Immigration economics: concord and contestation*

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Abstract: This paper will characterise the major economic dimensions of Australian research into economic aspects of immigration. This will cover macro-economics (labour markets, current account, government budgets), long-run growth (productivity, real income) and social economics (distribution of income and wealth, discrimination) and discuss the major gaps remaining for informing Australian policy (ageing, environment, regional distribution). It will speculate on the likely influence of research on future policy and may even bravely speculate on lessons from Australia for Europe and vice versa
I Introduction

Since the Second World War migrants or the children of migrants have provided 50 per cent of population increase and almost 60 per cent of work force growth. As at 2001, 23 per cent of the population were overseas born, one of the highest shares for any country. Migrant labour directly increased Australia’s post-war GDP growth rate by 42 per cent (Withers 1999). In this sense, modern Australia is a product of immigration.

In the Australian pragmatic tradition there has been much focus in public discussion and in research on the linkages between immigration and the economy. In public debate over immigration, economic issues are often a central element. On the one hand many supporters of substantial immigration base their position on its perceived role in Australian development and prosperity. On the other hand many opponents of high immigration take that position because of their concern that immigration is a source of national economic problems. In scholarly discussion, the economics of immigration has been a distinctive concern of Australian economists, as with like areas such as agricultural economics and international trade. For Australian economics the interdependence between resources, people and cross-border movements has been an abiding theme.

In the early post-war period, major names in Australian economics such as Karmel, Corden, Bensusan-Butt, Kmenta and Arndt found immigration a topic worthy of their close attention. In more recent times economists such as Norman, Lloyd, Chapman, Nevile, Pope, Cobb-Clark, Junankar, Creedy, McDonald and others have been ongoing contributors. A recent trend has been for economic consultancies such as Econtech, Access Economics and the Centre for International Economics to provide valuable commissioned studies in the field. However a brief flurry of high quality official research work in the 1990s under the aegis of the Bureau of Immigration, Population and Multicultural Research stopped when that organization was abolished in 1996.

The early post-war focus was upon the short-run macro-economic impacts of immigration, and analysis in this vein has continued ever since. For the short-term issues the basic economic concerns have been the implications of immigration for unemployment, training, wages and inflation, public outlays and the balance of payments, wage and income distribution. This paper reviews the literature on these issues and argues for a substantial professional convergence today on their nature and outcomes. However it is argued that the same convergence does not apply for a range of issues that go beyond the short-run macro-economics tradition that has dominated Australian research. In other areas a more contested professional terrain is still found-including in long-run income growth, demographic ageing, regional impact and the environment.
II. The macro-economics of immigration.

In relation to the short-term economic issues for immigration, considerable policy concern has been evinced from time to time regarding perceived adverse consequences of migration. In almost each case research however has consistently shown a basically neutral outcome of immigration for the economy. This is not to say precisely neutral. Nor is it to say that a different outcome might not have occurred under different conditions. But the key point emerging from the economic research in these areas is to recognise that immigration has impacts on both the supply and demand sides of the economy, thus producing offsetting effects (Foster 1994).

Much of the popular public debate recognises only one side or the other for these impacts. Often this is understandable, since the offsetting effects may be subtle, indirect or complex. But this is not to say they are not equally important. The precise balance of effects is a matter for empirical investigation, the results to date of which are now discussed for the major short-term impacts of labour-market outcomes, current account deficits, and public outlays and revenue, respectively.

*Labour market outcomes.*

Particular concern often arises over the labour market effects of immigration. A popular view is that immigration only adds to the number of workers and so increases the level of unemployment or, more specifically, that newly arrived migrants take jobs from existing residents.

Such a view is understandable. It does seem obvious that there is competition for jobs and that migrants may displace other residents. But this view misses the demand created by migration, for immigration can boost spending on goods and services which, in turn, increases demand for the labour to produce those goods and services. This is to say migrants are not only workers but are also consumers, a point stressed in the Australian literature as early as Karmel (1953). Moreover many also bring capital funds with them and they may induce others to spend eg domestic and foreign business investment to meet the greater consumer demand (Arndt 1964, Lloyd 1982, Lloyd 1996).

