

The Ageing Population of Brunei Darussalam: Trends and Economic Consequences

*Formal investment by the Government is
needed to care for elderly people, otherwise, huge social
problems with significant economic consequences
are both inevitable and imminent*

By Parvez Azim*

Population ageing has been a topic of considerable interest during the last decade (Knodel, 1999), more so in the developed regions of the world than in the less developed regions. This is so because the process of population ageing has been much slower until recent times in the less developed regions.

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Table 1. Actual and projected population by residential status, 1971-2011, Brunei Darussalam

Year	Citizens and permanent residents		Migrant workers		Totals population	
	Number	Percentage	Number	Percentage	Number	Percentage
1971	112,896	82.9	23,360	17.1	136,256	100
1981	147,861	76.7	44,971	23.3	192,832	100
1991	189,956	72.9	70,526	27.1	260,482	100
1996	214,400	75.4	69,800	24.6	284,200	100
2001	240,100	69.6	104,700	30.4	344,800	100
2006	266,300	68.5	122,400	31.5	388,700	100
2011	293,200	67.2	143,300	32.8	436,500	100

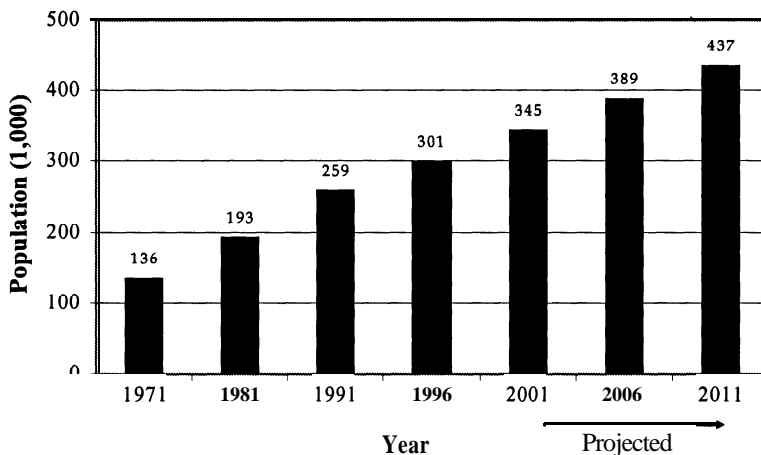
Source: Economic Planning Unit Report: Demographic Situation and Population Projections 1991-2011, Ministry of Finance, Negara Brunei Darussalam, April 1994.

The United Nations (1998) has projected that in some developing countries the “greying” population will increase rapidly in the next few decades. Because no research has ever been published on population ageing issues in Brunei Darussalam, this article was prepared to fill that gap. After a brief discussion of the past population changes in Brunei Darussalam, the future trends in population age structure are described, with the main emphasis being on the ageing segment of the population. This article distinguishes between “citizens and permanent residents” and “temporary residents” (migrant workers). The United Nations projections do not distinguish between those different population groups and thus project the entire population as though it will eventually reach retirement age in Brunei Darussalam. Therefore, it is necessary to make a distinction between the different groups. This article deals with the issue of migrant workers explicitly, and projections have been made separately for them. The article concludes with an assessment of the overall impact of population growth on the economy of the country in general and that of the ageing population on macro-economic variables in particular. The social impact and other implications of the ageing population have also been touched tangentially.

Past and future changes in population

The population of Brunei Darussalam was 136,256 persons, 192,832 persons and 260,482 persons, in 1971, 1981 and 1991 (**table 1**) respectively. These numbers reflect a growth rate of 4.5 per cent and 3.5 per cent for the 10-year intercensal periods 1971-1981 and 1981-1991 respectively. It can be seen from this trend that the population of the country almost doubled between

Figure 1. Population of Brunei Darussalam, 1971-2011



1971 and 1991 (Obben, 1998); it is estimated that it will have tripled by the year 2011 (**figure 1**).

