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Privatizing public pension systems Lessons from Latin America

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Abstract

The major goal of this analysis is to examine the pros and cons of privatizing public pension schemes based on the Latin American experience. The study draws on evidence from four countries that have fully privatized their public pension schemes (Chile, Mexico, Bolivia, and El Salvador) and four that have partially privatized (Argentina, Uruguay, Colombia, and Peru). Some evidence suggests that privatization is having positive economic effects, contributing to the development of financial institutions and the availability of investment capital. It may also be increasing national savings rates and the rates of economic growth, but on these issues there is less agreement. The benefits of privatization go primarily to high-wage male workers with few benefits for low-wage and female workers. As a result, privatization contributes to both income and gender inequality. Efforts to draw lessons for the US must take into consideration numerous political and economic differences. © 2001 Elsevier Science Inc. All rights reserved.

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1. Introduction

In many countries, both rich and poor, a gap has been opening up between pension fund obligations and pension fund revenues, a gap that is projected to increase dramatically in the decades ahead. There is general agreement among international pension policy analysts that something must be done. At the center of the debate as to what to do are proposals to privatize existing public pension schemes, an approach that is viewed by many as a way to deal with

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this projected gap and at the same time foster economic growth (James, 1998; Orszag & Stiglitz, 1999).

Since the mid-1990s, there has been a great deal of discussion in the US about a variety of different proposals designed to partially privatize the social security system. Some have been critical of such proposals (Baker, 1997; Ball, 1997; Williamson, 1997), but the emphasis, particularly in the popular press, has been on the potential economic advantages of privatization, advantages to the government, such as reducing the public burden of providing for the retirement of the baby boomers and advantages to workers, such as higher returns on social security contributions (Beard, 1996; Bipartisan Commission on Entitlement and Tax Reform, 1995; Kotlikoff, 1992).

When major changes are being considered in a program that impacts the lives of as many Americans as does the social security system, it behooves us to find out as much as we possibly can about what is likely to happen before making such changes. There are a number of ways in which relevant information can be obtained; each alternative has its strengths and its limitations. One approach, and the approach considered here, is to look at what has happened in other countries that have had some experience with these policies. While it would be a mistake to assume that reforms related to privatization in other nations would have basically the same consequences in the US, it would also be short-sighted not to at least take a close look at what has happened in those nations. When attempting to generalize from the experience of other nations to the US, it is important to take into consideration differences in program history (such as whether the nation has had a long or a short history of earnings-related public pensions), differences in cultural values (such as the strength of the commitment to self-help and individual responsibility or those values that help define gender roles and the relative status of women), and differences in political structures (such as degree of institutionalization of democratic procedures or the strength of interest groups that have vested interests in proposed pension policy reforms).

Any transition from an existing pay-as-you-go (PAYG) system (e.g., the current social security system in the US) to an advance funded alternative will involve substantial transitional costs. There is a risk that one generation will in effect end up paying for the retirement of its parental generation while at the same time setting aside savings to pay for its own retirement. For this reason, it is important to raise questions about which population subgroups are bearing the brunt of these transition costs. It is also important to consider the distributional consequences of privatization more generally. Until quite recently, there has been relatively little attention to the distributional consequences of the proposed privatization of public pension schemes particularly in Latin America (Arenas de Mesa & Montecinos, 1999; Kay, 1997b)

In recent years, we have begun to see efforts to address the privatization issue based on evidence concerning pension reforms in a few OECD countries such as the UK (Liu, 1999; Schulz, 2000) and Sweden (Sundén, 2000; Wadensjö, 2000). However, to date, most of the evidence with respect to the impact of shifting from public defined benefit PAYG schemes to privatized (advance funded defined contribution individual accounts) alternatives comes from Latin America. Until the 1990s, Chile was the only Latin American country that had privatized its public pension system, but during the decade of the 1990s seven other Latin

American nations fully or partially privatized their public pension schemes. Latin America now provides several models of full privatization and several others of partial privatization.

