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Two Legs are Better than Three: New Zealand as a Model for Old Age Pensions

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Summary. — In contrast to conventional social insurance, the New Zealand retirement income system comprises a basic individual taxable flat-rate public pension supplemented by purely voluntary saving. The New Zealand system has proved remarkably durable, acceptable, and fiscally responsible. It does not conform to the World Bank's ideal of three pillars, but offers developing and mature countries a model that is worthy of careful examination. Its primary success lies in ensuring a stable and adequate retirement income for all citizens, moderating income inequality in retirement and protecting all older citizens from uncertainty in times of rapid economic and social change. © 2001 Elsevier Science Ltd. All rights reserved.

Key words — social security, public pensions, tax incentives, ageing, New Zealand

1. INTRODUCTION

This paper is an inquiry into optimal pension design using New Zealand as a case study. In such an exercise, it is important to keep in mind the purpose of pensions. A country's overall retirement income provisions should provide the older generation access to an adequate share of output without creating intergenerational inequity, distortions which impede economic growth, or fiscal bankruptcy. Pensions do not exist to increase national savings or to provide jobs for actuaries, tax lawyers, accountants, fund managers and regulators. Their purpose is to help the elderly to live in retirement with dignity.

The New Zealand model, unique in the world, comes close to satisfying such goals. In doing so, its "two legs are better than three" approach may be worthy of examination as a model for other countries. Specific advantages of the model include low administration costs, flexibility in the light of rapid social changes such as to family and marital structures, and its potential for ease of adjustment in light of accelerating economic change. By de-emphasizing the link between paid work and income in retirement, women's unique life cycle experiences are less of a disadvantage, while the numerous women-friendly features contribute to an environment of social inclusion and cohesion (St. John & Gran, 2001).

2. THE NEW ZEALAND MODEL

The New Zealand system for retirement income provision is remarkably simple. It consists of provision of a noncontributory, flat pension called New Zealand Superannuation to

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individuals who qualify by virtue of age and residency, and voluntary savings. There are no compulsory saving schemes and no tax incentives for private saving for retirement. Eligibility is based on meeting the qualifying age (65 by 2001) and simple residency requirements, 10 years from age 20, of which at least five years are from age 50. Pensions are financed on a pay-as-you-go basis from general revenue, largely from a graduated income tax with marginal rates that go from 15% to 39% and from a broad sales tax (Goods and Services Tax or GST) set at 12.5%. Home ownership is common, and 83% of New Zealand's pensioners own their own homes. Pensioners who rent homes are eligible for a means-tested housing allowance to supplement the basic pension, but few require other means-tested assistance.

In 1898, New Zealand was among the first countries to introduce an old age pension. This pension, like its successors to come, was tax-funded, flat rate and noncontributory. It was paid to those over 65, of non-Asiatic origin, who passed a means test and tests of "good" character. Following the upheaval of the Great Depression, the Social Security Act of 1938 introduced two tax-funded flat-rate pensions for the aged. These were an income-tested age benefit payable from age 60, and a universal, taxable flat pension for those over the age of 65 not on the age benefit.

Following a volatile period in which a state-run compulsory contributory pension system was set up, then quickly dismantled (Ashton & St. John, 1988, p. 22; St. John & Ashton, 1993, pp. 14, 162), the government in 1977 replaced the dual pension system of 1938 with a single, more generous, public pension called National Superannuation. This public pension was originally set at 80% of the gross average ordinary weekly wage for a married couple and 48% for single pensioners. It was an individual, taxable entitlement, payable at age 60 regardless of work status. While concerns quickly emerged about the fiscal cost of generous universal pensions and the young age of entitlement, poverty among the aged virtually disappeared as a social issue.

During 1988–90, the government flattened the tax scale and abolished all tax subsidies for saving without grandfathering existing schemes (St. John & Ashton, 1993, pp. 21–45). The intent of removing privileges from certain classes of saving was to encourage a better allocation of resources. Life insurance companies and other tax-favored institutions were not seen as dynamic investors, and it was argued their dominance in directing savings flows explained, at least in part, New Zealand's poor returns to investment. At this time, various compulsory savings schemes were also investigated, debated and considered, but the concept of the simple and traditional basic public pension was one not easily dislodged.

Elimination of tax subsidies also had important equity implications. The benefits of tax incentives went mainly to white men who had high incomes and long-term careers with the same firm. Tax incentives came at the expense of general tax revenues, so everyone paid for them. Consequently, abolition of tax subsidies had the potential to reduce the average tax burden.

In 1985, the universal pension became subject to recovery (or clawback) from pensioners with other income when a surcharge was applied to them in the manner described in Section 4 (the role of the surcharge in New Zealand). This amounted, in effect, to an income test and abandonment of the principle of universality. The surcharge was very contentious and the National government promised to repeal it when they came to power in 1990. Instead, they announced measures in 1991 that would transform the public pension into a tightly targeted welfare benefit. A public outcry forced the government to back down and restore the original public pension, but one with a higher surcharge and a rise in the age of eligibility to 65 over 10 years. In 1991, the National government appointed the Task Force on Private Provision for Retirement "to report on policy options to encourage greater self-reliance of retired people." The Task Force on Private Provision for Retirement (1992) recommended an improved voluntary regime for private provision for retirement and the continued integration of public and private retirement income through the surcharge. Once again the case for compulsory contributions was carefully examined and rejected along with any idea that tax subsidies be reintroduced.

An Accord was signed in 1993 by the three parliamentary parties: National Party, the Labor Party, and the Alliance Party, cementing in the voluntary tax neutral arrangements for private saving. The public pension was to continue as a flat, taxable pension of between 65% and 72.5% of the net average wage for couples, [1] linked to private saving by a surcharge or by progressive taxation with similar effects.

The security offered by the Accord was challenged in 1996 with the formation of a coalition government that promised a referendum on compulsory savings and abolition of the surcharge. Amid much acrimony, the public rejected outright, by a vote of more than 12 to 1, the idea of compulsory savings (St. John, 1999). In the meantime, the framework set out in the Accord was endorsed by a comprehensive review, as required by the Retirement Income Act 1993 (Periodic Report Group, 1997).