The reduction in the rate of population growth could be attributed to the decline in fertility resulting from the increasing number of females attaining higher education (**table 2**). This has led to a considerable rise in the female labour force participation rate and in the number marrying at a later age. The composite effect of these factors has caused a reduction in birth rates, which are illustrated by the gradual shrinkage of the base of the respective population pyramids of Brunei Darussalam (**figures 2, 3 and 4**).

These population pyramids for 1971, 1981 and 1991 clearly show the changes in the country's age structure. The proportion of people aged 0-14 decreased, the proportion of people aged 15-59 increased and the proportion of people aged 60 and older remained stationary. One factor which held almost steadily throughout the period under consideration has been the 60 years and older population age group. It comprised 4.8 per cent of the entire population of the country in 1971, 4.2 per cent in 1981 and 4.1 per cent in 1991, as shown in the apex of **figures 2, 3 and 4** respectively. The population 0-14 years comprised 43 per cent of the population in 1971, 39 per cent in 1981 and 34 per cent in 1991, a clear downward trend in the young dependents, while the percentage of the 15-64 year age group (economically active people) increased from 52 per cent in 1971 to 57 per cent in 1981 and 61 per cent in 1991.

Figure 2. Population pyramid for Brunei Darussalam, 1971

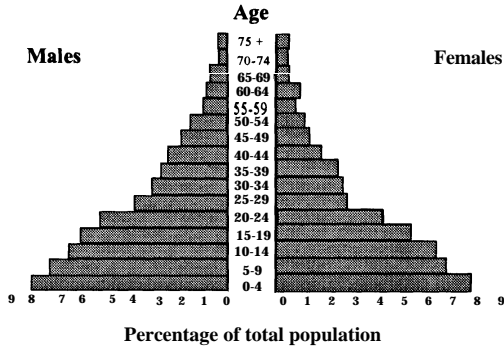


Figure 3. Population pyramid for Brunei Darussalam, 1981

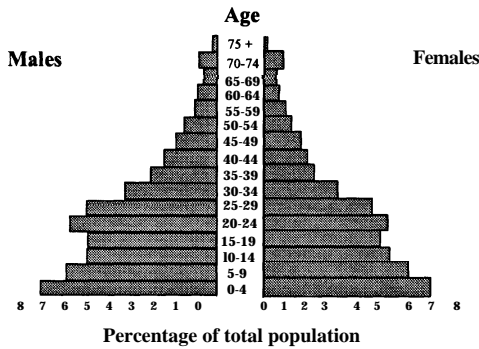


Figure 4. Population pyramid for Brunei Darussalam, 1991

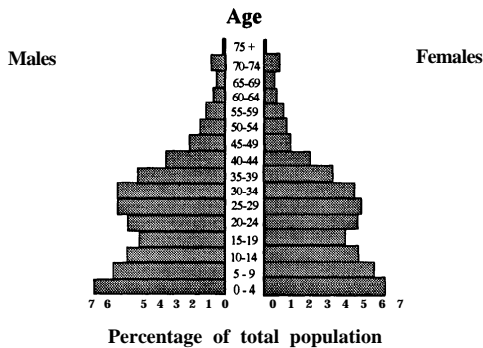


Table 2. Total fertility rate and life expectancy at birth in Brunei Darussalam, 1950-1995

Year	Total fertility rate (children per woman)	Expectation of life at birth (years)	
		Males	Females
1950-1955	7.00	59.6	61.1
1955-1960	7.00	61.0	62.0
1960-1965	6.72	62.5	63.5
1965-1970	5.94	64.0	66.0
1970-1975	5.40	66.9	69.9
1975-1980	4.40	68.1	71.4
1980-1985	3.80	70.1	73.6
1985-1990	3.37	71.5	75.3
1990-1995	3.09	72.4	77.1

Source: United Nations (1999). World Population Prospects: The 1998 Revision, Volume II: Sex and Age (New York, United Nations).

Population ageing

Population statistics reveal that there has been a continuous decline in fertility and a rise in the life expectancy at birth (**table 2**). As a consequence, there has been a rise in the average age of the population, with a subsequent trend towards an ageing population (**table 3**). Owing to this ageing trend, the young dependency ratio (under age 15) will fall and the old-age dependency ratio will rise. In the future, the number of very old (those 75 years and older) is expected to rise sharply as life expectancy continues to go up.

