

Population, Development and Quality of Life: Sustainability and The Role of Compassion

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THE RAISON D'ETRE OF THIS PRESENTATION

Civil society and organisations like the Sea of Faith have a very pressing context for what I will be saying here. When I was finishing writing this paper, between the 20th and 22nd of September 2010, the United Nations was convening at a ministerial level to review progress for the implementation of the Millennium Development Goals. The MDGs were formulated at the end of the last century by global civil society, and were passed by the United Nations in September 2000 to run until 2015.

My address is essentially a reflexion built around the MDGs (outlined in Appendix One): but first I must ask what is a reflexion for an empiricist like a demographer. Then in this presentation, I turn to the findings of my discipline's empirical reality by looking at trends that have occurred demographically since 1950, and what will occur until a century later, by 2050. This sets the demographic parameters for what I will be saying. Next, I will look at how population trends are addressed by development policy, planning and programmes. This takes me to a review of the MDGs, which I see, ideally, as an attempt to add a defined compassionate dimension, formulated by a consensus achieved by civil society, over and above the existing technical perspectives, to population and development issues. Then I step back and take a reflexive view of these issues that up till then I will have treated as objective trends and their policy contexts. This will allow me to finish my presentation, I hope, with a crescendo that formulates a model to link together everything I have been saying: a sort of manifesto for civil society faced with a global population that is increasingly unequal. This model could then be re-exported to the objective world of population and development as a set of guidelines that integrate pragmatics with compassion, the subject of this seminar.

The central argument here is that a compassionate approach provides the most effective strategies for development (ie those having the most positive impact on the populations) whose needs they address. Thus, ultimately, the approach that I will advocate is the most efficient way (ie the strategy which is most desirable managerially; which is most pragmatic) to deal with these problems. The seemingly hard-nosed, pragmatic approach of neo-liberal economics, the ideology that has dominated the development debate over the last three or more decades, has been, to use their own terminology, a market failure. This is because it has allowed finance to dictate the agenda and to set priorities for development; in a word, there has been no place for people.

But I also have a sub-plot in my address: bringing people back into the equation can be best achieved by taking a demographic approach to these issues. This is not to push my disciplinary or career barrow – I am now retired, so that is an academic issue for me. Instead, I am arguing this because a population is simply the aggregate of any group(s) of people. The best way to determine the needs of the people, to monitor the ongoing effects of development policy, and to evaluate the impacts of such policies at the end of programmes is by analysing what is happening to the population, not just for its dynamics but also its structures. Policy is written for populations not individuals; Margaret Shields once said to me only bad policy is written for individuals. But

to add to this, over the late 1990s and 2000s my discipline has built a new methodology that allows the endogenisation of population into development analyses and planning, with startlingly positive results that successfully challenge all the old, but still conventional, neo-liberal beliefs. I refer to what is called the “Demographic Dividend/Bonus” or, in Latin America “the Window of Opportunity”. I will return to this later. Given all this, one of my concerns about the MDGs is that they have virtually ignored population, instead dealing with commodified and almost inanimate objects that are isolated from people, whose needs should be their central focus.

REFLECTING ON POPULATION AND DEVELOPMENT

In 1978, the Chairman of the second to last Department I worked at in Canada was a social theorist with the very North American name of Muni Frumhartz. He once made a remark that has stuck with me ever since: “Ian Pool, you are a nothing but a rampant empiricist”. My presentation here is not some sort of delayed revenge for a perceived slight, but in part to allow me to meet the challenge he made – he was correct in that demography is heavily grounded in empirical observation, like the health sciences and much of biology. But that can not absolve us from the important task of stepping back to reflect on the philosophical implications of what we study – the *Sea of Faith* has graciously provided me with the opportunity of doing this. In passing, I should note in advance that I will be making a break with my normal strategy and will present relatively few data in this paper; I will, however, refer to appendix tables that support my argument.

I should also distinguish between population research and analysis, to which most of my career has been directed, and population programmes, on which I have, however, worked across the Third World, especially in Africa, as recently as 2005. But this has been in a consulting role, and not as a frontline worker. Although population research and teaching has been my prime focus, part of this has been outside academia, working for the Population Council a pioneering non-profit foundation, and much of my research -- even my most recently published international research -- has been on broader issues of population and development. Within New Zealand I have been interested in applied policy issues and have also been an expert witness for the Waitangi Tribunal, particularly in the Kai Tahu and Volcanic Inland Plateau hearings.

The reference to Waitangi provides a very good example of the role of demography in development and policy analysis and programmes, to which I will refer later by focusing on the Millennium Development Goals. For Waitangi demographic research quantifies numerous critical issues; notably -- and this is highly relevant to my presentation today – the impact of land loss on the population, particularly as it was reflected in the survivorship of children to their 5th birthdays. This factor, which is called child mortality by UNICEF in their annual reports, is much more than a measure of the health of our most vulnerable sub-populations, but in the poorer countries is a particularly sensitive measure of overall economic development. Those of you who have read “*The Spirit Level*”¹ will recall the graph plotting national income and life expectation at birth. Elsewhere in work I am doing at present I have graphed GDP/capita and infant mortality, the UNICEF index, and the curve is very similar to that shown by Wilkinson and Pickett.

Programmes, as against analyses, are directed towards changing demographic trends and behaviours, generally in order ensure that population trends enhance/do not constrain development. It is the population programme aspect, rather than research², that raises ethical issues for they can easily become social engineering, even when well intentioned and driven by compassionate people – family planning is most likely to face this dilemma. Most programme staff I have met in the field, even colleagues in the agencies I will criticise here such as the

¹ Richard Wilkinson and Kate Pickett, Penguin 2010: Fig 1.1

² That said, in my African research I also raised technical-ethical problems that relate to methodologies. In the 1960s, I was at odds with the strategies used by some strong advocates of family planning, who manipulated survey research to provide results that would lead governments, especially in Africa, to adopt mass programmes. These programmes were actually formulated and heavily-funded, for example in Kenya and Ghana, but until other pre-conditions, notably improved child survivorship, were evident, the programmes had almost no impact – in fact, in Kenya their implementation correlated with increases in fertility (for reasons that are easily explained from other research -- a similar thing happened for Maori, see Pool, I 1991 *Te Iwi Maori*, Auckland university Press -- and were not the fault of the programmes *per se*).

World Bank, are engaged in this work because they really want to contribute to improving the lives of the people to whom they are delivering services, yet sometimes what they are doing raises ethical issues. For example, I led a United Nations mission in Nepal, a member of which was a highly qualified, compassionate, experienced Indian woman public and reproductive health specialist. She was planning very efficient mass programmes for tubal ligations as they are often implemented in India – carried out in the open with the women lying on sheets on the ground. The demand was enormous, but illegal induced abortion was the alternative for those women who wanted desperately to have no more children. Nepalese women were descending 100s of metres to the “camps” located in the valleys, and then climbing back up on the same day, often also carrying a child. Within the mission we had a vigorous debate: How does one reconcile the horror of the way the procedure was carried out *en masse* with the alternative of failing to meet the demand, and of women turning to abortion as a last resort?