In the meantime, however, removal of the surcharge without proper Accord processes left the universal state pension vulnerable to further attack. Given the requirement of universality, costs could be contained only by raising the age of entitlement or by reducing the level of the pension. In September 1998, the government unilaterally announced that the wage band floor would be lowered over time to 60% from 65%. There was no longer any secure link to wages as there was nothing to prevent further reductions to the floor once the 60% level was reached. By 1999, the multiparty Accord was over, even though the legislation endorsing its provisions remained in effect.

This change was in turn highly unpopular, as was the loss of the Accord and the loss of certainty for the future. The Labor government, elected in 1999, immediately reversed the change to the wage band floor, which had seen the pension for a married couple fall to 62.8% of the net average wage. From April 2000 the net pension of a married couple was raised to 67.4% of the net average wage, restoring confidence that the public pension would once again move in tandem with the average wage. [2] While the Labor government also raised the top marginal rate of tax on income from 33% to 39%, there was no suggestion of a return to any kind of income-testing such as that provided indirectly by the surcharge.

In an international comparison of pension schemes and their evolution, Paul Johnson (1999) made the following judgment of New Zealand:

> The experience of "reform" in New Zealand has been especially unhappy, protracted and frankly absurd. A full description of all the reforms, proposed reforms, counter reforms and about turns read like an implausible script for a farce (p. 20).

While this judgment may be fair, it fails to recognize that throughout the past 15 years, the state pension, its goals and its success in preventing poverty and encouraging participation and belonging have remained intact. This suggests that it may be difficult to dislodge a universal pension once it is in place and an electorate recognizes its advantages.

3. THE MODEL OF THE THREE PILLARS

New Zealand appears to be swimming against the tide. The World Bank, in a report titled *Averting the old age crisis*, popularized the concept of a pension system supported by three pillars. While there are numerous interpretations of what these pillars look like (Willmore, 2000), the World Bank defined the pillars in the following way:

(1) Non-contributory (mandatory basic pension).
(2) Contributory (mandatory forced savings).
(3) Contributory (voluntary savings).

The first pillar is an anti-poverty pillar that is noncontributory and guarantees a minimum income in old age. The second is a forced savings pillar that provides benefits only to contributors, and, in general, provides the most benefits to those who contribute most. Pillar 3 is a voluntary savings pillar, available to anyone who wants to supplement the retirement income provided by the first two pillars. The first pillar protects the elderly from absolute poverty (consumption below a minimum subsistence level), whereas the second two pillars protect them from relative poverty (a drop in consumption following retirement).

Real world countries place differing emphasis on each of these pillars, depending whether the concern is primarily with absolute or rather with relative poverty. The first pillar is invariably public, financed by government on a pay-as-you-go basis. Pillar 2 has also traditionally been public and pay-as-you-go; increasingly it is private and prefunded, in part or in whole. The World Bank encourages governments to prefund Pillar 2 and to shift its management from the public to the private sector to minimize fiscal risk. When Pillar 2 is financed on a pay-as-you-go basis and is public, the contributions of workers and their employers are sometimes described as "payroll taxes." But, pension schemes, whether prefunded or not, promise greater benefits to those who contribute more, so Pillar 2 contributions are best described as forced saving rather than taxation.

The third pillar is identical to the second, except that it is always prefunded and is typically private because participation is voluntary. Finally, contributions to pillars two and three need not result in pensions. Retirement savings can be (and often are) drawn as a lump sum or as a series of withdrawals beginning at a specified age. Even savings invested in owner-occupied housing can be withdrawn as a lump sum, for it is possible to mortgage real estate or sell a property should a retiree choose not to continue to consume real services (housing), which is a form of pension.

Some of the World Bank staff subsequently revised their definitions for the first two of the three pillars by reserving the term "Pillar 2" for fully funded, privately managed schemes, and by placing all public schemes, contributory or not, in Pillar 1 (Willmore, 2000). Using this revised definition of the two World Bank pillars, Fox and Palmer (1999) reported "in 1994 most of the world had Pillar 1 systems" and "only Chile and Australia had a second pillar system." In this paper we assume that the World Bank position is that all earnings-related pensions *should* be privately managed and prefunded in Pillar 2, leaving to Pillar 1 the task of reducing poverty with flat, universal pensions financed on a pay-as-you-go basis. On this basis, New Zealand for more than a century has had only Pillar 1 and Pillar 3, except for its brief flirtation with a public Pillar 2 in 1975.

New Zealand's "third leg" consists of varied investments such as real estate, managed funds and unit trusts (mutual funds), shares held directly, bonds, cash, and, for a minority of workers, employer-facilitated savings plans and employer- subsidized pension plans. As there are no tax subsidies, there is no need for tight regulation of or restrictions on the design of saving plans with regard to concerns such as the form of saving, how funds are invested, or the type of payment made on retirement. The dismantling of the supportive tax regime for pension plans has certainly decreased their popularity. Total membership of all employment-based schemes, including many that provide a lump sum only, amounted to 25% of all employed people in 1990, and fell to 19% in 1997 (Periodic Report Group, 1997, p. 183). In New Zealand, individuals are free to structure portfolios to suit their needs as they see them, without tax subsidies for particular types of investment favored by government.

4. DOES NEW ZEALAND'S TWO-LEGGED SYSTEM MAKE SENSE?

If the purpose of pension systems is to provide adequate incomes for all older people, while minimizing fiscal costs and distortions that impede growth, we can use this as an ideal, against which to assess the operation of pension systems in the real world.

In developing countries, real world Pillar 1 schemes are seldom successful in achieving even the limited goal of protection against absolute poverty in old age (World Bank, 1994, pp. 239–244; pp. 117–118). With an eye on the budget, governments exclude from the benefits of Pillar 1 those who do not contribute to Pillar 2; these are typically workers with low lifetime earnings, such as domestic servants, caregivers, agricultural laborers and workers in the informal sector. Old-age pensions almost everywhere are a privilege of urban workers in the formal sector. Covered workers amount to perhaps half the labor force in developing countries with a relatively high income, such as Chile and Mexico, a quarter of the labor force in middle-income Colombia and Peru, and 11% of workers in low-income India. Widows and divorcees in developing countries would benefit particularly from Pillar 1 pensions, not only because few of them have access to the contributory pensions of Pillar 2, but also because they are often subject to discrimination and social isolation (ILO, 2000, p. 139).

