

**Supplementary Private Submission** to the Productivity Commissions Research Study on

**The Impact of Migration and Population Growth on Productivity Growth in the Australian Economy.**

This second submission addresses two issues.

First: a question. Is immigration been used as a blunt instrument to maintain demand in the short term with little regard to social and economic issues in the future? If so, where does this fit with monetary policy.

Second: As Immigration is used as a suggested solution for the problems associated with an ageing population Immigration and ageing are intertwined issues.

As such, the following paper is submitted.

**How are the analysts characterising the public policy challenges of ageing and how adequate are the solutions?  
Ageing and Immigration are intertwining issues.**

**Preamble.**

The Parliamentary Library of the Parliament of Australia on the 10<sup>th</sup> May 2005 issued a research note “Global ageing: economic implications for Australia” (Robinson, 2005).

The opening paragraph reads:

The economic implications of an ageing society and its related impact on public policy are being closely studied across the globe. In Australia, various studies have determined that the combination of lower labour participation rates and the greater demand for public spending on health and aged care caused by an ageing society will result in a steadily increasing fiscal gap.

This is a reasonable encapsulation as how most analysts, world wide, appear to characterise the public policy challenges of ageing. Should this be the case? What alternative views are there?

As all the Australian Federal politicians received the Robinson (2005) communication from the Parliamentary Library, it is likely that it is the economic effects of ageing that will dominate their thinking.

Walker (2003) questions “the universal process whereby what should be welcome demographic change leading to societal ageing has been transformed into a crisis of the welfare state”. Speaking from a European perspective, Walker focuses on five policy challenges of ageing and contends that these have been “strongly compartmentalised in traditional policy domains and ministries.”

### **Background.**

The problem of ageing is a function of the changing fertility and mortality of societies over time.

In modern societies, fertility and early mortality rates are low. Fewer children are born but fewer deaths (mainly in childhood) occur when compared to societies in the past or Third World societies today. The outcome is that society, over time, has a steady increase in its average age of population.

Jackson (2001), in her policy guide to ageing, describes several concepts such as “demographic transition”, “structural ageing” and “numerical ageing”. Each one of these concepts needs to be analysed to understand how ageing of a society occurs and its various policy implications. For most policy studies into ageing the starting concept is that of “dependency ratios” – the number in the working population divided by the number in the dependent (or non-working) population. As a population ages and more aged become “non-working”, a rising dependency ratio indicates a range policy issues.

Further complications occur in policy studies of the effects of ageing when considerations of the substance of many of the *ceteris paribus* assumptions are examined. This is especially true of the assumptions associated with the concept of “dependency ratio” and that economics is the only or prime dimension that matters.

Ageing is not just an economic issue that affects the economics of social security, health and aged care. It is a system wide multidimensional issue encompassing government and community, domestic and international spheres, social welfare systems, social standards and ethics. The importance of economic thinking is strong in Australia as shown by the range of business NGO's making economic submissions together with the CEDA-Australia (2004), Coombs & Dollery (2004), Henry (2003). This is not to say that economists are not capable of re-framing the issue as shown by Quiggin's (2001) analysis of the "Demography and the New Economy".

In addition, demographic differences in geographical areas and societies mean that any analysis of the problem can vary from area to area, nation to nation, society to society. However, there is an undercurrent of alternate research. This interprets ageing society as something that can be dealt with without crisis, over time. This undercurrent is represented by Castles (1994, 2004), Cheal (2000), Freidland & Summer (1999), Healy (2004), Kinnear (2001), McDonald & Kippen (2000), McGuinness (2002), Shaw (2002), Teitelbaum & Winter (1986) and Teitelbaum (2001). These writers represent the optimistic attitude to ageing being a manageable issue. A third position is that of the neutral commentator aware that there are problems but also aware that there could be benefits in a society stratified by age. AgeQuake (Wallace, 1999) is a futuristic examination in lay terms of the problem and opportunities approach.

