

**Updating the debate on intergenerational fairness in
pension reform**

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Kenneth Howse
Oxford Institute of Ageing

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Introduction

To ask whether or not the baby boom generation should expect to pay more for their pensions because of their low fertility raises the problem of intergenerational fairness in a fashion that is likely to strike many UK observers as suspiciously provocative. It is precisely this question, however, which has been asked not only in the news media in mainland Europe (see e.g. Gaschke 2003), but also in a number of recent academic papers and official reports. We are invited to take a view not only on the way in which the impact of population ageing might be distributed between different generations of taxpayers and pensioners, but also on the specific implications for pension reform of low fertility as distinct from increased longevity. Although the various papers and reports that have asked this question tend to agree that it is reasonable and fair to require the baby boom generations (and all subsequent generations) to bear the full costs of their increased longevity for their own pension provision, they disagree over the costs of lower fertility. It has been argued, on the one hand, that it is fair for government to configure pension policy in order to protect the baby boom generation from the full costs of population ageing by passing on to future generations some of the costs that result from its low fertility (see Schokkaert and Van Parijs 2003; Schokkaert 2004); and on the other hand, that the baby boom generation should be exposed to the full costs of its increased longevity *and* lower fertility (see Sinn 2000; Oksanen 2002; Oksanen 2003a; Oksanen 2003b).

¹ This is a version of a paper that appeared in *Social Policy and Administration* vol 41, February 2007.

My purpose in this paper is to unpack and examine the arguments involved in claims about the fairness or unfairness of government policies that would require the current working generation to bear the full impact of its lower fertility on the costs of retirement pensions. The analysis will be set in the context of a wider review of debate on the role of the idea of generational fairness in assessing options for reform under conditions of population ageing. The paper is broken down into four sections. Firstly, I consider the reasons for accepting that generational fairness poses a serious problem for PAYGO pension schemes. I then offer some comments on the supposed requirements of intergenerational fairness; and outline policy options for dealing with expected changes in system dependency ratios. Finally, I consider the policy relevance of the difference between increasing life expectancy and declining fertility as sources of changing system dependency ratios for PAYGO pension schemes.

A real and serious problem?

‘Member states should undertake ambitious reforms of pension systems in order to contain pressures on public finances, to place pension systems on a sound financial footing and ensure a fair intergenerational balance’ (European Commission 2003:61). If pension systems should be reformed to ensure a fair generational balance, then we must suppose that unreformed pension systems are unlikely to satisfy the requirements of fairness between generations. The European Commission here implies not merely that intergenerational fairness is a condition that should be met by proposals for pension reform, but that there is a problem with existing pension systems that has to be remedied if they are to avoid unfairness. The diagnosis is a familiar one, and applies to the large ‘pay-as-you-

go' (PAYGO) public pension schemes with defined benefits that are still to be found in many high-income countries. PAYGO schemes, on this view, are vulnerable to population ageing in a way that funded schemes are not. If a PAYGO scheme is to avoid running a deficit, it has to ensure that the revenue flowing into the scheme from current contributors covers the expenditure required for the payment of benefits to ex-contributors (assuming no income from reserves). Since the effect of the retirement of the baby boom generations will be to increase the ratio of current beneficiaries to current contributors, the schemes are unsustainable in their current configurations. There are, however, different options for ensuring that revenue and expenditure remain in balance when the baby boom generation starts to retire, and they affect different generations differently. The easy option – the option that might seem most likely to win the support of the electorate – would require future generations, through an increase in their contributions, to meet the expectations of the baby boom generations for an adequate retirement income; and this outcome, according to the standard diagnosis, would be unfair. One of the main reasons for the familiarity of this line of reasoning is that it has sometimes figured in the arguments for a radical reform agenda: without reform PAYGO schemes will not be able to satisfy the requirements of generational fairness – and the best way of averting an unfair outcome would be to replace unfunded public pensions with investment-funded and privately managed pension schemes (see e.g. World Bank 1994; Kotlikoff and Burns 2004).