This issue has been examined in a wide range of studies in Australia over different time periods and using different methodologies such as time-series analysis, structural modeling, and simulation, and beginning with Harrison (1984), Pope and Withers (1985, 1993), through Ackland and Williams (1992), to Shan and Sun (1998) and Addison and Worswick (2002). The burden of evidence is that immigration has not caused any net increase in the unemployment rate in Australia.

This finding is in no way incompatible with the observed fact of higher average unemployment rates for recently arrived migrants. Settlement adjustment can take time and in the interim, expenditure effects may disproportionately benefit the employment prospects of existing residents. Chapman and Cobb-Clark (1999) show a significant benefit to local unemployed where immigration is accompanied by capital transfer. The conclusion is also consistent with an impact that can vary across industries,
occupations and regions (Brooks and Williams 1995). Moreover some migrant groups themselves experience very low unemployment and others can have quite high rates. For instance, it is not surprising that many refugees whose education and work have suffered massive dislocation as a result of their experiences, may have higher than average unemployment.

In contrast to public concern over perceived adverse unemployment consequences of immigration, a long-standing concern of the union movement has been instead the potential impact of immigration on training opportunities for existing workers. If immigration is used by employers to fill shortages of skilled workers, the fear is that this provides an incentive to avoid proper training of local employees. Of course, recruiting migrant workers is not cost-less. It is subject to problems of lags before they arrive, problems of compatibility of qualifications, and problems of firm retention. Migrant workers are also subject to the same minimum requirements for conditions of employment as for existing residents. Nevertheless employers do seek skilled migrants and the remaining issue is whether the numbers arriving displace local skill formation.

The answer, as with unemployment, is a matter of the balance between offsetting effects. In the case of training, as with jobs, migrant-created demand itself induces a need for new training slots wherever that demand is sourced. And while there could be particular imbalances from time to time in the process, the available research evidence (particularly Wooden 1990 and Baker and Wooden 1991) finds at least an overall match of extra skill supplied and extra training induced or possibly a small net gain (Stromback et al 1993).

Finally, in terms of labour market effects, it is possible that unemployment effects of immigration would be muted if adjustment in the labour market took place via changes in wages. Then imbalance between supply and demand effects would not be observed in unemployment, but rather in wage movements. Local workers would suffer from reduced wages, rather than from unemployment.

This is less likely to be the outcome for Australia however, as the Australian labour market has been one of the most highly regulated amongst industrial countries. The extensive system of minimum wages in place since early in the twentieth century has meant limited capacity for wage reduction. Nevertheless it is possible that wage-setting authorities may have themselves responded endogenously to the presence of migration in fixing wages and, in recent years, the wages system has itself become increasingly deregulated. Or, again, the immigration could have induced inflation, so reducing real wages if not nominal wages. Empirical research, however, has found that there is no linkage from immigration to nominal wages (Norman 1985), nor to price inflation (eg Junankar and Pope 1990), thus confirming again a broad balance between aggregate demand and supply effects on the macro-economy.
Current account deficits

With broad macro-balance being a consistent finding of labour market studies in relation to immigration, it would be surprising if a different result held for the balance of payments on current account.

Nevertheless this could be possible. The demand created by migrants could well be “bunched” so producing foreign borrowing requirements for that period (Argy 1990, Mitchell 1996), or, if migrants bring in fairly large sums of lifetime accumulated funds when they arrive in Australia, there could be improvements on the current account, offset later by the prospect of remittances. Some have suggested migrants are irrelevant to much of Australia’s exports (eg agricultural and mineral products), but may be major importers, including of products from their source countries. Or will there be a foreign exchange benefit from visits from friends and relatives?

Clearly there are a myriad of transmission mechanisms for an effect on the current account – and there are further downstream induced effects. In addition while it is likely that any one cohort may have a definable sequence of impact eg early borrowing and subsequent saving, overlapping cohort effects must also be taken into account. The only effective resolution of the issue can be empirical. And again the available evidence in this respect is that migrant arrivals are neutral with respect to the current account balance (Junankar, Pope and Kapuscinski 1994), though an emigration ‘brain drain’ may have had a significant negative effect on the current account. Certainly the composition of departures is even more skewed to skilled persons than is arrivals. Within arrivals, there are studies showing high export pay-offs to particular migration categories eg business migrants (Access Economics 1998), but overall there has been a basically neutral average impact.