### **Recent historical timeline of the issue and reactions.**

Internationally, UN Conferences on Population (1994, 2000) have been catalysts for much analysis and reaction worldwide. The Madrid International Plan for Action on Ageing 2002, the Valencia Forum and other expert group studies are outcomes from these conferences (Ageing, U. N. O. o., 2002, 2003; AAEGroup, 2002). Phillipson (2002) in his opening address to the forum sets the tone of the deliberations across social platforms but with emphasis on the economic issues. In 2003, the United Nations (2003) issued "A Call for Revolutionary Thinking" as part of its studies into the UN "Ageing-Implications of an Ageing Society" initiative.

In Australia, the issue of ageing Australia dates back to the 1980's when it was framed as a retirement matter. This was then partially addressed by the 1980-1990's Superannuation

levies by the Keating and Hawke Governments. A further addressing of the retirement problem (for those with unfunded Federal Governmental Superannuation schemes) has been proposed by the 2005 Howard Government by way of the “Future Fund”. The outcome of these retirement income actions has already placed Australia in a different situation to many other nation states but has also sown seeds of possible future problems if large scale immigration takes place that ultimately creates a poorly (self) funded class of citizen.

Birch (1975) references an Australian “National Population Inquiry, first report, 1975” but his writing focuses more on population policy needs, zero population growth and immigration. In the later edition (1993), Birch refers to a 1991 report of the “Population Issues Committee of the National Population Council”. Therefore, it appears that there has been a longer-term analysis of population in Australia than the economic issues for some 30 years. It would also appear that the initial question, yet unanswered, was to develop an Australian population policy. This area of Government policy deserves further investigation.

Today, the issue has been highlighted by the Howard Government at the National level and various State Governments at the State level in response to increasing awareness worldwide about the challenges posed by ageing. From the late 1990’s, reports and analyses have been conducted by the Productivity Commission and the Department’s of Family and Community Services, Health and Treasury. These analyses focus on labour, social security (retirement incomes), health and aged care accommodation cost concerns. Prior to and since the Intergenerational Report 2002-03 (Costello, 2002) was released in the 2002-03 Budget there have been growing volumes of reports released by Australian and State Governments. These include Access Economics (2001), Ageing, D. o. H. a. (2002, 2005), AIWH (2003, 2004), Australian Government (1996, 1999), Bishop (1999), Foran (2002), House of Representatives Standing Committee on Health and Ageing (2005), Johnson (2002), Paice (2003), and Productivity Commission (1999, 2004). Generally, they have addressed aspects of economic policy with some appreciation of the broader system wide effects.

In Tasmania, the State Government was motivated by the Opposition’s release of a population policy (2001). The Tasmanian State Government has now produced several publications, especially as responses to Federal inquiries (Cabinet, T. D. o. P. a., 2003; Tasmanian Government, 2004). There have also been various publications in other Australian States, such as Heyen (2003) and Miller & Siggins (2003) in Queensland and

Hugo (2004) in Victoria. The Nixon Report (1997) titled “Tasmania into the 21<sup>st</sup> Century” pointed out Tasmania’s position as the only Australian State projected to have a falling population long term and its differing population and social structure profile. This indicates that Tasmania may be a special case to study regarding ageing. Note that the Nixon report focuses on economic development.

Local Government and NGO’s also have developed policy statements and submissions to various inquiries each reflecting their various interests, strategies and concerns CEDA Australia (2004), Curnow (2000), deVaus (2004), Geneva Association (2003), Hugo Rudd Harris (2001), Jackson (2004), McCallum (2003), Montgomery (2004), Rasic (2001), Sheen, (2001), Withers (2004).

Internationally, in addition to the United Nations, the OECD (2000, 2003, 2005) and the European Union have conducted studies and individual nations and organisations have studied ageing and its demographic effect. In an effort to compare the position in similar countries to Australia, Canada and New Zealand are to be investigated as to similarities in situation, response and degree of policy development undertaken. Governmental investigations in New Zealand include Bryant (2003a; 2003b; 2003c), Sonerson, Bryant & Tobias et al (2005), Guest, Scobie & Bryant (2003), Creedie & Scobie (2002) and Stephenson & Scobie (2002).

