

Tasmania's Turnaround? Migration in the Apple Isle

Invited submission to Peg Job and Graeme Hugo (eds.) (forthcoming)
'Recent patterns of migration within Australia', *Dialogue* 44, 2.

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May 2005

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Abstract

After a decade of net migration loss (1992-2002) which culminated in four years of absolute population decline, Tasmania's fortunes in the migration stakes appear to have recently turned around. However while the 'return to growth' has been widely heralded, the age distribution of Tasmania's migrants has in fact accelerated its 'premature structural population ageing' and sent it hurtling even faster towards natural decline. This paper outlines Tasmania's experience of migration both historically and over the recent period. It argues that, in the context of population ageing, Tasmania might do well to capitalise on the opportunities offered by the enormous growth forthcoming at the older ages (globally as well as nationally), and seek a type of 'Clayton's' population growth—the population growth you might have when you are no longer having growth. Following the State Government's lead in seeing economic growth drawing population, it may well be that—at least in the short- to medium-term—conventional population growth would follow.

Across the decade June 1992- September 2002, Tasmania's population was buffeted by consistent quarterly net migration losses. In four of these years (1997-2000) the losses translated into absolute decline, as the net outflow of migrants exceeded even the gain coming from natural increase. The situation was widely viewed with alarm, and a flurry of population 'strategies' were developed.¹

Arguing that the cause of population decline was Tasmania's poor economic performance over the 1990s,² the Bacon (Labour) Government embarked on an intensive marketing exercise designed to attract migrants to Tasmania and boost business confidence. Among areas to receive special assistance were tourism, the arts, business and investment missions both nationally and overseas, and labour market competitiveness.³ Slowly the number of jobs on offer began to increase, and both the migration loss and one of its main drivers, high unemployment, began to reduce. From late 2001 the changing economic situation was given added impetus by the national housing boom, which everywhere saw increased competition for properties and demand for related tradesmen. In Tasmania particularly the widely advertised 'lowest housing prices *vis-à-vis* best water views in the nation' attracted much interest, and mainland buyers began to snap up the bargains and in many cases to move across the strait. Tasmania's relative housing affordability was later identified by the Government as the primary driver of interstate arrivals.⁴

By 2002 both migration and total population growth were again positive. Since then Tasmania's 'return to growth' has been loudly and 'satisfyingly' proclaimed.⁵ During the year ended December 2003, net migration skyrocketed to 3,790, the largest gain since 1951 and indeed the fifth-largest gain across the previous 100 years. In the year to September 2004 the gains continued, albeit at a decelerating rate, but still delivering a net 2,454 migrants to the population (see Appendix 1). Are Tasmania's 'population problems'⁶ thus solved?

Unfortunately for those who have become addicted to population growth, this paper contends that Tasmania's population 'woes' are far from being resolved. Instead, migration is adding to 'the problem'. The paper first outlines Tasmania's migration history, and then turns to what these dynamics have done to Tasmania's age structure (the proportion of the population to be found in each age group). A brief discussion of the relative roles of migration and natural increase in generating Tasmania's population growth for the past several decades follows, and the analysis concludes with an outline of the changes in these dynamics that would be needed in order to ensure medium- to long-term growth into the future. We do not let the matter rest there, however. Instead we propose an urgent shift away from the current preoccupation with migration and its effects on population size, to a reconceptualising of what growth might mean for Tasmania in the context of population ageing.

Tasmania: Historical Components of Change

Pre-empting the discussion to be continued later in this paper, Figure 1 shows the components of Tasmania's annual population change across the past century. Four main periods of net migration growth can be readily detected, one in each of the immediate post-war years (the latter over an extended period), one in the 1980s, and the one occurring at present. The 64 years of net migration loss experienced by Tasmania across the century can also be readily observed, especially the sustained

losses of the past decade. However for most of the century—especially the 1960s, '70s and '80s—it can be seen how the natural increase component acted to offset those losses to deliver overall net gains. We will return to this issue later.