Conversely, some population programmes may, of course, be coercive and inherently evil – apartheid in South Africa was a population programme phrased in terms of limiting the “urban influx”; the most repulsive programmes are those involving expulsion of resident populations from conquered territories, genocide and the extreme eugenics programme formulated by the Nazis. But even some programmes that seem less malevolent may have this effect: laws banning contraception may produce perverse effects such as high rates of illegal induced abortion: the Italians conducted clandestine research before their reproductive laws were reformed, and then open research after, the results of which showed that by liberalising access to contraception, abortion rates had dropped.

IDENTIFYING THE PHILOSOPHICAL PARAMETERS FOR AN EXERCISE OF REFLEXION

The population analyst, and certainly the programme worker, must recognise that demography deals with the most central and sensitive issues of human existence – everyone is living their own demographic history. To add to this dilemma, demographic patterns and trends relate to much more than births, deaths, migration and ageing, the typical issues seen as “the demographics” in New Zealand. Instead, population analysis covers all aspects of age structural transition, of which ageing is merely a last phase. Factors such as health, the family, its formation and structure, urbanisation and urban agglomerations, and the labour force are also part of the bread and butter of demography, across all of which I have spread myself in recent work.

Many ethical issues, even some encountered in population programmes, such as those that surround the non-coercive offering of different methods of contraception, involve micro-level interventions, relating to the individual or couple or family or small group. These are familiar to most of us as they are the principles that guide our daily lives. But most of the ethical questions I will deal with here today are at a macro-level -- by definition a population is a collectivity, the people *en masse*. This higher level of aggregation does not render the issues any less problematic or pressing, but it can have the effect of obscuring or anonymising them. This is something about which the social engineer has to be acutely aware and build into their planning; too often this aspect of policy becomes several degrees removed from what is the reality on the ground. It risks ending up somewhat like some international affairs’ game players or geopolitical planners, absolved from facing the victims of their planning by a retreat to a far more macro-level of abstraction.

While certainly not of the same order of ethical blindness and with far less negative impact than say the carpet bombing of Cambodia to defeat the Viet Cong from Vietnam passing through Cambodia, such macro-level ethical issues do pose dilemmas for those dealing with population and development programmes. The World Bank and International Monetary Fund in their macro-level structural adjustments programmes, to which I will return, have had significant and negative, but often unrecognised, population and development implications. The brutal and sudden downsizing of a civil service may have all sorts of perverse effects: a country director of IMF once said to me, with astounding frankness and naivety, that they had not realised that this would cause unemployment. He seemed oblivious to the fact that well qualified Africans, who were on very low salaries, had to be replaced by consultants from the big accounting firms, paid stupendous fees and per diems, that would have to be covered in a repayable loan to the already poor African country. The countries were given no choice: accept these conditions or forfeit all possible external support.

By contrast, the United Nations' Human Rights deliberations under Mary Robinson identified both micro-level breaches of human rights (torture, imprisonment without trial for example), but also recognised what I would see as their more macro-level analogues ; they pointed out that the provision of basic needs (eg shelter, food, potable water, clean air, and many would add in basic education, good health and gender equality) to the population was also a human right. This principle serves as a *sine qua non* for the remarks in the rest of my presentation.

One might add another human right to do with population mobility and redistribution (freedom of movement; protection from expulsion for populations in conquered territories and settlement by the victorious party; and, most extremely, ethnic cleansing). These are in the United Nations basic documentation, but also were the hotly debated issue in the United Nations' Mexico Population Conference (1984) (see below).

Thus it is essential to be aware of the fact that implicitly one is dealing with issues fraught with human ethical questions, although statistical analysis has the effect to isolate one from the reality that one is recording. But for me an epiphany, as it were, came for a peculiar reason. My colleague Muni Frumhartz was only partially right about my orientations, as, even on his watch, I had already been afforded an opportunity to reflect on demographic issues by work I did with the Canadian Catholic Conference leading up to the Bucharest Population Conference (United Nations) in 1974. This confession about a faith-related skeleton in my cupboard, written as I listen to Rodney Hide busy confessing, may come as a surprise to those who know me and might argue that I am too theologically lazy even to be a successful agnostic.

I learnt a great deal from the Canadian Catholic Conference and accepted most of their very carefully thought out views on population programmes, driven by pragmatic compassion, to which I will return. In fact, they invited me to be a part of their contingent in the huge, totally dichotomised Canadian NGO delegation to the Bucharest conference (1974). But, I was worn out by the fights between their moderate views, and the gung-ho attitudes of the Canadian Family Planning Association, the other half of the Government-funded NGO delegation, led by none other than George Cadbury, a scion on the chocolate family. Thus, I politely declined and went instead on a long-scheduled family holiday to Mexico³. This decision was probably a wise one, as I will explain.

The Canadian Catholic Conference was heavily involved in international development programmes, while Canadians were disproportionately represented in that fine body of workers for the poor – the Liberation theology priests in Latin America. The Conference, in which a political hegemony was held by lay people and ordinary priests, favoured family planning including the use of contraception – during Vatican II they assumed that the Pope would probably accept contraception, and thus they enunciated a “Doctrine of Probability” that declared that it was no longer a sin for Canadian Catholics to use contraception; it was the Conference that persuaded Pierre Elliot Trudeau to legalise contraception in 1968 a process punctuated by Trudeau's famous comment: “the state has no place in the bedrooms of the nation”.

In the event, the Bucharest conference was notable for a counterproductive fissure between the developed countries and the developing ones. One delegate from the Third World summarised their position by asserting that “development was the best contraceptive”. In contrast, the developed countries saw mass family planning to reduce fertility, and thus growth, as the singular issue, as the easiest way to generate development, very much along the lines of people like Cadbury in the Canadian NGO delegation. Both sides were right: a fertility decline does generate development; but the prerequisite to such a change in reproductive intentions is development, and thus the paradox I must deal with here. So let us now turn to the data to see what has happened.

³ When in Mexico again, in 1977, I heard their President on TV say “We are a conservative, devoutly Catholic country, and that is why we are introducing a family planning programme”. Today the two Latin American giants – Brazil and Mexico – have very low fertility, 1.9 and 2.2 respectively, and Brazil, in particular, is becoming a very good example of a country managing its “demographic dividend” (see below). We take 2.1 births per woman/couple as exact replacement – below that the adult population will not, in the long run, continue to replace itself.

POPULATION TRENDS

In Appendix Tables 2-5, I summarise a few key demographic facts, both historic from 1950 and projected to 2050. I also have a few table notes by way of giving some context to these data. I do not want to go into these in detail, but merely to *bullet-point* the cardinal feature(s) in each table.

These tables set out the broad parameters for population and development over the last few decades and into the future. In turn, the parameters set the objectives for development, but also identify what has worked in the past and should be reviewed in future exercises.