### **Policy Development Challenges of Ageing**

A “Research agenda on ageing for the 21<sup>st</sup> Century” was developed by the United Nations Program on Ageing in association with the International Association of Gerontology and was subsequently endorsed at the Second World Assembly on Ageing in Valencia, Spain 2002 (“Valencia Forum”). This agenda is addressed to diverse researchers dealing with issues of population and individual ageing, it has been developed to recognise different societies at different levels of demographic, social and economic development (Ageing, 2003).

Research areas defined by the agenda are

- Priority 1. Relationships of population ageing and socio-economic development.

- Priority 2. Current practices and options for maintaining material security into older age.
- Priority 3. Changing family structures, intergenerational transfer systems and emergent patterns of family and institutional dynamics.
- Priority 4. Determinates of healthy ageing.
- Priority 5. Basic biological mechanisms and age associated disease.
- Priority 6. Quality of life and ageing in diverse cultural, socio-economic and environmental situations.

Priority issues 1, 2 and 3 are to be the prime foci of future study together with an understanding that the challenges of an ageing society are operating at local and international level amplified by globalisation and tempered by the demographic change of death.

The overarching platform of studies into ageing is that created by globalisation and the influence of transnational actors that have become influential forces in shaping national responses to population ageing. Phillipson (2002) argues and explores the concept that ageing “can no longer be viewed as a “national” problem or issue but one that affects transnational agencies and communities”. This policy area is not under much consideration in Tasmania but does have a bearing at the National level and thus affects both immigration and national income issues in a context of maintaining national security.

Among the key principles espoused by the United Nations Addis Ababa Expert Group (2002) recommendations included the statement:

Issues related to older persons must be mainstreamed in economic, social, political and humanitarian policies and all policies must be informed by research, which is *multi-disciplinary*, participatory and action-orientated... (Italics emphasis by this author). This statement applies equally to immigration.

Development of ageing policy since 1990 has been progressive and the 2005 propositions have moved beyond the concepts of aged care income and health to include some understanding and analysis of the interconnection between many issues and an economic society. However, although there is some understanding of the situation, it is generally without appreciation of the demographic effect of absolute number changes in population cohorts. Cohort numbers are not static and are always decreasing as the cohort ages. Thus, the economic effect of any policy stance needs to be projected in absolute demographic effect as well as be appreciated in terms of GDP numbers.

Tied in with the demographic effect of life span extension is the issue of quality of health and the cost of health and aged care beyond that provided by social security i.e. changes taking place in a dynamic policy environment. The health care issue is further complicated by technological advances, their attached costs and the health needs created by life extension. These items are the prime issues focused on in many economic analysis of ageing and deserve further analysis and reframing of concepts for a verification of the current stance to occur.

The extension to life afforded to society by the reduction of infant mortality was called the “Demographic Dividend” likened to an extra payment to society by the consumption and output of the longer-lived children who survived the previous historical infant mortality period. It is wry to now see the proposition “Demographic Deficit” being proposed to describe the costs associated with these same people as they continue to live longer (McKinley, 2005).

The extent of academic and policy literature devoted to the problems of an ageing society tend to be issue focused more than system focused.

This is understandable as this enables a simplification and discipline specific approach to analysing the challenges and opportunities. There is a need to challenge this conventional approach to research, however, and to replace it with a systemic framework.

There does not appear to have been much emphasis on the economic benefit of consumption by an ageing population and the support to a consuming economy given by an ageing population’s consumption. A tourist who visits a district and consumes \$100 a day is considered an economic benefit. How then a pensioner who consumes \$100 a day in the same district is not considered an economic benefit.

## **What are the platforms of society from which to study ageing, immigration and demographic effects?**

The US Centre for Strategic and International Studies Global Ageing Initiative in its recent paper (Howe, 2005) characterises two broad issues,

- an Inventory of Current Projection Practice
- an overview of Immigration Theory Frameworks.

It is contended that these frameworks can be applied to the study of population ageing in a Government context for Australia and particularly to Tasmania (immigration as a proposed partial solution to population ageing becomes the proxy solution framework).

