couple	2.7	2.0	2.4	3.3	3.4	3,3
	Alone	2.6	22.8	12.1	5.5	36.4	22,4
Skipped family	In couple or alone	1.4	3.4	2.4	0.4	2.5	1,5
With brothers		1,3	4.1	2.6	--	3.1	1.7
With other relatives		0,4	6.6	3.3	--	1.5	0.8
With unrelated people		--	2.9	1.4	--	3.9	2.1
Total		100	100	100	100	100	100
80 years and over							
Independent living	Alone	8.6	10.3	9.4	10.2	25.4	17,2
	In couple only	25.9	0.0	13.2	23.9	--	13,0
Head of the household	In couple with child(ren) /granchild(ren)	40.2	--	20.5	25.5	--	13,8
	Alone with child(ren) /granchild(ren)	12.3	15.0	13.6	13.6	3.0	8,7
Parent in the HH of child	In couple	3.1	0.0	1.6	10.5	--	5,7
	Alone	6.2	49.7	27.6	10.6	55.7	31,2
Skipped family	In couple or alone	--	1.9	0.9	--	--	--
With brothers		--	3.2	1.6	5.6	--	3.1
With other relatives		1,2	13.8	7.4	--	5.4	2.5
With unrelated people		2,6	6.1	4.3	--	10.5	4.8
Total		100	100	100	100	100	100

Table A8: Living Arrangements of the Elderly Aged 65 and over by Age-Class, Gender and Type of Residence, 2006

		Urban			Rural		
		Male	Female	Total	Male	Female	Total
65-79							
Independent living	Alone	7.5	26.4	17.4	3.9	11.4	7.9
	In couple only	26.4	12.5	19.1	19.2	10.6	14.7
Head of the household	In couple with child(ren) /granchild(ren)	50.5	11.8	30.4	60.3	13.1	35.2
	alone with child(ren) /granchild(ren)	10	22.1	16.4	8.7	17.1	13.2
Parent in the HH of child	In couple	1.2	1.0	1.1	5.5	2.7	4
	Alone	0.6	14.9	8.0	1.3	37.5	20.5
Skipped family	In couple or alone	2.3	2.1	2.2	0.5	0.1	0.3
With brothers		0.5	0.5	2.6	1.6	--	1.6
With other relatives		0.7	0.7	5.1	3.0	0.6	4.4
With unrelated people		0.3	0.3	1.5	0.9	--	1.6
Total		100	100	100	100	100	100
80+							
Independent living	Alone	8.7	29.7	19.2	2.4	16.20	10.2
	In couple only	40.5	2.2	21.4	29.7	--	12.9
Head of the household	In couple with child(ren) /granchild(ren)	21.6	0.7	11.1	23.3	--	10.1
	alone with child(ren) /granchild(ren)	17.2	15.2	16.2	23.9	14.0	18.3
Parent in the HH of child	In couple	3.8	0.9	2.3	8.0	3.2	5.3
	Alone	4.6	40.4	22.5	9.8	58.7	37.4
Skipped family	In couple or alone	1.6	0.7	1.1	2.9	2.5	2.7
With brothers		0,00	1.2	0.6	--	--	--
With other relatives		2,0	6.8	4.4	0.0	1.4	0.8
With unrelated people		--	2.2	1.1	0.0	4.1	2.3
Total		100	100	100	100	100	100
		68	72	140	40	52	92

Table A9: Living Arrangements of The Elderly Aged 65 and Over by Age-Class, Gender and Type of Residence, 2012

		Urban			Rural		
		Male	Female	Total	Male	Female	Total
65-79							
Independent living	Alone	7.0	28.6	18.5	2.1	18.5	11.6
	In couple only	36.1	19.4	27.2	28.2	12.2	19
Head of the household	In couple with child(ren) /granchild(ren)	46.4	19.1	31.9	59.5	25	39.5
	alone with child(ren) /granchild(ren)	6.2	14.2	10.5	2.1	8.8	5.9
Parent in the HH of child	In couple	0.1	--	--	2.4	1.4	1.8
	Alone	0.9	10.9	6.2	1.1	22.5	13.5
Skipped family	In couple or alone	0.9	2.1	1.6	1.2	1.5	1.3
With brothers		0,6	0.6	0.8	0.7	--	0.2
With other relatives		1,7	1.7	4.6	3.3	3.4	9.6
With unrelated people		--	--	0.3	0.2	--	0.2
Total		100	100	100	100	100	100
80+							
Independent living	Alone	10.3	24.6	19.4	10.9	24.8	19.0
	In couple only	37.4	3.1	15.6	20	1.4	9.1
Head of the household	In couple with child(ren) /granchild(ren)	24.2	10.7	15.6	37.8	3	17.4
	alone with child(ren) /granchild(ren)	16.4	19.6	18.4	7.9	8.4	8.2
Parent in the HH of child	In couple	--	--	--	3.5	0.3	1.7
	Alone	6.3	31.6	22.3	9.8	47.7	32
Skipped family	In couple or alone	--	--	--	--	--	--
With brothers							
With other relatives		3,8	3.8	10.5	8.1	8.8	13.6
With unrelated people		1,5	1.5	--	0.5	1.2	0.8
Total		100	100	100	100	100	100