In Section 2 the focus is on policy lessons derived from the Chilean experience. Section 3 extends that discussion to include evidence from seven other Latin American countries. In Section 4, the implications of contextual issues are explored, with an emphasis on those linked to historical, structural, and cultural differences between these nations and the US.

2. Lessons from Chile

In 1981, Chile became the first nation in the world to shift from a public PAYG defined benefit pension system to a privatized defined contribution alternative based on individual accounts. Chile is particularly important to the present analysis as it is the nation with the longest experience with defined contribution individual accounts.

In 1924, Chile introduced a national public pension system. It was the first nation in Latin America to do so. During the early years the scheme covered only a fraction of the population and only a few occupational categories. Over the years the proportion of workers included increased, and by the early 1970s the program covered approximately three-quarters of the population (Mujica & Larrañaga, 1992). However, by the mid-1970s the Chilean scheme could no longer function without huge subsidies out of general government revenues (Edwards, 1998). Due to a number of factors, the system was not generating payroll tax revenues that were adequate to cover pension obligations even with payroll tax rates at times as high as 25%. The pension scheme was supposed to replace 70% of a manual worker's final wage, but by the late 1970s the replacement rate was closer to 20% despite massive government subsidies (Simone, 1983). There were also serious problems of noncompliance due in part to very high payroll tax rates (Kay, 1997a).

The privatization of the pension system in 1981 was part of a more general effort by General Augusto Pinochet to marketize the Chilean economy (Williamson & Hochman, 1995). The authoritarian Pinochet regime was able to impose this policy shift despite opposition from a number of groups including: public sector workers, teachers, health workers, academic experts, and union members (Edwards, 1998; Kay, 2000b; Piñera, 1992, pp. 22–30). Given the number of people affected, the amount of opposition was quite limited. Among the general public, opposition was not great in part because the scheme it was replacing was performing so poorly; it was paying 70% of retirees pension benefits below the official minimum pension (Graham, 1998, p. 47). Another reason was that for the first year or so only new workers were required to enroll in the new scheme. Those already covered by the old PAYG scheme were not required to shift. Many older workers did remain with the old scheme and even as late as 1999 approximately 5% of workers were still covered under the old scheme (Piñera, 1999). Yet another reason the shift was not strongly opposed is that workers were given strong economic incentives to shift to the new scheme. Employers were required to give those who did shift a huge (18%) wage increase. They were also given a "recognition bond" to compensate them for contributions already made to the old PAYG system (Kritzer, 1996).

The privatized scheme in Chile is mandatory for all new employees, but optional for the self-employed. Each worker contributes 10% of his or her wage (up to a specified ceiling) into one of several (the number fluctuates) approved pension funds (called AFPs). As of this writing, there are eight AFPs, but as recently as 1994 there were 22. The AFPs are privately managed funds that compete with one another to attract enrollees (called “affiliates”). Over and above this 10% contribution there is an additional fee that varies from one fund to another, but averages about 3%, to pay for disability and survivor’s insurance as well as to pay for the cost of administering the funds, marketing costs, and profit (Queisser, 1999). The fund management industry is highly regulated by the government. For example, the state sets limits with respect to the maximum proportion of assets that can be invested in each of seven asset categories such as stocks, bonds, foreign equities, etc. If the return for a fund falls more than 2% below the average for all pension funds, it is required to make up the difference out of its own asset reserves (Queisser, 1998, p.77). To protect covered workers, the corporate finances of the AFP are kept separate from those of the pension fund assets it administers. If an AFP becomes insolvent, the pension assets remain intact; the government steps in and finds another manager for those pension assets. Workers who are dissatisfied with one AFP can shift to another.

After contributing for 20 years or more, the worker uses the accumulated assets to purchase an annuity. If the resulting annuity benefit would fall below the minimum pension, the worker is awarded a government-financed minimum pension instead.

The Chilean scheme is generally described as a fully privatized scheme despite extensive government involvement. The government is responsible for regulating the AFPs so as to protect workers from fraud and risky investment strategies; it is responsible for guaranteeing a minimum pension to low-wage workers who have contributed for 20 years or more; it pays for the recognition bonds; and it pays for the pensions of those who retired under the former system. The term “fully privatized” refers to the decision to require all new workers to shift to the new defined contribution individual accounts scheme.