Very major changes in migrant entry composition could shift outcomes somewhat. But the migration program itself represents an ongoing political balancing of competing humanitarian, economic and social objectives such that complete dominance by any one type of migration is unlikely for Australia – and hence so is dramatic change in impact. By contrast, there are US studies (eg Borjas 1999) showing that the lower skill composition of US immigration has had more negative net consequences there for some workers (especially in local low-skill labour markets) than has been discernable for Australia (and for Canada).

Public outlays and revenue

As with labour markets and the current account, the effect of immigrants on the public purse is a matter of balance between demand and supply-side effects.

In the popular debate over immigration and the public purse, criticism of immigration focuses on the demand generated though migration for government spending on welfare services, education and health and wider infrastructure eg roads, water. But there is equally a need to examine the less evident supply effects for public revenue through income tax, indirect tax, user charges and the like.
There has been some debate over migrant-specific services where, in the early stages of settlement, it is likely that outlays do exceed revenue eg language classes (Rimmer 1988). Also it is likely that for a specific intake there is a period where migrant-induced public expenditure exceeds revenue generated for a time, but thereafter moderates. It equally needs to be recognised that, with adult migrants, expenditure on education, training and health costs prior to arrival have been incurred elsewhere, a major saving for the Australian taxpayer (Lander 1988), just as is receipt of pension for retirees who relocate to Australia on overseas pensions. Conversely those who retire overseas on Australian pensions constitute a budget cost (Whiteford 1991).

The net impact of the many considerations such as these will vary with the type of migrant, the type of expenditure or revenue and the level of government. It will also vary over time as the nature of public sector activity alters eg greater requirements for self-funding in retirement for income support, health care and aged care services. For the particularly politically sensitive area of social security, the finding is that despite extensive benefit reliance for some migrant sub-groups (eg refugees), there is no overall disproportionate demand for social welfare support ahead of tax contributions (Whiteford 1991, Hellwig et al 1992). And indeed adding up all outlays and revenues, the burden of the empirical evidence indicates that there has been a significantly positive contribution of immigration to the public purse in Australia eg Centre for International Economics (1992), Cutts (1992), Mathews (1992), Access Economics (2002).

A particular policy issue of interest in this context is the position of illegal migrants. Given their restricted take-up of social support, it is possible that illegals make a larger net contribution to the public purse than legal migrants (Lukomskyj and Borowski 1991). However no case for their toleration on these grounds has been made. The spillover cost to society of toleration of illegality is no doubt instinctively seen as too great. The public opinion reaction to the Tampa asylum seeker issue in 2001 would seem to strongly affirm this view. The notion of “queue-jumping” gained some prominence in public debate over the issue.

**Wage and Income Distribution**

In interpreting the macro-economic impacts, some related social economics dimensions have also been important. One proposition emerging from some past studies has been that migrants might benefit more than natives in the migration process eg Parmenter (1990), Parmenter and Peter (1991) and Peter and Verekios (1996). This conclusion arises because the models used in such analysis emphasize how extra workers will either bid down wages or they will create unemployment if wages are inflexible.

However the results can in fact be otherwise once two factors are allowed for viz. offsetting positive dynamic benefits and the ownership of capital by existing residents. In the latter case, if the return to labour did decrease with immigration, the return to capital will increase. This capital is largely owned by residents. And when housing stock is acknowledged as part of capital and when ownership
of shares is widespread (eg through compulsory superannuation), then capital return benefit can also be quite widespread.

Even for labour earnings, when Addison and Worswick (2002) use regression to analyse cross-sections from the official income distribution survey for the years 1982 through 1996, no detrimental effect of immigrants on native earnings are detected. Nor is this altered when the specific impact on less-educated or younger Australian workers is investigated. This reinforces earlier compositional findings such as those by Saunders and King (1994). Addison and Worswick (p.77) conclude that “these results add to a growing body of literature that has consistently failed to find that immigration adversely affects the earnings of native-born Australians”

III. Contested Terrain

The preceding section established that overall the macro-economic effects of immigration to Australia have been neutral or benign. This was not always the view and for some decades these matters were contested professional terrain. However in these particular matters the accumulation of economic knowledge has served policy well. Refinement of theory and conduct of ongoing empirical research, often using competing theories and alternate empirical methods and data, have produced increasingly consistent and robust conclusions. The results are, however, not always obvious or self-evident and they are highly dependent on offsetting and subtle indirect effects, which makes the subsequent task of policy persuasion still somewhat difficult. Hence their full benefit has yet to be realised in the practical domain of policy.