- Firstly, population growth is slowing for the world as a whole and its component regions. Even the Least Developed Countries, a sub-set of the Less Developed, have passed their peak growth. In later bullet-points I will explain how this occurred. Suffice to say that in 1961, when I started in demography, the 1960 United Nations projections had just come out and had been presented to shocked experts, for they showed that there would be 7 billion in the world by AD 2000. But the slowing of growth since then has cut that figure by 14%.
- Most growth is in the Less Developed Countries (LDC), then switches to its sub-set, the Least-Developed. The More Developed Countries (MDCs) include Western Europe plus the so-called “states in transition”, the former Communist countries of Eastern Europe, encompassing both the European and Asian components of the Russian Federation, but excluding the Central Asian former Russian Communist republics, and also Japan and the Neo-Europes of Australasia and Northern America. The MDCs will become a smaller and smaller proportion of the World’s total.
- The diminishing importance of growth does not mean an end to the World’s population problems: in fact, they will become more complex and severe. Change will be composition-driven, making planning ever so much more difficult than simple growth (more and more of the same). Some composition changes, notably age-structural are inexorable – you can turn down growth by fertility decline (see below) but the resultant smaller birth cohorts produce momentum effects that distort the age-structure for at least 100 years, or into the foreseeable future. We know this as ageing, but ageing *per se* (higher percents aged 65+ years) is merely the last phase of an age-structural transition the passage of which may have major impacts on families, the labour force, every aspect of social policy and even fiscal and economic policy (who pays the taxes?; who needs to use them?).
- From the first data available here, it is clear that the World’s children were in LDCs while the World’s elderly were disproportionately in MDCs; in fact at one stage, almost half of all elderly are in MDCs, as against less than a third of the World’s people. This imbalance is really problematic because the future of the World depends on its children who are in poorer countries.
- The dependency ratios in Appendix 3, show that dependency is shifting from Child Dependency to Aged Dependency. For MDCs the crossover occurs early in the millennium. But for the World as a whole (and New Zealand) it is worth noting that Total Dependency is less in 2050 than earlier (1950 for New Zealand). It is a moot point as to whether a young person or an older person costs more; a child who is part of a family labour force costs less; in MDCs the elderly are living longer in post-retirement, but have savings and also in MDCs children are now likely to be economically dependent well into their 20s.
- Dependency ratios are important in another way: they allow us to identify and analyse the Demographic Dividend⁴, a paradigm that has emerged recently from economic-demography and has had a major impact on leading-edge economics, even at a popular level (eg a recent article on India in the *NZ Herald Business Pages* by a Morgan Stanley analyst), but not for mainstream neo-liberal economics. I will

⁴ Summarised, Pool, I 2007, ‘Demog. Dividends: Determinants of Development or merely Windows of Opportunity’ *Ageing Horizons* (Ox. Univ), on-line @ www.ageing.ox.ac.uk/ageinghorizons/.

return to the Dividend later as it allows us, for the first time, to endogenise population factors into development analyses.

- Appendix 4 is the most important for my argument here today, as it looks at the dynamics of how growth slowed. Critically, life-expectation improved, and, most importantly, infant and childhood survivorship improved. Then -- and only then -- did the world experience a fertility decline. Almost without exception, no population that has seen infant and childhood survivorship improve has maintained high fertility for a long period thereafter, even if there are extreme laws relating to family planning – the Mediterranean Catholic countries, with low mortality but strict anti-contraception laws, still reached very low fertility levels before they changed their legislation; conversely, populations with high mortality maintain high rates of reproduction. Iran after the revolution tried to increase its fertility and succeeded, briefly, by employing draconian measure against fertility control. But since then fertility levels have decreased rapidly.
- Improved education, especially of women, reinforces the effects of improved survivorship, both directly through the adoption of contraception, and indirectly because the better educated have lower levels of maternal mortality. Both improved survivorship and basic education were keynote factors in the development decades of 1950-80; World Bank reports showed that they were the most successful aspects of development.
- In sum, Appendix 4 points to the improve survivorship and the decreased fertility. By 2030-35, the United Nations projects, the World's Total Fertility Rate (TFR) will be at 2.1 births per woman, or exact replacement; compare that with rates three times as high in recent Third World experience. But the World's reproductive capacity is not evenly spread: it is vested increasingly with the World's poor: with only 12% of the Global population the Least Developed Countries have 18% of its children; by 2035, when the TFR for the Least Developed Countries will still be above replacement at almost 3.0, they will have 16% of the World's population but one-quarter of all of its children. Our selfish longer-term interests would be best served, it is clear, by making sure that all children are wanted and have a decent quality of life for, because they will be the World's future producers, taxpayers and probably also carers; there is a national analogy here – as we age, we are all going to need young people to pay our taxes and, no matter how wealthy we are, to care for us. Therefore the neo-eugenicists among us, who deplore children being born to the poor, are arguing against their own selfish interests -- for example, Michael Bassett who has argued that the poor shouldn't have children; or Don Brash who confounded teenage child bearing with the DPB.
- Finally, Appendix 5 looks at population mobility and distribution. It is clear that, Globally, mobility is increasing, in part because of the concentration of the World's population at ages 15-29 years, when migration is most common. Just think of China's "floating population", a phenomenon repeated across the Third World. Again the World Bank in its enthusiastic support for urbanisation, some of which I share, seems to ignore the gutting out of working populations in the rural Third World. I was recently in Sichuan where agriculture had gone into a decline in the Chengdu basin, once called the "Heavenly paradise" because of its productive capacity, and now in decline for two reasons: the spread of unchecked urban development, and the absence of the young on the eastern littoral of China working in the urban industries built on China's great flood plains and rice-producing areas.
- Intercontinental mobility after World War II was from war-torn Europe to the Neo-Europes. Today it is from the Third World to the First. Recently it has been Central Americans and Africans and Maghrebi trying to scale walls in Arizona or Ceuta. But increasingly it also involves longer trajectories: the huge Andean movement to Spain, for example, that now rivals that of Mexicans to the United States.

POPULATION AND DEVELOPMENT POLICY

Population and development policy has gone through a number of phases, but, until recently, the key axes have effectively revolved around growth, not composition. The 1960 round of United Nations' projections triggered

concerns that fitted well with the development ethos of the day, while new methods of contraception, becoming available only in the early 1960s, conveniently provided a humane means of reducing growth. Essentially, rapid population growth, shown in the tables to which I referred above, meant that population increases were outrunning resources: to meet demographic growth rates of 3% per annum, investment had to exceed 10%.