Table 3. Median age of the population by residential status, 1991-2011, Brunei Darussalam

Year	Median age (years)		
	Citizens and permanent residents	Migrant workers	All groups
1991	19.9	28.9	23.4
1996	21.0	28.9	24.2
2001	22.2	28.9	25.1
2006	23.5	28.9	26.0
2011	24.7	28.9	26.8

Source: Economic Planning Unit Report: Demographic Situation and Population Projections 1991-2011, Table 7.1, Ministry of Finance, Negara Brunei Darussalam, April 1994.

As shown in **table 3**, the median age of citizens and permanent residents is projected to increase from 19.9 years in 1991 to 24.7 years in 2011. The corresponding figures for migrant workers are estimated to remain constant at 28.9 years throughout the period under consideration. This implies that the ageing process of the population is solely due to the non-migrant population. Furthermore, the median age of migrant workers was noted to be more than that of local workers throughout the period 1991-2011. The overall median age of all groups is projected to increase from 23.4 years in 1991 to 26.8 years in 2011.

Regarding the economic consequences of this demographic transition, the trend in the ageing of the population will affect everyone in the country. Economists assess the importance of population size and population characteristics in terms of their contribution to the production of goods and services (Anderton, 1995). However, it is not the population size only that matters but the different age distributions of the populations. An ageing population is likely to cause an increase in the number of retirees; consequently, the old-age dependency ratio will increase. Elderly people will draw a pension and will make more demands on the country's health and social services system. The amount of health care and community services needed will increase not only with increasing numbers of elderly people, but also with the age of that segment of the population. These services will be provided by the working population of those aged 15 to 64 years. With the high level of unemployment and the growing elderly population, the future does not look very bright for the country. The ageing of the population will cause an increase in the cost of retirement pensions as well as in the demand for medical care. More geriatricians will be needed in hospitals.

There are many aspects in which ageing is an important issue: for example, the growth of the older segment of the population will lead to a reduction in the size of the work force and a simultaneous growth in the percentage of the population over retirement age. In addition, it may become necessary to re-design buildings and open spaces as the percentage of young people decreases and the proportion of the elderly increases.

Table 4 shows that the number of persons aged 65 years or older, including migrant workers, in Brunei Darussalam was estimated to be 7,000 in 1991. Out of that number, only 400 were migrant workers. This age-group is projected to almost double to approximately 13,800 by 2011; out of that number, only 800 would be migrant workers. The aged (65 years and older) female population of 7,700 will exceed that of the aged male population of 6,100 in 2011. Regarding the percentage of the population aged 65 years or older in Brunei Darussalam, 2.7 per cent of that population group were aged 65

Table 4. Decomposition of the projected population aged 65 and older, by sex and residential status, 1991-2011, Brunei Darussalam

Year	Citizens and permanent residents		Migrant workers		All groups	
	Males	Females	Males	Females	Males	Females
1991	3,400	3,200	200	200	3,600	3,400
1996	3,800	3,800	300	200	4,100	4,100
2001	4,300	5,000	300	300	7,700	8,000
2006	5,000	6,200	400	300	9,400	9,900
2011	5,600	7,300	400	400	6,100	7,700

Source: Based on Economic Planning Unit Report: Demographic Situation and Population Projections 1991-2011, Table 7.5, Ministry of Finance, Negara Brunei Darussalam, April 1994.

years or older in 1991; it is projected that this percentage will rise to 3.2 in 2011.

There has been a continuous increase in the number of migrant workers in Brunei Darussalam. Migrant workers were estimated to account for 17 per cent of the total population in 1971. The percentage of migrant workers rose to 27 per cent of the total population in 1991 and it is projected to rise further to 33 per cent in 2011 (see **table 1**). However, it should be noted that, in spite of such a large number of foreign workers in Brunei Darussalam, they live in the country for a temporary period and leave before retirement age. Thus, they do not become part of the elderly dependent population. This factor must be taken into account in future studies and projections. It is also worth mentioning that the percentage of old-age dependents is currently much higher in the more developed than in the less developed countries (United Nations, 1998), but the pace of ageing in developing countries is more rapid, and their transition from a young to an old-age structure will be more compressed in the future.