Governments often appropriate contributions to a public Pillar 2 for the purpose of redistributing income and alleviating poverty. This collapse of the first two pillars into a single public pillar has the effect of converting forced savings into payroll taxes, with all the inequities that regressive taxation can imply (World Bank, 1994, p. 119; Willmore, 1999). The World Bank in its 1994 report recommends wisely that governments shift to broader, more progressive taxes to finance the first pillar:

> Heavy reliance on a broad tax base, such as an income or consumption tax instead of a payroll tax, is the most efficient in the long run, since it reduces the tax rate needed to finance benefits. It is also most consistent with the redistributive function of the public pillar, particularly when coverage is broad (p. 243).

It would seem that New Zealand is well advanced in meeting this recommendation of the World Bank. Coverage under the first pillar is almost complete, with only a few excluded on residential grounds. The funding is from general taxation, not a payroll tax. While it is true that the older population is predominantly found in the lower quintiles of the income distribution (Statistics New Zealand, 1998), [3] the elderly are not a focus of public concern about poverty. New Zealand has no formal poverty line, but unofficial poverty lines do not suggest that poverty was a significant problem until the size of the universal pension began to slip relative to the average wage in 1998. Even so, the severity of poverty is far less for the elderly than for children (Stephens, Frater, & Waldegrave, 2000).

One of the issues debated by the public in New Zealand is whether the pension should be means tested. The World Bank (1994, p. 240) pointed out the negative consequences of such a policy for the first pillar. First, the administrative simplicity of the program would be lost; administrative costs would rise, as would opportunities for corrupt behavior on the part of government officials. Second, means tests act as a tax on retirement income, discouraging saving for retirement as well as continued work in old age. Third, means-tested benefits become characterized as "welfare," which reduces their political appeal and discourages applications from the eligible poor.

Nonetheless, many countries, especially developing countries, meet taxpayer resistance in collecting tax revenue, so finance of the first pillar can present major problems. One way to reduce costs to impose an income test, but one that does not stigmatize the recipient as a pauper and one that is graduated so that it does not have too adverse an effect on saving or work. This can be accomplished with an *ex post* income test, by granting a universal pension based on age, then "clawing back" some or all of the pensions of wealthier citizens by imposing an appropriate surtax on their income. This was the approach taken in New Zealand for 15 years and was the focus of much contention and debate. Nevertheless there were advantages to the surcharge as it was called, especially compared to the alternative of basic pensions targeted exclusively to the poor.

(a) *The role of the surcharge in New Zealand*

As noted above, in 1985 the government of New Zealand introduced a controversial surcharge on pensioners' other income over an exempt amount. Since government reduced the tax rate for the top income bracket from 66% to 48% in 1986, and then to 33% in 1988, the effect of the surcharge was to restore some tax progressivity for taxpayers over the age of 60 (St. John, 1999). The initial rationale was, however, purely cost saving.

Since the surcharge on recipients of pensions was a form of income testing, there was some inherent disincentive to save since individuals could consume their retirement savings during their pre-retirement years to avoid the surcharge. There was also an incentive to retire at the age of 60, for it limited or eliminated pension payments to those over the age of entitlement who were still in the workforce. (There is no test of retirement in the New Zealand system.) The surcharge was a very mild income test, however, which only applied to income above a generous exemption. In 1998, the last year of its operation, it was estimated that only 16% of all pensioners were affected and fewer still lost their entire pension through the surcharge (Periodic Report Group, 1997, p. 48).

By operating through the tax system, the surcharge avoided stigmatizing recipients or forcing them to fill complicated forms. [4] It provided an element of intergenerational equity as New Zealand reforms since the early 1990s had stressed targeting, low taxes and user fees for other groups. In particular the younger generation faced high direct costs for their tertiary education and an onerous loan system (St. John & Rankin, 1998).

Regardless of the justification, the surcharge became the politician's nemesis, eventually damaging both major political parties. It was removed in 1998, leaving pensions fully universal, although some recovery is provided through the progressive tax structure. Since 2000, the top rate of tax has been 39% for total incomes over NZ$60,000, so the wealthiest of pensioners retain only 61% of the gross pension.

While there are numerous views concerning the role and usefulness of the surcharge, it can be agued that politicians themselves were the ones that ensured its demise. Perceptions of unfairness and unacceptability were molded in political discourse rather than reflecting genuine outrage on the part of the older population.

(b) *Sustainability*

The Periodic Report Group (1997) concluded that the current pension, with the rise in the qualifying age to 65 by 2001 and the wage band formula for indexation described above was adequate, efficient and sustainable. From 2015, some well-signaled, moderate modifications could be introduced to curb costs if necessary. As a percentage of per capita gross domestic product (GDP), New Zealand's gross pension currently amounts to around 74% for a married couple and 49% for a single person. The pension is taxable as regular income, with the result that net pensions are smaller than gross pensions. For a couple with no other income, the net pension after tax amounts to 63% of per capita GDP, and, for a single person in the same situation, the net pension is 41% of per capita GDP. Projections of the Periodic Report Group showed that, with no change in rules for eligibility or in the indexation formula, net fiscal costs would increase from 4% of GDP in 2000, to around 9% of GDP over the next 50 years. These amounts seem modest when compared to other countries. In comparisons with other countries it must be remembered that New Zealand has no hidden tax subsidies for retirement income provision, and a very low-cost regulatory regime for private schemes.[5]

The Periodic Report Group argued that society would have to address the issue of integration of public and private provision. It presented for discussion a number of options, including the possibility of returning to a surcharge type arrangement by treating New Zealand Superannuation as a negative income tax.