The acceptance of a diagnosis does not entail the use of any particular remedy, however, and it is in this light that the Commission's formulation should be

understood. Although the Commission is indeed urging governments to take the problem of intergenerational fairness seriously, which implies that it rejects the easy option as unfair, it is not thereby committed to abandoning PAYGO for the purposes of income replacement in retirement. Far from conceding that PAYGO schemes cannot achieve what is expected of them without being unfair to future generations of taxpayers, the Commission is affirming that it is imperative (and feasible) to adapt such schemes to changing demographic circumstances in a way that is not unfair to future taxpayers.

Critics of the appeal to intergenerational fairness as a rationale for radical reform have argued, not only that the problem's significance has been greatly exaggerated and that it serves to deflect attention away from what are surely more pressing problems of social justice (Arber and Attias-Donfut 2000), but also that the criterion of fairness used to identify the problem is at the very least questionable (Walker 1993; Guillemard 1999; Concialdi and Lechevalier 2004). Such criticisms pose two questions for the standard diagnosis. Why should governments with PAYGO schemes attach such importance to the problem of intergenerational fairness? And what exactly are the requirements of fairness between generations that lead to the unfavourable judgement on the distributional consequences of the easy option for restoring financial health to PAYGO schemes?

Since proponents of the radical reform agenda can hardly insist that it is imperative to resolve the problem of intergenerational fairness in order to secure the long-term future of PAYGO pensions schemes, they have little choice but to present their arguments about the fairness of pension arrangements as an instance of a more

generalised problem of intergenerational justice. Present generations have obligations to future generations, and governments should therefore take proper account of the generational dimension of any policy measures that affect the welfare or living standards of future generations. The interests of future generations should be accorded the weight they deserve in our policy deliberations, and in practice this will usually mean giving them more weight. It is quite simply unfair to pass on an excessively large fiscal burden to the next generation – just as it is unfair to over-exploit natural resources or run down ‘natural capital’. As it stands, however, this line of reasoning provides rather a weak response to critics who are sceptical of the importance being attached to this issue. Why shouldn’t future generations, given that they are likely to be wealthier than earlier generations, carry a larger fiscal burden (Heller 2003)?

The other main reason for taking the problem of intergenerational fairness seriously turns on the quasi-contractual nature of tax-and-transfer arrangements for the provision of retirement income, and it has force only for those policy makers who *do* want to secure the long-term future of PAYGO pensions schemes. Because each generation relies for its retirement income on the continuing support and participation of the next generation in the scheme, it would be *imprudent* for the current working generation not to take any account of the interests of the next generation of workers when they are deciding about the best way of restoring the financial health of their PAYGO pension arrangements. Why? Because even if the next generation is persuaded that PAYGO arrangements are in principle a good idea, they might still think themselves justified in ‘writing off’ some portion of the pension liabilities handed down to them under the existing arrangements (i.e. by reducing benefits for

this current generation of workers). Fairness assumes importance here as the means by which policy makers assess the acceptability of their reforms to subsequent generations. The assessment is based on a judgement about whether or not the next generation – and future generations - *should* find them acceptable, and not on a prediction of the likelihood that they *will* find them acceptable. What we require of the idea of intergenerational fairness is that it should tell us when – under what conditions – future generations would have a legitimate grievance against the provisions of the scheme, and hence good reason to alter them.

The requirements of intergenerational fairness in pensions

If the terms on which future generations are expected to participate in PAYGO schemes – the terms which allocate the costs and benefits of participation – do not deal fairly with them, we can have no *legitimate* expectations of their continuing support for the scheme. So what is required of the intergenerational allocation of costs and benefits of participation in a pension scheme for it to be fair? The Rürup Commission, set up by Germany's Federal Government to make recommendations on ways of achieving financial sustainability in the social security systems, is usefully explicit on this point. 'A strategy pursuing the *aim of equal treatment for all generations* can cope with ... demographic changes only through an intergenerational redistribution i.e. a re-balancing in favour of the younger and as yet unborn cohorts' (Rürup Commission 2003:2). Fair terms are to be equated with equal treatment. It still has to be decided, of course, what counts as equal treatment in this context. Does it mean that no generation should do worse out of participation in the scheme than any other, i.e. that no generation

should find itself having to 'pay more' for its pension than any other? As Gillion *et al* (2000) point out in a discussion of pension fairness written under the auspices of the International Labour Office, this particular rule would pose problems for funded as well as unfunded pension schemes. Just as demographic shocks can cause one generation to receive a lower rate of return on its PAYGO contributions than its predecessors (by requiring them to pay a higher contribution rate for the same pension), volatility in financial markets can have a similar effect on the rate of return earned on pension contributions in funded schemes.