When it comes to the ageing population of a country, it is imperative to shed light on life expectancy at age 60. The world has experienced dramatic improvements in longevity. Life expectancy at birth has increased about 19 years since 1950 to its current level of 65 years. In Brunei Darussalam, the United Nations projects that life expectancy at birth will increase from 76 years (1995-2000) to a dramatic level of 81 years by the year 2040. Life expectancy at age 15 is projected to rise from 62 years (1995-2000) to 67 years in the next four decades. It is also observed that female life expectancy at birth is greater than that of males by a margin of about six years. It has also been concluded that the oldest old (75 years and older) females outlive their male peers. The

reason for this phenomenon is that males are exposed to more harsh environments and thus are subject to more wear and tear than females who in general are more likely to stay at home. In Brunei Darussalam, of those surviving to age 60, by 2040 men can expect to live another 20 years and women, an additional 26 years. The United Nations has projected that men reaching age 60 in the least developed countries can expect only 14 more years of life and women, 16 years, while in the more developed countries, life expectancy at age 60 is 18 years for men and 22 years for women. It is encouraging to note that life expectancy in Brunei Darussalam is almost the same as in the more developed countries of the world.

As far as the percentage of women, excluding migrant workers, in the older population of Brunei Darussalam is concerned, the female population will far exceed the male population in 2011 (**table 4**). In 1991, however, there were more males than females in the older population, excluding migrant workers. This reversal of the trend could be termed as old-age feminization. The reason is that women are generally more likely to survive to older ages. The percentage of women in the older age groups is higher in the more developed countries than in the less developed countries owing to larger differences in life expectancy between the sexes in the more developed countries. The same situation is projected to prevail in Brunei Darussalam.

Changing dependency ratios

Dependency ratios have important implications for social security schemes, particularly traditional pay-as-you-go systems (United Nations, 1998), in which current workers pay taxes used for the benefit of current retirees. The proportion of the population which is economically inactive (children below 15 years of age and adults above the retirement age of, say, 65) are classified as the dependent population. This ratio indicates roughly how many dependents must be supported by every 100 people in the economically active group. It can only be approximate, as some people younger than 15 or older than 65 may be in full-time employment; furthermore, some people older than 15 may be pursuing full-time education. The dependency ratio is considered to be one of the most important measurements of population structure, because the revenue obtained from the active population has to support the non-economically active sector for things such as schooling, pensions, food, clothing and shelter, health care and housing. Many of these services have to be provided by the Government and are the subject of planning.

The total dependency ratio in Brunei Darussalam has gradually declined from 59 in 1991 to 48 in 2011 (**table 5**). In 1991, there were 59 dependents per

Table 5. Dependency ratios by residential status, 1991-2011, Brunei Darussalam

Year	Citizens and permanent residents			Migrant workers			All groups		
	<15 years	65 and older	<15+65 and older	<15 years	65 and older	<15+65 and older	<15 years	65 and older	<15+65 and older
1991	69.6	6.1	75.7	26.1	0.7	26.9	54.9	4.3	59.2
1996	64.0	6.1	70.1	26.1	0.7	26.9	50.7	4.2	54.9
2001	58.7	6.4	65.2	26.1	0.7	26.9	46.9	6.9	53.8
2006	53.1	6.7	59.8	26.1	0.7	26.9	43.2	7.3	50.5
2011	48.5	6.9	55.3	26.1	0.7	26.9	39.9	8.7	47.9

Source: Economic Planning Unit Report: Demographic Situation and Population Projections 1991-2011, Table 7.4, Ministry of Finance, Negara Brunei Darussalam, April 1994, and the author's own calculations.

100 persons of working age (15-64 years). Out of these 59 dependents, 55 were young dependents and only four were elderly. However, the percentage of young dependents has been falling, while that of elderly dependents has been rising among citizens and permanent residents. Among migrant workers, almost all the dependents are young dependents.