A bigger problem professionally today, however, is that a number of other issues central to immigration policy do still remain professionally contested or under-developed. These include the issues of real income growth, population ageing, population distribution and green house emissions. These are core issues for policy since the more immigration is understood to assist real income growth and mute population ageing concerns it will be enhanced, the more it is seen as being maldistributed and causing environmental problems the more it will be opposed. The remainder of this paper looks at recent professional and policy contributions in these areas.

Real Income Growth

An older view was that the law of diminishing returns meant that adding population to fixed capital reduced marginal product and hence real wages. A more modern variant of this approach to real income issues has been the work of Guest and McDonald (2002). It has pursued and obtained extensive press reporting and so deserves close scrutiny. Essentially Guest and McDonald also argue that low fertility and low migration may actually enhance adult consumption per head, so that there is no need for concern over population slowdown. Their logic is that there is a lower investment requirement and associated savings with fewer children. Further, with fewer workers down the track with lower fertility and low immigration, there will be a lower investment requirement to sustain the capital-labour ratio
for the domestic labour force (a “Solow effect” or “investment dividend”). “Smoothing” allows the dividends to be used to finance an optimum inter-temporal consumption path. To demonstrate this a simulation model is used.

But the model that simulates this process assumes the following, inter alia:

- constant returns to scale
- exogenous technology
- homogeneous capital
- constant unit cost for (age-adjusted) social outlays
- easy substitution of capital for labour
- constant (age-adjusted) labour force participation rates.

The first five of these features causes the model to under-estimate the economic benefit for consumption of higher fertility, while the sixth causes the model to under-estimate the economic benefit for consumption of lower fertility. Addressing each in turn:

(a) The analysis provides no empirical justification for the constant returns to scale assumption, however analytically convenient. Certainly much business literature refers to the need for scale or, more convincing to economists, the industry economics literature provides guidance. For instance, Antweiler and Trefler (2002) have found one-third of global trade to be subject to increasing returns, and Keller (2002) shows how distance for countries such as Australia reduces international technology diffusion from the industrial population centers originating most new technology.

(b) Exogenous technology seems quite inconsistent with the direction of modern endogenous growth theory which emphasises the contrary. More production induces more innovation. For instance, the new growth theory models of Romer, Grossman, Helpmann, Aghion etc have been applied by Jones (2002) to measure how long-run growth arises from discovery of ideas which depend upon population growth. For Australia itself, Nevile (1990) calculated that a one per cent increase in total output increased the rate of innovation by 0.6 per cent.

(c) In relation to homogeneous capital, Australian economists more than most have known since Salter that capital comes in vintages. Concern for the “Solow effect” therefore carries with it the danger of ignoring the “Salter Effect” and the associated problem of relying on an ageing capital stock embodying increasingly outdated technology and hence of having declining total factor productivity (as conventionally measured). The same applies to human capital. If the response is to keep the latter up-to-date via life-long learning then this reduces the consumption dividend otherwise claimed.

(d) A constant unit cost for (age-adjusted) social outlays seems most improbable. Baumol’s unbalanced growth model would indicate costs for aged care rising much faster than is the fixed
trend productivity growth assumed, which latter so much helps the Panglossian conclusions of the model. Reinforcing the artificiality of this assumption of constancy in unit social cost is the whole trend of health care technology to increase costs too. These are pressures to increase costs. If these pressures further render benefits endogenous and reduce them accordingly, this may save on outlays—but expose an underlying intergenerational conflict that could be anything other than benign.

(e) There are important limits to capital-labour substitutability, including especially in labour-intensive service activities often of the essence in relation to an ageing population. Such a population needs home maintenance, personal care and health care services etc for which some increasing capital substitution may be found, but with substantial growing direct personal labour requirements still likely from a diminishing workforce.

(f) Labour-force participation is likely to be endogenous with respect to fertility. As child-rearing falls off with lower fertility, adult female labour market participation should rise (or leisure consumption). This reinforces the net consumption benefit (after due deduction of the loss of consumption benefit from the pleasure in raising children).