Viewed across the entire span of human history, population growth had suddenly erupted in the post-war period. The MDCs had, of course, seen their growth rise as mortality fell in the late 19th early 20th centuries, but this increment was slow by post-Second World War standards, because historically the factors determining mortality declines had been really socio-economic change rather than public health technologies. Decreases in the death-rate were then followed by a gradual decline in fertility. By the 1920s Western Europe and the Neo-Europes were fairly advanced in what we call a “demographic transition”; in terms of mortality decreases New Zealand Pakeha led the way, while parts of Western and Central Europe, especially the capital cities, led the fertility declines that went well below replacement. Even Pakeha saw their rate dip just below replacement briefly in the 1930s. These countries then went through Baby Booms, of which New Zealand’s, entirely Pakeha-driven, was the most extreme for level, and one of the longest – contrary to popular opinion it went into the 1970s and, unlike the American, did not finish in the 1960s. Since then these countries have wrestled with long, sustained, historically unique decreases in fertility, with some European states having had low sub-replacement levels for several decades. Simultaneously, longevity has increased to levels far above what was ever seen in the past: in the past a few people did live to a very ripe old age, but most died on the way, and in many populations the median age at death was in childhood⁵; today, however, in Western Developed countries the median age at death is well into the 70s – most people reach retirement.

Consequently, unprecedented ageing trends have also set in. The increases in longevity are driving numeric ageing (increases in the numbers aged 65+ years); but it is the sub-replacement fertility that is driving structural ageing (increases in the percent of the population at 65+ years).

The trajectory for the LDCs was very different. Very high rates of child death and low longevity continued into the post-war period; we forget that countries like Thailand, Singapore and China had very low levels of life-expectation in the 1950s; in 1940 Japanese and Maori life-expectation was still around 45 years. Suddenly, however, mortality decreased rapidly, a function of the mass applications of public health technologies -- the new vaccines, chemotherapeutics and anti-biotics becoming available in the 1930s and during World War II, plus, let us recall, insecticides such as DDT. It was their low-cost and the development of efficient public health management programmes that produced sensational results, in colonies as well as independent countries. In Ceylon in the 1950s, life-expectation leapt by 5 years, from 50 to 55 years mainly because of an assault on mosquito breeding using DDT. Pakeha women had taken a quarter of a century to make a similar gain, and at that time theirs was among the most rapid anywhere. But such declines in mortality stimulated rapid growth.

The IUD, dependent on a high quality plastics industry, became available circa 1960, and, unlike the pill, was free of commercial patents thanks to the eponymous Dr Lippe, who gifted his work to a non-profit foundation, the Population Council that had been established by John D Rockefeller. It seemed the answer to cheap mass family planning, based on programmes that drew their management principles from public health. Then in the 1970s the pill became cheaper to produce and entered the menu of mass family planning programmes, more or less as micro-surgical sterilisation techniques, such as tubal ligation, also became cheaper to provide. Finally, Japanese condom technology was imported to many countries to provide yet another more reliable means of contraception, and also to help in the fight against HIV/AIDS.

In the 1960s and 1970s, compassionate policy makers focused on mass family planning as an answer to population growth that was seen as the major constraint to development. The more ardent advocates, however, pushed for family planning in advance of improving longevity, a strategy that turned out to be inefficient as the history of the transition had told us. This also flew in the face of what was becoming clear – that the sequential

⁵ 25% of Maori girls born in the 1890s would have died before 9 months of life; 50% before their 7th birthday, but a few, notably for example Dame Whina Cooper, lived to a grand old age. In contrast the first quartile deaths for their Pakeha peers came at age 32 years – a vast difference. Reducing that gap has been a great achievement of New Zealand public health – and a microcosm of global dynamics.

processes of mortality decline and then fertility decline were far more rapid in the LDCs than they had been in the Western Developed Countries, for the simple reason that public health and contraceptive technologies were both far more advanced. It is easy to forget that it was not until the 1930s that the public health armoury suddenly expanded exponentially, and not until the 1960s that this was followed by the development of modern contraceptive technologies.

Yet a further push to accelerate the process by forcing family planning ahead of other development came in the late 1960s and 1970s, advocated by environmentalist extremists – people like the Ehrlichs and the ZPG movement; well-meaning people who were simplistic in their approach. I used to debate with the biologists when I was a professor at Cornell at the turn of the 1970s. They called for “ZPG Now!!!”, mainly, I must add because they were justifiably concerned about the level of consumption in the MDCs. I used to respond that this would only be possible were the men to be put on one American coast and the women on the other, and I did not think that this would be politically popular. Moreover, sudden and radical changes in fertility would produce severe age distortions that would have very long-term, inexorable consequences. The marked fluctuations in Pakeha fertility rates have had this effect, to a modest degree, on New Zealand’s age-structures, but not as severely as those seen in say Rumania or Iran or China.

China is a very pertinent example of the impacts of ill-considered social engineering. Typically this is done through fertility control, which then produces distortions in cohort sizes. As these cohorts of differing sizes pass up the age-pyramid they have an impact on all aspects of policy and the market.

At the 1981 International Population Conference of our scientific body, the great French demographer Roland Pressat, in a superb address, pointed out the severe consequences of the very rapid fertility declines in China of the 1970s. It is not generally recognised that China’s real fertility decline occurred well before the one-child policy was promulgated, but when life expectation had already passed 60 years (circa 1970). The most rapid declines were from a Total fertility Rate of almost 6 births per woman in 1965-70, to 2.93 a decade later in 1975-80. Chou En Lai was the cheer-leader of this decline with his famous dictum: “fewer, later and longer between”. But then, in the early 1980s, operations research specialists produced beautiful computer models that failed to understand population dynamics, but called for social engineering, arguing that to feed itself China must have ZPG. Unfortunately for China, they were successful in getting the government to introduce the one-child policy, while at the same moment China also introduced a legal minimum age at marriage. Under Chou En Lai’s policy couples had been persuaded, often even coerced, to marry late and to abort if pregnancy occurred before they were in their late 20s. But with the change in marriage laws in the 1980s, couples leapt into marriage at the first possible moment in order to have their one-child, with a marked gender preference for that birth. The one-child policy has thus had major further negative consequences, on top of the somewhat more muted effects of Chou En Lai’s policy: besides its political unpopularity, it has seen the severe distortion of sex-ratios at birth – fetal scanning has been focused on gender identification, often followed by abortion for girl children – and further marked age-structural mutations.

To take another case of a social engineering perspective, in the lead-up to the first United Nations Environment Conference in Nairobi in 1977 a group of us, all with field experience in the Sahel, were convened, in Berlin of all places, to write a paper on the human aspects of environmental deterioration and desertification, with a focus on the Sahel. The Deputy Director of UNEP, a geomorphologist, had a simple solution – just eliminate people and goats from the Sahel and desertification would stop. It seemed of little concern to him that the Sahel was home to perhaps 30 million people.

I have already talked about the Bucharest conference, which split between the Western delegates, spurred on by extremist environmentalists, pushing family planning, and on the other side the LDCS arguing for development. Before the next conference, in Mexico in 1984, which I attended as an NGO, a remarkable consensus had been achieved at the regional conferences, including the Arusha Declaration of the African countries, recognising that population growth was a threat. This consensus was first of all sabotaged by the Reagan White House that bombarded the conference with a four-page paper by the right-wing Heritage Foundation arguing that the best way to reduce growth was with free markets, which they saw as democratic by

definition. But then, as I noted above, the conference became side-tracked when a motion reinforcing the United Nations convention on human rights relating to settlement of conquered territories was seen as anti-Israeli by the United States. This ended in a vote that saw the United States, Israel, Surinam and Guyana (the latter two for reasons that no one understood) against the rest of the world, including New Zealand.