The data in **table 6** reveal that the overall growth rate of the employed population was 5.65 per cent during the period 1971-1981; 10 years later, during the period 1981-1991 it was 4.7 per cent. An interesting feature of the data concerns the more than double growth rate of employed females as compared with males between the periods 1971- 1981 and 1981- 1991. While the growth rates of unemployed males increased from 2.6 per cent in the period 1971-1981 to 4.04 per cent in the period 1981- 1991, that of females decreased from 2.96 per cent to 1.43 per cent for the same period.

The projections indicate consistently rising trends of employed males and females over the period under consideration (1995-2010), but the growth rates of employed females were noted to be more than those of males. The growth rates of unemployed males and females were almost the same during the period 1971-1981 except during the period 1981-1991 (**table 6**).

It is encouraging to note that the employed female workforce increased manifold from 7,000 in 1971 to 37,000 in 1991 (Yean and Tan, 1999); by contrast, the number of employed males increased from 34,000 to 75,000 for the same period. This trend towards rising female participation in the workforce

Table 6. Population distribution by activity status and sex, 1971-2010, Brunei Darussalam

Activity status	1971	1981	1991	1995	2000	2005	2010	Average annual growth rate (%)	
								1971-1981	1981-1991
Total:									
Employed	41,000	71,000	112,000	186,000	204,000	230,000	251,000	5.65	4.70
Unemployed	36,000	48,000	59,000	115,000	123,000	124,000	129,000	2.80	2.08
Males:									
Employed	34,000	54,000	75,000	96,000	107,000	120,000	130,000	4.64	3.38
Unemployed	9,000	11,000	16,000	59,000	64,000	65,000	65,000	2.60	4.04
Females:									
Employed	7,000	17,000	37,000	85,000	97,000	108,000	120,000	9.35	8.16
Unemployed	28,000	37,000	43,000	56,000	60,000	63,000	64,000	2.96	1.43

Source: Figure for the period 1971-1991 are from Teo Siew Yean and Tan Siew Ee (1999). "Population and labour forces in Brunei Darussalam: patterns and structural changes", *Readings on the Economy of Brunei Darussalam*: (Universiti Brunei Darussalam), pp. 101-105; figures for the period 1995-2010 are projected.

Note: Numbers have been rounded.

should help to reduce the current reliance on foreign workers in almost all sectors of the economy. This trend could be due to more enlightened employer attitudes towards the hiring of females, the better educational qualifications of women and the more lucrative job opportunities for females in the rapidly expanding economy of Brunei Darussalam.

Population by residential status

The data on foreign-born persons categorized as temporary workers show an upward trend, rising from 23,360 persons in 1971 to 44,971 persons in 1981 and to 70,526 persons in 1991, for a growth rate of 6.77 per cent in the period 1971-1981 and 4.61 per cent in the period 1981-1991 (**table 7**). The distribution trend of the temporary residents increased from 17.1 per cent in 1971 to 23.3 per cent and 27.1 per cent in 1981 and 1991 respectively. Another noteworthy feature concerns the decline in the number and proportion of permanent residents and a declining proportion of citizens of Brunei Darussalam. The annual growth rate of citizens was slightly slower for the period 1981-1991 as compared with the period 1971-1981. The number of citizens increased less than two-fold, from 92,153 persons in 1971 to 171,099 persons in 1991. The

Table 7. Population by residential status in Brunei Darussalam, 1971,1981 and 1991

Year	Citizens ^a	Permanent residents ^b	Temporary residents ^c	Total
Numbers:				
1971	92,153	20,743	23,360	136,256
1981	127,676	20,185	44,971	192,832
1991	171,099	18,857	70,526	260,482
Growth rate per annum (%):				
1971-1981	3.31	-0.27	6.77	3.53
1981-1991	2.92	-0.68	4.61	3.05
Distribution (%):				
1971	67.6	15.2	17.1	100
1981	66.2	10.5	23.3	100
1991	65.7	7.2	27.1	100

Source: Various issues of *Brunei Darussalam Statistical Yearbooks*.

a The term citizens refers to the holders of the Brunei Darussalam Yellow Identity Card;

b The term permanent residents refers to the holders of the Brunei Darussalam Purple Identity Card;

c The term temporary residents refers to the holders of the Brunei Darussalam Green Identity Card.

number as well as percentage of permanent residents in Brunei Darussalam decreased during the period under consideration. The main cause could be emigration, which produced a negative growth rate.