A final point is to stress the limitations to simulation analysis in providing definitive answers on these matters. Such analysis is best at providing indicative or suggestive answers. But direct estimation methods may be more able to balance the range of factors, including the effects of difficult to measure effects such as scale economies and even broader effects through endogeneity and spillovers and synergies eg productive diversity and entrepreneurship effects. The several Australian attempts to provide such direct estimation based on historical data find strong positive links from immigration to productivity and per capita income growth eg Nevile (1990), Withers (1988), Pope and Withers (1995). This is direct evident which directly contradicts Guest and McDonald’s simulation. Caution is therefore required before acceding to the blandishments of the Guest-McDonald extinction economics.

Population Ageing

A related matter is the issue of population ageing and immigration. There was another somewhat Panglossian view evident amongst many economists in a major conference on these issues convened by the Productivity Commission (1999). The dominant view was that Australia has far lower shares of elderly than other OECD countries, it had put in place the appropriate policies to deal with the ageing that would occur, immigration did not help slow ageing anyway and besides it is good that we have greater longevity, particularly since in most cases it is accompanied by a healthy and rewarding lifestyle.

It is helpful to look at these propositions. Yes, Australia is in the fortunate position of having a younger age profile than many OECD countries and of having moved in the direction of reducing the public transfers required by an ageing population through compulsory savings policies and increased incentives for private health insurance. But it remains true that substantial demographic ageing will occur for Australia over the decades ahead and that the self-provision arrangements are incomplete.
More is needed to prevent a bigger intergenerational transfer burden from bedeviling our political future. This will require a range of measures including higher savings, greater control of health costs, greater aged workforce participation and higher selective immigration.

The Inter Generational Report (Treasury 2002) that accompanied the 2002-2003 Budget was an important correction to the preceding orthodoxy among economists on analysis of these issues. That report documents a significant role for immigration in population ageing despite the contrary public statements of Finance Minister Minchin who, in this matter, seems to have not read thoroughly his own Government’s budget papers when he said: “The report rules out an increase in immigration as a way to water down the problem” (ABC News, May 15, 2002). The Inter Generational Report concluded that population ageing under present trends would require an increase in the public outlays share of GDP of 5% by 2042. It also found that an increase in net migration from a base case of 90,000 to a higher level of 135,000 would raise GDP by 10% and real per capita income by 2% by 2042, and reduce the aged population share by six percentage points. This latter could represent some $30 billion in reduced outlays, a worthy target for a Finance Minister and for it to be achieved via enhanced immigration might also have been thought to be potentially attractive to a South Australian Senator.

Indeed the estimates in the Inter Generational Report are, if anything, conservative. They ignore the scale and induced innovation effects already discussed and further productive diversity effects (see Goff et al 2002 for fascinating evidence on the latter). Also they adopt a demographic projection methodology based on absolute migration levels which inevitably shows a diminishing influence of immigration over time. An alternative immigration rate-based methodology supports an even greater estimate of the role of immigration in muting (though not reversing) the impact of demographic ageing (Withers 2002). Of course, the focus of that impact is upon public transfers and the tax base, but there are also issues of the adjustment and innovation capacity of an ageing society. This is not to denigrate the aged nor to decry the benefit of greater longevity. The latter of course is what used to be called a motherhood statement, though no doubt that specific invocation is reducing pari passu with fertility. The point only is that of population balance – an appropriate mix of the old and the new.

*Regional Distribution and Impacts*

The new economic geography and environmental and ecological economics do tell us to to pay attention to location and space. So do the contemporary policy realities of debate over immigration in Australia. And economists have offered their insights here too, as this section will discuss.

But the lead in this area no doubt comes more from a political leader than the economists. In particular NSW Premier Bob Carr has been prominent in expressing concern that the costs of immigration are too high because of their concentration upon Sydney. In recent speeches to the Davos Leadership Forum and the Urban Development Institute of Australia (Carr 2002a,b), Mr Carr has given nine reasons for his view that expansive immigration is unwarranted. He termed these points a “mental
picture” that conveyed the need for caution on immigration. In particular he cautioned against population targets like 50 million for Australia. The arguments were:

- Environmentally, Australia is not North America. It is North Africa. This limits our population potential substantially.
- Our population growth is coastal. But the wholesale urbanization of our Eastern coastal strip from the mountains to the sea is unacceptable. 50 million people represents 12 Sydneys.
- A higher population requires higher taxes. 50 million needs a trillion dollars more in taxes.
- Population is a Commonwealth responsibility but Sydney is the honey pot. This means Sydney suffers the pressures of population disproportionately.
- Small is beautiful. Prosperity does not come from sheer weight of numbers but from knowledge eg Finland
- Australia does not have an aged population. We are a young country compared to Japan or Germany.
- Immigration was needed for a labour-intensive economy, not a global knowledge economy
- Population expansion must await new technical fixes which improve our ability to carry population on Australia’s resource base.
- Globally it is population expansion that has produced poverty, misery and environmental degradation.

