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Requiem for a national ideal? Social solidarity, the crisis of French social security, and the role of global financial markets

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Abstract. It is well appreciated that demographic trends threaten the integrity of continental European systems of social security. For France these trends imply a long-term financial crisis as well as a crisis of confidence in national economic and social institutions. The payment of social security entitlements is a recurrent and largely unresolved political issue; proposals for comprehensive reform are heavily contested, involving political interests willing to go to the streets. At the same time, governments' incremental changes in benefit formula and accounting have discounted the expected value of future retirement benefits. In this paper, I begin by sketching the logic of pay-as-you-go social security, identifying the basic economic principles and social institutions that sustain such systems. One goal of the paper is to articulate the economic and philosophical roots of social solidarity and the importance of the state as the custodian of the social contract between generations. In doing so, I sketch out the French ideal: a coherent social security system based upon self-reinforcing mutual obligations and institutions. A second goal of the paper is to show how and why the French social security system became unsustainable. Demographic trends have been exacerbated by the use of the retirement system as a form of labour-market compensation policy, thereby undercutting both its financial and its political legitimacy. The third goal of the paper is to indicate how and why global financial markets may play a significant role in resolving the crisis of social security. Basically, I dispute the argument that national systems of social security will persist into the future; internal inconsistencies and the possible defection of those not served by such institutions combined with external opportunities may overturn the past. By making this argument, I do not mean to suggest that the Anglo-American model is necessarily superior to social security systems based on social solidarity. Rather, my point is entirely argumentative: solemn incantations that defend the past, whatever their best intentions, may simply reinforce the nature and significance of the pending crisis.

Introduction

French retirement income depends upon a set of related institutions commonly known as pay-as-you-go (PAYG) social security.[1] In general, the objectives of French social security are threefold: (1) universal coverage, (2) benefits related to earnings supplemented where necessary by government contributions, and (3) a high income-replacement ratio between 50% and 70% of average worked incomes. Although it was a compromise solution to pressing problems immediately after 1945, a new system stitched together with pre-existing occupational pension institutions, for some it has become an ideal form of state-guaranteed income security (Esping-Anderson, 1990). To illustrate, many commentators distinguish between social security schemes that provide flat-rate minimum retirement benefits as opposed to earnings-related benefits; this distinction is often articulated by comparison between the United Kingdom, and France and Germany (Budd and Campbell, 1998). Referenced or implied is a

[1] French social security is more than a unitary institution sponsored by the state. At base, there are pillar I institutions linked to complementary pillar II institutions, and combined in some cases with employer-sponsored individual savings plans (pillar III). Certain occupations and government employees have their own jointly managed institutions, but the majority of private employees are members of the core institution known as the *régime général*. See Moss (1997) for a detailed exposition.

distinction between Beveridge and Bismarck—the principals personifying the history of 20th-century Western welfare states (Lannoo, 1996).

Whatever its virtues, the future of the French social security system is heavily contested. Like many PAYG systems, it faces a demographic crisis (the pending retirement of the baby-boom generation) as well as a financial crisis (the payment of promised benefits and obligations). There is a huge literature devoted to the topic and to France in particular; see Clark (2001a; 2002) for extensive review and analysis.(2) Though incremental reforms over the past decade have discounted the future costs of social security, many commentators believe that European social security is not viable compared with Anglo-American mixed public and funded private systems (Brahs, 2001). Yet hidden in the debate over the French 'crisis' is a presumption that the crisis is in some way new or unanticipated. In fact, government reports over the past thirty years or so raised concerns about the difficulties of paying for future social security liabilities. Here, I contend that at the time of its design and implementation reasonable doubts could have been raised about its long-term financial viability. This does not mean that French social security was destined to fail. In point of fact, higher than anticipated fertility rates during the 1950s first sustained but then ultimately undercut the intergenerational balance needed to sustain social security as a self-reproducing system of taxes and payments. If social security is just a financial accounting system, it is very vulnerable to national demography.

However, social security is more than an financial and demographic accounting system. Given the uncertainties involved in estimating future liabilities, social solidarity between the generations can be seen as an essential ingredient in any PAYG social security system.(3) Indeed, it is argued here that social solidarity is a necessary political instrument or bridging mechanism between current costs and future benefit expectations. It is suggested here that for many years the institutions of social solidarity effectively 'managed' reasonable doubts about the robustness of French social security. However, I also suggest that *economic circumstances* and *intragenerational transfers* by those with a special place in French policymaking compromised the vitality of social solidarity as a means of 'balancing' intergenerational interests (see also Boldrin et al, 1999). The state as custodian of social solidarity has undercut the financial and political legitimacy of the ideal. One response has been tacit defection by the middle class from the ideal. Being unable to opt out, they have become significant consumers of quoted and unquoted equities, savings, and retail investment products designed to augment or protect their long-term welfare given the discounting of promised social security benefits.

Basically, three sets of arguments are made in this paper. In the first instance, the focus is upon demography. We begin with the classic formula that underpins analysis of the funding of social security systems owed to Samuelson (1958) and Aaron (1966). We then move on to demographic accounting to show how and why such pension systems may be vulnerable to demographic imbalances. In abstract, this analysis could be thought to be like generational accounting as developed by Auerbach et al (1999).

(2) There are, however, some who believe that solutions are at hand, and can be readily and easily implemented. See, for example, the study by Levy and Dore (1999, page 270) where they suggested "Fortunately, policies can be specified that could help alleviate such an [demographic] imbalance, in particular those aimed at fostering higher employment and later retirement among cohorts aged 55 – 65."

(3) Strictly speaking, the French system is best thought as a *répartition* system of intergenerational transfers (see Lynes, 1967, chapter 7). The conventional PAYG nomenclature obscures this feature of the French system, thereby encouraging some commentators to ignore the essential social commitment behind intergenerational social solidarity. In this paper I attempt to correct this possible confusion.

But, as we shall see, the logic used here is simpler and more direct (matching the simplicity of the analytical point I wish to make). In the second instance, the focus is upon a social solidarity. Here, social solidarity can be understood to be a national ideal concerning the proper organisation of society *and* a means of mutually insuring the welfare of related generations. Third, the likelihood of defection by younger workers is discussed in the context of the globalisation of finance and industry. Whereas French social security was conceived in reaction to the market uncertainties of the first half of the 20th century, global financial markets may be a necessary element in any solution designed to ameliorate the financial burdens that threaten the welfare of younger workers and retirees over the coming decades.

In making these arguments, I use analytical logic rather than a detailed historical exposition of French political and economic debate. Given the available commentaries on contemporary French public policy, it is unnecessary to reproduce those details (see Friot, 1999; Mantel and Thomsen, 2000). As well, understanding the looming crisis of French social security requires an appreciation of the basic economic and demographic building blocks as well as the historical evolution and political debate about reform. Inevitably, my approach has a certain Anglo-American flavour reflecting the literature on the core principles underpinning the structure of social security systems. At the same time, and perhaps unlike many Anglo-American commentators, I remain sympathetic and supportive of the ideal of social solidarity. This paper should not be seen as yet another outside attack upon French policymaking. There is enough literature on this topic, from a variety of quarters including the OECD (Flutter, 2001). Even so, recognition of the significance of ideals such as social solidarity should not blind us to the emerging faults of these institutions. Defection is not just evidence of middle-class self-interest; it could be evidence of the failure of national institutions in the context of changing European economic (Supiot, 2001) and social conditions (Crouch, 1999).