What differentiates the generational impact of funded and unfunded schemes, therefore, is not so much their outcomes as the processes which lead to them. It is the difference between (i) an earlier generation doing better out of existing pension arrangements than a later generation, and (ii) an earlier generation benefiting at the expense of a later generation. The problem with PAYGO schemes is that they allow governments to pass on to future generations, as a form of implicit debt, the inevitable costs of adjusting pension schemes to population ageing (Fenge and Werding 2003). The objective of equal treatment for all generations requires successive governments to observe the same restraints on cost-shifting.

In other words, future generations would have a legitimate grievance against earlier generations that benefited through the pension system at their expense – and this is what will happen in unreformed PAYGO schemes as a result of population ageing. The European Commission may not be quite as explicit on this point as the Rürup Commission, but there can be little doubt that such a judgement underlies the Commission's insistence that reform is necessary to ensure a fair intergenerational

balance. The judgement invites an obvious response, however. What is so wrong with governments using the capacity for cost-shifting that is inherent in PAYGO schemes in order to mitigate the impact of population ageing on the retirement income of the baby boom generations? Is it not possible that a fair intergenerational balance might involve some redistribution or burden-sharing? We can accept that PAYGO pension schemes require – as a condition of their political sustainability - a workable standard of intergenerational fairness in order to ensure a fair allocation of the benefits and burdens of participation without conceding the point that future generations would have a legitimate grievance against earlier generations that benefited through the pension system at their expense.

There is a further important question here. Even if it is conceded that later generations have a legitimate grievance against earlier generations that benefit through the pension system at their expense, we need to consider how to decide whether the benefits that an earlier generation derives from its participation in the scheme have indeed been obtained at the expense of their descendants. What is the appropriate framework for assessing the generational fairness of pension policy? Is it reasonable to focus exclusively on public intergenerational transfers that are made through the pension system? Or would it be preferable to take proper account of *all* age-related social transfers – as with the method of generational accounting recommended by Kotlikoff (2001) - and so rest the case for reforming current pension policy on its contribution to the overall burden that the existing system of age-related social transfers would impose on future generations under conditions of population ageing? Or is it perhaps ‘fairer’, as some critics of orthodox generational accounting have argued (e.g. Helliwell 1998), to assess the generational consequences of

maintaining a given pattern of age-related social transfers within an even broader framework of generational burdens (including, for example, the long-term environmental costs of public policy) and legacies (the transmission of capital) than generational accounting uses?

It would seem, then, that there is no single, uncontroversial answer to the question about the 'best' or most 'appropriate' framework for deciding whether or not the effect of maintaining existing PAYGO pension arrangements would be to make a net transfer from future generations. Do we try to incorporate the assessment of the generational consequences of pension policy into a larger and much more complex problem of generational fairness (Kohli 2002) – or do we keep things as simple as possible by isolating the assessment of pension policy as a vehicle for intergenerational transfers from other kinds of generational burden and legacy (Fenge and Werding 2003)?

The simplest option, no doubt, is to base the comparison of the gains that different generations make from the pension system on the lifetime return they receive on their pension contributions. All that would concern us in this case is whether or not intergenerational redistribution occurs *within* the pension system; and the case for reforming current pension policy would rest on the consequences, for the gains that different generations made through the pension system, of maintaining current policy settings under conditions of population ageing.