Some comment on each of these is helpful, for each embodies some partial truth, but only that. As with much in the migration field these propositions appeal to the direct and observable and ignore the indirect and subtle. As such they are populist rather than educative, and they do not in this area exercise leadership through information and persuasion. For example:

(a) We may not be North America, but the Jones Committee on Australia’s Carrying Capacity (Jones 1994) did find that our northern plains are a biophysical homologue of Southern China with 1/500th the population-and that we have twice the renewable water per capita of the United States. Our population density is 2.6 persons per square kilometre. The Netherlands has 385 persons per square kilometer.

(b) Our population growth is certainly predominantly coastal, but critique of a 50 million Australian population is really attack on a straw man and even so the associated twelve 12 Sydneys would each be an average 700kms apart. And for a more realistic 30 million population, that is seven Sydneys, bearing in mind that Sydney is only the 67th world city in population and that 5 cities have Australia’s total population and 25 have more than 10 million.

(c) The cost of a larger population is of course a larger tax aggregate. But every study available shows that migration in the Australian pattern produces as much tax as it requires outlays-and,
indeed, that there is a surplus for government arising from the overseas funded education, working age and good health of migrants (Access Economics 2002). The marginal cost of infrastructure extension is below the marginal tax receipts of migration. But this is caught up in the buckpassing of Australian fiscal federalism, where it suits a state premier such as Mr Carr to shift blame for congestion to the Commonwealth over immigration while reaping the rewards of global cosmopolitanism that are only feasible with that immigration.

(d) Mr Carr exaggerates the population pressure on Sydney from immigration. It is true that Sydney receives the lion’s share of new settlers. But it is equally true that Sydney’s population growth rate is no more than the national average, as Garnaut (2002) has demonstrated. Indeed even in absolute terms, Greater Brisbane has been growing as much or more than Greater Sydney. Internal migration is the explanation, and is almost an automatic stabilizer, responding to Sydney property prices as they rise under the constraint of limited release of new land by the NSW Government. Mr Carr’s Sydney receives an educated, globally integrated work force in exchange for retirees and welfare dependents moving out to cheaper locations. There are problems indeed, but they are those of poor planning, infrastructure and land release policies, not excessive population growth. Indeed even on the premier’s own proclaimed turf of environmental enhancement, NSW has lagged substantially on commitments and in comparison with other states in a whole range of public transport, emission control and like policies. In these circumstances, scapegoating and blame-shifting becomes an almost inevitable feature of policy—but a most unfortunate one when it all too easily lends itself to encouraging a climate of uncertainty over some dimensions of our multi-cultural society.

(e) Certainly population alone does not guarantee prosperity. Otherwise Bangladesh would be wealthy and Finland poor. But its absence does not guarantee affluence either. Otherwise Chad would be rich and the USA would be poor. The point is that of conditionality and complementarity. The link from population scale to real income per capita is a conditional one. A rich industrial country that can properly invest for a growing workforce can obtain payoffs from a larger population that poorer countries and low population growth countries cannot. Cross-country studies have trouble incorporating these complementarities and their interdependence. But single country historical studies do not—and they support this interpretation eg for Australia see Pope and Withers (1995)

(f) We are indeed a young country demographically compared to Japan, Germany, Spain, Italy, Korea and many others. But we are rapidly catching up. Our aged population share will double by 2030 under present trends, from six workers for every aged to three workers for every aged person. We do have a window of opportunity to get our policy settings right. But as a nation we must beware the complacency that a short electoral cycle may condone. As such we need political leadership that will display the necessary vision in this area.
Immigration is not needed for a labour-intensive economy, unless it is a national ambition to remain an economy predicated on raw labour. It was precisely because Australia turned its back on its nineteenth century commitment to open trade and investment, skilled labour importation and strong domestic infrastructure and education investment within free markets, that our pre-eminent position in pre capita income was progressively lost over the twentieth century. We turned inward, stopped investing in ourselves, took in unskilled labour and built a system of protection based on rural rents that made us sclerotic. Strong human capital formation, both domestic and imported, is precisely what is needed in the new global knowledge economy.