5. THE COST OF FLAT, UNIVERSAL PENSIONS

We have seen that the projected fiscal cost of a universal Pillar 1 is relatively modest for New Zealand. What about other countries, which may want to follow the example of New Zealand? Fortunately, it is a simple matter to estimate costs, provided we know the proportion of the population that will be eligible for a pension, and the level of that pension in relation to per capita GDP.

Suppose that r represents the proportion of the population eligible for a flat pension of py, where y is per capita GDP and p is the ratio of the pension to per capita GDP. Pensions are financed on a pay-as-you-go basis from taxes fraction t of gross domestic product (GDP). Balancing the Pillar 1 budget requires that expenditures equal revenue or, equivalently, that expenditure per capita (rpy) equal revenue per capita (ty)

$$rpy = ty. \tag{1}$$

Solving for t (taxes as a proportion of GDP) yields

$$t = rp. \tag{2}$$

In words, the fiscal cost of a universal Pillar 1 (as a proportion of GDP) is equal to the proportion of the population eligible for pensions times the ratio of the pension to per capita GDP. Costs will be higher the higher the pension, and the larger the proportion of the population that is eligible to receive it. In low-income countries especially, it is advisable to set the pension in relation to per capita income rather than the average wage, since wage data refer to the formal sector of the economy, whereas much of the population toils in the informal sector. A reasonable target for a Pillar 1 pension might be one- third or one-half of per capita GDP. In countries with widespread foreign ownership or a large foreign debt, gross national product (GNP) is more relevant than gross domestic product (GDP) as an indicator of both the tax base and the income of residents.

Table 1 provides calculations of t, the taxes required to finance a basic pension, as a proportion of GDP, for various values of r (the proportion of pensioners in the population) and p (the basic pension as a proportion of per capita GDP). These figures are for illustration

Table 1. *Revenue (as percentage of GDP) required to fund flat, universal pensions (hypothetical eligibility and pension size parameters)*

Pension size (% of per capita GDP)	Eligible residents (% of total population)			
	2	10	20	30
30	0.6	3	6	9
50	1	5	10	15
100	2	10	20	30

Source: Authors' calculations.

only. The tax requirements of any particular plan can be calculated easily by solving the equation $t = rp$. In the first cell of Table 1, for example, $t = (0.02)(0.3) = 0.006$ or 0.6% of GDP.

It is important to remember that t represents the cost of providing a given flat pension, py. To lower net fiscal costs, as well as to improve the progressivity of the system, authorities can gross up and tax the flat pension, leaving pensioners with no income other than the pension in the same net position as before. Higher income pensioners will pay tax on their pension at their highest marginal tax rate and receive less in net terms. Imposing a surcharge to recover more of the pension from wealthier recipients will lower net costs even more. Very poor countries perhaps cannot afford to provide pensions to able-bodied workers, regardless of their income or age (Willmore, 1998). In these circumstances, the criterion for eligibility could be physical disability—inability to work at a steady job—rather than age. If, instead, the age of eligibility is set rather high, say age 70, there exists a danger that benefits will go disproportionately to the wealthy, who are more likely to survive to such an old age, rather than to the poor, who are more apt to die at a younger age.

India provides a useful illustration of calculation of the fiscal costs of universal provision of a basic pension. A means-tested Pillar 1 has been in effect in that country since 1995. Approximately 2.2 million "destitute" persons aged above 65 years receive pensions of 75 rupees (less than US$2) a month (Expert Committee, 2000).[6] A pension this size amounts to little more than 5% of India's per capita GDP, so even without means-testing would not strain the government's budget. There are approximately 30 million persons in India today who are more than 70 years of age, and some 50 million who are 65 years of age or older. This constitutes about 3% and 5% of the population, respectively. Therefore, the cost of providing all persons aged 65 or more with the current pension would be only $(0.05)(0.05) = 0.0025$ or one-quarter of one per cent of GDP. Universal provision of a more generous pension equal to one-third of the country's per capita GDP would cost around 1% of GDP with an age cut-off of 70 years, and 2% of GDP with an age cut-off of 65 years.

Nonetheless, the Expert Committee (2000) recommends that nothing be done to expand coverage of the first pillar, alleging that

> The sheer number of the elderly is too large, and the resources of the State are too small, to make anti-poverty programs the central plank in thinking about the elderly (p. 13).

At the same time, the Committee recommends creation of a new system based on individual, voluntary contributions to any one of six Private Fund Managers (PFMs), to be regulated by a new agency, the Indian Pensions Authority (IPA). Government would promote this expansion of Pillar 3 with hidden tax expenditure and with some not so hidden direct expenditure as well. Contributions to private pension funds would be tax exempt up to a limit of 60,000 rupees a year. Income earned in the funds would also be free of all tax. Government is to set up a National Senior Citizen's Fund to promote private pension schemes, and subsidize it with earmarked taxes. (See p. 41 of the Report.) Government is also expected to guarantee minimum returns on investments in the PFMs. There is no mention of the source of funding for the new regulatory agency (the IPA), which suggests that its cost may fall as well on the Indian taxpayer. The Committee reports neither the fiscal cost of expanding Pillar 3 (which it supports), nor the cost of expanding the coverage of Pillar 1 (which it opposes), but our suspicion is that the cost of expanding Pillar 3 exceeds by a large margin the cost of expanding Pillar 1.

India's experience is typical of experiments with noncontributory pensions in the developing world. Similar schemes exist in South Africa, in China and in "about 10 countries" of Latin America and the Caribbean (ILO, 2000, Chapters 6 & 9). Everywhere, the story is the same: pensions are well below the poverty line, administrative costs are high, corruption is all too common, and benefits reach only a small percentage of the targeted poor.

One developing country, however, stands out from the others in pension coverage. That country is Mauritius, which is located in the Indian Ocean, off the coast of Africa. Since 1976 Mauritius has offered a universal pension payable to all residents from age 60, subject to a requirement of 12 years residence after age 18 for nationals and 15 years residence after age 40 for foreigners. Just as in New Zealand, it is financed from general revenue of the government, and there is no means test and no retirement test for eligibility. At the beginning of fiscal year 1999/2000, in July 1999, the standard pension was 1,400 rupees per month

(US$55, equal to roughly 38% of average industrial wages or 18% of per capita GDP). Old age pensions for the very elderly are approximately four times higher: Rs 5,400 rupees for those aged 90 years and Rs 6,000 for those aged 100 years or more. This is unusual since, except for expenses of nursing care or surgery, retirees typically require less income as they age. A supplement of a thousand rupees (71% of the standard pension, but only 17% of a centenarian's pension) is paid to severely disabled pensioners of any age. (See Government of Mauritius, 2000.)