The *projection concepts* specified by Howe are (for national level issues)

- Global,
- United States,
- European Countries and other
- Developed Countries.

For this study it is suggested that the projection concepts be expanded to

- International Group/s,
- International Nations,
- Australia Nation,
- Australian States,
- Tasmania,
- Tasmanian Local Government Areas,
- Community and
- Families.

This is necessary as each lower level once we reach the (Australian) nation state makes both differing and (sometimes) complimentary contributions to the ageing equation. Inquiry will be calculated from the National level down. This is important as most public policy analysis reviewed considers each level of contribution in isolation and rarely factors in the community and family contributions.

The intention is to call these “platforms” and to additionally show the inter-relationship of these platforms to the ageing study.

### **Assumptions – Ceteris Paribus**



The assumption of what is an aged dependency ratio is one of the first issues to be addressed as this shows a direction for progressing an analysis.

Generally, the aged dependency ratio is defined as the ratio of people over 65 divided by number of people 15-64. It can also be represented by other ratios, the most common of which is the ratio of over 65s divided by the 20-64 year olds, which is the practice of the OECD (2003). That there is no standard concept applied causes confusion in that like is not always compared with like. The concept of dependency ratios is only a proxy for actual measurement and a poor one at that. Let us consider actual dependency.

The age at which youth enter the work force is a variable. In the 1950's, it was normal for most youth to leave school and enter a trade and to no longer to be considered a dependent although in fact they were to a certain degree due to low wages. However, it was common for youth to pay parents a contribution towards their keep until they left home. Currently, very few youth enter the workforce at 15, and a large number do not enter paid employment until 23 or later due to University and other studies. Over the 50-year span between 1950's and 2000's, youth numbers continuing to be dependent on family and society, in both time and financial burden, have increased in a way that is not usually fully appreciated or quantified as a dependency issue. The real youth dependency ratio of today is thus a differing one to that of 50 years ago, just as the aged dependency ratio has changed.

In the same way, the aged dependency ratio is viewed as a major issue due to the increasing average life span of the population. By calculating the dependency ratio on a age basis (over 64) unemployed people and those dependent on social welfare for support under 65 are not considered in the dependency ratio equation when in fact they are a major dependency factor on society already i.e. these ratios lack validity, they are no longer good measures of dependency.

Deficiencies in dependency ratio definitions that cause alarm arise from a variety of factors that have relevance in actual dependency expenditures. These are not factored into common dependency discourse. Some of these extra factors are social security policies, gender, wage levels, skill levels, productivity, type of work (full-time/casual) and geography as well as the considerations of actual dependency. Walker (2003) points out that older people do

contribute to national productivity and do pay taxes. He also contends that population ageing is not the prime policy challenge of the future but changes to the labour market and the family are the variable that must be considered. For example, are women and men in the same supposed degree of strife?

Other oft-emphasised variables of financial concern are the health costs associated with ageing. This too is a variable in that it is not well understood. Much of the cost increases are associated with technological advancement more than costs of ageing. For example, some diseases identified as age related are not: they only become apparent in older people. Dementia, breast and prostate cancer are age-related diseases that tend to occur in old age but also can occur before 65. However, measles chicken pox and pregnancy could also be considered age-related diseases when considered as health costs but they are not necessarily ageing diseases.

All these variables have differing degrees of importance at different times and affect understand and changes in the dependency ratio. The variables are generally ignored in what are considered “ceteris paribus” assumptions. This would be valid if the changes in the variable were of little effect. However, has this been verified and quantified as valid?

An overarching consideration is the assumption that growth and consumption are a prerequisite for a society. Is this valid?

Is that assumption valid both currently and in the future? The assumption that growth is the salvation of (capitalist) society is an un-stated assumption by the commercial interests that hold political sway. Why this is so is partially due to the political system, the inaccuracies and frictions within it and those that seek to influence the process. Of course, the growth assumption is inherent in business and economic theory.