As Chile is a small nation (about 15 million people), a nation with less well developed financial institutions, a nation with a much lower standard of living, and a nation with a very different cultural background, it is important to be very cautious when attempting to make judgments as to how the Chilean experience can best be used to inform the current debate over social security reform in the US and other OECD nations.

The discussion that follows presents a number of generalizations that policy experts have made based in large measure on the Chilean experience with privatization. It is important to qualify these generalizations, and where called for I have attempted to do so. Some are better viewed as lessons for developing nations similar to Chile than as lessons for the US.

Over the long run rates of return for assets held in individual retirement savings accounts are likely to be high relative to the “imputed” returns on contributions to the typical PAYG defined benefit public pension schemes. The rates of return for contributions made to mature public PAYG defined benefit schemes are typically determined by demographic changes, such as population aging, and trends in (real) wage rates. These rates are typically much below the rates of return on capital assets. In Chile, between 1981 and the end of 1998, the average real rate of return for AFP investments was 11%, a figure often cited by proponents of privatization (Piñera, 1999). When we take into consideration the payroll tax of

approximately 3% that goes to cover administrative expenses, the average return turns out to be much lower, something closer to 5.1% (Kay, 2000a); but it still substantially higher than the 1% or 2% return young workers in the US can reasonably expect on their contributions to the current PAYG social security scheme.

It is of note that the very high returns during the early years of the newly privatized Chilean scheme were due in large part to investments in government bonds that paid high (double-digit) interest rates; a relatively small share of these pension assets were allocated to common stock (Kritzer, 1996). Also important was the privatization of many public utilities (Huber & Stephens, 2000). In recent years at retirement the pension has replaced approximately 78% of a typical worker's income averaged over the 10 years just prior to retirement (Piñera, 1999). While the 19-year average return has been high (11.2%), the real (inflation adjusted) return on assets held in Chile's AFPs has been lower in 4 out of the last 5 years; between 1995 and 1999 it was: -2.5%, 3.5%, 4.7%, -1.1%, and 16.3%, respectively (Piñera, 1999). Between 1990 and 1998, after taking into consideration commissions and fees, the average worker had a negative return. Even between 1982 and 1998 the average worker would have had a better return had the same amount of money been invested in 90-day certificates (Kay, 2000a).

Historically, rates of return for public funded schemes (as in Malaysia and Singapore) have been lower than privatized funded schemes (as in Chile and Argentina) (Vittas, 1996), but this could be due in large measure to the way in which these schemes were structured and administered. As Orszag and Stiglitz (1999) point out, it is important to avoid conflating the consequences of individual accounts and advance funding. Typically, one type of public scheme (a mature PAYG) is being compared with one way of providing individual accounts (privately administered and advance funded). If an advance funded public scheme with passive (indexed) private sector investment of the trust fund were compared with privately administered advance funded individual accounts, the results might well turn out quite differently due to the high marketing and administrative costs associated with private sector individual accounts.

Privatization is likely to have positive effects on several important aspects of the economy. In Chile, pension reform has had a positive impact on the development of capital markets (Arenas de Mesa & Bertranou, 1997). By 1995, the funds held by the AFPs had increased to 40% of the GDP and clearly had made a major contribution to the development of Chilean capital markets (Queisser, 1999). There is also much agreement that privatization has contributed to the development of financial institutions in Chile. Not only did it increase the funds available for investment, it also led to increased disclosure requirements for public companies, the development of risk classification agencies for bonds, improved bank supervision, new securities and corporation laws, and other such changes associated with modern financial institutions (World Bank, 1994, p. 213). However, these benefits with respect to the development of financial institutions are much more likely to be repeated in other nations at a comparable level of economic development than in the US and other OECD nations that already have well-developed financial institutions.