Social security: demographic and economic principles

Let us begin with the simplest of cost-accounting identities provided by Gillion et al (2000, page 128). Assuming a PAYG system without the accumulation of assets beyond that necessary to pay for immediate liabilities, it can be shown that the current cost (time t) of a PAYG social system is the product of the dependency ratio and benefit ratio.[4] That is,

$$\mathrm{PAYG}(t) = \frac{P(t)}{A(t)}\frac{\mathrm{AP}(t)}{\mathrm{AIW}(t)}\,. \tag{1}$$

(a) Ignoring for the moment the young, infirm, and unemployed, the dependency ratio can be defined as the number of pensioners $P(t)$ divided by the number of active workers $A(t)$.
(b) Also, by ignoring systematic variations in pension entitlements, the cost of living and productivity growth, the benefit ratio can be defined as the average pension value $\mathrm{AP}(t)$ divided by the average amount of insured wages or earned income $\mathrm{AIW}(t)$.
(c) Assuming constant pension values and insured wages, an increase in the dependency ratio from time t to time $t+1$ will directly increase the total cost at time $t+1$ of the country's social security system.

To understand the logic of this system, imagine that society wished to reduce future expected pension costs. The age at which retirees were eligible for a state pension could be increased so that in time $t+1$ $P(t)$ was smaller relative to $A(t)$. Deferring eligibility

[4] See also Disney (2000, F14) who provided a very similar cost accounting formula, though $\mathrm{PAYG}(t)$ was treated as society's contribution rate $C(t)$, and $\mathrm{AIW}(t)$ was treated as the average wage rate.

may discount costs if, for example, in the mean time A were to increase in greater numbers than the numbers of deferred beneficiaries and the life expectancy of retirees were to remain constant. Alternatively, society could reduce the future value of the paid pension. This could be achieved in a number of ways. By reducing the income-replacement rate; by breaking the nexus between the pension and future wages by indexing pensions to prices; and by distinguishing between the hourly wage rate and total compensation, thereby limiting the reference wage when setting the pension. All these options have been contemplated or introduced by European governments over the past ten years (see Zanni, 2001). Earlier, in the 1980s, the UK government shifted from wage to price indexation thereby discounting long-term pension liabilities (a policy adopted by the French government during the early 1990s).

Consider other possibilities. Imagine society were to reduce the age at which retirees were eligible for a state pension while keeping constant the paid pension. Some active contributors A would join the ranks of the pensioners P bringing forward in time the cost of their retirement. If those pensioners were to live longer, the costs of their pensions would increase in proportion to their total (early + middle + late) years of retirement. In this regard, Lynes (1967, page 13) noted that in the early 1960s nearly 50% of French workers retired at the conventional age of retirement (65 years). When asked about their preferred age of retirement, however, over 80% of workers would have retired by age 60. Revisiting the issue nearly twenty years later, Lynes (1985, page 13) noted that the majority of French workers retired by 60 years of age and very few remained in work through to 65. In the meantime, the rules allowing early retirees to draw social security pensions had been relaxed—by that time, the numbers of pensioners P had increased faster than the number of active workers or tax contributors A. Notice *net* immigration could play a significant role in these circumstances by adding to the total stock of active contributors. As well, policymakers might impose limits on the long-term pension eligibility of guest workers.

There are a variety of advantages to PAYG social security. For one, PAYG retirees share with current workers the earned income of the economy. They may also share in the fruits of economic growth to the extent of which higher labour productivity is rewarded with higher real wages. Equally importantly PAYG systems protect the consumption expenditures of retirees, being maintained at levels consistent with past habits and tastes. In doing so the elderly may avoid the poverty so often associated with old age and retirement, a point of contrast often introduced to distinguish continental pension systems from the Anglo-American world. Furthermore, and unlike contribution-based social insurance programmes, PAYG systems tend not to penalise workers with variable employment histories and incomes. Although the value of the social security pension entitlement may be linked to average worker's earned income, it need not rely upon workers' accumulated lifetime earnings. If caps are imposed on pension benefit entitlements and if minimum benefit levels are guaranteed, then PAYG social security can help achieve social democratic goals of income equity and redistribution (see Diamond, 1977; Goodin et al, 1999).

PAYG systems are, however, national systems characterised by hard borders: citizenship is a normal qualification of entitlement (van Amersfoort, 1998). At the same time, whereas net immigration may benefit 'local' dependency ratios, such systems penalise interjurisdictional labour mobility and economic integration (Aranda-Hassel and Duval-Kieffer, 2001). For individuals subject to system-specific rules regarding vesting periods, minimum terms of work, and measures of average income, sustained episodes of 'outside' employment can translate into limited long-term benefits. As these systems rely upon earned wage income, reflecting local employment contracts and the norms of employment relationships, they are often insensitive to corporate compensation systems tied to global as opposed to local career paths. Furthermore, being tied to local earned wages these systems rely upon commodity trading systems that (hopefully) localise the benefits of exchange between countries while widely distributing any costs of such trading regimes. Inevitably, social security pension income is very sensitive to the economic performance of the 'sponsoring' country. Presumably, the larger the national economy the more diversified pensioners' long-term income risks. But equally importantly, these systems ignore finance: not only dividend income from stock ownership but also the risk-adjusted rate of return of globally invested assets (Aglietta, 2000; Boyer, 1996).[5]

Social security: intergenerational social solidarity

It is tempting to suppose that PAYG social security is simply a demographic and economic system of intergenerational taxes and income transfers. For critics of such systems, demographic imbalances combined with expected financial liabilities are sufficient to justify counterarguments in favour of Anglo-American funded public and private systems. However, it should be understood that PAYG social security is also a social institution. This is most obviously the case in France, as indicated by the complex array of jointly managed government and nongovernment organisations that administer social security. But it is also a social institution in another most important sense: it is a system of mutual obligation and entitlement. As each generation works to support their children, they earn a claim to their own retirement income in the future by virtue of the obligation passed to their children. Binding each generation together in this system of mutual obligation and entitlement is the concept and practice of social solidarity. Implied, perhaps, is a moral order [compare Keyfitz (1976) who disputes this idea].

Perhaps the easiest way to explain social solidarity is to invoke Durkheim's (1893) treatise on the division of labour. In doing so, I do not mean to suggest that Durkheim is the only appropriate reference point or necessarily the most up-to-date source relevant to contemporary French political debate. Rather, it provides an accessible source for an ideal that has evolved and developed over the 20th century through institutions such as the post-1945 French welfare state.[6] According to Durkheim, prior to the industrial revolution social solidarity was imposed by "rigid social controls in uniform belief". Whatever the mode of economic organisation prior to the industrial revolution, Durkheim characterised modern society by the division of labour, capital accumulation through firms and corporations, and economic growth through the medium of exchange. For Durkheim social solidarity derives, in an organic fashion, from the complementarities between individuals, their mutual dependence and reciprocal relationships, and a form of collective consciousness (modernity). Essentially, social solidarity is a response to the anonymity of market-exchange relationships.