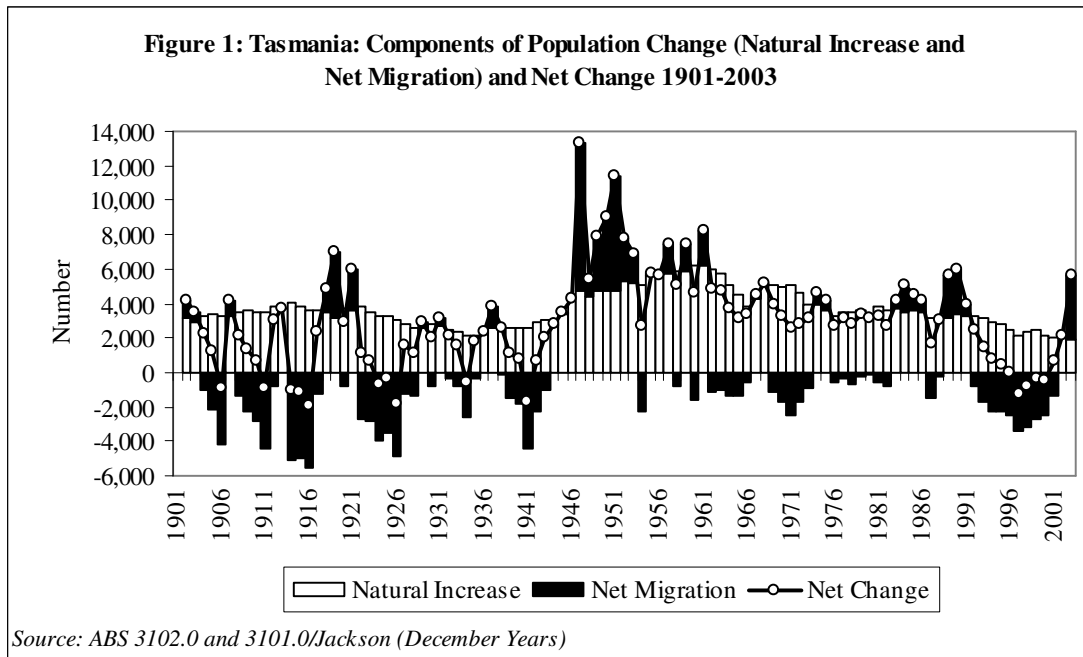
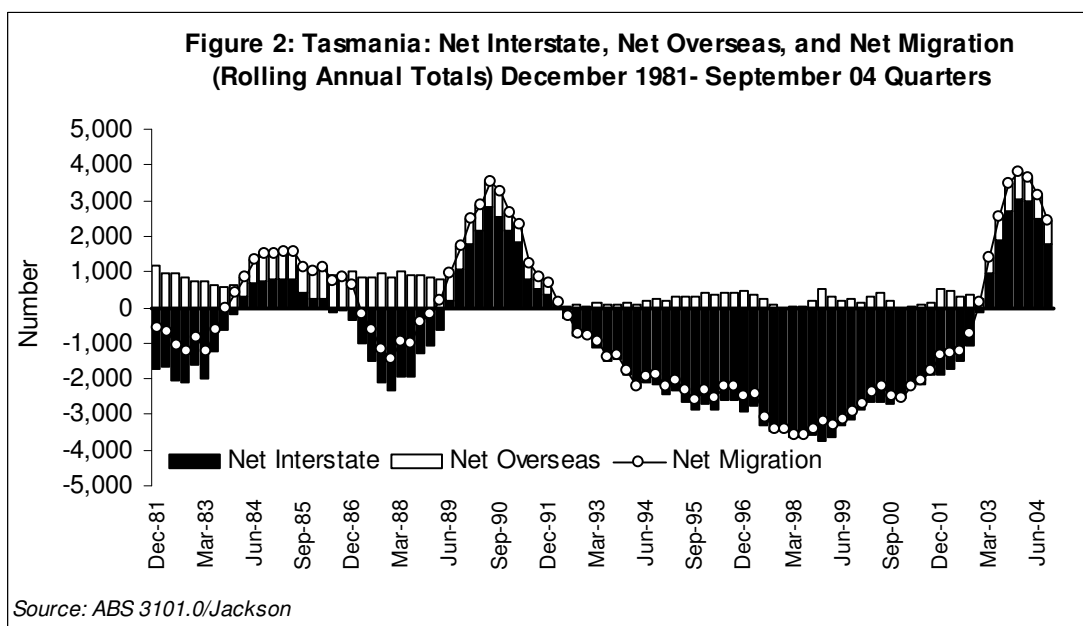


Figure 2 focuses on Tasmania’s experience of migration over the past 25 years only, this time showing the relative contributions of interstate and overseas migration. Clearly, international migration has played a relatively minor role in the state’s growth; instead it is interstate migration that has long controlled Tasmania’s migration outcomes. Notably, the present period of gain may have peaked, with numbers for the September quarter having fallen to two-thirds those of 12 months earlier.⁷



Also notable is that the net numbers shown here conceal vastly greater flows in each direction (averaging 10,250 interstate arrivals and 11,600 departures for each year across the period shown here) which have undoubtedly contributed to the state's economic growth. Arguably, if we were to reconceptualise what is meant by 'growth', this 'population churning' (termed 'turnover' by the ABS) would be a better focus than its net outcome. On this index Tasmania has among the highest per capita levels in Australia.

Tasmania's relatively light experience of international migration has its sequel in its relatively small overseas-born population, accounting for some 10 per cent of the state's population compared with 23 per cent at the national level. Further, this relative deficit has a compounding effect via the mechanism known as chain migration, whereby people of similar nationalities tend to follow those who have settled ahead of them. In Tasmania's case there is only minor evidence of these 'ethnic magnets' along the lines enjoyed by the nation's larger cities. That said, it should not be overlooked that Tasmania's international migration is consistently positive; the number of years that Tasmania has experienced a net international loss can be counted on the fingers of one hand. Currently also, Tasmania is enjoying a sizeable increase in the number of migrants from the 'new' sending countries, especially the African continent, and this occurrence contains much promise for the future.