But the initial position of the United States, on free markets, had the effect of reinforcing what was starting to emerge as an operating principle from the World Bank and International Monetary Fund, for other reasons. This had to do with their extraordinarily rigid focus on debt repayment, accompanied by the enforcement of severe marketisation and repayment programmes, a paradigm that has dominated population and development for perhaps three or more decades: in this world view, population is seen as marginal or exogenous to the economy; and development is all about financial accountability and fiscal austerity – at least for the poor countries. At a macro-level we witnessed the net capital flows moving South to North, from African and other poor regions to Europe and North America, often to private banks whose lending had oft been achieved under circumstances that were questionable. This was the era, then, of the infamous structural adjustments. But the application of these programmes was conveniently modified if Washington liked the side your country professed to be on in the Cold War – thus, because Mobutu was seen as a staunch anti-communist ally alongside “Communist” and oil-rich Angola, the World Bank, IMF and the United States made no real attempt to force him to repatriate the billions in his name in Swiss banks.

The World Bank and International Monetary Fund in their structural adjustments programmes -- the New Zealand analogies of which were Rogernomics and Ruthenasia -- avoided confronting all the ethical dilemmas relating to population programmes, by appealing instead to neo-liberal theory, which favoured marketisation, privatisation and a reduction in the role of the state. Debt servicing, no matter how the debt had been incurred, was to be the greatest priority of a developing country. This was justified with the elegant, but simplistic and ultimately fraudulent, assumption that the playing field is flat. Consequently, these agencies slashed a path through Africa eliminating public sector programmes, such as free basic education and health, and even attempted to privatise access to basic services such as water. These were bad economic development initiatives, doubly bad because not only did they hold back real development, but they had a negative effect on the people, on populations, especially the poorest. Moreover, at the most practical of levels, they downgraded/eliminated programmes for exactly those sectors in which, by the World Bank’s own research, development had been by far the most efficient and effective: health, education and family planning. Moreover, these interventions, commanded from Washington, had other less obvious but nevertheless perverse, negative effects: education is one of the best means of engineering gender equality – slashing education meant that, faced with the terrible choice about whose education to pay for, parents paid for their sons and there was a marked decline in female rates of school participation. We are still not out of this period entirely, although the World Bank claims to have had a Damascene epiphany, and to be all heart and sensitivity.

Conventional, neo-liberal economics still chooses to ignore population almost entirely as exogenous to the economy; the World Bank’s recent and otherwise very useful study on urban agglomerations editorialises that they are due to “market forces”, the “invisible hand”. There is a sort of self-evident truth here, for the sectors, above all low skilled manufacturing, that have flourished in recent Third World development, most notably in China, are by definition urban-based. The region Guangzhou-Shenzhen and Hong Kong is virtually one huge megapolis, full of factories and their attendant sleeping quarters.

The report on urban aggregation downplays the “visible hand” of a huge rural exodus, often forced by unemployment and under-employment, and the dream, often a mirage, of work in urban areas. Another recent World Bank report shows that “in terms of \$1/day poverty, the urban share increased more rapidly than the level of urbanisation from 1993 to 2002, although this was not the case for \$2/day poverty”⁶. As urban dwellers are more at risk of exploitation by market manipulation for basic needs such as food, the World Bank

⁶ Ravailon, M, Chen S and Sangraula, P “New Evidence on the Urbanization of Global poverty”, World Bank Research Paper, April 2007, cited Population Division 2009 *World Population Monitoring, Focusing on Population Distribution, Urbanisation and International Migration, the Concise Report*, NY, United Nations: 29.

is, I would argue, extremely optimistic -- as the tenor of their reports suggest, they see urban areas as drivers of growth, measured by aggregate indices that obscure growing intra-urban inequalities, and overlook many of the negative aspects of extremely rapid urbanisation. Emerging food crises suggest that rural development may also be important for long-term sustainability.

The question then arises why the community of population analysts and programme managers could not counteract these “dark forces”. The answer goes back to the International Conference on Population and Development, the most recent of the United Nations Population Conference, held in Cairo in 1994⁷. The dynamics and processes by which it was set up and unrolled in Cairo ensured that it would produce at best a garbled message.

First, like Bucharest there was an underlying tension between the LDCs, arguing for development, and MDCs, pushing a very diffused programme that focused on empowerment of women and reproductive choice. No one can possibly object to either of these objectives, but they are merely a part of the population and development equation, whereas at Cairo they became the central focus.

Secondly, the incorporation of these into the draft plan of action, occurred in New York at a preparatory meeting at which any NGO that could pay its own way could attend. In the event this was a highly self-selective process and the meeting seems to have been dominated by politically strident feminist organisations from the North East of the United States. They forced through a plan that was repetitive on these issues and ultimately counter-productive. It was so strident that it generated a very negative counter-force, dubbed “Une alliance étrange” by *Le Monde* (Sept 1994): the Vatican, which is unique in being a state as well as the HQ of a major religion, ultra-Orthodox Rabbis, evangelical American Christians and conservative Muslims united against the draft plan, led by the Vatican delegates. They were extraordinarily eloquent Dominicans, Jesuits etc (all men), who were puppeteers for proxy countries, the poorest of Latin American poor such as Guatemala. The “Main Committee”, which debated all the motions and counter-motions mainly revolving around these two issues, became the focus of the media, which lapped it all up, and thereby missed the main issues of development occurring in the plenary sessions that gained no attention.

To add to the shambles, as a sop to the Europeans the United Nations tossed in ageing, disability and “indigenous people(s)” (the Canadians and Australians battled over what to call these people, with poor little New Zealand caught between). About 6% of the world’s people were aged at that date, and similar proportions disabled or “indigenous”, yet they each earned a dedicated section in the final report. In contrast, youth, persons aged 15-24 years, the very people on whom we are dependent for development potential, who were almost 20% of the world’s population at that time, who are the group in whom is vested the demographic dividend (see below), and a sub-population that has what is called a “high level of demographic density” (they are biologically maturing, finishing their education, starting work, perhaps starting their own family, and likely to be highly mobile) were ignored except for their sexuality, about which the delegates (none of whom were youth) waxed prolifically. Thus the best chance to make a link between population and development was squandered in this a conference that was meant to be on population and development.

This has had severe consequences since then. Essentially neo-liberals could ignore population as a serious issue. Moreover, the donor countries could still see “reproductive choice” as a proxy for family planning. As fertility was dropping across much of the world they could say “Fine, as fertility is now declining, we’ve solved all the population and development issues; we’ll put our AID elsewhere”.

