

Central Bureau of Statistics

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this issue

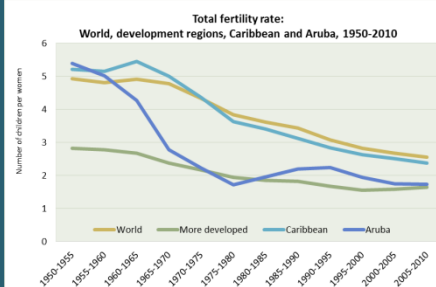
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THE DYNAMICS AND CONSEQUENCES OF POPULATION AGEING

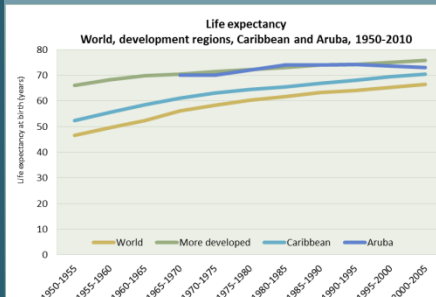
The process underlying global population ageing is known as the “demographic transition”, a process whereby reductions in mortality, particularly at young ages, are followed by reductions in fertility. Decreasing fertility along with increasing life expectancy (see graphs on the right) has reshaped the age structure of the population in most regions of the planet by shifting the relative weight of the population from younger to older groups. Aruba experienced a very steep fertility decline between 1957 and 1973, and hovered since then around or even below replacement level. As a consequence, ageing will take place in Aruba at a much higher pace than in most other countries.

The shift in age structure associated with population ageing has a profound impact on a broad range of economic, political and social processes. For example, concerns are growing about the long-term viability of intergenerational social support systems, which are crucial for the well-being of both the older and younger generations (Cliquet and Nizamuddin, 1999). This concern is especially acute in Aruba, where provision of care within the family becomes increasingly difficult as family size has decreased and women, who are traditionally the main caregivers, engage more and more in employment outside the home.

Total fertility rate



Life expectancy at birth



Four major findings with regard to ageing in Aruba:



1. Unprecedented

Population ageing in Aruba is unprecedented, a process without parallel in the history of Aruba. A population ages when increases in the proportion of older persons (that is, those aged 60 years or over) are accompanied by reductions in the proportion of children (persons under age 15) and then by declines in the proportions of persons in the working ages (15 to 59).

2. Pervasive

Population ageing is pervasive since it is affecting nearly all the countries of the world. Population ageing results mainly from reductions of fertility that have become virtually universal. The resulting slowdown in the growth of the number of children coupled with the steady increase in the number of older persons has a direct bearing on both the intergenerational and intergenerational equity and solidarity that are the foundations of society.

3. Profound

Population ageing is profound, having major consequences and implications for all facets of human life. In the economic area, population ageing will have an impact on economic growth, savings, investment, consumption, labor markets, pensions, taxation and intergenerational transfers. In the social sphere, population ageing influences family composition and living arrangements, housing demand, migration trends, epidemiology and the need for healthcare services.

4. Enduring

Population ageing is enduring. Since the first population Census in Aruba, the proportion of older persons has been rising steadily, passing from 4.9 per cent in 1950 to 15.1 per cent in 2010, and is expected to reach 19.2 per cent in 2023. As long as old-age mortality continues to decline and fertility remains low, the proportion of older persons will continue to increase.

Indicators of population ageing

Ageing Index

The ageing index is calculated as the number of persons 60 years old or over per hundred persons under age 15. Between 1950 and 2007, the ageing index increased by more than half at the world level, passing from 24 older persons per 100 children to 39 per 100. In Aruba the ageing index increased from 11.8 older persons per 100 children to 80.1 older persons per 100 in 2010.