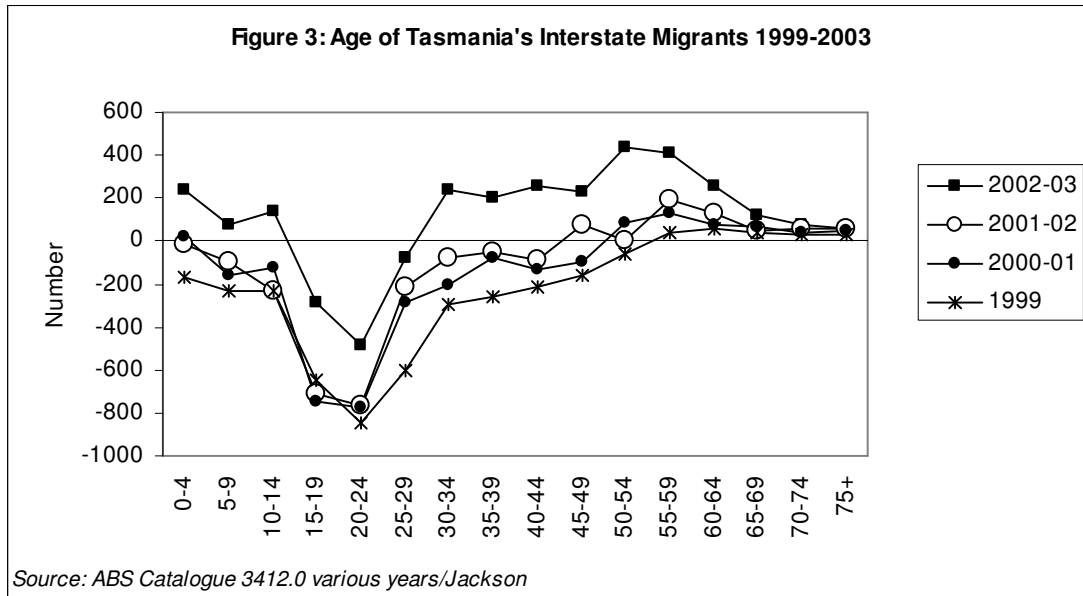
Let us turn now to the issue of age structure, first in terms of the age distribution of migrants themselves, and then in terms of their impact on Tasmania's age structure. Historically, the relatively youthful age of Australia's international migrants—most of whom are in the 20-40 year age groups—has been seen as a positive for Australia, and for many years was assumed to significantly offset population ageing.⁸ While this association has now been strongly refuted⁹ there is as yet minimal acknowledgment that interstate migration could be having the exact opposite effect.

Figure 3 shows the age distribution of Tasmania's net interstate migrants for the years 1999-2003. The loss of people at the younger ages—albeit at a declining rate in each successive year—and gain at older ages is marked. This remains true even for the June 2003 year when Tasmania recorded a net interstate gain of 1,895 persons. In that year, Tasmania experienced a net gain of 2,750 persons aged 0-14 and 30 years and above, but a net loss of 855 persons at ages 15-29. Of the total net gain, 1,850 were thus above age 40. The loss at 15-29 years meant that the gain below age 40 was reduced to a mere 45 persons.

On the positive side, the net gain of some 937 persons aged 30-49 appears to be related to the gain of 457 persons aged 0-14, who presumably did not arrive here on their own. Undoubtedly the latter are the children of the former. It is this type of analysis of Tasmania's migration patterns, *not* the current preoccupation with net numbers, that may hold a key to turning the situation around.

The extent to which the age-specific pattern for 2002-03 may have continued in the 2004 year cannot be shown here because the data (by age) are not yet available. However one thing is certain; Tasmania's migration patterns of recent years have been reducing its proportion of young people and adding to its old, and thus accelerating its structural ageing. The argument is supported in the patterns

underlying these trends, which are almost the mirror image of those at national level. Tasmania's outward bound migrants are typically younger than their counterparts elsewhere, while its inward bound migrants are typically older. The net outcome is that the median age of Tasmania's migrants is generally the oldest in the country.¹⁰



What have these age-specific migration patterns done to Tasmania's age structure? According to Jackson and Kippen¹¹, by 2001 they had caused a concomitant hollowing out of the age structure across the ages 18-38 years, and a small but significant addition at older ages. Figure 4 compares the age structures for 1991 and 2004. Over the period Tasmania lost a net 25,000 people aged 18-38 years. While a small portion of this loss will be due to declining fertility across the 1960s, '70s and '80s (when the current 18-38 year olds were born), the bulge below those ages reinforces the argument that the bite in the age structure is primarily due to migration. Indeed it is worth noting that at 1.97 births per woman, Tasmania's current Total Fertility Rate remains the second-highest in the country.