## **Solutions offered to alter the aged dependency ratio.**

Three general solutions are offered that provide changes to the aged-dependency ratio.

These are:

- Increased fertility to increase the number of children
- Immigration increase of younger immigrants
- Increase the retirement age and thus retain people in the labour force.

It is now generally accepted that these methods, although effective in mathematical terms merely defer the problem to a future generation. Thus, the problem should be addressed as it occurs.

Two alternatives that are considered (rightly) ethically repugnant are euthanasia and banning of abortion, even though these methods have been employed at stages in human history.

## **Are the public policy challenges of ageing properly framed?**

The concept of intergenerational transfers frames the ageing debate into an economic policy matter concerning the cost of sustainability of current social security and health benefits into the future. This economic frame is popular but there appears to be little consideration of what will occur when the number of births falls below the number of deaths: the situation of negative population growth. In Tasmania, this is projected to occur in 2011, six years away. Will this be ruin? On the other hand, will this transition allow funds from child related expenditures to be transferred to aged related expenditures?

The focus of each discipline studying ageing or immigration as public policy challenges treat the attributes of the issues in isolation from, or at best in a very limited combination with, other disciplines or policy spheres.

Cheal (2000) suggests that the issue of ageing dependency is not one of perceiving old age to be negative but one of inter-related age dependency requiring a multidimensional demographic analysis. Walker (2003) also argues that the problem of an aged dependency is not just economic but far more general as one of citizenship. He also develops the concept of

“prudential like-span intergenerational account”. Can this be considered to represent a form of “net present value” application for intergenerational accounting? The article by Storesletten (2003) on the “Financial Implications of Immigration - a net present value calculation” has direct parallel to the transfer of social security over a lifetime of a citizen because immigration is often suggested as the solution to aged dependency issues. This concept is depicted in Diagram 1 (Swedish Central Bureau of Statistics, 1985 – attachment to end of paper). Lee (2001, 2004) furthers this line of study and both Lee and Storesletten raise the issue that depending on immigrants to reduce a dependency ratio depend on a variety of country specific factors but mainly on a individual State’s social security system.

The more developed the social security system, the less likely that immigrants will add to the net social wellbeing of the nation.

Australia and Canada are culturally similar nations in that immigration has contributed significantly to national population developments. By comparing Australian and Canadian policy developments, it is interesting to observe some divergent views. Australia gives priority to economic *over* sociological perspective, while Canada treats both more equally. Canadian papers by Cheal (2000), Jetson (2003), Rainville (2003), Souare (2002) and Spencer (2003) display this emphasis difference.

## **Solutions**

The concept of a strategy for active ageing proposed by Walker (2003) emphasises citizenship as an essential element in ageing policy in tandem with pensions, employment, health and social care. These deserve further inquiry “ using the concepts of basic science” to produce more policy–oriented research on ageing. Walker closes his work with an emphasis of the holistic nature of ageing policy studies and a need to think what ageing means to all levels of society. The same concepts apply to immigration.

## **The Growth Assumption.**

An un-stated “given” in most analysis of ageing is the “growth” assumption. The assumption is that economic growth must continue to expand and not contract consumption. Hamilton (2003) calls this a growth fetish – the worship of growth. Birch (1975, 1993) and others

question this assumption. Productivity improvement is offered as a partial solution to the growth dilemma created by a declining and ageing population by Henry (2004), Jackson (2004), Johnson (2002), McDonald (2000), Merette (1999), NuRPI (2001) and UK HoL (2003). Denton & Spencer's (1999, 2003) investigations in Canada are relevant as is Howe's (2003) development of the Ageing Vulnerability Index proposed by the Addis Ababa meeting (AAEGroup, 2002).

Freidland & Summer (1999) detail a series of policy areas: those that affect economic growth, redistribute income, influence behaviour, influence demography and involve rational policy choices. They take the position that economic growth is necessary but it is pointed out that their arguments are based on a US social economic model.