Some experts argue that privatization has definitely increased the savings rate (Edwards, 1998, p. 52); others that it may or may not have had such an impact (Barrientos, 1998, p. 155;

Orszag & Stiglitz, 1999). While there is general agreement that between 1986 and 1996 the savings rate increased from about 10% to about 29%, there is disagreement as to the source. Some point out that during this period most of the increase in savings was corporate or government savings, not household savings, the category that includes the new pension fund accounts (Huber & Stephens, 2000). Many critics and some supporters of privatization point out that it is hard to say how much of this change in savings rate was due to pension reform given that there were a number of other major changes that would also be expected to contribute to an increase in the savings rate taking place during this same period of time (World Bank, 1994, p. 209). Much of the increase in savings due to the new pension accounts may have displaced other forms of savings (Graham, 1998, p. 50).

Similarly, some argue that there has been a positive impact on the rate of economic growth (Kay, 1997a; Piñera, 1999); more common is the view that there may have been such an impact (Arenas de Mesa & Montecinos, 1999). There is general agreement that Chile has experienced a great deal of economic growth since the early 1980s, but there is much less agreement about how much (if any) of that growth can be attributed to pension reform.

General revenues can be used to help finance the transition from a PAYG to a privatized scheme. In Chile approximately 40% of the cost of the transition has been financed by government bonds paying market rates. These bonds are primarily being sold to the AFPs and will be gradually redeemed by the government using general revenues during the retirement years of those covered under the old system (Piñera, 1999). This is viewed as a way to distribute the cost of burden of the transition across generations. The burden on general revenues due to transition costs had started to decline by the mid-1990s (Edwards, 1998). Some advocates of privatization for the US have also suggested that the transition could, at least in part, be financed by selling bonds (Beard, 1996, p. 157). While most analysts would agree that general revenues could in theory be used to help finance a transition to privatization in the US, a common objection is that such a policy would involve sacrificing social security's traditional self-financing structure. While this approach may have worked for Chile given the dictatorial power of the Pinochet regime, questions can be raised about the political feasibility of such a policy in the US. It may, however, be a useful lesson for other developing nations considering a similar transition.

With privatization, returns on retirement contributions tend to be greater for high-wage workers than for low-wage workers. While the return on invested capital is the same for everyone who is invested in a particular fund, with some of the AFPs there are a number of flat-fee expenses that have the effect of reducing net returns for employees who earn less and thus contribute less (Graham, 1998, p. 52; Huber & Stephens, 2000). For example, with some of the AFPs there is a flat rate transaction fee for each contribution that has the effect of reducing the net return on contributions for workers making small contributions. Further adding to this regressive effect are the penalties linked to interruptions in the flow of contributions associated with moving in and out of the labor force, a pattern that is more common for low-wage than high-wage workers.

By some estimates, more than a third of currently covered Chilean workers will eventually reach retirement age with AFP account balances so low that they qualify for the minimum pension (Kritzer, 1996). There are two somewhat contradictory ways to analyze returns for

such workers. We could say that their effective returns are higher than those of workers with slightly higher wages who do qualify for a pension, because the government in effect adds money to their account after retirement. Or we could say that their perceived returns are lower than those of workers who earn enough to justify a regular pension, because they realize no increase in their eventual pension based either on the size of their contributions or the performance of assets in their accounts.

In the event an individual accounts scheme were introduced in the US, it is likely that money managers would also want to find ways to charge fees to help compensate for the high administrative cost of maintaining small accounts. If they were allowed to do so, this would have a regressive impact on returns for low-wage workers. It is also likely that such regressive fees will be common in other developing nations that privatize. However, it is of note that in recent years the trend in Chile has been toward less regressive fee structures (James, 1998).

Privatization has affected women adversely. One reason is that as in the US and in most other OECD nations with PAYG public schemes, the old public PAYG scheme that is being phased out in Chile includes a number of provisions that protect women and provide redistribution from men to women. With privatization, these protections were for the most part removed. Today little effort is made to make up for the effects of the gender gap in wages and gender differences in work histories. Women are disproportionately represented at the lower end of the income distribution. They are also more likely to move in and out of the labor force and, as a result, are less likely to reach the 20 years of contribution required for the minimum pension (Elter & Briant, 1995, p. 23). Chile also uses gender-specific annuity tables. When women retire, due to these gender differences, they find that their pensions replace substantially less of their preretirement salary (Huber & Stephens, 2000; Kay, 1997a, 1997b).