TOWARDS A NEW PARADIGM: DEMOGRAPHIC DIVIDENDS

A new paradigm emerged right at the very end of the last century. It clearly demonstrates how population and development are interrelated might permit a more effective approach to this issue. It is the “Demographic Dividend” I noted earlier. A Dividend/Bonus (I prefer the less deterministic Latin American usage “Window of Opportunity”) occurs when the Child population dips below 30% of the total, yet the proportion aged is still below 15%: the dates for the onset and end of this Window are in square brackets in Appendix Two. In New

⁷ I was a member of the New Zealand Delegation.

Zealand we have had several such Windows historically, but the Baby Boom set us back badly. Our current Window started post-Baby Boom, in 1976, and will come to an end circa 2016.

The critical point here is that such a Window allows governments, the market and families to shift expenditure from meeting current costs (say education; health) to savings and investment in productive sectors, infrastructure and institutions; the success of the Asian Tigers was almost entirely due to this factor. Indeed, work across Asia and both North and Latin America, and historically on Europe, shows that the Dividend is THE MOST IMPORTANT explanatory factor for economic development.

There is also a possible multiplier-effect of a Demographic Dividend – if it is managed well, as Taiwan did, it ushers in investment in institutions (such as health, social insurance, etc) and infrastructure that produce what is called a Second Demographic Dividend. It is really not demographically driven, except at second-hand from the first one, although it occurs simultaneously as the population ages. It is long-lasting, perhaps perpetual, and ensures a comfortable future for a population's elderly; but only if the first dividend has been well-managed.

The Window of Opportunity has passed for most MDCs, but is just starting for the LDCs. This raises a major point: Compassion to the poorer countries is not just some warm and fuzzy thing we should feel, but may be selfishly in our own best interests. If countries are exposed to, and manage well, their Demographic Dividend, then there may be some spin-off effects that could reinforce the Second Dividend of MDCs. Regretfully, New Zealand has wantonly squandered its modern dividend (I am happy to discuss this if it is raised, but my paper focuses on the world development, not New Zealand's).

Let us look at the two giant populations – China and India. China started its dividend period in the late 1980s, but it will draw to a close, as aged dependency increases, about 2030. By 2015, India will be starting its window of opportunity, which will be drawing to a close only about mid-century. These two examples show that each country has a different timetable; and each has a different approach to managing it. But whatever, one thing is clear – a dividend bestows financial and physical capital resources, but, far more importantly, it generates human capital.

The Demographic Dividend will become a reality only when countries exploit it by good management. This clearly involves investing in human capital not just to ensure that the inflated labour force cohorts are employed, but to turn its workforces towards high-paying, highly skilled work. Japan has now passed into a post-dividend era, from demographic bonus to onus as some Japanese demographers say, yet is a major exporter – not of cheap goods that are produced by less skilled workers, but of very high technologies, the technologies, for example, that provide the instrumentation for plants employing less skilled workers. It has a huge export trade with China; Japan also is a major investor in Chinese plants.

This transformation cannot be left to chance and to the whims of the market. Strategising in a Keynesian way may be a compassionate approach but may also enhance development. The important issue for this presentation is that the Demographic Dividend's analyses provide a technically powerful explanation of how population and development interact. This also allows population -- that is people -- to be brought back far more solidly into development. It's no longer just about GDP, or protecting the environment, but about people. This provides the broader justifications for compassionate approaches. That said, it is not only a matter of simple decent compassion, but also in our best selfish interests to be nice to the LDCs, especially those on the cusp of a dividend. But how can these be strategised and made more concrete endeavours? To answer this one must turn to the Millennium Development Goals, the MDGs, which are civil society's consensus about the strategies.

ENTER THE MDGS

The MDGs represent global civil societies' first concerted approach to population and development that is grounded in compassion⁸. It is important that I say this, and that I stress that I strongly support the MDGs, because I also have major concerns about the way they were formulated and are being implemented, as will become clear⁹. In Appendix One I outline the MDGs.

The MDGs are, however, very important for two reasons. First, they represent the consensus opinion of the world's nations and a promise to try to implement the goals they have outlined. Of course, as critiques published last week show, the world is quick to promise but very reluctant to deliver, especially when one has the excuse of a "global crisis". But this is a crisis that recurs from time to time, and that is more a book entry crisis to do with creative accounting than a failure of the world system physically and in terms of its stock of human capital: the houses that figured in the prime mortgage scandals still exist, the workers are still looking for jobs, farmers are still harvesting their crops. But what the MDGs refer to are the continuing and worsening crises that do relate to physical and human capital, and the environment. They also often represent what are historically unique situations: global warming because of the impacts of humans is exactly a case in point.

Secondly, the MDGs represent a package. Up till now we have very much seen development in silos; the MDGs cover all the major development issues, bundled together under one cover.

My critiques are first that, having put together a package, this has once again been chopped up into de-facto silos; this is understandable from a programme standpoint because clearly defined objectives and targets are theoretically more attainable. Yet any singular issue is likely to be confounded by other intervening factors – that is the true reality. To add to this, for a person standing outside the United Nations' system it looks as if the most powerful agencies in the family got the biggest or best slice of the pie: The World Bank got poverty (and nutrition, but little publicity is given over to this by comparison with a \$/day poverty); WHO got three, one of which, maternal health, seems to have made less progress than some others, perhaps because it is silo-ed off from gender equality, of which it is a kingpin. The UN Environment Programme got environment; UNESCO education and Unifem gender equality. But UNICEF seems to have missed on child health, and UNFPA, which should have a watching brief as all issues have a major population content, was pushed out of the picture it seems.

The silo-effect has some rather grave consequences. Poverty underpins, is deeply interrelated with and determines all of the other six substantive issues, yet is siphoned off as a separate issue. Most public health experts would agree that nutrition is intimately interconnected to child (above all) and maternal health, and to the communicable diseases -- the silo-ing effectively ignores the malnutrition-infection cycle, the great driver of the diseases of poverty¹⁰.

Secondly, the MDGs are a-demographic, yet, as I have just mentioned, all of them, even environment, have a population content. In fact, demographic factors drive need and its differentials. And monitoring and evaluation should be based on the success of delivery to diverse population groups -- a \$/day makes for great marketing, and has dominated the public face of the MDGs, yet it is extremely simplistic in both its conceptualisation and its implementation. Jeffrey Sachs has become a superb salesman for the MDGs, but has approached them with the same missionary zeal he and other economists approached the Glasnost Soviet economy, and handed over the state assets to a small cabal of oligarchs. By his public statements he, like the World Bank, also seem to have had a Damascene conversion -- the road to Damascus must have been very busy.

In sum, however, the MDGs exist and are a collective judgement. They are certainly better than what we had before. So we need to build on them. The last part of my paper attempts to do so by stressing strategies that

⁸ The links between population change and the MDGs are detailed in Adieotomo, S, Beninguisse, G, Gultiano, S, Hao, Y, Nacro, K and Pool, I (2006) "Policy Implications of Age-Structural Changes", in Pool, Wong, L and Vilquin, E (eds) *Age-Structural Changes: Challenges for Development*, Paris, CICRED: 361-76

⁹ I have made these critiques in public, at the head office of the United Nations Population Fund, in an invited address (2007) that was in the Executive Director's Lecture Series; I have also argued publicly that the academic research community should not, therefore, abandon their support for them, but use our research to refine and improve them.