But is there any reason apart from simplicity for isolating the assessment of the generational consequences of PAYGO pension schemes from other forms of

intergenerational transfer? One possible justification for such an approach may perhaps be found in the public understanding of what individuals *should* be able to expect from these schemes – in those shared assumptions about the purposes they serve that form the basis of their political legitimacy. It is surely reasonable in this connection to ask whether all participants – present and future - have a legitimate expectation that the scheme should work for them as a savings vehicle. Although there is no reason to suppose that the political legitimacy of PAYGO pension schemes is everywhere underpinned by its function as a form of mandatory ‘saving’ in which individuals accumulate entitlements to a portion of future revenue from contributions, this does seem a reasonable view to take wherever there is a strong quasi-actuarial link between benefits and contributions (so higher income individuals accumulate more ‘pension wealth’). The only rationale for insisting on the maintenance of this link is that the scheme should work as a savings vehicle for all participants, and not just some. In the absence of any such understanding about the functions of the scheme, it is hard to see why intergenerational transfers made through the pension system should be picked out for separate consideration; and this arguably is the situation that obtains in the United Kingdom.

Grounds for legitimate grievance?

It is clear that population ageing imposes real costs on individuals who save for their own retirement by making regular payments into a funded pension scheme. If they have a longer period of retirement, they must either save more during their working lives or reduce their consumption in retirement – though it may perhaps be possible to pass on some of these costs by persuading their children to finance the additional

consumption. Population ageing also increases the costs of financing their retirement for the participants of unfunded PAYGO schemes, and since these additional costs have to be apportioned *somehow* between different generations or birth cohorts, we have to decide what share of the increased costs of financing *their* retirement should fall to the baby boom generations.

If the baby boom generations are to bear some portion of the increased costs of financing their own retirement, they must either work for longer or pay higher contributions (i.e. 'save' more) to prefund some portion of their future pension or accept a lower replacement rate in retirement. Hence we have to decide not only what share of these increased costs should fall to the baby boom generation, but also in what form they should be imposed. If, on the other hand, it is fair for the baby boom generation to pass some or all of these costs on to later generations, it is *ipso facto* unfair to impose on them the *full* costs by any combination of these policies.

The view presented by Erik Schokkaert and Philippe van Parijs in their 2003 paper on this question is that it is fair

- (a) to require the baby boom generations *to work for longer* in order to cover that part of the increased costs of financing their retirement that can be attributed to increased longevity; and
- (b) to require their descendants to share the costs of their lower fertility.

And in laying out this view, they explicitly reject a line of reasoning developed by Hans-Werner Sinn for requiring the baby boom generations **to prefund** that part of

the increased costs of financing their retirement that can be attributed to their decline in fertility.

Before turning to the details of these arguments, I want to highlight one very important area of common ground. What is not in dispute is that the baby boom generation should *not* have to bear the increased costs of financing their pensions through a lower replacement rate. It is agreed that population ageing does not provide government with a good reason for relinquishing its responsibility for ensuring adequate retirement income for the baby boom generations. Sinn takes for granted what Schokkaert and van Parijs explicitly affirm, namely that it is the proper task of government to ensure that the living standards of pensioners do not fall in relation to the living standards of workers, and that mandatory social insurance is the policy instrument for securing this outcome. Decisions about the generational incidence of the costs of the coming wave of demographic ageing have, therefore, to be made within this constraint. In other words, what is to be decided is the generational incidence of the costs of maintaining the desired relationship between the incomes (or living standards) of pensioners and those of workers under conditions of population ageing.

There is also tacit agreement about the irrelevance of a 'principled' appeal to the unfairness of *any* intergenerational redistribution through PAYGO schemes. As Schokkaert and van Parijs rightly point out, it has to be possible under some circumstances to justify some degree of intergenerational redistribution through PAYGO. It would not be possible otherwise to justify the establishment of a scheme that paid higher than market rates of return to the start-up generation. To justify these windfall benefits, we must appeal to general arguments about social justice, about the

fairness of an intergenerational redistribution which is used to alleviate poverty / improve standards of living among the majority of the workforce who had insufficient savings to generate adequate retirement income. There is no question, in other words, of arguing that baby boom generation should be exposed to the full costs of their low fertility by appealing to the unfairness of *any* intergenerational redistribution in a PAYGO scheme. There is no attempt to argue that because the PAYGO scheme is intended to work as a savings scheme, any redistribution – whether *intra-generational* or *inter-generational* - is unfair.