Figure 4: Tasmania's Age-Sex Structure 1991 and 2004

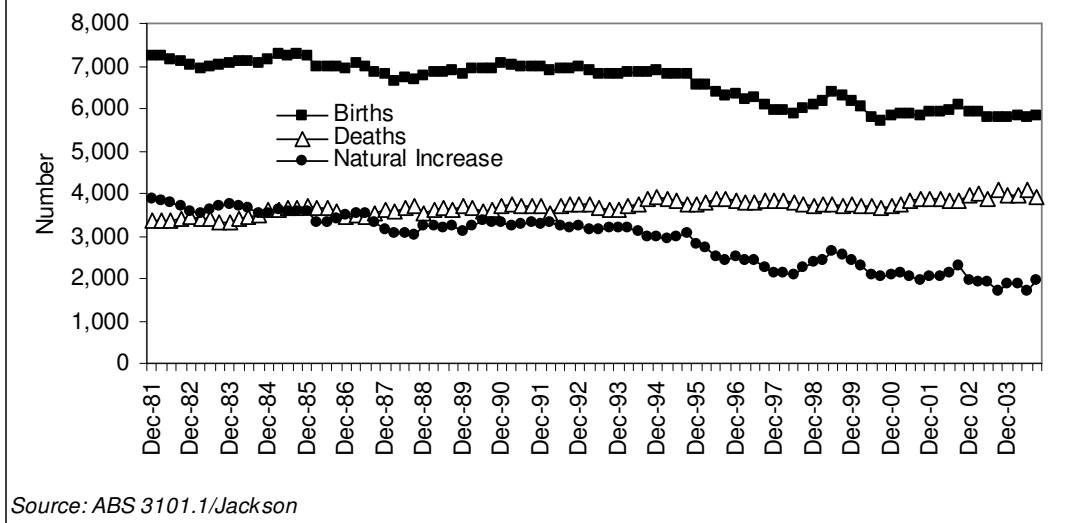


Jackson and Kippen¹² argued that Tasmania is thus experiencing ‘premature’ structural ageing which is not caused by its primary harbinger, low/falling fertility, but rather by its age-specific migration patterns. Far from migration ‘solving’ Tasmania’s population ‘problem’, it is actually a major cause of it.

Moreover, the ‘problem’ is being compounded because the loss of people at the key reproductive ages has also removed the children they would have had and/or have taken with them. The effect can be observed at the base of the age structure for 2004 where a significant contraction is taking place. In reality the 2002 Tasmanian birth rate (1.969) was higher than it was in 1991 (1.906), so the contraction is not caused by overall falling fertility. Rather, its cause—as above—is the migration-driven deficit of people of reproductive age in the population.

Declining numbers of births mean a decline in the contribution of that component to natural increase. Tasmania’s natural increase peaked in 1961, when births (8,962) outnumbered deaths (2,789) by almost 6,200. Currently natural increase is around 1,900. Figure 5 shows these trends across the past 25 years; it is clear that natural increase is diminishing rapidly, and that declining birth numbers are its main driver.

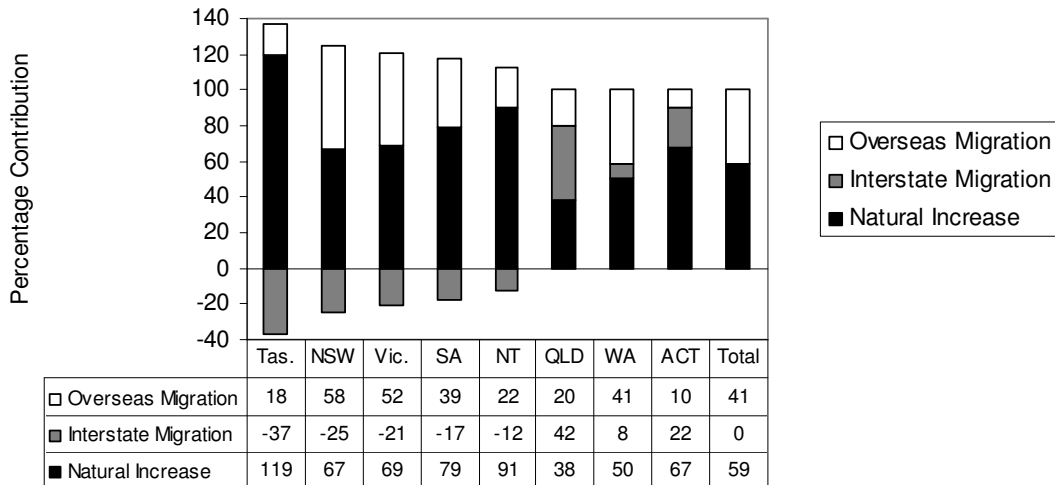
**Figure 5: Births, Deaths, Natural Increase
(Rolling Annual Totals) December 1981- September 2004**



This trend comes at a time when natural increase is falling everywhere of course, although at the present time in Australia the main driver of this trend is not declining birth numbers *per se* (which at the national level have remained surprisingly static over the past three decades) but increasing numbers of deaths. The increase in the number of deaths is a perfectly explainable phenomenon, but one which many still encounter with surprise. Certainly people are living longer than ever before, but they still cannot live forever. As population numbers grow, so too do the numbers of deaths. As numerical population ageing (the absolute increase in the numbers of elderly) unfolds, the numbers of deaths will accelerate. By contrast, the (nationally) declining birth rate only recently began to translate into a reduction in the number of births, because, due to a perverse phenomenon known as the ‘momentum effect’,¹³ the number of people at reproductive age has continued to grow. The size of the resulting birth cohort is the combined effect of the birth rate per woman and the number of woman (and men) of reproductive age. In Tasmania that combination is becoming equally perverse.