If social solidarity is the product of modern society it is also an important functional component of modern society, binding together disparate individuals with (at times) quite antagonistic and competing interests. Indeed, social solidarity within a

[5] Thus there is something odd about the EU proclaimed presumption in favour of national responsibility for pension and retirement income. See the recent Communication from the Commissioner responsible for the Employment and Social Policy Directorate (noted in Clark, 2002). Although no doubt consistent with past expectations regarding the site of regulation of relationships between the social partners, it would appear to be inconsistent with the evolution of European integration unless the euro and related developments in capital markets make up the difference between local and European economic performance.

[6] See the study by Jones (1999) on Durkheim's social theory. For many, Durkheim is identified for his arguments about suicide. Here, I am more interested in his notions of social solidarity, representing a development of Rousseau's social contract and the French tradition of social realism.

generation may be thought to be functionally necessary for economic growth just as social solidarity may be necessary for the reproduction of society from generation to generation. This notion is rarely discussed in Anglo-American social science. In many respects, rational choice theory and the prospects for cooperation dominate the space in which social solidarity might be fully elaborated and discussed.(7) Crudely speaking, it could be thought analogous to social capital if that is defined as the social resources of society, including authority, trust, and customs and norms—the untraded components of social life that enable individual action. Coleman (1990, page 300) noted that social capital stands in between individual agents, thereby providing the resources for social exchange and identity set against the stripped-down view of autonomous and rational economic agents that dominates so much of Anglo-American social theory and policy expectations.

Social security as intergenerational obligation and entitlement could be also thought of as an insurance contract: "a bond or note, an exchange of money now for money later" (Arrow, 1984, page 78). As workers support their children, they effectively purchase a claim to retirement income at a specified date in the future. In doing so, the state sustains the exchange of income between generations *and* guarantees the redemption of the bond in the future. Left unspecified, except in an abstract manner, is the net present value of future retirement income. Historically, the commitment made by the French social security system was to pay future retirement benefits in accordance with the future level of earned income. This would have maintained the relative value of retirement income (workers compared with retirees). It would also have factored some portion of the wage and salary benefits of productivity growth into retirees' income now and in the future. In this respect, Arrow noted that insurance is more than just a bond; it is also a promise of future benefits contingent upon certain circumstances. If so, the future real value of PAYG social security is contingent upon (1) the growth in labour productivity, (2) the distribution of its value between capital and labour, and (3) the continuity of commitment.

Current workers as future retirees have a variety of interests. They have an interest in retirees spending their income, thereby contributing to the level of current employment (the numbers of workers who bear the burden of contributions to the PAYG system) and future economic growth (the driving force behind their expected retirement income). They also have an interest in the state's efficient and cost-effective administration of the PAYG system as they have an interest in the commitment of the state to future economic growth. As the state indemnifies the bond, workers have an interest in the state's long-term solvency. As the state is responsible for ensuring the future value of PAYG social security, workers rely upon it for ensuring that conditions (1), (2), and (3) are met at the time of their retirement and are consistent with their long-term interests. Most importantly, workers have an interest in the continuity of commitment—making possible the redemption of the retirement income bond in the future.

How are such interests protected? How is PAYG social security to be regulated? There are a variety of possible answers. One obvious means of regulation is to invoke the ideal of social solidarity: mutual obligations and entitlements. But, as Durkheim indicated, this is insufficient for a variety of reasons not least of which is the possibility of spontaneous revision time and time again of the terms and conditions of mutual obligation and entitlement. For Durkheim the regulatory institution underpinning social solidarity over the long term is contract. This can be thought to be a limited, legally defined set of rules governing discrete exchange relations. This would be consistent with much of Anglo-American social theory, specifically rational choice

(7) See for example the special issue of *Economic Geography* [**68** (1) 1992] devoted to the topic of rational choice theory.

theory (Coleman, 1992). More importantly, Durkheim suggested that contract is actually a commonly accepted moral order, a set of customs and norms that express the ideal of social solidarity and underpins the execution of the law of contract in specific cases. By this logic, social solidarity is constituted in the first instance by social norms such as trust and reciprocity where trust refers to "long-terms relations, a sharing of goals and expectations, and the suppression of short-term self-seeking" [see Deakin et al, (1997, pages 108 – 109) for a related line of reasoning].

Being a moral order, social solidarity as a social contract may 'regulate' intergenerational obligations and entitlements by reference to moral sentiments such as fairness, equity, and mutual regard. The exploitation of one generation by another would be properly ruled 'inequitable' given accepted principles of fairness. Likewise, the distribution of obligations and entitlements between successive generations would have to meet standards of fairness consistent with the reproduction of the whole society and the institution of PAYG social security. Inevitably the administration of such a system, being based upon codified rules and regulations contributions and entitlements, would have to be consistent with the principles of social solidarity. In this sense, the state is both the *custodian* of social solidarity and the *regulator* of the social contract binding the generations together. These functions place the state at the very centre of society, being the instrument of its reproduction from generation to generation. These roles are not entirely unproblematic, given the abstractness of the underlying principles. Nevertheless, it should be apparent that PAYG social security is premised upon a distinctive language of association and representation (Clark, 2001b).

Financial integrity of French social security

In previous sections, I set out the economic and political logic underpinning PAYG social security, and its French incarnation. Here, we consider the performance of this institution from its inception in 1947 through to the present day. In doing so, we concentrate on the integrity of the institution rather than its particular administrative and benefit formula. Much has been written about the latter; understanding the status and significance of the institution in French political life also requires a better appreciation of the former issue. Integrity is defined here as the long-term coherence of the institution relative to its initial goals and objectives. Integrity can also have a more explicit social meaning, referring to the degree to which the population at large accepts it as legitimate. In these ways, integrity has both a formal institutional quality as well as a less formal political quality.

To evaluate the integrity of the institution, we consider economic and demographic patterns and trends related to the dependency ratio introduced above in equation (1). We also consider the evolution of contributions and benefits, again referencing the terms introduced in equation (1). Perhaps more difficult is an assessment of the governance and regulation of social solidarity, focusing upon the administration of the institution as well as its cost-efficiency. In the next section, we refer to the nature and organisation of governance rather than precise figures on cost-efficiency (which, in any event, are unavailable). We must take care not to idealise the institution of social security, treating it as if it was established only according to the economic and political principles noted above. These principles may justify such institutions. But it would be foolhardy to suggest they were the only issues taken into account when the institution was established. Thus, we must take care not to apply ex-post reasoning either in the form of now recognised economic and demographic trends or in the form of consistent and far-reaching behaviour attributed to successive generations of policymakers.