In June 2000 Mauritius was home to an estimated 105,234 persons aged 60 years or more. This amounted to 8.9% percent of the total population, so, from Eqn. (2), (0.18) (0.089) or about 1.6% of GDP would suffice to provide each person in this group with a pension equal to 18% of per capita GDP. In fact, in fiscal 1999/2000 the government spent much more than this on universal pensions: 3.2 billion rupees, equivalent to 10% of all government expenditure and about 2.9% of GDP (Government of Mauritius, 2000, 2001).

The fiscal cost of universal pensions in Mauritius is 2.9% of GDP rather than the expected 1.6% for three reasons. First, as we noted, the pension is not paid at a flat rate. Some pensioners (the extremely old and the severely disabled) receive pensions that are considerably larger than the standard pension. Nearly 12% of old age pensioners were certified as severely disabled in the year 2000 (up from 9% in 1995). No information is available on the number aged more than 90 or 100 years. Second, in June of 2000 actual old age pensioners numbered 111,885, or 9.5% of the total population, well above the expected 8.9%. It is, of course, possible that population statistics severely underestimate the number of elderly in Mauritius. It is also possible that some of these pensioners are no longer alive, especially since the availability of very generous allowances from age 90 does nothing to encourage survivors to report the death of an elderly parent or spouse. The total cost of standard and enhanced pensions for this group amounted to 2.3 billion rupees in fiscal 1999/2000, which is about 2.0% of GDP.

The third and most important reason for the high fiscal cost of the scheme is that many of Mauritius' universal pensions are not old age pensions at all. As of mid-2000, the government was providing pensions to about 42,000 residents who were younger than 60 years of age. This group of young pensioners comprised 20,000 severely disabled or invalid workers (2.6% of the total population aged 15–59 years), 21,000 widows (5.6% of the female population aged 15–59 years), and 686 orphans (aged 0–20 years). Like the old age pensions, these pensions are not income tested or taxed in any way. Widows, however, lose their pension if they remarry before the age of 60. "Underage" pensioners in fiscal 1999/2000 cost the government nearly a billion rupees, or 0.9% of GDP. (See Government of Mauritius, 2001.) In contrast, New Zealand Superannuation is solely an old age benefit; no one under the age of 65 receives it.

Universal pensions in Mauritius differ also from those of New Zealand in that they are not taxable, so there is no clawback, no recovery of any portion of the pensions received by the wealthy. In fact, *all* pension income is exempt from taxation in Mauritius, up to what is, given prevailing wage levels, a generous limit (currently Rs 65,000 per year in addition to the standard personal exemption of Rs 65,000). In addition, Mauritius has a functioning public Pillar 2, with mandatory contributions that total 9% of ordinary wages (13.5% in the sugar industry). So, Mauritius quite definitely has all three pillars of pensions in place. We feel that New Zealand's two-legged system would be an attractive option for Mauritius, but recognize that its three-pillar system is vastly superior to the system of other developing countries, where a universal Pillar 1 is conspicuously absent.

The experience of Mauritius is important, for it illustrates that it is possible for low-income countries to implement a meaningful Pillar 1. Universal, noncontributory pensions are feasible, both politically and economically, in a developing country. Our suspicion is that the absence of targeting in Mauritius, the tax exemptions, and the generous entitlements for the very old are features that increase the worth of basic pensions to the middle classes, hence contribute to their broad political appeal, even as they increase their fiscal cost. We have no special knowledge of Mauritius, though, so leave this interesting case for others to investigate.

6. NEW ZEALAND DOES NOT HAVE A SECOND PILLAR. IS IT DISADVANTAGED?

The case for a first pillar is compelling: no one wants to see workers forced to toil until they die or retire with less than a subsistence level of income. If the state does not guarantee some minimum standard of living, families and private charities will step in, and most likely provide a social safety net that is much less even, one that misses many of the elderly. But why mandate a second, earnings-related pillar? Why should society care whether a worker has the means to consume well above a subsistence level during retirement? Governments, of course, would like workers to enjoy a comfortable retirement. But they also would like them to own a home, eat plenty of vegetables and exercise regularly, yet they do not mandate home ownership, purchase of vegetables, or an exercise regime. For the most part, they leave this to individual choice. Why do not they leave pensions to individual choice as well?

Pensions are different, it is said, first because governments ought to protect taxpayers from the demands of penniless retirees; second, because they ought to protect workers from their own short-sightedness; third, because of adverse selection problems in the annuities market; and fourth, because of a belief that a funded second pillar encourages the development of capital markets and facilitates a country's growth (World Bank, 1994, pp. 26–38). We consider each of these rationales, and then discuss briefly the effect of universal pensions on the retirement decision.

(a) *Moral hazard and myopia*

If the guarantee of a minimum income in old age discourages people from saving for their own retirement, moral hazard is said to exist. In essence, the existence of a first pillar makes the second pillar necessary. Feldstein (1998, footnote 1), for example, justifies forcing all workers "to save some fraction of their wage and salary income" on grounds that the pensions of the first pillar are means tested. This, however, only justifies forcing workers to save enough to finance a minimum pension, enough to insure that they will not become eligible for a Pillar 1 pension. High-income workers would contribute no more than low-income workers to Pillar 2, and they would receive the same basic pension. Those who prefer additional retirement income always have the option of voluntary contributions to Pillar 3.