Total dependency ratio

The total dependency ratio (number of persons under age 15 plus persons aged 65 or older per one hundred persons 15 to 64) is a commonly used measure of potential social support needs. It is based on the simple notion that all persons under 15 and those 65 or older are likely to be in some sense dependent on the population in the working ages of 15-64. Those in the working ages are assumed to provide direct or indirect support to those in the dependent ages (Kinsella and Gist, 1995). From 1950 to 1975, the total dependency ratio increased globally from 65 to 74. The total dependency ratio in Aruba went down from 80 per 100 to 40.7 in 2010. The Old age dependency ratio provides a better indicator about the pace of ageing.

Old-age dependency ratio

The old-age dependency ratio is the number of persons 65 years and over per one hundred persons 15-64 years. The old-age dependency ratio is currently at 6 per 100 in Latin America and the Caribbean, and will be at 26 in the year 2050. In Aruba the old-age dependency ratio is already at 14.1, and will be approximately at 19.2 in 2023.

Youth dependency ratio

The youth dependency ratio is the number of persons 0 to 14 years per 100 persons 15 to 64 years. This ratio is dropping at a high pace, indicating the decreasing share of young people.

Potential Support Ratio

The Potential Support Ratio is the number of persons aged 15 to 64 per every persons aged 65 or older. This ratio dropped from 18 in the year 1961 to 7.1 in 2010.

Age	1960	1972	1981	1991	2000	2010	2023
0-14	22003	21016	15615	16263	20887	20326	27151
15-60	28592	32591	38953	43438	59163	71200	88749
15-64	29550	34331	40704	45564	62637	76637	97515
60+	2,604	4,301	5,744	6,845	10,097	16,277	27,476
65+	1,646	2,561	3,993	4,719	6,624	10,840	18,710
80+	284	341	560	1,101	1,307	1,950	4,411
Total	53,199	57,908	60,312	66,546	90,147	107,803	143,377
0-14	41.4	36.3	25.9	24.4	23.2	18.9	18.9
15-60	53.7	56.3	64.6	65.3	65.6	66.0	61.9
15-64	55.5	59.3	67.5	68.5	69.5	71.1	68.0
60+	4.9	7.4	9.5	10.3	11.2	15.1	19.2
65+	3.1	4.4	6.6	7.1	7.3	10.1	13.0
80+	0.5	0.6	0.9	1.7	1.4	1.8	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Ageing index	11.8	20.5	36.8	42.1	48.3	80.1	101.2
Youth dependency ratio	74.5	61.2	38.4	35.7	33.3	26.5	27.8
Old-age dependency ratio	5.6	7.5	9.8	10.4	10.6	14.1	19.2
Total dependency ratio	80.0	68.7	48.2	46.0	43.9	40.7	47.0
Potential Support Ratio (PSR)	18.0	13.4	10.2	9.7	9.5	7.1	5.2
Parent Support Ratio	0.1	0.1	0.1	0.1	0.1	0.1	0.2
Sex Ratio	96.5	96.3	94.7	97.0	92.2	92.0	82.6

Source: Population and Housing Census 1961 - 2000; preliminary census 2010 data; projection 2023

The other main findings of population ageing:

Ageing is irreversible

Because fertility levels are unlikely to rise again to the high level common in the past, population ageing is irreversible.

Doubling number of older persons

In 2010, the population in Aruba aged 60 years or over numbered 16,277, more than six times the number present in 1961. By 2023, 27,476 older persons are projected to be alive, implying that their number will once again almost double over a span of the next 12 years.

Aruba's older population is growing fast

Globally the population of older persons is growing at a rate of 2.6 per cent per year, considerably faster than the population as a whole, which is increasing at 1.2 per cent annually. In Aruba the population of older persons is growing much faster: 6.6 per cent yearly, while the total population is growing at 1.4 per cent annually. At least for the upcoming decades, the older population is expected to continue growing more rapidly than the population in other age groups. Such rapid growth will require far-reaching economic and social adjustments.