Returning now to comments made earlier in relation to Figure 1, where it could be seen that natural increase has been the main contributor to Tasmania’s growth, not only across the past century, but increasingly across recent decades. Figure 6 places that component of growth in stark contrast to the situation for Australia’s other states and territories. Nationally, natural increase has accounted for around 60 per cent of growth over the past three decades. In Tasmania it has contributed 119 per cent—in other words it has been substantially ‘covering’ the loss from net interstate migration. Again Tasmania’s relatively small but nevertheless consistent contribution from international migration can be seen. While the projected forthcoming loss of natural increase from all states and territories (e.g., Australia from the mid 2030s) will present all regions with a major challenge, that challenge will be extreme in Tasmania. Moreover, Tasmania’s natural increase is declining at a substantially greater rate than indicated in the Australian Bureau of Statistics’ ‘high’ variant projections, which projected for 2004 a natural increase of 2,100.¹⁴

Figure 6: Components of Population Change (Percentage Contribution), Australia's States and Territories 1972-2004



Source: ABS Demographic Trends, Catalogues 3102.0 and 3101.0, various (June) years /Jackson

In sum then, Tasmania's 'population problems' have not been turned around with the recent return to net migration gain. Instead, these gains have largely exacerbated the problem, because older migrants (while very welcome) are not perfect substitutes for the youth they replace.

What demographic changes might assist in remedying the situation? Obviously a sudden influx of around 25,000 people aged 18-38 years would be very helpful. However, given that this is highly unlikely, it is worth revisiting the set of 18 projections developed in 2001 by Jackson and Kippen.¹⁵ Of these, if their underlying assumptions were to prevail, 16 would deliver population growth to Tasmania. Eight of the projections were based on combinations of annual net migration (ANM) and fertility scenarios ranging from a constant ANM gain of 1,000 and TFR of 1.65 (Scenario 8), to net migration of 4,000 per annum and a TFR of 1.8 (Scenario 1) (in all cases life expectancy at birth was assumed to improve at around 1 year for every three years projected, and the migration and fertility assumptions were assumed to be achieved by 2009 and then remain constant).

Under the (arguably improbable) 'high variant' Scenario 1, Tasmania's population would pass the 600,000 mark around 2020, 700,000 by the 2040s and reach 1 million by the century's end. Under the somewhat more achievable 'medium variant' Scenario 8, the population would peak at 530,000 around 2035, and thereafter begin a very slow decline to around 480,000 by the end of the century.

Conversely the population could be kept at a constant size of around 470,000 (as it was in 2001) with a long term birth rate of 1.65 if ANM could be kept in the vicinity of 1,400 from the time that natural decline begins (expected sometime in the 2020s), while a population of 500,000 could be achieved by 2019, with very modest but consistent ANM gains (between 40 and 450) and TFRs between 1.8 and 1.6 (Series

14-16). However in all cases where ANM was 1,000 or below, the inexorable nature of structural population ageing and the shift to natural decline would see numbers peak and begin to decline within a few decades. It is worth recalling here the data shown in Figure 1: Tasmania has rarely achieved ANM gains of 1,000 or more, having done so only five times since 1961 (inclusive of the last two years).

Given that migration cannot actually solve the ‘problem’ of structural population ageing¹⁶ and that the populations of all developed countries are projected to peak and/or decline over the first half of the 21st Century, even with substantial migration gains¹⁷ might it not be better for Tasmania—currently Australia’s second oldest but fastest-ageing state—to ‘bite the bullet’ and begin to look at population ‘growth’ in a different way?