It is very important to note that temporary residents more than doubled in number from 23,360 persons in 1971 to 70,526 persons in 1991. This increase should not be surprising, the reason being that Brunei Darussalam is an underpopulated country. Over the years, the continuous recruitment of foreign workers having a wide variety of skills has caused this change.

According to the 1971 population census, out of the total population of 136,256 people in Brunei Darussalam, 101,511 persons or 74.5 per cent were born in the country and the remaining 34,745 persons or 25.5 per cent were born outside Brunei Darussalam. As can be seen from table 8, the number of locally born persons had increased from 101,511 persons in 1971 to 139,167 persons in 1981 and 184,388 persons in 1991. However, in terms of proportion, the locally born population decreased from 74.5 per cent in 1971 to 72.2 per cent and 70.8 per cent in 1981 and 1991 respectively. There was an increase in the share of persons born in other countries in the total population of the country between 1971 and 1991.

Table 8. Classification of the population according to citizenship status in Brunei Darussalam, 1971,1981 and 1991

Country of birth	1971	1981	1991	1971	1981	1991	Growth rate	
	(Number)	(Number)	(Number)	(per- centage)	(per- centage)	(per- centage)	1971- 1981	1981- 1991
Brunei Darussalam	101,511	139,167	184,388	74.5	72.17	70.79	3.20	2.85
Foreigners ^a	34,745	53,665	76,094	25.5	27.83	29.21	4.44	3.55
Total	136,256	192,832	260,482	100.0	100.0	100.0	3.53	3.05

Source: Population Census Reports, 1971, 1981 and 1991.

a Foreigners include people from Australia; Bangladesh; China; Hong Kong, China; India; Indonesia; Malaysia; Nepal; Netherlands; New Zealand; Pakistan; Philippines; Republic of Korea; Singapore; Sri Lanka; Taiwan Province of China; Thailand; United Kingdom of Great Britain and Northern Ireland; and some other countries which are not mentioned.

It may be observed from **table 8** that the population of citizens of Brunei Darussalam grew at an annual average rate of 3.20 per cent and 2.85 per cent for the intercensal periods 1971-1981 and 1981-1991 respectively, which was slower than the population growth rate of foreigners, which grew at 4.44 per cent and 3.55 per cent respectively for the same periods. In 1991, citizens of Brunei Darussalam constituted just over half (51.09 per cent) the country's workforce (Tisdell, 1999:214); the proportion of temporary residents (migrant workers) aged 65 years and older amount to less than 1 per cent of the workforce.

Regarding the implications of the large number of younger temporary residents in Brunei Darussalam, it should be noted that a large number of these workers could assist the Government via the payment of taxes to be used for providing pensions and health care for citizens and permanent residents. Most foreign workers in Brunei Darussalam live there for a temporary period; they leave before retirement age, to be replaced by younger migrants, so they do not become part of the elderly population of the country. Therefore, it is highly recommended that a progressive income tax be imposed on temporary residents. Brunei Darussalam, as a rentier economy (*ref:* its so-called unearned income from oil and natural gas), is heavily dependent on migrant workers for the operation of its economy. Government expenditure in the form of transfer payments to the aged and unemployed populations, though financed by an equivalent allocation from income taxes, would have a positive net multiplier effect on the national income. A taxation policy which redistributes income from the rich, with their relatively smaller marginal propensity to consume, to the poor, with their higher marginal propensity to consume, would likely increase aggregate demand in the economy, which in turn would raise the national income and hence the standard of living.