One fifth of Aruba's population 60+ in 2023

Marked differences exist between developed and developing regions in the number and proportion of older persons. In the more developed regions, over a fifth of the population is currently aged 60 years or over and by 2050, nearly a third of the population in developed countries is projected to be in that age group. In the less developed regions, older persons account today for just 8 per cent of the population but by 2050 they are expected to account for a fifth of the population, implying that, by mid-century, the developing world is likely to reach the same stage in the process of population ageing that the developed world is already at. In Aruba 15.1 per cent of the population is aged 60 years or over. Within 12 years, this is expected to be a fifth of the total population.

Aruba's pace of ageing is faster than in most other countries

The pace of population ageing is faster in developing countries than in developed countries. Consequently, developing countries will have less time to adjust to the consequences of population ageing. Moreover, population ageing in developing countries is taking place at lower levels of socio-economic development than has been the case for developed countries. In Aruba fertility rates dropped even faster than the fertility rates in the Caribbean or in developing countries. As a consequence, the pace of population ageing will be much faster than in most countries in the world.

Aruba's oldest old is increasing with 8.6% per year

The population of older persons is itself ageing. Among those aged 60 years or over, the fastest growing population is that of the oldest-old, that is, those aged 80 years or over. Globally, their numbers are currently increasing at 4.0 per cent per year. In Aruba this age-category is increasing at a speed of 8.6 per cent per year.

The potential support ratio in Aruba is dropping fast

The potential support ratio (PSR), that is, the number of persons aged 15 to 64 for each older person aged 65 years or over, indicates how many potential workers there are per older person. As a population ages, the potential support ratio tends to fall. Between 1950 and 2009, the potential support ratio for the world, declined from 12 to 9 potential workers per person aged 65 or over. In Aruba the PSR dropped from 18 in 1991 to 7.1 in 2010. Globally, by 2050, the potential support ratio is projected to drop further to reach 4 potential workers per older person. In Aruba the potential support ratio will drop already to a number as low as 5.2 by the year 2023. The reduction of potential support ratios has important implications for social security schemes, particularly for pay-as-you-go pension systems under which taxes on current workers' pay the pensions of retirees.

Older women in the majority

Because women live longer than men, women constitute the majority of older persons. Currently, women outnumber men by 2073 persons among those aged 60 years or over. Among those aged 80 years or over, women are nearly twice as numerous as men.

More and more older persons are living alone

Older persons living alone are at greater risk of experiencing social isolation and economic deprivation, and may therefore require special support. Because of higher survivorship and lower propensities to remarry, older women are much less likely than older men to be currently married, and older women are also more likely to live alone. Globally, 80 per cent of men aged 60 years or over but under half of women in that age group are living with a spouse. An estimated 19 per cent of older women live alone, whereas just 9 per cent of older men do.

The other main findings of population ageing:

Illiteracy low in Aruba

Illiteracy is still common among the older population of less developed regions. Currently, it is estimated that nearly half of all persons aged 65 or over in developing countries are illiterate. In Aruba only 7 percent of the males and 6 percent of the females are illiterate.

27.6 percent of older males still economic active in Aruba

The effective age at retirement varies considerably among populations. In countries with high per capita incomes, older persons can retire earlier and thus tend to have lower labor force participation rates at older ages. Thus, just 14 per cent of men aged 65 years or over are economically active in the more developed regions, whereas 35 per cent are in the labor force of the less developed regions. The difference is similar among women. In the more developed regions, 8 per cent of older women are economically active, compared to 19 per cent in the less developed regions. Older persons remain economically active for longer in the less developed regions because of the limited coverage of pension programmes and the relatively small incomes they provide. In Aruba 17 percent of the males aged 65 and over remain economically active, compared to 11.1 percent of the females in the same age-category. For younger males, aged 60+ the percentage is much higher. More than 27 percent of them are still economic active. 18.2 percent of their female counterparts are still working after reaching pensionable age.