¹⁰ Pool, I 2007 "Mortality as a Determinant and a Consequence of Poverty and Hunger: Policy Implications", *Policy Paper Series #4*, CICRED, Paris

have a compassionate heart, but are also effective. My argument is that this is not as difficult as it might seem, as the efficient neo-liberal programmes of the past two or so decades have been neither compassionate nor effective, and thus ultimately not efficient either.

TOWARDS A MODEL: A MANIFESTO FOR COMPASSION

In his report on tertiary education in New Zealand, Gary Hawke argued that efficiency and effectiveness were the same. That is conceptually confused, to say the least. Efficiency is completing a task with the minimum possible inputs, typically seen as dollars spent, with less concern about the outcomes – these strategies are output-driven. Effectiveness involves changing a situation for the better at a cost which meets the needs -- that is has a positive outcome for the population, but does not involve extravagances. Closely interlinked with effectiveness must also be equity.

All development initiatives must be effective: the health, education, housing, incomes, nutritional-status and overall wellbeing of all of the population must improve because of development. You will all be familiar with the basic problem with the standard measures used in economics, notably GDP, that they do not indicate overall well-being. This is a more general issue facing the MDG programmes, and you will be aware of recent media reports (eg *Guardian Weekly*)¹¹ that some countries have improved average well-being by effectively reducing the medians (ie 50+% have seen their wellbeing decrease, while the country's overall ranking has improved as the better-off get wealthier – the tax cuts in New Zealand are very much of this genre).

Measurement is improving and becoming more sensitive to real development, by the formulation of the Human Development Index by the United Nations Development Programme. It comes closer to measuring what happens to people by a composite index based on statistics derived from life expectancy, education and GDP. New Zealand is very close to the mean for the most developed countries, whose range is very narrow; we are affected by our lower GDP. What then might such development programmes look like? My model outlined below is a macro-level schema that is underpinned by three considerations:

1. That the wellbeing of the population improves.
2. That we accept that in the MDGs we have a list of global priorities for sustainable development.
3. That, in the longer run, a more effective approach will also be the most efficient.

Population Perspectives conducive to Sustainable Development

- First, any such programmes must have the support of global civil society. The MDGs have given us this assurance.
- Secondly, that all development meets the criteria for assessing human rights, both at a micro-level and a macro-level.
- Thirdly, that all development is directed to improving quality of life and also towards developing global caring capacity – for the children, men and women, and the elderly¹².
- Fourthly, that demographic/sociological/economic analyses be used to identify more accurately sub-populations more in need, to monitor progress and to evaluate attainments. The *Spirit Level* (see fn 1) is a first attempt to do this.

Population Perspectives that are Anathema to Sustained and Sustainable Development

¹¹ Bunting, M 2010 “Equality is not on the Agenda at the UN”, *Guardian Weekly*, 24th Sept: 19. Madelaine Bunting says “...countries are growing richer by leaving the poor behind”. This, of course, is an inherent flaw in league tables’ approaches that posit simple \$/day type solutions.

¹² A bold attempt was made in 1993/94 to document this with the Independent Commission for Population and Quality of Life. This resulted in several monographs published by the Commission, including one that I authored: *The World's Caring Capacity*, Paris, 1994. The Executive Director also gave a Plenary paper at the ICPD (Cairo).

Population and development programmes also need to avoid some of the past approaches that have rendered them less effective and thus less efficient. Several types of interventions have been problematic:

1. Neo-liberal economics as exemplified by the World Bank
 - Markets fail, and thus, while one must pay attention to markets especially for consumer goods, marketisation is not the answer to most areas of public policy; Keynes provides part of the answer; economists like Stiglitz and Krugman give a much more rounded approach, especially for issues such as Tobin taxes which would provide a technically easy way of generating financial capital for development. The “invisible hand” should be seen for what it is: yet another piece of 18th century social alchemy that should be redrafted to incorporate modern social science knowledge, very much as the miasmatic theory of disease or the theories of racial superiority that justified the slave trade were shown to be flawed by modern bio-medical, biological and social science.
 - There are also problems that, what seems to be a viable social science theory, shelves off into an ideology that is underwritten by greed, increasing consumerism and that sees people as exogenous to the “real economy”. But that is not true, for, as Diane Macunovich argues, the people are the economy:

Sometimes we lose sight of the fact that an economy is just people – working, playing, eating, sleeping, loving, learning, and dying – because of our tendency to focus on mergers, acquisitions, IPOs, dot coms, and the stock market....¹³

2. Population Bomb/ZPG/Ecology extremists¹⁴
 - These are typically people whose hearts are in the right place but who seek simplistic solutions to what are complex situations. They also forget that people are also an integral part of the environment and that their interventions can be positive as well as negative.
3. Single-issue lobby groups, such as the feminist organisations that played such a divisive role in the Preparatory Conference for the ICPD, Cairo 1994.

APPENDIX ONE:

THE MILLENNIUM DEVELOPMENT GOALS (MDGs)

MDG ONE: Eradicate extreme poverty and hunger

MDG TWO: Achieve Universal primary School Education

MDG THREE: Promote gender Equality and Empower Women

MDG FOUR: Reduce Child Mortality

MDG FIVE: Improve Maternal Health

MDG SIX: Combat HIV/AIDS, Malaria and Other Diseases

MDG SEVEN: Ensure Environmental Sustainability

MDG EIGHT: Develop a Global Partnership for Development

MDGs 1-7 relate to specific substantive goals. MDG 8, however, is essentially the enabling objective, that mobilises world actors. This entails more than official development assistance, but includes factors such as the role of migration and, very importantly, of remittances. There is always a worry on my part that some

¹³ Macunovich, D (2002) *Birth Quake: The Baby Boom and its Aftershocks*, Chicago, University Press

¹⁴ See the concerns expressed in White, M 2010 “Alternative needed to Eco-fascism”, *Guardian Weekly*, Sept 24th: 20

economists and policy people will see remittances as a substitute for aid from developed countries to the poorer ones.