Demographic trends

In the years leading up to World War 2, adverse demographic trends preoccupied French governments. It seemed inevitable that the total population would fall from about 42 million (1938) to 34 million by 1985 (Scargill, 1995, page 5). For more than thirty years, falling fertility rates combined with the enormous loss of young men during the First World War had conspired to produce crude birth rates lower than crude death rates.(8) During and immediately after the Second World War grants, tax allowances, and provisions against birth control were introduced to promote population growth through the family (pro-natalism). Even so, when French social security was established in 1945, only the most optimistic nationalist would have forecast the baby boom that, in conjunction with inward migration, contributed to the rapid growth of population through to the mid-1970s. By contrast, a risk-adverse actuary might have reasonably predicted a stable or even declining population base (see table 1 for a summary of French population growth by broad age categories).

The newly established social security system had to accommodate the interests of three generations at once. Those retirees who had borne the brunt of inflation prior to the Second World War and had seen the value of their entitlements extinguished during the Second World War claimed compensation from the new Republic. Those workers who had been employed or unemployed through the Great Depression and had fought during the Second World War claimed an entitlement to a just retirement. And those who were about to enter the labour market or were to stay in the labour market sought to protect pension rights and privileges while recognising the claims of social solidarity and universal coverage. Given the exhaustion of the previous fragmented and partially funded retirement schemes, there was no option but to institute a PAYG social security system. Remarkably, and against expectations, the baby boom transformed French demography and the French economy. Indeed, rapid population growth gave financial legitimacy to French social security as social solidarity.

By the mid-1970s, however, the baby boom had petered out. Fertility rates returned to pre-1945 patterns, and government officials again became concerned with the prospects and consequences of a stable or declining population (witness the

Table 1. French population (millions) and percentage distribution by age category 1931 – 1995 (sources: League of Nations, 1931; 1935; and United Nations, 1945 – 95; supplemented by Keating et al, 2001a).

Year	Total population	Age		
		0 – 14	15 – 64	> 64
1931	41.2	22.9	67.6	9.3
1935	41.3	25.2	65.0	9.8
1945	37.4	21.0	67.0	12.0
1950	41.9	22.0	67.0	12.0
1961	45.9	26.0	62.0	14.0
1972	51.7	24.0	63.0	13.0
1982	54.2	21.0	64.0	14.0
1990	56.6	19.0	66.0	13.0
1995	57.8	17.0	66.0	15.0

(8) In fact, of course, the question of population growth and decline has preoccupied French political debate for more than a century. Noel Whiteside (personal communication, School of Health and Social Studies, University of Warwick) suggests it can be traced as far back to the 1872 defeat. These historical issues go far beyond the scope of this present paper.

Sullerot 1978 Report).[9] If postwar economic growth driven, in part, by population growth had saved the fledgling social security system, by 1970 the ratio of pensioners P to active workers A had moved massively in favour of active workers. With a normal retirement age of 65 years, rapidly accumulating contributions, and the prospect of future high rates of economic growth it seemed that the gamble on social solidarity had paid off; indeed, it seemed that demography could be ignored as the social security system gained greater responsibilities and administrative coherence. Although a widespread view, not all agreed. In fact, even then, reports were issued warning about the long-term pension obligations implied by the baby-boom generation [see Lynes (1985) for further information].

Labour-force participation trends

As noted above, retirement at 65 years of age was normal even if retirement was increasing at earlier ages (in their early sixties) through to the 1960s. But as we also noted above, the preferred age of retirement was identified as being around 55 years of age. By the early 1980s many older-aged working people had realised their preferences. From the late 1960s to the late 1990s, the labour-force participation rate for men aged 60 – 64 declined dramatically from around 70% to less than 15%. Over much the same period, the labour-force participation rate of men aged 55 – 59 also began to decline, accelerating immediately after lucrative benefit revisions were introduced in the early 1980s. Consistent with patterns of female labour-force participation around the world, over the same period the labour-force participation rate of French women aged 60 – 64 also declined significantly (although the participation rate of women aged 55 – 59 increased slightly over the same period) (see Blanchet and Pelé, 1999). It is now rare for French men and women over 60 years to be working and contributing to social security. No other Western advanced economy experienced such a dramatic long-term decline in older-aged male and female labour-force participation rates (see Gruber and Wise, 1999; Johnson, 2000).

In effect, the fathers and mothers of the baby-boom generation began retiring earlier than expected in the late 1970s and early 1980s. Not only did the stock of active workers A as contributors to the social security system grow more slowly than expected due to reduced labour force participation rates, the stock of pensioners P grew more rapidly than expected much *before* the onset of the retirement of the baby-boom generation. There are various explanations of the apparent precipitous decline in labour-force participation rates after 1970. Some commentators have suggested that the generation that went to work immediately after World War 2 could claim special consideration, having endured privations of the war and the burdens of driving economic growth and development. At the same time, it has been suggested that restructuring of the state-governed industrial economy begun during the 1970s prompted employers to encourage early retirement as a means of improving economic efficiency. Most importantly, however, with the employment crisis of the late 1970s and 1980s, it has been observed that early retirement was a form of job rationing, protecting the jobs of younger workers and, in theory at least, providing opportunities for the baby-boom generation entering the labour market (Lynes, 1985).

To make this possible and thereby encourage voluntary retirement, retirement benefits had to be adjusted to an earlier retirement age and the formula between pensions $\mathrm{AP}(t)$ and wages $\mathrm{AIW}(t)$ relaxed. Blanchet and Pelé (1999, page 105) noted

[9] From 1975 to 1995, the French population grew by only another million. Whereas net immigration had played a significant role in driving the rate of population increase immediately after 1945, by the end of the 1990s the difference between in-migration and out-migration was negligible. In 1994 the crude birth rate was reported as 12.2 and the death rate was reported as 9.0.

that over the ten-year period 1974 – 84 the ratio of the average retirement benefit to the average wage increased from approximately 0.33 to 0.57. This was the result, no doubt, of many new retirees from the labour market on benefits more liberal than before and the introduction of supplements to existing benefits. By 1976 the entitlement of certain government and nationalised industry workers to full benefits at age 60 had been extended to manual workers. With the passage of pension reforms in 1981, and enacted in 1983, the official age of retirement with full benefits was set at 60 years for the *régime général*. Note that, consistent with the job-rationing logic, those workers who took retirement at 60 were required to leave the industry in which they had been employed. These changes in the benefit/wage ratio were paid out of the accumulated reserves of the social security institutions administered by the various *caisses* (funds). Social security contribution rates borne by current workers and their employers were then increased to offset, in part, future claims on pension reserves.

Employment and unemployment trends

Having encouraged earlier retirement, and having funded larger numbers of unanticipated retirees at higher benefit levels, the integrity of the French social security system became even more dependent upon (1) continued high rates of population growth, and (2) high rates of economic and employment growth through the 1980s and 1990s. But as we noted above, population growth was already faltering as fertility rates returned to pre-1945 levels. At the same time, concern was expressed about the prospects for economic growth and employment growth over coming decades. Those concerns were realised over the last couple of decades of the 20th century: the French economy underperformed many of its peers and, in particular, the United States and (to a lesser extent) the United Kingdom. Consequently, French social security was profoundly, and perhaps terminally, compromised by the next twenty years of increasingly adverse dependency and benefit ratios (to 2000).