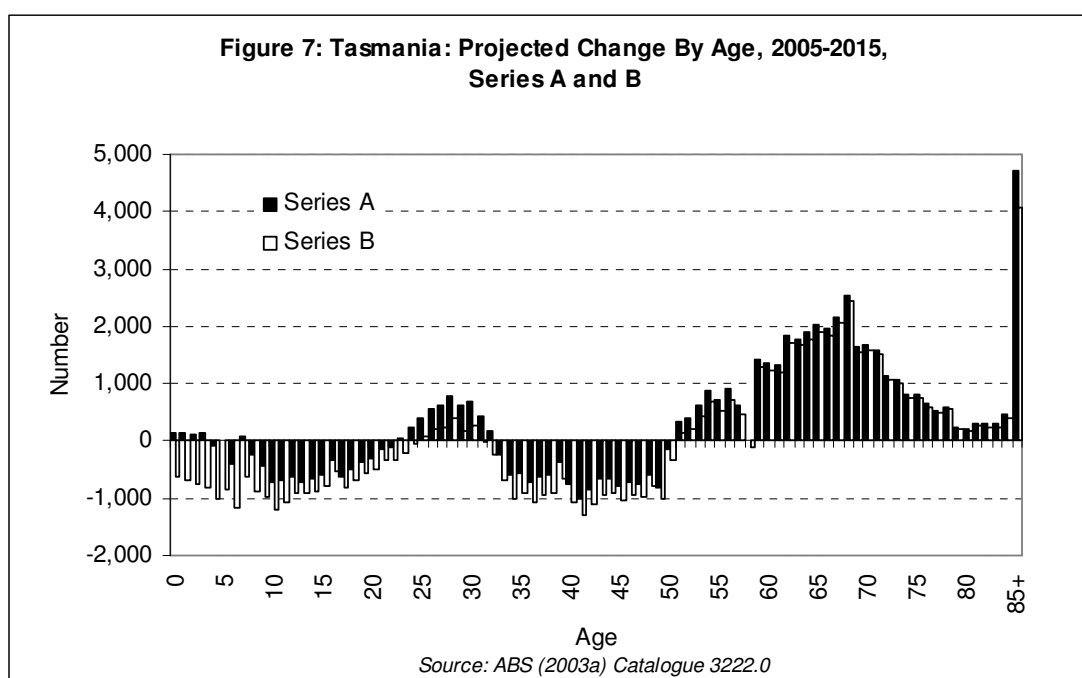
To reiterate an earlier point; Tasmania’s population churning or turnover is relatively high. In the 1997-98 year, when net migration troughed at -3,726, population turnover was in the vicinity of 6.3 per cent (around 29,707 ‘movements’); in 2001-02, when the losses ceased, it was 7 per cent, or 33,239 movements.¹⁸ In both years Tasmania’s turnover was the second-highest of the states. According to the ABS these flows can have considerably greater social and economic implications for states and territories than their net effects.¹⁹ Given that most movers are adults, that is a sizeable number of people selling, buying or renting homes, purchasing household goods, requiring local services and so on. (These numbers of course do not include tourists, whose positive impact on local economies is already well understood.) What is needed is some research on the economic impact of turnover. Imagine for example that Tasmania did indeed achieve a net migration gain of 1,000 per year, generated by 2,000 arrivals and 1,000 departures. How would the impact on the economy of a mere 3,000 movements per year compare with its present 30,000-odd?

Such a perspective might also cause us to ask why population growth is so important. The classic answer that population growth *per se* stimulates the economy would suddenly seem questionable (this is not to deny that larger populations can have improved economies of scale). Indeed aside from the recent influx of home buyers having a sizeable impact on Tasmania’s economic growth, the Tasmanian government would seem to argue the opposite; that it is economic growth that draws (or at least, retains) population.²⁰

But to return to the question; another answer is probably closer to the truth. This answer concerns federal to state and local government fiscal transfers. Currently these transfers reward population growth.²¹ However these are precisely the sort of policies that the United Nations Population Division²² was referring to when it argued that the emerging situation—of global population ageing and a shift from natural and absolute growth to decline—requires objective and comprehensive reassessments of many long established economic, social and political policies and programs. The publication particularly exhorts policy makers to look at the principles on which their current policies are based. Many were developed at a time when natural increase was booming; that is no longer the case and it is highly unlikely that there will be a return to natural increase, at least in the short- to medium-term, for most developed countries (the United Nations latest fertility assumptions posit a long-term global convergence to a TFR of 1.85, a level above the present but well below that required to replace the

population²³). Instead, while populations are unlikely to grow very much, they will certainly age.

Let us imagine then that for Tasmania, population growth *per se* may soon be a thing of the past. But what about growth by age? Figure 7 gives these data for the following decade according to the ABS ‘high’ and ‘medium’ variant projections.²⁴ The former (Series A) assumes an annual net migration gain of 490 (all international; interstate migration is assumed to be zero) and the birth rate rising to 2.03. The latter (Series B) assumes an annual net migration loss of 1,100 (390 international less 1,500 interstate) and the birth rate remaining around 1.81. For Series A, life expectancy at birth is assumed to continue to increase at a constant rate, while for Series B it is assumed to continue to increase but at a decelerating rate. As Figure 7 indicates, there is really little overall difference between the two outcomes (albeit the loss at the very youngest ages is substantially greater under Series B).



Clearly, even if the high variant assumptions prevail, numbers at the younger ages will still decline: virtually all growth will occur at the older ages. It is also worth reflecting on the fact that the picture looks remarkably similar irrespective of state or territory, the only difference being the time frame until the numbers at the younger ages begin to decline. There is, however, much potential in the growth promised at the older ages. Numbers there are already rising rapidly, and, looking further ahead than the data in Figure 7, in Tasmania alone will average some 10,000 additional 65+ year olds every five years for the next 30 years. This is growth.