Mr Carr believes technology comes like manna from heaven. Yet it can come as readily from navel-gazing-and the more navels the more ideas. Or, as endogenous growth theory has it, the more output we have the more likely we are to find ways to improve on that. Australian economist Ron Duncan (1997) shows how the Green Revolution conforms to this prediction-and Popp (2002) gives precise elasticities for induced environmental innovation. Thus both for innovation in general and for environmental innovation in particular, waiting for a technology fix is again precisely the wrong policy. The market aided by market compatible policies can reduce environmental damage and produce innovation supporting environmental sustainability.

Globally, the world is facing a decline of population from the third quarter of this century. The same forces which have produced ageing as a problem for industrial countries are reducing fertility dramatically world wide. The drivers are women’s education and work and contraception. The population bomb is not the threat it was. If it ever was-because there is much truth to Sen’s observation that no country with a free press has ever had a famine. The problems are those of institutions and distribution, not population, resources and technology. Duncan (1997) calculates that global output of cereals (the main food source for most people) has increased by 2.7 percent a year since 1950, whereas population has grown at 1.9 per cent. This rather disproves the Malthusian pessimism whereby food will grow arithmetically and population geometrically.

In principle a way through such a complexity of contending incentives and impacts, and associated rhetoric and selective argumentation, is to move to large scale modeling to try and embody and quantify the full range of drivers of economic change and environmental outcomes and their interdependence. Such an endeavour recently in Australia was to be found in the work conducted by the Wildlife Ecology Division of CSIRO for the Commonwealth Immigration Department (Foran, 2002). But, while well-funded and well-intentioned, it fell well short of the mark because it failed to blend modern economic principles with contemporary scientific insight. Indeed the model is not so much scientific as primitive economic, in the sense of the classical growth economics of two centuries ago. As such it appropriately re-introduced natural resource use into the production process, but it ignored the subsequent neoclassical recognition also of the crucial role of prices in inducing conservation of scarce resources and the new growth theory recognition of induced technological
change. On the population side, the neoclassical recognition of substitution even in the family sphere also helps understand why there is ongoing reduction of birth rates, rather than unrelenting population pressure. For an effective critique of the CSIRO work see Wooden (2002)

Immigration and Greenhouse

Of course the market is not the answer to all things. In particular it does not deal well with externalities, public good and commons problems, though improved property rights allocations can assist the market in many cases. But in matters of the environment some forms of market failure can still be of the essence. This is most clear in relation to a global problem such as greenhouse gas emissions. Interesting work on this and its possible linkage to population for Australia has in fact been provided by economists.

Originally the Business Council of Australia (1991) commissioned work that linked greenhouse emissions to population scenarios. The identity I = PAT, where I is impact, P is population, A is attitude or behaviour and T is technology, summarized a simple accounting framework for this purpose, and spreadsheet analysis showed population growth as a major force behind growth of greenhouse emissions. The National Population Council (1992) drew attention to the fact, however, that while the immigrant component of population growth added to Australian emissions it reduced emissions elsewhere, so that net greenhouse effects were smaller than a purely national analysis showed. Most recently Turton and Hamilton (1999) have revisited this conclusion and, quantifying emission reduction elsewhere from emigration to Australia, conclude that the net effect of Australian population growth is still very large. The essential basis for this conclusion is the attribution of per capita Australian emissions to migrants here, and source country effects are calculated using per capita emissions there. Since Australia is a high fossil fuel using country in per capita terms, the conclusion follows. This is an improvement over the earlier BCA and NPC work. But it is not conclusive.

In particular the result can be criticized because:

(a) it attributes average use in source countries to migrants who may have higher than average emission patterns there but not in Australia eg business and skilled migrants;
(b) it uses current patterns of emissions whereas in fast-growing source countries emissions may grow faster than in Australia in the future;
(c) other environmental damages in both locations are not considered by such a narrow indicator of environmental welfare, but it is quite possible that in other dimensions of ecology Australian impacts are better than in less-regulated source locations; and
(d) the possible greater efficacy of alternative policies addressed at the behaviour of all residents of Australia is not considered.