We do not observe in any country the flat, low pensions that the "taxpayer protection" rationale would predict for Pillar 2. Interestingly, such a system was offered to New Zealand voters in 1997 and rejected by 92.8% of them in a referendum (St. John, 1999). Voters regarded as bizarre the idea of saving only enough to replace the basic pension, and even more bizarre the novel idea of a ceiling that the wealthy would reach rapidly but the poor would never reach. The mechanics of the interface between Pillar 1 and the proposed Pillar 2 meant that a dollar more of pension from Pillar 2 would effectively result in the loss of a dollar of pension from Pillar 1. The pension funds of those who were unable to reach the savings cap were to be "topped up" by the state by enough for a capital sum sufficient to purchase an annuity equivalent to the basic state pension, which would ultimately disappear. The savings of the poor, which were supposed to promote self-responsibility, would thus have no effect on the size of their retirement pensions!

Not surprisingly then, policymakers never cap pensions of Pillar 2 at subsistence level. Instead, mandatory contributions and benefits increase with earnings to a point far beyond the basic pension of Pillar 1. The usual explanation for this pattern of pensions is that governments are paternalistic and seek to protect not the taxpayers but rather workers themselves. The belief is that at least some workers are so short-sighted that they would consume too much of their salary and save too little for retirement if they were free to choose their own pattern of lifetime consumption. The implicit assumption is that government knows best: without compulsion, individuals would make mistakes that they later come to regret. So government forces each worker to save enough to avoid any drastic drop in his or her standard of living in retirement.

These arguments for mandatory saving apply equally to withdrawals during retirement. Workers do not escape from moral hazard or myopia simply because of age. In a traditional second pillar, which is defined benefit and pay-as-you-go, retirees receive a pension, i.e. a series of payments paid on a regular basis until the death of both the participant and any dependent spouse. These payments are often indexed, explicitly or by custom, to prices or wage levels. In a defined contribution, prefunded Pillar 2 an individual account exists in the name of each worker. There is no automatic pension. Instead, the accumulated savings must be converted into some sort of an annuity, that is, into a stream of payments extending perhaps until the death of the participant or the participant and any designated dependent. The possibility exists, then, that workers might receive all or a part of their savings as a lump sum payment on retirement. But, if saving was mandated in the first instance, the same logic surely dictates that no lump sum payments be allowed. Otherwise a myopic retiree, or one that wants to "game" the system, would quickly spend these proceeds, suffering a consequent reduction in his or her standard of living.

This would seem to be the logic, yet the World Bank in its 1994 report (p. 331) left open the possibility of lump sum payments by declaring "In a mandatory saving scheme workers should not be required to purchase annuities with their entire retirement saving." More recently, the World Bank (2000, p. 8) has elaborated on this position, recommending that participants in a mandatory Pillar 2 be required only to purchase "a minimum, indexed annuity with adequate survivor's provision, with flexibility for any remaining retirement savings." The minimum is set at the level of Pillar 1 ("the social safety net") for both the participant and any dependent spouse, and begs the question as to why saving in excess of that necessary to purchase a minimum pension or annuity is mandated in the first instance.

New Zealand's first pillar is universal, so taxpayers would not benefit from a mandatory second pillar unless some type of means test were applied, possibly in the form of an effective surcharge. One could also argue that an effective Pillar 1 prevents the moral hazard that arises when people are left to rely on their own saving. Society would not allow penniless retirees to starve, so they force them to save for a basic pension during their working lives. The tax funding of Pillar 1 extracts a compulsory contribution from all taxpayers, and in this manner overcomes the problems of moral hazard and myopia.

(b) *Adverse selection and annuities*

The decision to purchase an annuity is an irreversible decision, for a very good reason. If insurance companies were to allow annuitants to reverse their decision at any time, then a person whose health becomes bad would naturally want to cash in his annuity. A poor person, especially, benefits from keeping options open. He might need cash for a medical emergency, or for a bout of hard times in the family (unemployment, crop failure). The poor typically face very high real interest rates on borrowing, so the best investment they can make might well be in owner-occupied housing, land, tools, other family business, or in the education of their children. Even better nutrition can be seen as investment at extremely low levels of consumption. The poor have short expected lifetimes in any event, so an annuity is less appealing to them, especially if they are pooled with wealthier people, who live longer on average.

In the case of New Zealand, the absence of Pillar 2 annuities is less significant given that Pillar 1 provides an inflation and wage-linked pension sufficient to cover basic needs of consumption in retirement. Nevertheless, there are myopia and adverse selection arguments that may apply. Middle-income New Zealanders are unlikely to purchase voluntarily annuities without the underpinning of some kind of government support, be it in tax credits, inflation adjustment or in provision of greater liquidity. The question remains, is it a good idea for them to convert their savings into an annuity? If this requires the stimulus of government subsidies, one must ask whether society wants to use its fiscal resources for a program that will disproportionately benefit those who are better off.

(c) *Developmental issues*

The fourth reason often given for a funded second pillar is that pension funds promote depth of capital markets. New Zealand may be vulnerable on this score. It has a very undeveloped share market and its tax regime encourages excess investment in housing and real estate. Of course, pension funds are not the only, perhaps not even the best, way to promote capital markets. Governments could also subsidize residents' purchases of shares in mutual funds, or even the direct purchase of stocks and bonds in the local market.

The Labor Alliance-Coalition government has proposed the creation of a fund, to be invested at arms length by an independent board so that the first pillar will be prefunded in part by new assets accumulated on the Crown balance sheet. While there are few details available, there are some ironies here for New Zealand. In the 1980s and the 1990s the government sold most of its state-owned assets and the income derived from dividends of these has steadily dropped. A fund such as the one proposed may end up buying shares in these very privatized businesses. While debt repayment technically accomplishes the same fiscal outcome as asset accumulation, the perceptions of the public regarding the ability of the state to meet its future commitments to pensions may perhaps be enhanced. The requirement to build up assets for the fund may mean that the government can resist tax cuts in the face of large projected surpluses. Given the current account deficit and overseas debt problem of New Zealand, [7] this may be the best way to be fiscally responsible in the light of the ageing of the population. In its favor, too, the scheme would have low administration costs, as there would be no individual accounts.