The macroeconomics of ageing

To modernize and foster economic development in a country, injections of capital are needed and these inputs should come from domestic savings. But the composite impact of ageing and the rising dependency ratio in the country will have adverse effects on household savings. Less savings mean less availability of funds for banks to lend. This situation will exert an upward pressure on interest rates. Pensioners living on meagre allowances will not be spending enough and therefore producers will not be investing and fully utilizing resources. Therefore, less savings means less investment, which in turn will decrease the aggregate supply of goods and services. Thus, the fall in national income will be multiplied. Less income means lower tax receipts for the Government. The fall in national income will reduce both consumption and savings as well as the demand for imports: the larger the marginal propensity to import, the bigger the reduction in imports. The reduction in demand may also put downward pressure on prices and wages. The reduction in demand will widen the deflationary gap (demand-deficient unemployment) in the economy. Less imports (by Brunei Darussalam) implies less exports (of the country's trading partners). In other words, if a country sells less to a trading partner, it cannot afford to buy as much as it did when it sold more. The net effect of these two changes in exports and imports on the current account component of the country's balance of payments is uncertain. Whether the current account will go into deficit or surplus depends on which of these effects is the greater. If the reduction in exports is greater than the reduction in imports, the current account will go into deficit. This may cause depreciation of the country's currency against the major currencies of the world. The opposite will hold true if the current account goes into surplus.

The current account deficit will reduce the supply of money, but on the other hand the fall in national income will reduce the demand for money. The net effect on interest rates will depend on which of these effects outweighs the other.

Regarding the pattern of production, the ageing population will force producers to change the pattern of production, avoiding or reducing the production of goods needed by the country's young population and increasing the production of goods which are demanded by its ageing population. This will result in a diversion of resources in the economy from the production of goods suitable for the young segment of the population to the ones required by the older segment.

A growing elderly population is likely to be of increasing significance to sellers of goods and services, because they will be representing an important and growing segment of the market. Firms will increasingly have to switch

their products to appeal to middle-aged and old-aged people. It will be necessary for firms to carry out continuous new product development programmes, keeping in mind the requirements of the ageing population. More research will be needed by firms to determine the likely level of demand at different ages, then they will have to calculate which is the most profitable. More would be charged for a product with a relatively low price elasticity of demand.

The changing composition of the population has major implications for the Government. Old-age dependents tend to have very low incomes and therefore need income support. They will have to look to their families for care in a way that has not changed in Brunei Darussalam for centuries. But as time passes, fewer and fewer people on whom such responsibilities will fall may be willing to take on such burdens. The greying population may not only slow economic growth, but also heighten social tension and weaken cohesion in the community. Many elderly people are unable to look after themselves and therefore need care in the community. They are particularly expensive for the Government in terms of pension and social services budgets, imposing strains upon government finance. Because they have been brought up in a society accustomed to affluence, their incomes will have to be increased in real terms if the standard of living of the elderly is to be maintained at its current level, or there will have to be much more private provision by individuals. With the population ageing as it is currently, the Government should encourage more voluntary welfare organizations and private operators to provide community-based health-care services (Sun, 1998). The Government of Brunei Darussalam has long recognized that there is a growing number of people with no family to support and who are not ill enough to be hospitalized but who need continuous medical or nursing care in a community-based setting. To tackle the problem, the Health Ministry must take appropriate early action.

An ageing population will have adverse impacts on the standard of living of workers in the population (Anderton, 1995). The higher the dependency ratio, the lower will be the income of workers if dependents are to receive a given income. Workers will see their share of national income fall over the next 40 years if the income of pensioners increases at the same rate as that of workers. A sharp increase in the proportion of pensioners in Brunei Darussalam will cause a rise in net financial liabilities of public pension and health care schemes. A rising percentage of this expenditure in gross domestic product (GDP) will leave less money for the Government to spend on other projects. Tough decisions will have to be made in order to deal with an ageing society. One response to this situation is for the Government to cut expenditure on state pensions; otherwise, state pensions would absorb an ever-increasing percentage of the total budget in the next half century.

Based on actuarial projections, even small changes in assumptions concerning economic growth, retirement age, earnings and other variables could result in big revisions to pension forecasts. However, it can be said with confidence that the ageing trend will not change much during the next four decades.