Statutory age versus pensionable age

In most countries the statutory age at which a full pension can be obtained provided a minimum period of contributions to the pension system is completed (i.e., the pensionable age) is the same for women and men, but where there is a difference, the pensionable age is lower for women. In about 40 per cent of countries, women become eligible for full pension benefits at lower ages than men, typically five years lower, even though women generally survive longer than men. For both men and women, pensionable ages tend to be higher in developed than in developing countries.

The effects of the global crisis

The global economic and financial crisis that started in 2007 and unfolded during 2008 and 2009 brought about sharp reductions in the value of pension funds in many countries in the world. The downturn is partly due to reduced employment and contributions, but is mainly the result of large negative rates of return on pension funds' investments. As a consequence,

retirement savings have contracted substantially in both more developed and less developed countries. This, together with lower home prices, has translated into significantly reduced assets upon which older persons rely for their retirement years. The impact has been the greatest among workers approaching retirement, retirees who did not annuitize their retirement savings, and those drawing a large portion of their pensions from defined-contribution schemes, which are directly affected by the negative rates of return. Some of the most severe impacts, however, may be on the large number of workers and older persons who have no social security protection at all.

Intergenerational support under pressure

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 the negative shocks in the economy. However, given the systemic nature of the most recent crisis, the scope for family support to compensate for the reduction of labor and asset income seems to be rather limited. Thus governmental social protection programmes should be maintained or strengthened to effectively counter the impacts of the crisis, and to improve social protection in the future. Confronting the downturn in tax receipts and the stable or increased public spending produced by the current crisis will entail a fiscal gap, which could be as low as 1 per cent or as high as 13 per cent of GDP, depending on the ultimate severity and duration of the recession. Although some increase in public debt seems inevitable, care must be taken not to increase unduly the burden of the adjustment on future generations.

Implications and conclusions about population ageing:

This issue has examined briefly the demography of population ageing and mentioned many of the socioeconomic implications of demographic trends. In one sense, the reality of global ageing represents a triumph of medical, social, and economic advances. In another sense, population ageing produces myriad challenges to social insurance and pension schemes, health care systems, and existing models of social support. It affects economic growth, disease patterns and prevalence, and fundamental assumptions about growing older.

Population ageing may fuel opportunities for economic growth and spur Aruba to develop new fiscal approaches to accommodate a changing world. While some governments have begun to plan for the long term, most have not, and reform becomes more difficult as the pace of population ageing accelerates. In general the pace of population ageing is faster in developing countries than in developed countries. Population ageing in Aruba is even faster than most of the developing countries, because of the steep fertility decline between 1957 and 1973.

In order to better understand the paths and processes of ageing, at both the individual and population level, multidisciplinary research will play a key role to depict the coherence and interrelationships among work, health, economic status and family structure.

Ahead of such research one may come to the following conclusions:

Pension and Old-Age Security

Population ageing will surely require an increase in budgetary outlays in the form of old-age pension payments. This issue is particularly the case in Aruba where the public pension system is financed on a pay-as-you-go basis.

Total amount of paid AOV, benefits x Afl. 10000 en number of pensioners

Year	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006*
Premies	66.6	97.2	94.1	103.8	96.5	114.3	118.8	123.7	120.9	135.1	131.3	149.6	153.5
Uitkeringen	61.9	89.8	97.2	102.7	111	113.5	117.2	127.2	128.2	130.7	138.1	151.8	158.9
Aantal Ge-pensioneerden	7261	7664	8000	8351	8922	9237	9506	9942	10275	10579	1414	15013	15928

Since the early 1990s, pension reform has become a high priority in many nations; more than half of the 30 Organizations for Economic Co-Operation and Development (OECD) countries have made major changes during the past 10 to 15 years (OECD, 2007b).

The rapid growth of the number of pensioners paid by APFA (69.1 % since the year 2000), and the increase in the total number of pensioners covered by the SVB (119.4% since 1994) is affecting already the reserves of both institutions.

The current demographic changes will even accelerate the problems with liquidity of the funds.