(d) *Labor market incentives*

One of the concerns with the ageing of the population is the impact of a country's retirement income scheme on the incentives to retire early. Retirement decisions in New Zealand have been very closely tied to the age of eligibility even though retirement is not required as a condition for receiving the universal pension. The raising of the age of eligibility for the state pension in New Zealand seems to have been effective in increasing the participation of older workers in the labor force. The raising of the age has however produced other problems. The unemployed over age 55 are only entitled to a sharply income-tested welfare benefit of meager proportions. The incentive this provides to remain in employment is impotent in the face of the scarcity of jobs for this age group.

7. INCENTIVES FOR CONTRIBUTIONS TO PILLARS 2 AND 3 (TAX SUBSIDIES)

Almost everywhere except New Zealand, retirement savings are taxed more lightly than savings for other purposes. It is not clear why this is done. Perhaps governments believe that subsidization of savings (granting a higher return to saving) might have a positive effect on private or national saving. Theoretically, the effect can be positive or negative. After all, if a person earns a greater return, she might well save less, since less saving is required to reach a specific target savings. Empirically, the best evidence is that subsidies and tax incentives affect the form but not the amount of saving (Engen, Gale, & Scholz, 1996). In other words, saving that flows into subsidized retirement plans is, on average, at the expense of other, nonsubsidized, forms of saving. This point is so important that it merits emphasis and repetition: *subsidies, including tax incentives, have no discernible effect on the amount of private saving*.

Home ownership and retirement savings are almost everywhere favored over saving for other purposes. In the case of owner-occupied housing, tax authorities ought to impute the rental value of the home and add it to the income of the homeowner for the purposes of calculating taxable income. This is rarely done, presumably because voters dislike paying taxes in cash on imputed income that they have never seen. Norway is one of the few countries to tax imputed rent in this way, but the imputed rent is rather low (2.5% per year of the taxable value of the house), capital gains are not taxed, and young people saving to buy a home receive a special tax deduction (Economist Intelligence Unit, 1999).

What accounts for this generous provision of tax shelters for retirement savings? In the case of mandatory pension schemes (Pillar 2), they are said to encourage compliance. In the case of voluntary savings (Pillar 3), the motive seems to be paternalism: tax subsidies allow governments to require that savings be "locked in" until retirement. Governments are aware that these tax incentives are costly, and for that reason always limit the amount of income that can be sheltered in this way. Since retirement savings are not available (or available only upon payment of a large penalty) for any purpose other than retirement, this type of subsidy is more valuable to the wealthy than to the poor, who are in a lower tax bracket and have greater need to retain access to their savings in the event of an emergency such as illness or unemployment. In the United States, according to analysis prepared by the Department of Treasury (cited in Orszag & Orszag, 2000), two-thirds of all tax subsidies for retirement saving go to the wealthiest 20% of the population while only one-eighth go to the bottom 60% of the income distribution.

In sum, tax subsidies for retirement saving are common, but they are costly and they have regressive effects on income distribution. In effect, they constitute a "hidden welfare state" that favors the wealthy, and they affect only the form, not the amount, of private saving in an economy. Governments would do well to follow the path of New Zealand and eliminate these tax expenditures. But, if they persist in their desire to subsidize retirement saving, they might at least seek ways to do this in a more equitable manner. In the Czech Republic, the Government matches voluntary contributions to pension schemes up to a maximum amount, which is the same for everyone (ILO, 2000, p. 135). This is more equitable than the standard practice of exempting pension contributions from payment of tax, because it puts the wealthy and the not so wealthy on an even footing, but the system continues to provide no benefits for the poor, who cannot afford to contribute to such schemes.

In New Zealand, various task forces in recent years have examined the case for tax subsidies, but no one has seriously proposed that they be reintroduced, nor that cash subsidies be introduced, along the lines of those in effect in the Czech Republic. Once subsidies for pension savings were removed, their regressive, complex and unhelpful nature became transparent for all to see (Task Force on Private Provision for Retirement, 1992).

8. COVERAGE OF PENSION SYSTEMS

Approximately two-thirds of the world's formal labor force (Palacios & Pallares-Miralles, 2000), 85% of its households (Holzmann, Packard, & Cuesta, 1999) and 90% of its working-age population (Gillion, Turner, Bailey, & Latulipe, 2000) lack any form of income security in old age. The privatization promoted by the World Bank, which favors defined contribution schemes and individual accounts, does nothing to expand coverage. On the contrary, it typically results in decreased coverage because benefits are linked more tightly to contributions, so there is less redistribution and less reason for the poor to participate. [8]

James (1999), lead economist for the 1994 World Bank Report, acknowledges the limited pension coverage in developing countries and argues, "contributory insurance for many of these workers, particularly for low income workers, is neither feasible nor desirable" (p. 1). Expansion of the first pillar would then seem to be a logical way to extend coverage to these workers. But James rejects this solution on grounds that incomes are distributed very unequally in developing countries. Her reasoning is as follows:

> When income is unequal, a uniform benefit that is reasonable from the point of a poor worker would be negligible for a rich worker who would therefore be uninterested in supporting it. But a benefit that is high enough for the rich worker would exceed the wage level of a poor worker, and would be very expensive for the economy as a whole. Relatedly, when incomes are very unequal, typically only a minority of people pay general taxes, and these people would oppose financing a universal benefit. . . . Note that the OECD countries with universal benefits all have a high degree of income equality (p. 3).

Ms. James concludes on a pessimistic note. Pensions, at least in developing countries, will have to be financed with earmarked taxes, and benefits linked to taxes paid. She allows for the possibility of means-tested assistance for the elderly, but cautions that "to avoid negative effects on the contributory program, redistribution via social assistance to the uninsured should not be 'too' generous" (p. 18).

Nonetheless, this conclusion is not very convincing, since the same reasoning would apply *a fortiori* to government services such as schooling. There is widespread illiteracy in developing countries, and the level of primary education that is adequate for a poor worker is not likely to interest a wealthy taxpayer. Moreover, the cost of primary education adequate for the wealthy exceeds the wage of a poor worker, and would not be affordable for the economy as a whole. Governments nonetheless attempt to provide all citizens with schooling at the primary level, even though they are not always successful. Primary education is financed from general revenue, not earmarked taxes. Some taxpayers, in countries of all levels of development, pay for private schooling because they want a higher or at least a different standard from that offered by the government. Many of these taxpayers are relatively wealthy; others have modest means. Governments do not provide rebates to childless taxpayers or to those who pay for private education, although some governments have begun to experiment with vouchers.