Since 1900 the number of elderly in US has doubled three times. Even since 1960, it has increased by more than 100 percent while the overall population has grown only 50 percent. But during the same time the Nation's income (GDP) has increased over 220 percent. (Freidland & Summers, 1999)

Freidland & Summers also state "There is reason to be concerned about growth in (ageing) expenditures, but there is more reason to be concerned about economic growth. With little economic growth society faces a significant challenge; with sufficient economic growth the challenge is considerably smaller."

The time span of projection for the effects of an ageing population varies so that there is great variance as to the topic's bounds. Should the problem as projected to 2035 be addressed or should the problem as projected to 2055 be the time span considered. Why not less? Why not more? This is not normally defined as a standard span of say 30, 40 03 even 60 years forward.

Population projections are uncertain. They change as the assumptions on which they are based change.

Consider that the baby boom was not as large as is generally thought. Only the additional babies born because of the higher birth rate should be counted.

The number of elderly people relative to people of working age (and is this the right factor?) in the population is predicted to be more than twice as large in 2040 as in 1960. However,

the total number of dependents – children and elderly relative to people of working age is predicted to be lower in 2040 than in 1960.

Many people not working are consuming goods and services they finance out of their own savings, as well as from social security benefits, thus helping provide other workers with the opportunity to produce. Many non-workers will also be investors and lenders of financial capital, and many will be volunteers who help their family or communities, providing services that would have been financed by workers if there were no volunteers (Freidland & Summer, 1999).

### **Where to Now?**

While demography will affect the future, societies destinies are not determined solely by demographic changes. The economy, public policy and the adaptations individuals and institutions make will also affect the future.

Public policy can be used to alter the future.

The Select Committee on Economic Affairs House of Lords UK (2003) investigation and report that has produced similar outcomes to the economic studies by the Australian House of Representatives Future Ageing report (2005) but with less emphasis on issues outside economics. The UK report (Chapter 2.17) concludes

...although net immigration will tend, in the short run, to increase the relative proportion of younger persons within the population, it is neither appropriate nor feasible to counter the trend towards a more aged society in the United Kingdom through a manipulation of immigration policy

If this is the case then any effort to manipulate immigration policy in Australia to off-set population ageing should be fully justified as a valid solution before effected.

Lee and Edwards (2001) point out that apparently in the US years of healthy life are growing roughly as fast as total life expectancy. The consequence of this statement is that there appears to be a correlation that the final years of life are a fixed component of a life span, not a percentage of a life span. (This deserves further investigation, as is a summation by the author). Lee focuses on the effects of ageing on one particular institution: the government

and its age structure of age-related programs. He points out that by focusing on government programs alone, a false or exaggerated impression of the adverse effects of population ageing is implied. The inter-relationship of government programs with the complex arrangements for redistributing income across ages is one of the alternate elements, as is the family and the market.

Population structure and change depend on fertility, mortality and net immigration, as well as the initial population age distribution (Lee 2003) in addition changes to the mortality rate are possible and recordable.

The OADR is the aspect of population change with greatest fiscal implications over the coming century. Its numerator drives the cost of benefits for the elderly, while its denominator is closely related to the tax base (Lee 2003)

It is possible to view the fiscal impact of population change as a rather mechanical process, in which projected changes in population age distributions are applied to fixed or exogenously changing age schedules of benefits and taxes, leading to projections of future expenditures. Population ageing, viewed in this way, would be expected to impose heavy costs on future taxpayers. However, when analysts have looked at actual historical change in expenditures on benefits, population ageing has typically been found to have only a modest explanatory role. Change has been dominated by political decisions about benefit levels in existing programs such as Social Security, or by the introduction of new programs such as Medicare (US). ...The implication is that is that total spending on the elderly would rise, but spending per elderly person would fall. It is also noteworthy that total government expenditures are not affected. The increased spending on the elderly has been funded by reducing spending elsewhere in the budget. Clearly, the mechanical approach misses an important part of the story (Lee 2003).

Another approach is to consider the nature and purpose of government transfer programs in an attempt to understand how they might change in response to changing demography the actual projected numbers approach.