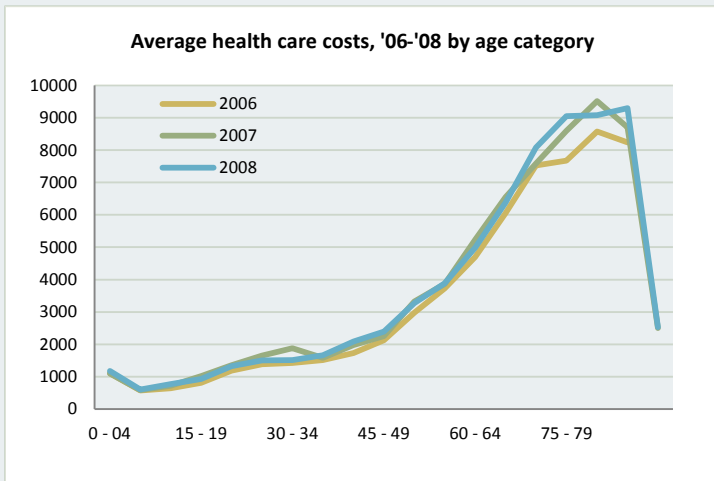
Total number of pensioners by age-category, 2000 - 2009

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Age-cat										
45-49	13	10	8	5	5	0	0	0	0	0
50-54	40	41	38	35	34	30	23	21	17	11
55-59	316	305	287	283	278	266	258	319	323	303
60-64	570	621	665	703	720	745	727	767	783	825
65-69	302	365	406	463	518	577	623	658	695	714
70-74	196	217	240	256	270	297	351	392	453	497
75-79	130	130	138	158	171	180	195	215	220	247
80-84	65	71	80	84	100	112	110	112	130	140
85-89	39	38	41	39	37	42	54	61	66	79
90-94	9	13	18	21	19	19	19	20	18	17
95-99	1	2	2	3	2	3	5	5	6	10
100-105	0	0	0	0	0	0	1	0	0	0
Total	1681	1813	1923	2050	2154	2271	2366	2570	2711	2843

Source: APFA, august 2010

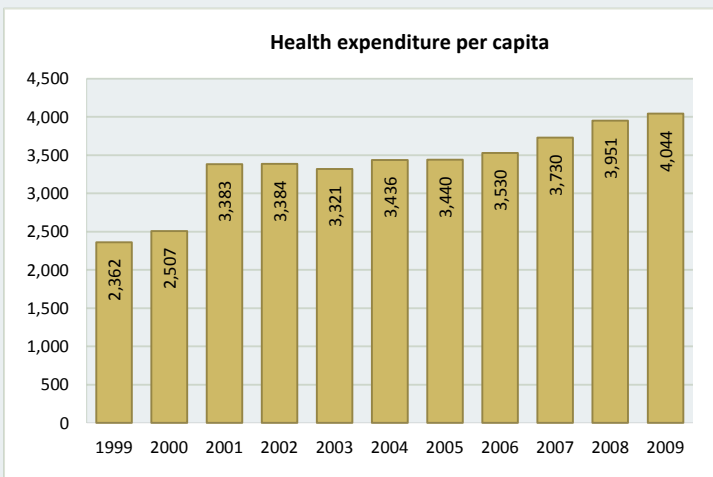
Ageing increases health care cost

Population ageing is likely to increase cost of health care, because health expenditures by and for older age groups tend to be proportionally greater than their population share. The figure below (source AZV) show the average health care cost per age category for the years 2006 – 2008. The costs for people aged 65 and over are uniformly higher than for the non-elderly. Especially in countries where acute care and institutional (long-term care) services are widely available, the health care costs are expected to increase rapidly because of ageing populations.



A large fraction of health care costs associated with advancing age is incurred in the period just prior to death, and since an increasing proportion of people are living to old age, overall health care cost rise with age.