In terms of the growth of real gross domestic product (GDP), the French economy marginally underperformed the US economy and even the UK economy during the 1980s and markedly lost ground to both economies during the 1990s (Clark, 2002). Most importantly, low and uneven rates of real GDP growth were reflected in very low and even negative rates of employment growth over both decades. Only towards the end of the 1990s did the French economy begin to show signs of significant and sustained increases in employment (to be then dashed by the onset of the global recession).[10] Accentuating these trends was sustained and increasing higher-than-OECD-average rates of unemployment. See figure 1. As we know, unemployment in France is both a long-term phenomenon and a highly geographically concentrated phenomenon. Those regions most affected by industrial restructuring during the 1970s became the regions most affected by long-term structural unemployment during the 1980s and 1990s (Flutter, 2001). Reflecting these trends, overall French labour-force participation rates remained on average five percentage points less than the Anglo-American economies and at times almost 10% less than those economies.

Basically, any chance of repaying the social security system for the opening of early retirement in the 1970s was lost during the 1980s and 1990s through declining population growth rates and employment growth rates. Unfortunately, the costs associated with higher dependency and benefit ratios fell on a static working population.

[10] There is considerable debate over the path and prospects for the French economy. For some, the introduction of the 35-hour week has had a significant long-term effect on the supply-side flexibility of the French labour market, contributing to higher rates of employment growth. Some dispute this argument, suggesting that employment growth during 1999 – 2001 was a cyclical phenomenon rather than a structural phenomenon as in the United States. See and compare Flutter (2001) and Basu et al (2001), respectively.

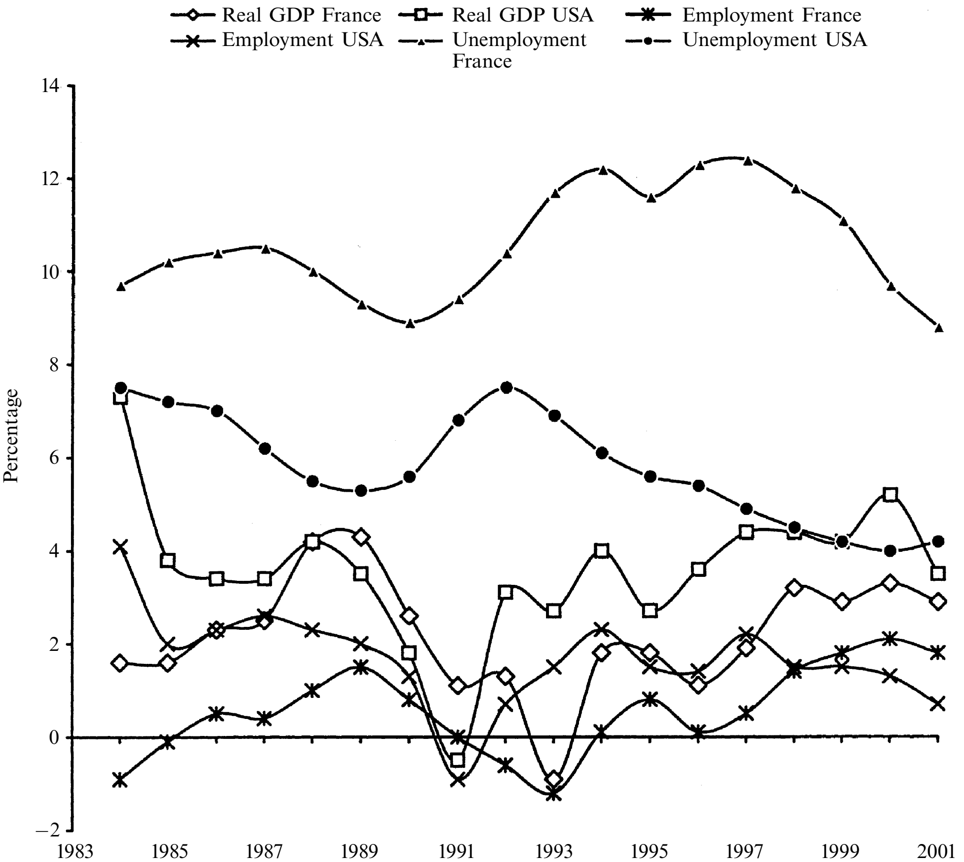

Figure 1. Comparative economic performance of France and the USA, 1984–2001 (source: OECD, 2001).

Although accumulated reserves were initially important in funding retirement during this period, the prospect of current system-wide deficits prompted higher rates of contribution charged against workers and employers. Arguably, these higher costs then contributed to lower rates of employment growth and higher rates of unemployment. By this logic, Palier (2000, page 121) has observed that "the high level of contributions is seen to have an overall negative impact on the country's economic competitiveness and to be responsible for the high rate of unemployment. The argument is that social insurance contributions inhibit job creation, as they have a direct impact on the cost of low-skilled labour". This is the legacy of 20th-century French social security: it is in this context that debate over the reform of the funding and the administration of social security institutions has taken place.

Governance and regulation of social security

In previous sections, it was argued that the state is both the custodian of social solidarity and the regulator of its institutions (in this case, the institutions of social security). As we noted above, social solidarity is based upon intergenerational mutual obligation and entitlement. At the same time, the state must guard against 'overconsumption' by those retired and 'overinvestment' by those currently working. In essence, the state's role is to promote commitment and ensure that there is a long-term balance between the generations in terms of their current and future economic welfare.

Ideally, this requires the state to be both a bystander and an adjudicator between competing intergenerational interests (compare Clark and Dear, 1984).

There is, however, a temptation to idealise the role of the state, assuming that social security began as a coherent and comprehensive system and is accepted as legitimate by all citizens. In fact, the history of French social security tells a rather different story. Instead of a universal unitary system, French social security began as a combination of various new and old retirement income institutions. In the face of considerable opposition from certain segments of the population already covered by public and private pensions, the French government was forced to introduce a system marked by considerable complexity and variable accountability. Furthermore, the administration and financial management of the social security system was highly decentralised being based upon a large number of occupational, industrial, and regional jointly managed caisses. Consequently, the social partners have had a significant share of the state's custodial responsibilities; in the first couple of decades after 1947, the administration and financial management of social security was located with the caisse notwithstanding the fact that the state guaranteed its integrity.

In this section, two points are made. First, there was at first and there remains a considerable 'gap' between the ideal of social solidarity and the functional organisation of the social security system. To make good on its custodial and regulatory responsibilities, the French government has had to fight to centralise control of the various functions and institutions of social security. Only in the last decade has the state accumulated sufficient powers to manage the system effectively, reflecting perhaps a common realisation that its current financial problems and future liabilities threaten the integrity of the nation-state. The second point made here is that the coherence of the French social security system has been undercut by a series of unresolved conflicts over the functions of social security. Social solidarity has not been a robust or unambiguous overarching principle capable of resolving conflicting interests within and between the generations. To make these points, three observations are made about the governance and regulation of French social security.