This does not mean, however, that there is no problem with cost-shifting in a mature PAYGO scheme. The problem is that the costs have to fall somewhere and the scheme can only be stable if there is some kind of agreement or rule about where they should fall. If the baby boomers do not take upon themselves the full costs of ‘their’ population ageing, the generations whose contributions pay for their pensions will earn a lower rate of return on these contributions – unless, of course, they ‘vote themselves’ higher benefits with a view to maintaining a more favourable rate of return (Disney 1996). Either therefore the baby boomers and their immediate descendants absorb the full shock of the wave of demographic ageing that coincides with the baby boomer’s retirement; or they arrange to share out the burden ‘fairly’ between all future participating generations. What is required is a ‘rule’ to determine the generational incidence of the additional ‘implicit tax burden’ generated by a second wave of redistribution – only this time in favour of the baby boom generations rather than the start-up generations (Diamond and Orszag 2003).

So what exactly is at issue in the arguments presented by Sinn and Schokkaert? If Sinn is not arguing that redistribution in favour of the baby boomer generations is unfair because any intergenerational redistribution is unfair in a mature PAYGO scheme, what is the basis for his opposition to redistribution? What stands out in these arguments is the significance attached to the distinction between increasing longevity and declining fertility - the two different ways in which population ageing will increase the costs of pension provision in a PAYGO scheme for the baby boom generations. When they ask whether or not it is fair for this generation to pass on some or all of the costs of population ageing to the next/future generations, they distinguish between the policy response that is required to adapt the scheme to increased longevity and the policy response that is required to adapt to lower fertility.

At first sight it looks as though the dispute turns on a question of responsibility – whether or not it is fair to hold the baby boom generations collectively responsible for their low fertility - and this certainly is how Schokkaert and van Parijs construe Sinn's argument, which aims to justify the imposition of a 'double burden' on the baby boom generation, but only as a response to declining fertility, not as a response to increased longevity. Sinn argues, firstly, that what seems to be a double burden is not really a double burden. The lower fertility generation has extra resources available because it has fewer children to raise and educate. 'Can pay', however, does not entail 'should pay'. So a second step is required to show why these resources should be used to make additional provision for retirement. What Sinn emphasises is that low fertility is equivalent to under-saving. Provision for retirement can be made in only two ways, either by investing in real capital or by investing in human capital. What differentiates longevity increases from fertility declines is that

longevity creates the need for retirement provision and fertility (having children) is one of two ways answering that need. The low fertility generation *should* make up for their under-investment in human capital by increasing their investment in real capital.

If Sinn's argument is read in this way, it is hard to avoid the conclusion that the dispute does indeed turn on a question of responsibility. Consider, for example, how the argument looks when applied to under-saving rather than low fertility. Under-saving could presumably occur either as a result of some collective catastrophe which required massive current expenditure or as a result of individuals choosing to consume more and save less; and it surely matters which. In one case the under-saving is a 'problem of their own making', and in the other it is a misfortune that befalls them. In the same way we decide whether or not the baby boom generations have a claim against the assistance of future generations by determining whether or not their low fertility is a 'problem of their own making' or something that 'happened to' them. Granted that it is not entirely implausible to regard the low fertility of the baby boom generations as a predictable collective outcome of individual choices about the size and timing of families, it is arguable that it is a problem of their own making.

As I have said, this is how Schokkaert and van Parijs read Sinn's argument, and it is on the basis of this reading that they reject it: it would be unfair to hold the baby boom generation collectively responsible for its rapid and sharp decline in fertility. They also argue that the generations whose contributions will pay for the baby boomers' pensions should expect to take a cut in their rate of return *if* this is the price of ensuring that average retirement incomes for the baby boom generations do not fall

too much below average worker incomes. They are insistent, however, that this justification only works for that part of the costs of population ageing that are attributable to low fertility. So why is it fair to require the baby boom generations to bear the full costs of their own increased longevity, but not their decline in fertility?