Conclusions, implications and recommendations

With the country's declining fertility rate resulting in a reduction in the proportion of young people in the population, the trend towards ageing may have serious implications for Brunei Darussalam such as the potential for limitation of the labour supply. Furthermore, females are becoming more independent and marrying later in life. Thus, a liberal, well-structured immigration policy could do a lot of good for the economy because foreign workers will be needed at the higher and lower ends of the skills scale.

To respond to this mounting demographic pressure, the Government must come up with new policies, which could, for example, limit salary-related benefits for new retirees by a certain percentage, and may consider gradually raising the pensionable age from the current 55 years to 65. These and other measures would enable the Government to cut the annual pension bill by a considerable amount and will put the system's long-term finances on a viable footing. Unless something is done urgently, the pension fund will go into the red within a decade or so. With a rapidly greying population, the issue is of more than mere academic interest. To establish a healthy ageing society, formal investment by the Government is needed to care for elderly people, including rapid development of pension schemes and establishment of a medical insurance system; otherwise, huge social problems with significant economic consequences are both inevitable and imminent. Last but by no means least, the Government must continue with its very impressive education policy to tackle the high population growth rate. Better education, while a worthwhile end in itself, also has impacts on family planning. Education fosters fertility decline as it changes the perception of parents regarding the value of children (Morshidi and others, 1999).

Data on foreign-born persons have shown a rising trend both proportionally and in terms of absolute numbers. This trend could be attributed to Brunei Darussalam's import of both skilled and unskilled workers to meet the needs of the growing economy. Since there currently is no income tax in Brunei Darussalam, it is recommended that a progressive income tax be levied by the Government on foreign workers. The tax revenue collected should be spent on the welfare of the country's ageing population. Government expenditure, though financed by an equivalent allocation from income taxes,

would have a positive net multiplier effect on the national income. A taxation policy which redistributes income from the rich with their relatively smaller marginal propensity to consume to the poor with their higher marginal propensity to consume will tend to increase aggregate demand in the country. This fiscal tool will reduce the strain on the Government's tight budgetary position. Brunei Darussalam needs to undertake a comprehensive review of taxation systems in order to broaden and strengthen the Government's tax revenue base. Such a review should take into account the needs of an ageing population without discouraging investment in the country. Such an approach will strengthen government finances by controlling government expenditure through clear prioritization.

To conclude, unless adequate measures are taken in the course of time, this ageing of the country's population will affect its ability to develop sustainably. It must be remembered that development and population are interacting variables, each affecting the other. Judicious fiscal and monetary economic policies will have to be formulated and implemented to ward off the adverse consequences on the economy of the ageing population.

References

- Anderton, Alain (1995). *Economics* (Oxford, Alden Press), pp. 332-335.
- Knodel, John (1999). "The demography of Asian ageing: past accomplishments and future challenges" *Asia-Pacific Population Journal* 14(4):39-56.
- Morshidi, Abdul Malik and Shamim Ahmad Siddiqui (1999). "Cause and implications of the declining population growth rate in Brunei Darussalam", *Readings on the Economy of Brunei Darussalam*, pp. 132-457.
- Obben, James (1998). "Towards the explanation and abatement of road casualties in Brunei - a contribution from the toolkit of economists" *TINJAUAN Policy and Management Review*, (Universiti Brunei Darussalam), No. 2, p. 58.
- Sun, Fubin (1998). "Ageing of the population in China: trends and implications", *Asia-Pacific Population Journal*, 13(4):75-92.
- Tisdell, Clem (1999). "Brunei's quest for sustainable development: diversification and other strategies" *Readings on the Economy of Brunei Darussalam*, (Universiti Brunei Darussalam), pp. 201-225.
- United Nations (1999). *World Population Prospects: the 1998 Revision, Volume, II: Sex and Age*, (New York, United Nations).
- _____ (1998), United Nations website www.popin.org/pop1998/8.htm 9 May 2000.
- Yean, Teo Siew and Tan Siew Ee (1999). "Population and labour forces in Brunei Darussalam: patterns and structural changes", *Readings on the Economy of Brunei Darussalam* (Universiti Brunei Darussalam), pp. 101-105