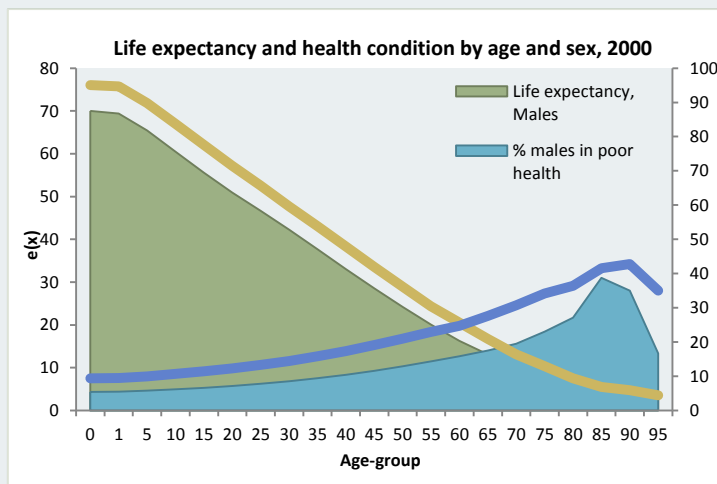
The per capita public health expenditures for older people are higher than for younger people. An ageing population will increase, as can be seen in the graph below, the health care cost per capita.



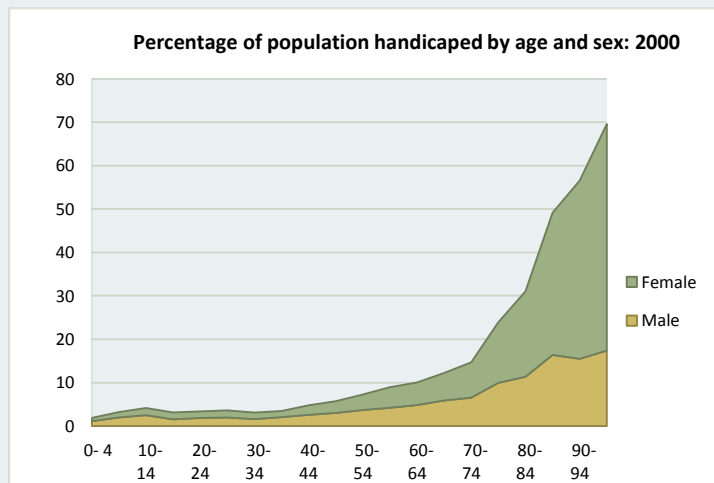
A longer life isn't necessary better

As people live longer, the quality of that longer life becomes a central issue for both personal and social well-being. Are individual living healthier as well as longer lives, or are ill health and disabilities characteristics of older years? In ageing societies, the answer to this question will affect national health systems, retirement and the demand for long-term care.

The next graph visualizes the clear correlation between the decreasing life-expectancy and the increasing ill health condition of people, according to age.



The graph below clearly shows a steady increase in the relative number of handicapped persons by age. As the age group of elderly will grow quickly in the future, the number of handicapped persons will also increase rapidly, bringing with it serious logistic and financial consequences for Aruba's health care system.



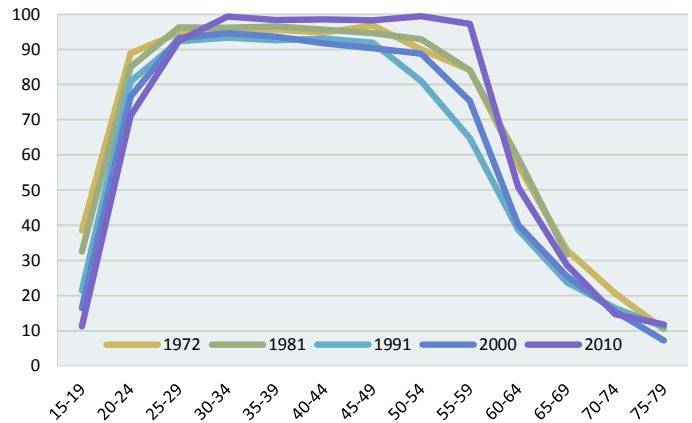
Labor force participation and retirement