The policy relevance of the difference between declining fertility and increasing life expectancy

To answer this question, it is necessary to understand how and why Schokkaert and Van Parijs appeal to the so-called 'Musgrave rule' as a way of apportioning the costs of the baby boom generation's drop in fertility. What they say, following a suggestion by Myles (2003), is that PAYGO pension systems should adhere to the Musgrave rule as a way of dealing with the baby boom generations' drop in fertility, but not as a way of dealing with their increase in longevity. The rule to which they are referring was proposed by the economist Richard Musgrave (1981) as a way of adjusting PAYGO systems to demographic or economic 'shocks', and according to Schokkaert and Van Parijs, the baby boom generations' drop in fertility is appropriately regarded as an 'exogenous shock' to the pension system. By adhering to the Musgrave rule, we ensure that the costs of the demographic shock administered to the pension system by the low fertility of the baby boom generation are shared between the baby boomers themselves and their immediate descendants (i.e. the generations whose contributions fund their pensions).

Now, by way of explaining the rule, consider the following scenario. Policy-makers plan for an expected increase in the longevity of the current working generation (let us

suppose by raising the state pension age). This working generation is expected to live longer than their parents' generation, and hence will require a pension for longer. It then turns out that when this same generation retires, they live for even longer than was expected. Who should bear the risk of this outcome? In a PAYGO system with a fixed contribution rate, the risk is born by the retirees. In a system with a fixed benefit rate, the risk is born by the working generation. A system which followed Musgrave's rule would adjust the contribution rate so as to maintain a fixed relationship between the income of taxpayers net of contributions and the benefits received by pensioners. This means that the *risk of such contingencies* is shared by pensioners and workers instead of being borne only by pensioners or only by workers. In the eventuality of such an 'unexpected' increase in life expectancy, pensioners and workers would share a real cut in incomes, even though the replacement rate for pensions would remain unchanged. What the rule does, in effect, is to define the nature and extent of intergenerational risk-pooling in a PAYGO scheme. In this case it provides against the contingency that an increase in life expectancy for some given cohort may become apparent only when it is effectively too late for its members to prepare for it, either by saving more or working for longer (because they have reached, or are close to, retirement age). The provision is clearly an important one, since the presence of intergenerational risk-pooling is sometimes held to be one of the key advantages that PAYGO schemes have over funded schemes (e.g. Gillion *et al* 2000). Workers and pensioners alive at the same time share the burdens that exogenous shocks to the system impose on them as participants in the scheme.

What this scenario also makes clear is that some kinds of projected change in system dependency ratios are not appropriately treated as the sort of contingency covered by

intergenerational risk-pooling. There are changes which ‘catch us by surprise’, and changes for which it is possible to make adjustments ‘in advance’. More precisely, in this scenario there is a distinction between an increase in a cohort’s life expectancy which becomes apparent in time for that cohort to do something about it, and an increase in life expectancy which becomes apparent too late to do anything other than accept a lower replacement rate. Although the Musgrave rule gives effect to the proposal that each generation (or cohort) should be protected against this second contingency, it gives no guidance on the appropriate policy response to a future change in system dependency changes should this become apparent in time for the affected cohort to adjust its own work or savings patterns.

It would seem, therefore, that the decision about the appropriate policy response to the adjustment problems caused by the low fertility of the baby boom generation will depend on (i) whether or not we think that there is enough time to do anything else other than rely on the protection offered by intergenerational risk-pooling; and (ii) what we think should be done if there is enough time to do something else. Certainly it is important to consider why, if we accept that we should do something *now* about a future change in system dependency ratios due to a predictable increase in life expectancy, the same reasoning should not also apply to the predictable effects of a decline in fertility.

The problem, in other words, is the scope of the rule for intergenerational risk-pooling. It is not a question of whether the Musgrave rule is the best approach to the intergenerational apportionment of risk in a PAYGO pension scheme – but whether it is reasonable (or fair?) to apply this rule to a projected change in system dependency

ratios if it is possible to avert the consequences of that change by other means. And in this case, it has to be remembered, these other means would impose the full costs of change on one particular generation. Suppose, for the sake of argument, that the baby boom generation has been given enough advanced warning about this projected change to do something about it, and so take upon themselves the costs of adjusting to the change. Would it be fair for them to do nothing about the projected change – relying on the benefits of intergenerational risk-pooling by making appropriate adjustments to contribution rates as and when it becomes necessary? The Musgrave rule itself does not provide an answer to this question.