Functional and organisational fragmentation

As many commentators have noted, the design and implementation of the postwar social security system were contested and protracted processes of accommodation. If originally conceived in terms similar to the UK Beveridge report, the agreed system combined three kinds of organisations that have coexisted in one form or another through to now. At base were the state-sponsored institutions like the *régime général* (for private sector employees) and the *régimes spéciaux* (for civil servants and public employees). Also important were administrative units responsible for supplementary benefits and provisions for those judged least well off. Added to the base were so-called private voluntary occupational or industry arrangements known as the *régimes complémentaires*. Local jointly managed funds or units (caisses) administered each institution. Lynes (1967, page 22) noted that the régime général was administered by 16 regional caisses, the agricultural workers' scheme was administered by 86 local caisses, and the scheme for the self-employed was administered by 101 industry caisses. Over time, the complementary fund for salaried managers has become mandatory, and has been matched by other occupational funds similarly jointly managed by nominated or elected employer and employee representatives.

At one level, the rules and regulations regarding coverage, minimum and maximum benefits, and contribution rates were the responsibility of the state. Likewise, recognition of workers' membership and the jurisdiction of the various pension institutions and their caisses were established and administered by the French government.

However, the caisses were initially responsible for collecting contributions, setting benefits, and distributing benefits in accordance with 'local' circumstances and national legislation. Embedded in this system were multiple and overlapping jurisdictions; over time, the resulting conflicts were to be resolved (as in the régime général) with reference to a formal top-down hierarchy of authority such as *the state – the scheme – the caisse*. In many cases, however, the claimed formal authority of the state was contested and disputed; the caisses also claimed considerable autonomy and administrative functions, legitimated by the representative nature of the boards and the local circumstances of individual participants and their special claims for justice. For more than three decades, local caisses functioned as 'courts of appeal' and economic decisionmakers rather than as economic and financial agents of the central state.

Even so, we should take care not to exaggerate the current autonomy of the various pension institutions and their caisses. Over the 1980s and 1990s, the French state successfully claimed greater powers of oversight, integration, and control than ever before. In part, centralisation has had significant consequences for the relationship between the state and the régimes complémentaires (AGRIC and ARRCO). Even though these institutions can claim separate status with reference to employment and collective agreement law, the French state has increasingly regulated their funding protocols, their investment policies, and their status with respect to the régime général and régimes spéciaux. Being now compulsory, private complementary pension arrangements have become integral to the whole pension benefit system, taking some of the responsibility for income replacement previously thought to be essentially the responsibility of the state. Indeed, one option for reform is to add greater responsibilities to these institutions, mimicking funded sector-based pension plans in the Netherlands and the role of similar institutions in the United Kingdom and United States.

Multiple responsibilities

With respect to intergenerational solidarity, the state, the pension institutions, and their caisses were to be joined together in their custodial and administrative responsibilities. In fact, overlapping and at times at odds with the ideal of social solidarity has been a broader conception of the role of the state. Reflecting the turmoil of the first fifty years of the 20th century, the extensive version of social solidarity has been the welfare state—a proclaimed comprehensive system of benefits and entitlements combining pensions and retirement income with unemployment benefits, health care benefits, and social services. Whether this 'system' was ever as significant or as robust as claimed by many on the left is less important than the role of the ideal in justifying the accumulation of responsibilities of the social security system. In this respect, it is arguable that the roles and responsibilities of the various pension institutions and their caisses have been interpreted in ways *less* consistent with intergenerational social solidarity and in ways *more* consistent with intragenerational equity and social justice.

The economic crisis of the 1970s and 1980s added greater responsibilities to the pension system than often recognised. In effect, it was required to implement an early-retirement scheme to protect the employment of younger workers and potential new entrants to the labour market. Legislative changes in the official retirement age, contribution rates, and benefit entitlements relative to work experience all contributed to an extensive reinterpretation of social security—from being a system of intergenerational mutual obligations and entitlements to being a system of intergenerational resource management and welfare. Although many French workers preferred to retire earlier than anticipated, the connection between contributions and benefits built-up over successive generations of workers was muted, as the system became (in effect) an increasingly onerous tax burden on current workers. As the government sought to encourage industrial restructuring in the nationalised and nonnationalised sectors, the pension system and its administrative units were required to absorb and rationalise the labour-market consequences of industrial policy. Inevitably, the problems occasioned by these responsibilities reinforced centralised state authority just as they contributed to a (re)interpretation of intergenerational social solidarity as an extensive welfare state.

One consequence of the multiple responsibilities assumed and imposed on the social security system has been greater reliance upon current tax revenue not just accumulated contributions and investment income for the payment of pension benefits. In this respect, it is arguable that the French system has become more a tax and transfer PAYG system than a répartition system (as originally intended). Another consequence has been the steady growth in social security contributions or taxes, adding a remarkable burden to current wage costs. For 1996 it was estimated that the related nonwage labour-cost burden was nearly 50% of total labour costs in manufacturing industry, being only surpassed by Italy and Austria amongst developed Western economies (Moss, 1997; UNICE, 1998). When considered in the light of related workplace rules and regulations, it is arguable that the crisis of social security has also become a crisis of the welfare state (and vice versa).

Status of the social partners

As noted above, the social partners have had a significant long-term role in the administration and management of social security institutions. The caisse are jointly managed institutions, drawing their board members from employer and employee groups. As such they are enmeshed within the centralised, national, and regional French collective bargaining processes thereby reflecting the inevitable tensions (structural and personal) that accompany such systems. Over time, however, the role of the social partners (especially unions) in these institutions has become increasingly problematic. In part, claims made against a continued role for unions in this system have been encouraged by the long-term decline of union representation in the French economy. Remarkably, union representation is the lowest amongst Western European nations—about 9% (1997) against an average of about 35–40% (Waddington and Hoffman, 2001).[11] Such simple numbers hide considerable diversity of institutional form and organisation. Even so, French workplaces (outside of the largest companies) have quite limited contact with their union 'representatives'. In this context, there is a widespread belief that caisse membership may be the last remaining place of formal *representation* for the social partners even if their place in French society remains in principle significant and widely accepted.

It could be argued that social security contributions and their promised benefits are deferred earned income, being part of the total negotiated hourly wage or negotiated salary. Consequently, these contributions are costs to the employer, whether borne entirely or shared in some manner (in selected industries and sectors) between the employer and employees. As such, these costs enter directly into current per unit costs of production. Employers see solutions to current and future social security funding that involve increasing the rate of contributions as immediate threats to their short-term income and long-term investment. Not surprisingly, French social security contributions have become a highly contested component of current wage costs, being often identified as a problem if French industry is to remain competitive with their

[11] Only Spain has a similarly low union density, being measured at about 15%. By contrast, countries of similar economic size such as the United Kingdom (30%); Germany (33%) and Italy (38%) have much higher albeit slowly declining rates of union representation.