Some analysts view public sector transfer programs as providing a kind of social insurance that the market cannot provide, or can only provide inefficiently, such as insurance against falling into poverty, or annuities which insure against running out of savings if one lives unexpectedly long. In other words, conceptualise government transfers as valuable complements to the market. Demographic change is viewed as altering the constraints and trade-offs governing our policy choices, rather than dictating increases in expenditures.

The concentration of benefits in youth and old age is clearly apparent.

We dodge many important but complicated issues surrounding the political choices that people make, with differing amounts of their lives remaining to be lived, make when they vote for government programs (Lee 2003).

For example, social security costs are not the biggest growth in costs; health costs are. Health costs are, however, a product of two different processes; about half due to the increased cost of population ageing, about half to increases in per beneficiary expenditure, in excess of productivity growth, due to technological advances.

Lee agrees that productivity growth will solve problems related health costs, but disputes the effects of social security costs. Longer life may increase costs on social security but not so much on health costs.

It should be kept in mind that the fiscal costs of an incremental birth are carried at family, community, state and federal levels, while most of the fiscal benefits are reaped at the Federal level.

Lee's (2003) studies on California indicate State finances are not much affected by population ageing and that in the US is a Federal funding problem. The case in Australia is not likely to be the same as in the US as a different ratio of services provided by the different levels of Government exists.

### **How adequate are the solutions.**

The solutions to ageing (and immigration) issues can be developed by including a larger number of relevant variables. This requires a multi-disciplinary approach as proposed by Cheal (2000) as ageing is a multidiscipline problem. Ageing is not just an aged person policy area - it is part of an aged related policy analysis of citizenship and priorities.

The situation as to economic value contribution of an aged population should be more fully investigated. It is suggested in Burress's (1996) "Social welfare functions in benefit cost



analysis” and the techniques used by the immigration (Storesletten, 2003; Lee, 2004) tourism (Stynes, 1995) and child care (Warner, 2004) industries in justifying their economic contributions be applied in understanding the economic value of the aged population. Other aspects of age related costs that deserve a holistic incorporation include Joshi (1998) on the opportunity cost of childbearing and Davis & Joshi (1998) and Warner (2004) on the cost of children as well as the social security and education costs (in Australia and Tasmania).

In addition, as ageing is a demographic dependent problem mathematical models can assist in quantifying projections and assist in understanding. Data thus becomes important. In Australia some of those sources are Affairs, DoF AC (2004); Costello, (2002); Productivity Commission (1999, 2004); Gong (2005); Australian Government (1996, 1999); Heyen (2003); House of Representatives Standing Committee on Health and Ageing, 41st Parliament (2005); Jackson (2001, 2005) and Tickle (2003).

Howe’s (2003) overview of Immigration Theory is categorised into the following frameworks.

- Policy
- Neoclassical
- World Systems
- New Economics
- Social Network
- Dual Labour Market

It is proposed that the same frameworks be initially utilised in any study of population ageing or immigration. From perusing the bibliography in the Howe report, it is observed that much of it has direct proxy application to this study of population ageing.

Revisiting Howe (2003) it is suggested that a population study based on the concepts from the ageing vulnerability index could replicate and augment that of immigration studies namely:

- Population Theory: General
- Adequacy of solutions
- Alternate solutions
- Social Security and education expectations and policy
- Extended and alternate frameworks
  - Multiplication factors of aged people expenditure
  - Social Welfare Benefit-cost analysis
  - Aged care as an industry? Export?

- Examination of assumptions (what if *ceteris paribus* assumptions are inappropriate?)

This would examine the demographic dependency concepts and the extent of social security system service changes.