As for Schokkaert and Van Parijs, although they are clear that adherence to the Musgrave rule is not the way to apportion the predictable costs of the baby boom generation's projected increase in life expectancy, they are emphatic that it is the best solution to apportioning the equally predictable costs of their decline in fertility. Why this difference? If there is enough time to do something about the expected decline in fertility, why persist in treating it as a 'shock' which *should* be handled by the Musgrave rule? It is at this point that we may feel compelled to resort to the question of responsibility. If the baby boom generation's decline in fertility is not a 'problem of their making', it seems unfair that they should be required to take upon themselves the costs of adjusting to the change; and of course *vice versa*. There is, however, a glaring difficulty with this view of the matter, namely, that the same reasoning would seem to apply to an increase in life expectancy.

So why treat the decline in fertility differently from the increase in longevity?

Schokkaert 2004:8) does make the point that 'the increase in longevity is not really a

problem in intergenerational justice'. We can 'see' that each generation should expect to pay for its own (expected) longevity increases because this is what each generation would have to do if it were to make its pension arrangements independently of any other generation. Low fertility, on the other hand, constitutes a problem for pensions *only* when one generation is dependent for its retirement income on regular transfers from the income of its children's generation. This is true enough, but it hardly helps to resolve the problem.

Schokkaert and Van Parijs frame their argument in terms of the Musgrave rule: under what demographic conditions would it be right for a PAYGO pension scheme to depart from (or follow) the rule? Granted that the Musgrave rule constitutes normal working procedure for the scheme, they ask whether or not the baby boom generation's drop in fertility justifies 'special treatment' (i.e. departure from the rule) – and they decide that it does not. Adherence to the Musgrave rule would share these costs between the baby boom generation and their *immediate* descendants i.e. the descendants whose contributions would pay for their pensions. Instead of the costs falling on one generation rather than the other, they are shared between them.

Expected increases in life expectancy, on the other hand, do justify special treatment, i.e. departure from the rule. The point to note here is that for Schokkaert and Van Parijs a policy of redistribution in favour of the baby boom generations does not have to be justified as a case of special treatment; it is consequence of the normal operation of the scheme. There is, however, another way of thinking about the justification that population ageing might provide for departing from the normal working rules for a pension scheme; and this is because there is another device for burden-sharing besides that proposed by Schokkaert and Van Parijs. It should be possible to ensure that the

costs of adjustment to demographic change are shared out among *all* future participating generations, just as it should be possible to smooth the ‘implicit tax burden’ generated by the costs of the windfall gains made by the start-up generations (Diamond and Orszag 2003). In this case redistribution in favour of the baby boom generation does have to be justified as a form of special treatment. What we want to know is whether the facts of the case justify providing them with similar assistance from future generations (i.e. redistribution) as the start-up generations received.

Even if we accept that a mature PAYGO scheme works like a zero-sum game, it need not be impossible for any given generation to make out a case for this kind of special treatment. Although a policy of redistribution from later and wealthier to earlier and poorer generations would be unsustainable if it were proposed as a general rule, it may nevertheless be possible to justify such a policy in some circumstances. The question we want to ask therefore is whether the baby boom generation’s rapid drop in fertility to below-replacement levels constitutes grounds for special treatment in a way that increasing longevity does not.

One reason for insisting on the policy relevance of the distinction between current trends in life expectancy and current trends in fertility may be found in our expectations of the future evolution of these trends. It is not implausible to suppose that whereas increases in longevity are likely to continue for the foreseeable future, the baby boom generations rapid drop in fertility is something of a ‘one-off shock’. Most policy makers in high-income countries seem to think that whereas we should be planning for continuing increases in life expectancy, a continuing decline in fertility rates is most undesirable. What they want to see is stabilization, if not

increase, in fertility. Although a policy of passing on the costs of longevity increases would be unsustainable under these demographic conditions, a one-off redistribution to deal with a one-off drop in fertility would not be vulnerable to the same objection. But this does not yet provide us with a good reason for making the redistribution; it simply says that a good reason for *not* making it does not apply. We still need a positive reason for making the redistribution.