European neighbours and international rivals. In this context, the jointly-managed caisses are believed by employer groups to have been 'captured' by 'unrepresentative' union interests inimical to the immediate interests of employers in managing costs and the long-term interests of French society in increasing employment. Perhaps in response, in mid-2001 the principal employer group withdrew from participation in these institutions; the politics of social security 'reform' are as much about governance as cost accountability.

Where unions remain directly important is in the public services. Here, they have acted to limit the flow-on of pension 'reforms', disputing changes in early-retirement provisions, increases in the number of years worked needed for maximum benefits, and the nature and value of supplementary pension benefits. At one level, unions have held each government (left or right) hostage to their claims for differential treatment. At another level, however, the unions have acted on behalf of all workers, claiming to represent their interests and society's interests in an extensive interventionist state. Inevitably, as the union movement have sought to represent themselves as the 'true' custodians of social solidarity, the ideal of social solidarity has been 'rewritten' in terms consistent with the current distribution of income and entitlements and against the corrosive forces of globalisation (Dore, 2000). In this sense, the ideal of social solidarity has been overtaken by political dispute about the proper nature of the state.

Defection in a global economy

On the basis of an opinion poll for Merrill Lynch, various observations can be made about French understanding of their social security system (see Thomson, 1999). Only about one quarter of the 1000 polled understood that the current social security system is a PAYG system and nearly two thirds of those polled believed that social security contributions are either partially or fully invested for the future. Many of those polled also believed that social security is currently in debt, and the vast majority of those polled expected it to run a deficit in the future. In essence, a significant majority believed that the social security system would be inadequate relative to their expected incomes and a large majority believed they would have to make other private arrangements to supplement their expected retirement incomes.

Similar attitudes were reported in a study by Boeri et al (2001). They surveyed the attitudes of French, German, Italian, and Spanish citizens about support for the welfare state, and their knowledge and commitment to publicly funded PAYG pensions. Using a sample of 1000 households from each country, they concluded that most respondents believe social security will not provide the same high levels of retirement income in the future even if they underestimate long-term expected PAYG pension liabilities (country by country). Boeri et al also concluded that most citizens would not support increased contribution rates or taxation to support the welfare state even if many are ignorant about the current financial status of their respective national systems. Finally, and perhaps most importantly, they found that support for public pension systems is closely related to age, education, and social status. Younger, better educated, middle-class, and professional households are most pessimistic about the future value of their retirement incomes and are most supportive of alternatives to current systems. Conversely, older, less educated, lower status manual workers are stronger supporters of public pensions and the welfare state in general.

It should be observed, however, that the polling data do not mean the majority of French citizens reject the principle of social solidarity. At present, and on average, they tend to 'balance' declining expectations against a more general commitment to the state as the custodian of social solidarity. Even so, few individuals apparently believe the state has been a perfect or an efficient means of delivering future retirement incomes. As well, given the enormous costs of the economic crises of the 1970s and 1980s for the funding of retirement pensions, it seems that older people have accepted the need to sacrifice expected incomes on behalf of the welfare of current and future generations. In this sense, social solidarity has provided a means of equitable relief, a balance between the interests of successive generations in the face of changing economic circumstances. This is, surely, a most appropriate reading of any social contract.(12) Nevertheless, it should also be recognised that many younger French citizens are very concerned about their long-term welfare and are even willing to consider (albeit in abstract) opting out.(13)

As Thomson (1999) noted, there is support for private funded pensions. As well, there is popular support for individual retirement accounts and company-sponsored tax-preferred savings schemes (witness the support for the voluntary savings system PPESV introduced by the Jospin government in early 2001). And there is the widespread view that social security contributions are an uncomfortable cost burden on French enterprises and a 'tax' on workers' current real wages (Palier, 2000). For these reasons, younger workers have sought the ways and means of defecting (albeit obliquely) from the institutions of social security. Increased household consumption of savings products, retirement insurance products, and equity financial products has been significant over the past five years. See table 2 comparing 1995 to 1999. Most remarkable has been the growth in savings, equities, and pension-related assets. This is all evidence of *implicit* defection; those individuals able to afford to purchase such products do so while acting with the majority to limit increases in public pension contribution rates. These trends in household savings have prompted new entrants to the domestic financial market and the consolidation of French banking and financial institutions. Just as obvious are the growth of underreported earned income

Table 2. Financial assets of French households (1995, 1999) in nominal French francs (billion) [source: Banque-de-France, Paris (47-1421-DESM-SESOF)].

Category	1995	1999
Currency and savings deposits	4490	5346
Nonshare securities	621	377
Loans	182	242
Quoted shares	496	1374
Unquoted shares	1829	6434
Other equity	499	689
Mutual fund shares	1405	1751
Insurance and pension reserves	2285	3997
Prepaid insurance premiums	338	415
Other	317	584
Total [a]	12462	21209

[a] Ignores certain other categories of little significance.

(12) Compare with Boeri et al (2001) who find it hard to reconcile the fact that a significant number of respondents from all surveyed countries would opt out of state-sponsored social security if they could even though they also support the principle of state provision of pensions.

(13) The opt-out option is problematic. Those most vulnerable in the labour market would stay in the system, so as to protect their long-term income security. Those most successful in the labour market would leave to protect their long-term retirement incomes, and (hopefully) reap higher rates of return in money and capital markets. This is the often-observed problem of selection bias (Arrow, 1984). A necessary but not sufficient condition for the success of national répartition and PAYG systems is the mandatory participation of all citizens. There are strong grounds for denying individuals the right to opt out of such systems.

and the flow of unaccounted cash to individual investment and savings accounts in jurisdictions such as Luxembourg.

Although younger French citizens have an interest in defection from the public pension system, they also have a strong interest in defection from the national economy and those European economies dominated by unfunded pension systems.(14) Imagine that French workers are bond holders in the French and European economies—as is surely their status in that they hold at least an implicit (if not explicit) promise made by the state that society will repay their commitment to the welfare of younger generations (secured against the assets of the state; see above). As we have seen, the future value of their pension entitlements is a function of the rate of growth of population and the rate of growth of labour productivity (Boldrin et al, 1999). In effect, the value of their bond is a partial function of the benefit ratio and dependency ratio [equation (1)]. If the euro is a success, and if economic integration accelerates, national growth will be even more closely correlated with continental Europe. Although closer correlation may promote economic growth and labour productivity, it will not translate into higher population growth. At the same time, by becoming ever more dependent upon Europe, French citizens will be ever more dependent upon comprehensive solutions to similar public pension financial liabilities of Germany, Italy, and Spain.