Source:

UNFPA/IPEA 2007 *Potential contributions to the MDG Agenda from the Perspective of ICPD: A Reference Guide to Evidence for Policy Dialogue in the Latin American-Caribbean Region*, Inst for Applied Economic Research (Brazil)/United Nations Population Fund, Brasilia and New York

Adieotomo, S, Beninguisse, G, Gultiano, S, Hao, Y, Nacro, K and Pool, I (2006) "Policy Implications of Age-Structural Changes", in Pool, Wong, L and Vilquin, E (eds) *Age-Structural Changes: Challenges for Development*, Paris, CICRED: 361-76

APPENDIX TWO:

GLOBAL POPULATION STRUCTURES: DATA TO ACCOMPANY IAN POOL'S PAPER TO THE SEA OF FAITH, 3RD OCT 2010

	Date				
	1950	1975	2000	2025	2050
Rate/Region of globe					
<i>Population Numbers (Millions)</i>					
World	2,529	4,061	6,115	8,012	9,150
More Developed*	812	1,049	1,195	1,277	1,275
Less Developed	1,717	3,014	4,920	6,734	7,875
[Least Developed]**	200	357	677	1,165	1,672
<i>Percent of World's Population in Various Regions</i>					
More Developed	32	26	20	16	14
Less Developed	68	74	80	84	86
[Least Developed]	8	9	11	16	18
<i>Population Change Percent in each 25 year Period</i>					
		1950-75	1975-2000	2000-25	2025-50
World	--	64	49	31	14
More Developed	--	29	14	7	[-0.2]
Less Developed	--	76	63	37	17
[Least Developed]	--	79	90	72	44
<i>Percent of World's Child Population (aged 0-14 years) in each Region</i>					
More Developed	26	15	12	11	11
Less Developed	74	85	88	89	89
<i>Percent of the World's Elderly (aged 65+ Years) in each Region</i>					
More Developed	48	49	41	32	23
Less Developed	52	51	59	68	77

Notes: * More Developed = Australia/NZ, Europe (including the Asian parts of the Russian Federation), Japan, Canada/United States; Less Developed is the rest of the world including the newly industrialised countries like Singapore

**Least Developed is a sub-set of Less Developed

APPENDIX THREE:

DEMOGRAPHIC DEPENDENCY RATIOS: DATA TO ACCOMPANY IAN POOL'S PAPER TO THE SEA OF FAITH, 3RD OCT 2010

	Dates				
	1950	1975	2000	2025	2050
<i>Child Dependency Ratios [(Pop 0-14/Working age pop, 15-64 years) * 100]</i>					
World	56	59	48 [<u>2005</u>]	<u>36</u>	31
More Developed	42 [<u><-1950</u>]	37	25	25	26
Less Developed	63	75	54 [<u>2010</u>]	39	31
<i>Aged Dependency Ratios [(Pop 65+/Working age pop, 15-64 years) * 100]</i>					
World	9	11	11	<u>16</u> [2045]	25
More Developed	12	17	20 [2005]	33	45
Less Developed	7	7	8	13	22 [<u>-></u>]
<i>Total Dependency Ratios {(Pop 0-14 + Pop 65+) /Working age pop, 15-64 years} *100}</i>					
World	65	70	59 [<u>2005</u>]	<u>52</u> [2045]	56
More Developed	54 [<u><- 1950</u>]	54	45 [2005]	58	71
Less Developed	70	82	62 [<u>2010</u>]	52	53 [<u>-></u>]

Note:

In the literature on “demographic dividends” an “economic support ratio” is used = remunerated workers : non-workers. I prefer the dependency ratios for two reasons:

1. There are major difficulties defining and measuring the remunerated work force;
2. The use of a dependency ratio provides a broader picture of development burdens and capacities, and implies social and cultural as well as economic.

In my work internationally I have adopted the Thai figures for dependency to set parameters: Thailand, an “Asian Tiger” was one of the countries in the early studies on “demographic dividends” (or “bonuses” as they are sometimes called). The “demographic dividend”, or “window of opportunity” can occur when less than 30% of the population are children (0-14 years), but fewer than 15% are at 65+ years. New Zealand’s most recent “window of opportunity has spanned from 1976, but will finish by 2016.

Figures in square brackets identify the start and finish of the Demographic Dividend: [xxxx] the start, and [xxxx] the end. <- = Before a given date ; -> = After a given date.

Summarised, Pool, I 2007, 'Demog. Dividends: Determinants of Development or merely Windows of Opportunity' *Ageing Horizons* (Ox. Univ), on-line @ www.ageing.ox.ac.uk/ageinghorizons/. APPENDIX FOUR:

GLOBAL POPULATION DYNAMICS: DATA TO ACCOMPANY IAN POOL'S PAPER TO THE SEA OF FAITH, 3RD OCT 2010

Rate/Region of globe	Quinquennia		
	1950-55	1970-75	2000-05
<i>Average annual growth (%)</i>			
World	1.8	1.8	1.3
More Developed	1.2	0.7	0.4
Less Developed	2.0	2.2	1.5
[Least Developed]	2.1	2.5	2.4

Rapid growth = 2.0+. Very rapid, eg Kenya 1980-85 = 3.8 or Maori 1956-61 = 3.9

Total Fertility Rate (births per woman; 2.1 = replacement)

World	4.9	3.8	2.7
More Developed	2.8	1.9	1.6
Less Developed	6.0	4.5	2.9
[Least Developed]	6.6	6.6	4.8

High = 5.0+; Very high 6.5+, eg Pakeha 1870s = 7.0, Kenya 1965-70 = 8.1

Life-expectation at Birth (years)

World	47	60	66
More Developed	66	72	76
Less Developed	41	57	64
[Least Developed]	36	46	54

Very low < 40, eg Maori 1890s = 23-25; High 60+, eg Pakeha women 1901, first population to exceed 60; Very High 75+, eg Japanese women 2000-05 = 86

Infant Mortality Rate [(Deaths at age zero/Live Births) * 1000]

World	152	83	52
More Developed	59	18	7

Less Developed	174	93	57
Least Developed	194	136	90

Very High 200+, eg Maori 1890s ~ 330, 1900-11 ~ 230; Very Low, 2000-05 NZ = 5, Sweden = 3

APPENDIX FIVE:

POPULATION REDISTRIBUTION: DATA TO ACCOMPANY IAN POOL'S PAPER TO THE SEA OF FAITH, 3RD OCT 2010

Rate/Region of globe

International Migration (000s of migrants), by Decade

	1950-60	1970-80	1990-2000
More Developed	20	1,147	2,697
Less Developed	- 20	- 1,147	- 2,697
Africa	- 137	- 296	- 402
Asia	146	- 361	- 1,502
Europe	- 447	355	952
Latin Amer/Carib	- 67	- 426	- 725
Northern Amer	418	675	1,591
Oceania	85	53	86

After World War II, there was mass migration from Europe to Northern America Oceania, but since then that movement has been overshadowed by migration from the Third World to the Developed Countries.

Percent of Population Living in Urban Areas, Selected dates

	1950	1975	2007	2025	2050
World	29	37	49	57	70
More Developed	53	67	74	79	88
Less Developed	18	27	44	53	67
[Least Developed]	8	15	28	38	56

Sources of data for Appendices 2-5 Presented above

Population Division 2009 *World Population Prospects: The 2008 Revision, vol 1 Comprehensive Tables*, NY, United Nations



Population Division 2009 *World Population Monitoring, Focusing on Population Distribution, Urbanisation and International Migration, the Concise Report*, NY, United Nations

Maori data are from Pool, I 1991 *Te Iwi Maori*, Auckland University Press

Pakeha data from ongoing analyses of life-tables plus Pool, I, Dharmalingam, A, and Sceats J 2007 *The New Zealand Family from 1840*, Auckland University Press