If there is a positive reason for redistribution in favour of the baby boom generation, surely it lies in the claim that they would otherwise have to prefund a second pension for themselves as well as paying for the pensions of already retired workers. They would be required to carry what is in effect a double burden. The choice therefore lies between a double burden for the baby boom generation or an increased implicit tax burden for all future generations.

Arguments about collective responsibility would have us decide this issue by asking whether or not the burden that results from the baby boom generations drop in fertility 'really belongs' to one generation rather than another. If there is no good reason for laying the burden on the shoulders of any particular generation, then the best (and fairest) solution is to share it out among all future generations. How does Sinn's argument fit into this picture? It fits very neatly if it is understood as an attempt to circumvent this very issue of responsibility. The essential point is the claim that prefunding a second pension would *not* impose a double burden on this generation. The burden is illusory, and hence there is no case for special treatment. This argument, furthermore, is not directed against the suggestion that the baby boom generation and their immediate descendants absorb the full costs of the decline in

fertility. It is directed against a policy of tax-smoothing (i.e. smoothing out the *implicit* tax rate). But in this case, as Sinn says, tax-smoothing is not burden-smoothing.

It is possible, however, to accept Sinn's point about the equivalence between low fertility and under-investment without accepting his conclusion about the reality of the burden that a second pension would impose on the baby boom generations. Certainly if we allow that an improvement in the quality of human capital could compensate for a decline in fertility, the fact that the baby boom generations had fewer children does not imply that they under-invested in human capital. Could not a large investment in public education – especially perhaps a large expansion of higher education – make good the decline in fertility?

Let us suppose, for the sake of argument, that the baby boom generations, by paying for a substantial expansion of higher education, have done their bit 'to make good' one of the more problematic consequences of their changed patterns of child-bearing. Would this serve to justify a policy of redistribution? Is it not reasonable for the baby boom generations to expect help with the costs of adjusting to new patterns of child-bearing from future generations that are themselves likely to applaud and adopt these same patterns? I have no conclusive response to offer to this question, except to say that it seems important to articulate some view of the legitimate expectations of future generations. Would it not be reasonable for them to insist, as a condition of their continued support for the PAYGO scheme, that it should continue to 'work for them' as a savings scheme – and does not this impose some limits on the costs they should be expected to bear as a result of their commitment to it? Although we may

think it difficult to say anything very determinate about these limits, it is at the very least plausible to argue that the scheme will no longer fulfil its purpose if the rate of return becomes negative. This is admittedly a rather weak condition to impose on PAYGO schemes. It is not easy, however, to see what the alternative might be – unless we were to argue that the whole attempt to justify redistribution in a mature PAYGO scheme as a form of special treatment should be regarded as suspect. It does, after all, offer each generation an opportunity to construct a case for using the pension system as a means of redistribution in its own favour, and to that extent is virtually a recipe for generational conflict.

Conclusion

The problem of intergenerational fairness in pensions has at least as much importance for policy-makers who want to secure the long-term future of PAYGO pensions as for the proponents of a radical reform agenda. One point at which issues of intergenerational fairness seem inescapable for PAYGO reformists is when they ask about prefunding as an option for reform. Proposals that contributors meet the costs of increased life expectancy through a longer working life leave hanging the costs of changes in system dependency ratios that arise from a drop in fertility. Prefunding has been proposed as one way of dealing with this problem, and cost-sharing by means of the Musgrave rule as another. Although it is tempting to regard the crux of the dispute about the fair allocation of the costs of the baby boom generation's low fertility as an argument about the attribution of responsibility for low fertility, it is a temptation that should be resisted. The suggestion, furthermore, that the Musgrave rule is relevant to the settlement of this dispute is hard to sustain, and it is more useful

to formulate the policy choice as lying between the imposition of a double burden on the present working generation and tax-smoothing across future working generations.

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Author

Kenneth Howse
Senior Research Fellow
Oxford Institute of Ageing
University of Oxford
Manor Road Buildings
Manor Rd
Oxford

Email : kenneth.howse@ageing.ox.ac.uk