Let us forget the ‘problems’ that population ageing will bring for a moment and turn to their positives. These numbers will generate an entire industry of new opportunities; most of the jobs associated with an ageing population will not be able to be shipped offshore, as currently occurs with manufacturing.²⁵ Unemployment is

broadly anticipated to fall,²⁶ and indeed in Tasmania the Pearson's Correlation Coefficient ('r')²⁷ between the declining ratio of labour market entrants to exits and the unemployment rate over the period 1991-2001 was 0.93 – a tantalising glimpse of what may lay ahead (i.e., continued declines in unemployment as the ratio of labour market entrants to exits becomes negative, expected in Tasmania between 2010-2012). However the increasing numbers of initially 'young elderly' (early retirees) contain even more promise. Next year across Australia there will be around 66,000 more 65+ year olds than there are this year. The following year there will be around 72,000 more. By 2012 the annual increment will rise to 140,000 and it will hover around that level for the following two decades. This is growth. Across the OECD countries over the next 25 years, 70 million people are projected to retire. This is growth.

As the nation's first (or second) state projected to reach zero growth (the other being South Australia), Tasmania has the opportunity to see a large proportion of these people visit the State. The enormous increase in leisure ships calling into Tasmanian ports over the past few years is just the tip of the iceberg. Imagine the demand for people in the 'accommodation, cafes and restaurants', 'culture and recreation' and 'retail' industries—to say nothing of the construction industry—if those numbers were to increase by a factor of ten or even five. It may entirely achievable if we change our view of what constitutes population growth and consider the bounties that might be enjoyed from 'Claytons' growth: the population growth you have when you are no longer having growth.²⁸ A concerted program actively pursuing Australia's and the world's forthcoming retirees could in fact see the stimulation to Tasmania's economy that was theorised in the State Government's 2003 Population Strategy. It is not inconceivable that conventional population growth would then—at least for a short time—follow, as insufficient workers to provide those goods and services drive a reversal of Tasmania's youthful migration losses.

Summary:

This paper has outlined Tasmania's recent 'return to population growth' but has shown that the age distribution of its migrants has in fact accelerated the pace of Tasmania's structural ageing. Given that all populations are ageing, but not as rapidly as Tasmania's, it is proposed that the state should cease to look at migration as 'the answer'. Instead, the paper proposes that a type of 'Claytons' growth might be pursued. Drawing on the Australian idiom 'the drink you have when you are not having a drink' it is proposed that a concerted program to attract the world's (and Australia's) increasing millions of early retirees to visit these shores could in fact see the stimulation to the economy that was the focus of the State Government's 2003 Population Strategy. Success in this endeavour may then even see Tasmania return to conventional population growth, at least for a time, as tourism-related employment grows and Tasmania's youthful migration losses reverse.

**Appendix 1: Tasmania: Migration: Rolling Annual Totals
December 1991 - September 2004**

	Net Interstate	Net Overseas	Total Migration
Dec-91	371	286	657
Mar-92	62	74	136
Jun-92	-289	36	-253
Sep-92	-797	80	-717
Dec-92	-811	40	-771
Mar-93	-1128	162	-966
Jun-93	-1494	103	-1391
Sep-93	-1428	107	-1321
Dec-93	-1874	119	-1755
Mar-94	-2265	55	-2210
Jun-94	-2107	192	-1915
Sep-94	-2165	268	-1897
Dec-94	-2428	212	-2216
Mar-95	-2312	284	-2028
Jun-95	-2656	310	-2346
Sep-95	-2870	278	-2592
Dec-95	-2731	406	-2325
Mar-96	-2869	331	-2538
Jun-96	-2590	398	-2192
Sep-96	-2617	419	-2198
Dec-96	-2922	455	-2467
Mar-97	-2778	372	-2406
Jun-97	-3325	254	-3071
Sep-97	-3466	70	-3396
Dec-97	-3411	-3	-3414
Mar-98	-3623	53	-3570
Jun-98	-3633	39	-3594
Sep-98	-3592	179	-3413
Dec-98	-3735	513	-3222
Mar-99	-3645	327	-3318
Jun-99	-3317	171	-3146
Sep-99	-3167	230	-2937
Dec-99	-2846	115	-2731
Mar-00	-2671	297	-2374
Jun-00	-2632	435	-2197
Sep-00	-2681	208	-2473
Dec-00	-2533	-8	-2541
Mar-01	-2239	37	-2202
Jun-01	-2136	101	-2035
Sept-01	-1898	120	-1778
Dec-01	-1886	529	-1357
Mar-02	-1743	465	-1278
Jun-02	-1512	307	-1205
Sept 02	-1082	338	-744
Dec-02	-117	260	143
Mar-03	951	461	1412
Jun-03	1895	655	2550
Sep-03	2702	793	3495
Dec-03	3035	755	3790
Mar-04	2970	659	3629
Jun-04	2475	662	3137
Sep-04	1789	665	2454

Source: ABS Catalogue 3101.0

¹ In 2001 the Government of Tasmania released a publication entitled *Population. An Information Paper on State Government Policy*. This document was largely in response to a challenge from the Opposition Liberal party, which in 2000 had released an election-oriented population strategy which included a Baby Bonus. Until the release of the Liberal Party's paper, the incumbent Labour (Bacon) Government had strongly eschewed any need for a population 'policy'.