If universal provision of primary schooling is feasible, so is universal provision of basic pensions. Unlike public schooling, public pensions are of value to everyone, regardless of income, religion or family structure. There is never a need for taxpayers to replace public pensions with private provision, for they can supplement public pensions with their own savings. Politically, from the perspective of how citizens value the benefits, universal provision of public pensions should be even more popular than universal schooling.

9. CONCLUSION: NEW ZEALAND AS A MODEL FOR OTHER COUNTRIES

New Zealand's universal first pillar provides every resident with retirement income. It is not just a minimal "safety net for the poor," but neither does it provide for all needs of wealthier citizens in their old age. Some pensioners receive a larger income than the average pay they received during their working years. This is certainly true, for example, of women who have a history of little or no attachment to the paid labor force. There is no harm in this and much potential for good. With a universal pension, society recognizes contributions of all kind, not just contributions from paid work. As for workers who subsist on low incomes, if society for whatever reason finds it difficult to improve their lot during their working years, it can at least give them an opportunity to escape poverty in their old age.

A universal Pillar 1 is well suited to changing family structures, characterized by more divorce and separation, widowhood and living alone. The principle has been to keep the older population contributing and participating in the economy though adequate income support. There are no disincentives to continue part-time or full-time work, save those that arise from the progressiveness of the tax system.

There is no second pillar in New Zealand, but there is a third pillar. Everyone has the option to save for retirement in whatever way is most suitable and efficient at each stage in the life cycle. Authorities do not tax retirement savings any differently than savings for any other purpose, thus do not incur any hidden "tax expenditures" on this account.

While tax neutrality is a goal in New Zealand, it has not yet been achieved. Since 1990, the government has not provided any tax subsidies for retirement savings or for private pension plans, but owner-occupied housing is tax-favored. Homeowners are not obliged to declare imputed rents as income, nor are there taxes on capital gains for most personal real estate transactions.

New Zealand encourages private provision of pensions through an advertising campaign run by the Office of the Retirement Commissioner. It is true that removal of tax subsidies resulted in a drop in coverage of workers in occupational plans. Nonetheless, the flexibility of a voluntary Pillar 3 has many advantages provided that individuals recognize that they must take personal responsibility for accumulating savings on which they can draw to supplement the public pension. If desired, they can convert a portion of these savings into an annuity at any time, but the annuity market is thin and unattractive in New Zealand, as it is in most countries around the world.

Universal pensions can be criticized on grounds that they do nothing to ameliorate poverty in other age groups. The World Bank (1994, pp. 76–82), argues that, since poverty rates among children in many countries are higher than poverty rates among old people, it makes little sense to target the old for special treatment. According to the World Bank, it is children, not the elderly, who merit special treatment. There is much truth to this position. Poverty is tragic wherever it occurs, and is especially tragic when it affects the lives of the young. Nonetheless, it is not necessary to choose between helping to lift children from poverty and helping the elderly who are poor. The beauty of Pillar 1 is that it distributes the primary cost of caring for each elderly generation on an ability-to-pay basis. This removes from low-income workers much of the burden of saving for their own old age. They have the opportunity to invest this income in the nutrition, health and education of their children. More importantly, Pillar 1 frees the aged from dependence on the generosity of their adult children. These children in some cases may not exist, they may live in poverty, or they may be burdened by the need to care for their own children. With a universal Pillar 1 in place, all this becomes less important. Pillar 1 is good value, for it provides the entire population with security and peace-of-mind.

There are special difficulties to be noted for developing countries that do not have the administrative capacity for income tax collection, or for record keeping to support residency claims. These are also a tall order for implementing the World Bank's second pillar. Over time development should facilitate the process. Those countries that rely on regressive taxation via consumption taxes might face difficulties in introducing a universal pension, but one should remember that well-designed consumption taxes need not be regressive, and in any case are seldom as regressive as payroll taxes. The New Zealand model proved robust despite many attacks on it and despite political volatility. The lesson for other countries is that if a system is well liked, fair and treats women well, it will be difficult to dislodge. Even so, the New Zealand system is much more able to respond to changed circumstances as the population ages than other, more complex systems.

With some caveats, then, New Zealand would appear to be a useful model for provision of pensions in developing countries. It is a model that offers valuable lessons as well to countries that would like to reform overgenerous and complex systems. Researchers everywhere ignore New Zealand, even as they lavish attention on Chile, a country with a private system that excludes nearly half its working population. We suggest that the experience of New Zealand is worthy of attention, and perhaps even of emulation.

NOTES

1. Under the wage band formula, NZS was price adjusted each year, unless the net pension fell below the floor (65%) or rose above the ceiling (72.5%). At these triggers, wage indexation would restore the relativity.

2. The actual adjustment was more than required to restore the floor; thus, the size of the pension increased significantly.

3. Figures on equivalized household income basis.

4. Which is not to say that the surcharge itself was not complex. Had it remained in effect it could have been simplified.

5. The World Bank claims that New Zealand pensions, as a fraction of GDP, are twice those of Australia (World Bank, 1994, p. 177), but fails to account for the surcharge or the effect of taxation on the net cost of public pensions in New Zealand. The age of eligibility is also higher for men in Australia than it has been in New Zealand, and the World Bank ignores costs of tax subsidies for private provision in Australia.

6. The figure of 2.2 million recipients of old-age pensions is implicit from the information the Report of the Expert Committee provides regarding total pension payments (two billion rupees a year) and the flat pension (900 rupees a year). The authors of the Report suggest that there are perhaps 11 million destitute elderly in India who ought to qualify, so the pension is reaching only a small portion of the targeted group.

7. The current account deficit in the year 2000 amounts to 7% of GDP, and the gross overseas debt exceeds 100% of GDP.

8. Barrientos (1998, p. 172) reports that in Chile, following pension privatization, active contributors rose from 52.6% in 1982 to 55% in 1995, but remained "well below the coverage rates of the 1960s and early 1970s at over 70%."

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