Rapid growth of the older population may put pressure on a nation's financial resources, in large part because of the need to fund systems to provide financial support after retirement. Many older people, however, continue to work beyond normal retirement age. Globally, older workers share several characteristics. Labor force participation declines as people near retirement age, and participation rates are higher for older men than for older women. In all countries, workers aged 65 and over constitute a small proportion of the total labor force. Their share of the total labor force in the 52 study countries ranged from less than 1 percent to about 7 percent. In Aruba their share is 3 percent in 2010. If we take all the persons between age 60 and 64 also into account, the percentage will increase to 7 percent exactly.

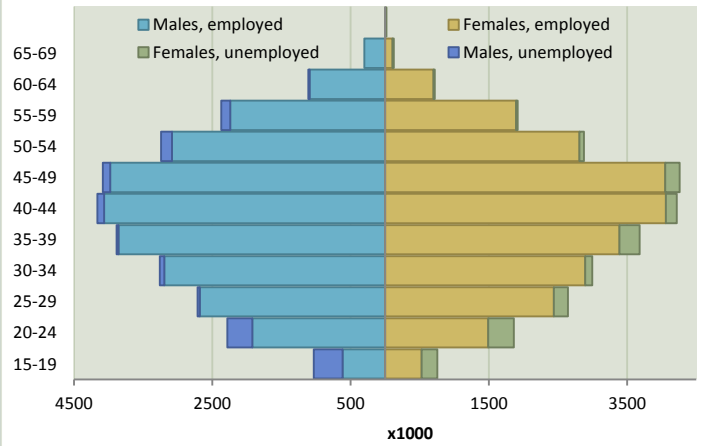
Globally, many older workers work part-time as a transition to retirement. Older women are more likely than older men to work part-time, and the proportion of older workers who work part-time increases with age. The trend toward part-time work (also called flexible work or gradual retirement) may also be a function of increasing government support for such arrangements (Vickerstaf, 2007).

In Aruba only a very small number of persons are working part-time. Legislative conditions are currently not favorable toward flexible working conditions. In order to create conditions to smoothly enter retirement, it's advisable to ease restrictions regarding older employees. Measures need to be developed and implemented that will separate older workers into categories for retention, retraining or redeployment.

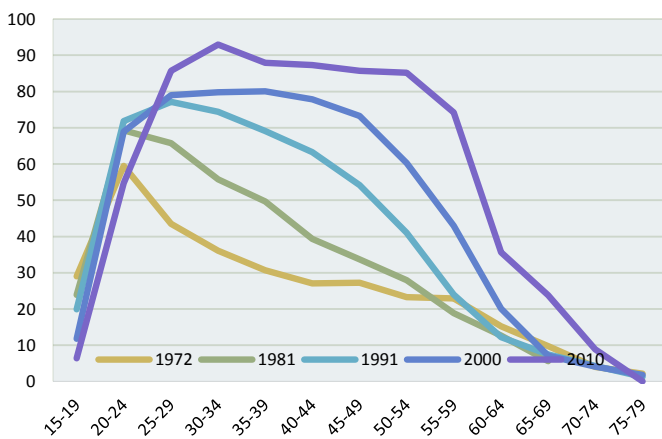
Participation rates males by age-group (1972-2010)



Economically active population 2007



Participation rates females by age-group (1972-2010)



The number of older workers leaving the labor market is already surpassing the number of new young entrants. The very high pace of ageing in Aruba will accelerate the outflow of elderly workers, resulting in shortages in the labor market, especially in service oriented sectors, such as education, health services, police, etc.

Without flexibilization of legislative conditions of the labor market, Aruba will be soon confronted with shortages in the labor market, only to be filled with the use of foreign labor.