² *Ibid*: 12, 18. In particular the Government drew attention to the strong correlation between interstate departures and the state/mainland employment growth differentials, and between employment growth and population growth.

³ *Ibid*: 19. The Government's 'Industry Development Plan' was introduced earlier, in late 1998.

⁴ Government of Tasmania (2003). *Tasmania's Population 2003. An Information Paper on Recent Trends and State Government Policies*, Hobart. Relative housing availability was highlighted as the only variable that was strongly correlated with interstate arrivals (others modelled were a range of economic and employment indicators including employment, participation rates, unemployment rates, private investment, average weekly earnings, and job vacancies).

⁵ Crean, David (2003). *Sharing the Rewards*. Annex to the Tasmanian Budget 2003-2004, Tasmania, Government Printer.

⁶ Jackson, Natalie and Rebecca Kippen (2001). Whither Tasmania? A note on Tasmania's population 'problem'. *People and Place* 9, 1: 27-37.

⁷ Australian Bureau of Statistics (various years) *Australian Demographic Statistics*. Catalogue 3101.0.

⁸ e.g., Whithers, Glen (1999). A younger Australia? *Discussion Paper 63*, Public Policy Program, Australian National University.

⁹ Kippen, Rebecca (1999). A note on ageing, immigration and the birth rate. *People and Place* 7, 2: 18-22; also Kippen, Rebecca and Peter McDonald (2000). Australia's population in 2000: the way we were, and the ways we might have been. *People and Place*. 8, 3: 10-17.

¹⁰ E.g., Australian Bureau of Statistics (2003a) *Migration 2000-01 and 2001-02*. Catalogue 3412.0: 65.

¹¹ Jackson and Kippen *op cit*.

¹² Jackson and Kippen *ibid*.

¹³ The momentum effect is the growth potential contained within the age structure, even after the fertility rate falls to exact replacement level of 2.1 births per women, or lower. In Australia's case the number of men and women currently in the reproductive ages remains large, due to the combined effects of the fertility rates and numbers of birth parents when they themselves were born, and also in part to migration.

¹⁴ Australian Bureau of Statistics (2003b) *Population Projections 2002-2101*, Catalogue No. 3222.0: 156. Tasmania's natural increase is currently on a par with the ABS' medium variant projections.

¹⁵ Jackson and Kippen *op cit*: 32-33.

¹⁶ Kippen and McDonald *op cit*.

¹⁷ United Nations (2000). 'Replacement Migration. Population Division. Department of Economic and Social Affairs. United Nations Secretariat.

¹⁸ Australian Bureau of Statistics (1999) *Migration 1997-98*. Catalogue 3412.0: 32, also *op cit*: 84).

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- ¹⁹ Australian Bureau of Statistics (1999) *ibid*: 31.
- ²⁰ Government of Tasmania *op cit*.
- ²¹ Jackson (forthcoming). Some considerations of regional population ageing and local government funding (under consideration for publication in Journal of Population Research) (available at <http://www.taspop.tasbis.com>).
- ²² United Nations *op cit*: 4.
- ²³ United Nations (2005). World Population Prospects. The 2004 Revision. Highlights. Population Division. Department of Economic and Social Affairs. United Nations Secretariat, page 21.
- ²⁴ Australian Bureau of Statistics (2003b) *op cit*: 146.
- ²⁵ McDonald, Peter and Rebecca Kippen (2001). Strategies for labour supply in sixteen developed countries 2000-2050. *Population and Development Review* 27, 1: 1-32.
- ²⁶ Productivity Commission (2004) *Economic Implications of an Ageing Australia*, Draft Research Report, Productivity Commission, Canberra, xxvii. See also Jan Kuné (2003) *On Global Aging. Old-Age Income Systems in the EU and Other Major Parts of the World*. Physica-Verlag: Heidelberg.
- ²⁷ The Pearson's Correlation Coefficient measures the strength of a linear relationship between two trends. An index of 1.0 would indicate perfect linearity (both trends moving in the same direction), while an index of -1.0 would indicate that as one trend increased, the other decreased. Tasmania's 'r' of 0.93 for unemployment and the labour market entry/exit ratio indicates a very strong relationship; however this is not to imply that demographic forces are the only factors having an impact on unemployment. They are not. See Natalie Jackson and Bruce Felmingham (2005) *Population Ageing in Tasmania's Local Government Areas. A Community-Level Perspective*, ARC-Linkage Research Report (available at <http://www.taspop.tasbis.com>)
- ²⁸ *Clayton's* was a non-alcoholic beverage launched in Australia during the 1970s as 'the drink you have when you are not having a drink' (in other words, 'not the real thing'). In the present context it is an argument that the State Government's view that 'economic growth precedes population growth' may well be the answer. If the focus were on, for example, tourism, rather than migration, it might not be long before migration followed.