Overall the Turton-Hamilton analysis would be at one with the Guest-McDonald approach in accepting great benefit from low fertility, since it reduces aggregate population growth. Turton-
Hamilton might be less committed to a consumption per head maximand, but in greenhouse matters the low population implication is the same, if the analysis is accepted.

By contrast, work by Swan Spiller for the Australian Academy of Technological Sciences and Engineering (2001) provides a detailed analysis of population-related environmental impacts and the opportunities for their reasonable remediation even with only existing technology and concludes that: “It is not appropriate (and indeed simplistic) to use population as the only policy option to address environmental concerns whilst maintaining environmentally damaging technological, lifestyle and economic arrangements into the future. There are a wide range of technological, behavioural, pricing and settlement planning strategies (52 identified) that could be applied to address the four population-related environmental issues” (p.21)

IV. Conclusion

Much Australian economic analysis of immigration has focussed on the relatively short-run effects on aggregates such as unemployment, wages, inflation, public finance and the foreign debt. Yet the general finding in all of these areas is that the effects have been reasonably balanced or, where not, they have in fact been marginally positive for the Australian macro-economy and for Australian residents.

Of course further work may be needed to examine and refine these findings further. And there remains the long and arduous task of persuading both decision-makers and public opinion that fear of generally adverse effects may mostly be myths. Economists faced just such a task earlier in recommending the benefits of tariff reduction and other market liberalization, so that it can be done - though eternal vigilance is needed.

But an even greater research priority might now lie with examining implications for our longer-run future. In this present paper issues of per capita income growth, population ageing, regional growth and greenhouse emissions growth were highlighted as major issues in research and in current political debate over immigration and population.

A distinctive feature of Australian economics has been its close orientation to policy and a willingness to draw on a range of quantitative methods to put empirical flesh on the bones of theory. Sometimes the theory and empirical method are inappropriately applied without due recognition of their limitations. That is the case in the way in which some economics is addressing some of the current core issues in immigration economics and policy, as this paper has sought to demonstrate.

At the same time this is not to condemn the endeavour. Clearly stated assumptions, transparent logic, full data documentation and competent statistical methods, for all their faults in practice, do remain the best way to advance understanding when operating in a contestable marketplace of ideas.
Professional economics on immigration issues in Australia happily illustrates this proposition and we can look forward over time to increasing convergence based on expanding knowledge. Then new areas of contestation will emerge to challenge our intellects for the good of our societies.

Whether this Australian journey can mean much for European discourse and policy is a whole new paper. But my own view is that much can indeed be learned from the policies and the role of research in underpinning those policies in the Australian case, which I believe overall provides an interesting blend of reasonably successful policy and research by world standards.

Good economic theory and empirical research help underpin understanding and sensible policy. They do not guarantee it - as populist politics and rent-seeking will often undermine public interest outcomes. Also, at times, the economics itself can be faulty and inadequate. But the belief that sustains independent scholars interested in policy is that ongoing accumulation of systematic knowledge improves the prospects for constraining policy error.
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1 This survey looks at post World War Two Australian research. A succinct review of previous discussion is given in Pope (1999).

2 The Bureau of Immigration Research (later Bureau of Immigration, Population and Multi-cultural Research) was established in 1989 as an independent, professional research body within the Commonwealth Department of Immigration, Local Government and Ethnic Affairs. Its research was published by the Australian Government Publishing Service and is listed in the Bureau’s Annual Reports. 1989-1996.

3 Nevertheless there is a distinct diminution in this focus over time dating from floating the exchange rate in 1983 and the subsequent flow-on reforms which served to mute the traditional balance of payments crises and induced wage-inflation of concern to earlier economists.

4 For reasonable variations in migration program composition little difference in short-term macro-economic outcomes is observed eg Foster (1994), Cobb-Clark (2000). But longer-term effects eg on per capita income, can be more marked eg Econtech (2001).

5 Recent surveys of the macro-economic material are to be found in Foster and Withers (1992), Sloan and Villaincourt (1994), Foster (1996), and Junankar et al (1998). Much of the stimulus for analysis in these areas for the decade of the 1900s was Norman and Meikle (1985).