In this respect, it is arguable that both the French state and its citizens are 'over-invested' in the expected growth of France and Europe. For individuals, one solution is obvious: diversify their savings and investments to other regions of the world via the investment strategies of private pension systems (as is common in the Anglo-American world) or the investment strategies of local finance and insurance companies. By doing so, the future value of their social security could be made dependent upon the relatively young and growing populations of the USA, China, and Asia [but *not* Japan; see Oguchi and Hatta (2001) on the crisis of Japanese demography and pensions]. Much the same argument can be made about the proper investment strategy of state-sponsored social security institutions. Perhaps the only way out of the long shadows cast by low demographic growth and economic growth is for the investment of social security contributions in a diversified portfolio of national and international demographic and economic growth futures (see Keating et al, 2001a; 2001b). Such a strategy would not violate the principles of national social solidarity, but would 'scale up' its geographical contingency (Swyngedouw, 2000). Nor would such a strategy violate traditional prudential concerns (Chemillier-Gendreau, 2000), even if a different geography of risk were introduced into the flow of future income.(15) Those that advocate the development of a large state-managed central reserve fund have such an investment regime in mind.

If clear in theory, there remain two obvious practical problems. One is the design of an appropriately diversified portfolio—what level of risk should be accepted given

(14) Here, I emphasise financial defection because it seems that significant out-migration from France to countries with funded pension regimes such as the United Kingdom and the Netherlands is a most unlikely scenario. There are, of course, large numbers of younger French workers in southern England. Whether this is a permanent state of affairs remains to be seen. See Martin (2000) on European patterns of labour mobility compared with the USA.

(15) This argument presumes segmented international capital markets, contributing a 'local' premium to global markets available to those investors willing to bear the appropriate risk. See Feldstein and Horioka (1980) for an early assessment of the significance of this phenomenon, Ross (2001) for arguments in favour of continued regulatory differentiation between capital markets, and Wójcik (2001) for an empirical assessment of its continuing significance for Europe. See also Christopherson (2001) for an analogous argument from the side of labour markets. But compare with Clark et al (2001) on the related harmonisation of international accounting standards.

the maturity of the French population? Clearly a younger population, one with their lifetime ahead of them, are better able to absorb higher risks over the long term than an older population. In this respect, younger French citizens should have a riskier investment portfolio than an investment portfolio that represented the population at large. A second problem has to do with the most appropriate organisation of the investment process. We have noted above that existing social security institutions combine various constituencies and objectives together under the rubric of joint management and the representation of the social partners. For this kind of system to be effective in the wider world of investment management, the state would either play a stronger role overseeing the decisionmaking of these institutions and/or ensure that investment functions are provided by competitive market for financial services. In this respect, the current policy of enhancing the competitiveness of 'national champions' may have to be modified in favour of encouraging the entry of efficient and effective global investment managers.

Finally, it should be noted that the most obvious argument—that the state is the ultimate guarantor of the value of retirement income and the financial integrity of the social security system in general—would be difficult to sustain. If true fifty years ago, it is now quite implausible given the size and significance of global financial markets (and the diversity of demographic and economic growth prospects they represent). In this sense, the future value of French social security now depends upon these markets for realising the promise of social solidarity even if we are unable empirically to assess the implied relative risk profile. Fifty years ago, of course, it was argued that social solidarity was the proper mechanism for insuring the welfare of successive generations of working peoples against the market. This is surely a most remarkable turn of events in the modern history of the state (Peck, 2000).

Conclusions

In this paper, I have traced the evolution of French social security from its inception immediately after the Second World War through to its current status and future crisis. My approach to the topic has been analytical rather than historical; there are others more skilled and knowledgeable about the particular historical moments and circumstances of French social security (see Whiteside, 2000). In particular, I have tried to indicate how and why French social security has proved to be so fragile and yet, paradoxically, so robust. This has required the exposition of an analytical framework consistent with the seminal contributions of Samuelson (1958) and Aaron (1966) as well as the inclusion of concepts allied to the notion of social solidarity drawing upon Durkheim (1893).

As is well appreciated, PAYG social security is heavily dependent upon demographic and economic growth (Keyfitz, 1976). Immature systems characterised by the dominance of a younger working population may reap the benefits of demographic and economic growth while honouring their obligations to share current income with each generation as they come to retirement. On the other hand, mature systems dominated by older workers and retirees may be a burden on the working population and may, over the long term, drastically affect the income of future generations through 'overconsumption' and 'underinvestment'. In this respect, the introduction of the PAYG system in France in 1947 was a gamble on an unlikely combination of increased demographic and economic growth; for the first fifty years of the 20th century declining fertility rates promised successively smaller generations of French citizens. For a time, it is true, the gamble paid off. Now, however, the baby-boom generation represents a double burden on French social security: the sheer financial weight of paying for their retirement will be amplified by their failure to sustain population growth (a recurrent European and French dilemma).

Tracing through the implications of this argument, drawing upon demographic indicators and the uneven path of the French economy, allowed us to understand better the limits of PAYG systems. However, demography and economics are just two elements in a more complex social and political system of intergenerational social solidarity. Although PAYG social security makes a promise to each generation, such promises are contingent upon the need to balance the rather different interests of overlapping generations. In this respect, the promise of future retirement income is more akin to a bond than a property right. Insuring the long-term value of that bond is the role and responsibility of the state; it acts both as the custodian of social solidarity and as the regulator of its social security institutions. However, as is apparent from the historical record, there are limits to state capacity just at the institutions of social security may be overtaken by other interests and objectives.

The future of French social security (as inherited) is in doubt. The discounting of future benefits and the apparent incentives for younger workers to defect from the social security system suggest that social solidarity may not be able to hold the system together in the face of successively poorer retirees and overburdened workers. If the national system is to be 'saved', demographic trends and forecast lower rates of economic growth must be compensated for; global capital markets are one obvious way out for individuals and the population at large. Alternatively, governments may have either to encourage or at least to remain neutral with respect to individual and employer attempts to fashion long-term retirement income strategies. Given the economic and financial integration of Europe, it seems unlikely that the French state will be able to deny individuals the opportunity to reach beyond Europe's borders to financial opportunities outside of historical commitments.

If, as I suggest, global financial markets are a vital ingredient in any strategy to save French social security, there remain important questions about the governance and regulation of its institutions. A significant part of my argument concerned the complex array of agents, objectives, and interests that threaten to overwhelm the governance of French social security. If these institutions are to enter global financial markets there are reasonable doubts about their long-term efficacy. There seems little doubt that London and the private institutions of global financial markets will play more significant roles in 'managing' French expected pension benefits and liabilities. This goes against the grain of the efforts by successive French governments to reform local and European securities' markets in the hope of challenging Anglo-American institutions and practices. Similarly, it goes against the grain of common commitments in favour of the role of the social partners in 'regulating' economic and financial decisionmaking.

In this respect, 'reform' of French social security may be as much a matter of discounting embedded democratic interests as it is a matter of discounting the future value of retirement income. Perhaps this is already well appreciated: attempts by the state to reform social security institutions according to financial accountability are widely perceived to be a threat to the powers of those social partners who have had long-standing and significant roles in the administration and management of the system. In this respect, the principle of social solidarity has more work to do: it must legitimise reforms of the governance and regulation of social security in the interests of those who stand to benefit and those who stand to pay for the retirement of the baby-boom and successive generations.

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