Table A10a: Family Structure in 2006 and 2012. Individuals in Panel Households Aged 65 and over in 2012, Males

Family typology in 2006	Family typology in 2012							
	Alone	Couple only	Nuclear family	Extended family	Multi-family	Skipped family	Total	N. of cases (2006)
Alone	71.8	8.7	3.7	3.4	12.5	--	100	23
Couple only	7.5	82.2	2.2	2.1	5.5	0.6	100	143
Nuclear family	3.5	25.4	60.9	1.0	9.3	--	100	435
Extended family	6.1	15.9	24.7	32.1	21.2	--	100	50
Multi-family	1.0	19.4	14.5	12.8	50.5	1.8	100	177
Skipped family	--	--	--	--	--	1000	100	3
N. of cases (2012)	48	261	313	47	155	7		831

Table A10b: Family Structure in 2006 and 2012. Individuals in Panel Households Aged 65 and over in 2012, Females

Family typology in 2006	Family typology in 2012							
	Alone	Couple only	Nuclear family	Extended family	Multi-family	Skipped family	Total	N. of cases (2006)
Alone	87.5	--	2.0	6.3	3.5	0.8	100	119
Couple only	29.8	58.5	3.6	4.5	2.8	0.8	100	117
Nuclear family	17.6	16.8	42.0	13.8	9.5	0.3	100	263
Extended family	9.8	1.8	3.3	65.7	18.2	1.2	100	230
Multi-family	9.0	13.4	10.2	22.9	43.9	0.6	100	150
Skipped family	48.1	--	8.5	--	6.5	36.9	100	15
N. of cases (2012)	223	131	140	243	152	13		894

Table A11: Questions on Transfers & Other Sources of Income, ELMPS 2012

Name	Label
q12301a	Over the past year, did the household receive - normal pension
q12301b	Over the past year, did the household receive - sadat's/mubarak's pens
q12301c	Over the past year, did the household receive - social assistance from the Ministry of Social Solidarity?
q12301d	Over the past year, did the household receive - social assistance from religious/non-governmental institutions?
q12301e	Over the past year, did the household receive - returns on rent (buildings, land, …etc)?
q12301f	Over the past year, did the household receive - interest on financial investments?
q12301g	Over the past year, did the household receive -other (assistance of sisters, etc.)
q12301h	Over the past year, did the household receive -other (divorce expense, etc.)?
q12301i	Over the past year, did the household receive -other (farmer's pension, etc.)?
q12301j	Over the past year, did the household receive -other (taxi)?

Source: ERF page online: Egypt - Egypt Labor Market Panel Survey, 2012.

Table A12: Percentages of Men and Women Living Alone and Receiving Public Support by Sex and Type of Public Support, 2006 and 2012

	2006						2012					
	Men			Women			Men			Women		
	U	R	Tot.	U	R	Tot.	U	R	Tot.	U	R	Tot.
Normal pension (q12301a)	78.0	55.2	70.2	79.7	39.6	67.1	69.6	42.4	61.6	73.2	48.1	62.9
Sad/Mub. Pension (q12301b)	6.3	27.5	13.6	10.1	40.4	19.6	5.5	23.3	10.8	13.3	23.2	17.5
Ministry Social Solid. (q12301c)	3.1	17.3	8.0	1.6	13.4	5.3	7.9	20.3	11.5	8.2	23.8	14.7
Other soc. ass. (q12301d)	3.9	--	2.6	5.6	18.1	9.5	0.2	--	0.1	2.1	1.0	1.6

Table A13: Elderly 65 Years or over Who Declared a) A Disability, b) A Situation of Limitation. Percentages among Those Included In Different Living Arrangements, by Age-Class and Sex, 2012

Living arrangements	YES Disability		Limited/strongly limited	
	M	F	M	F
65-79 years old				
Living alone	69.3	77.4	52.4	55.8
With spouse only	72.7	74.0	46.2	43.5
With descendants	63.7	70.9	40.4	42.9
Other relat. or unrelated	54.7	68.0	54.7	48.8
Total (% on total cases)	67.0	73.0	43.1	46.6
80 years and over old				
Living arrangements				
Living alone	65.1	82.8	29.1	58.8
With spouse only	71.9	91.9	48.8	67.0
With descendants	71.6	64.2	47.6	55.5
Other relations or unrelated people	100.0	100.0	.--	.--
Total (% on total cases)	71.3	64.2	45.2	56.5