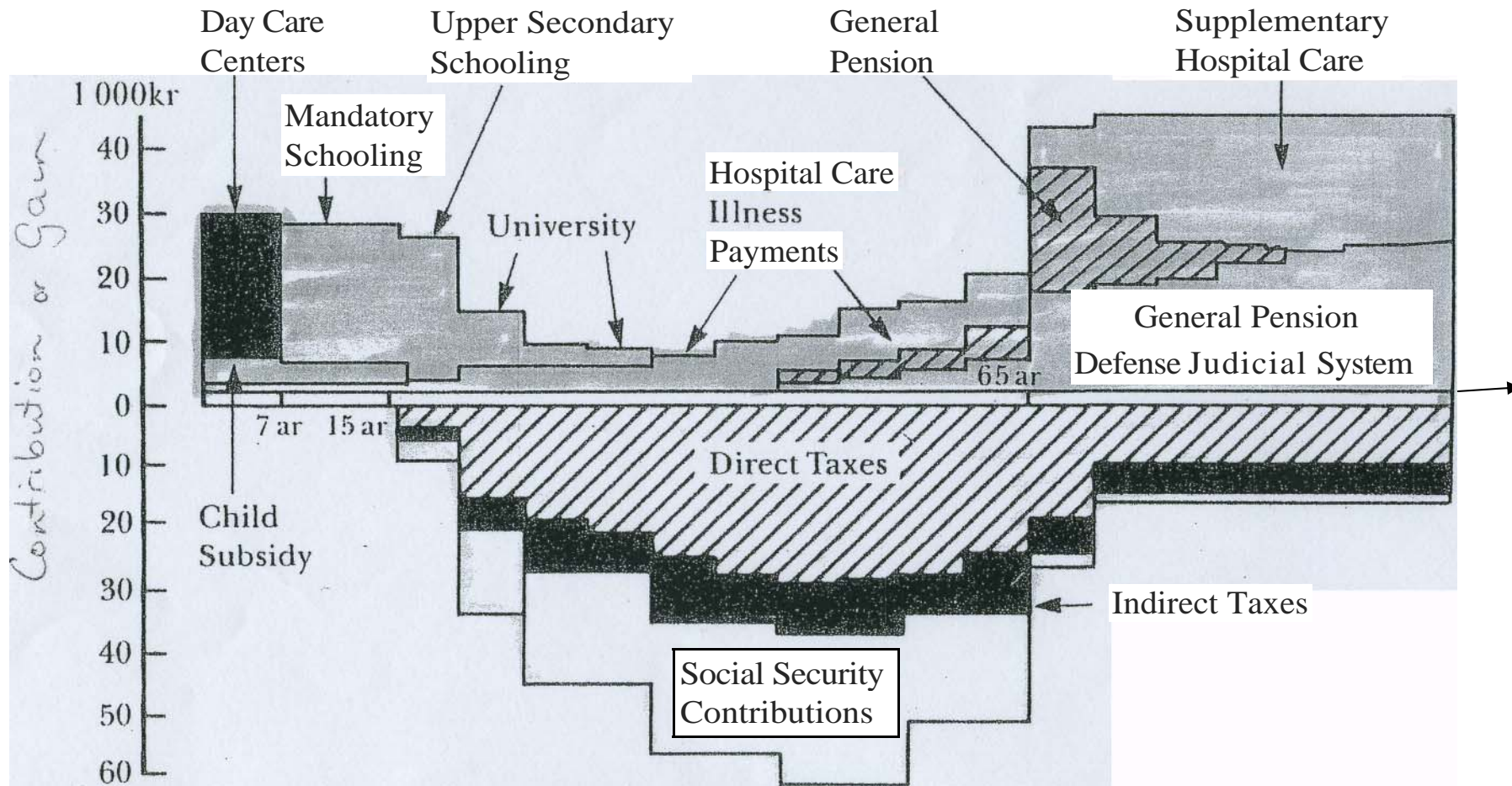
The questions are:

Are the solutions proposed solutions or are some of them future problems based on false premises?

Is it a whole of Government analysis or a series of departmental or discipline analyses - a tower of Babel?

In summation, whilst some of the solutions proposed for the ageing and immigration issues are adequate they are normally studied in isolation and analyses should be extended to a study of age related policies in a society of continuing citizenship.

Diagram 1 - REDISTRIBUTION OVER THE LIFE CYCLE - Sweden



1 000kr

SOURCE: Swedish Central Bureau of Statistics, 1985.Heidenheimer et al (1990) p358