It is likely that provisions would be made in the US for unisex actuarial tables, although this would be less likely in other developing nations. The loss of the redistributive benefits of the current PAYG scheme would, however, be important in the US as is the case in Chile.

The administrative costs associated with the individual accounts tend to be high. The administrative costs for the AFP accounts are less than transparent as there are a number of periodic transaction fees in addition to the initial 2.5% to 3.5% fee. For small accounts, these fees can eat up much of any advantage there might have been of investing in private financial markets as opposed to participating in the old government PAYG defined benefit scheme (Diamond, 1996). Many commentators present figures on the rate of return for the Chilean pension funds that do not take into consideration costs associated with marketing and the administration of these funds. There is evidence suggesting that the cost of administering Chile's privatized scheme is higher than it was with the old PAYG scheme (Diamond, 1994) and evidence that it is the highest in Latin America (Huber & Stephens, 2000), but there is also evidence suggesting that administrative costs are coming down (James, 1998). While the administrative costs of social security in the US are very low when compared with Chile, there is general agreement that there would be a sharp increase in costs in this country if individual defined contribution accounts administered by private sector money managers were added (Salisbury, 1999). However, as the balances in these accounts would on average be much higher in the US due to higher wage levels, it is likely that the cost of administering such a scheme would be lower in the US than it has been in Chile.

The marketing costs associated with the AFPs are high and getting higher. The returns for the various funds tend to be very much alike (e.g., in 1999 the range was from 16.0% to 18.5%) due in large part to the stiff penalties for falling below the average return for all AFPs. Given these similar rates of return, the funds must find other grounds on which to attract enrollees. Incentives such as free cell telephones or bicycles are used to get workers to shift from one AFP to another (Friedland, 1997; Rotella, 1998). This marketing effort calls for a large sales staff and other marketing expenses (Kay, 1997a). The cost of all this marketing reduces the net return for participating workers. Over the years, the sales staff for the various AFPs have grown considerably as competition between AFPs has become intense. Between 1990 and 1997, the sales force in Chile has grown from 3500 to 20,000 (Graham, 1998). It is also estimated that as many as 50% of all enrollees switch AFPs each year (Queisser, 1999).

Privatization may promote movement from the formal to the informal labor market. In an effort to avoid paying the high payroll taxes associated with the privatization scheme (which approaches 20% for Chilean workers when we include the contribution for health insurance as well), some workers are moving from the formal to the informal sector of the labor force. This move is particularly attractive to workers who have 20 years of contribution credit (this number often includes credit for several years spent contributing to the former PAYG scheme) and who realize (or expect) that the savings in their individual accounts at retirement will be so low that they will qualify for the government-financed minimum pension (Arenas de Mesa & Bertranou, 1997). One estimate is that between 30% and 40% of those currently covered will end up taking the minimum pension (Kritzer, 1996).

The argument made here is more likely to apply to other developing countries than to OECD nations, many of which are used to paying high payroll taxes to finance public pension systems. In developing countries with a larger fraction of the population living close to the margins of subsistence, the incentive to shift to the informal sector is likely to be stronger. While it is likely that there would be an increase in the payroll tax were there to be a shift to a partially privatized scheme in the US, the increase would most likely be a modest 1.5% to 2.0% (based on the various proposals made to date), not enough to push many people into the informal labor market.

3. Evidence from several Latin American nations

Chile is no longer the only Latin American nation to have introduced defined contribution individual accounts. During the 1990s, several other countries have privatized or partially privatized their social security systems: Peru (1993), Argentina (1994), Colombia (1994), Uruguay (1995), Mexico (1997), Bolivia (1997), and El Salvador (1998) (Cruz-Saco & Mesa-Lago, 1998a; Mesa-Lago, 1997; Peirce, 1997; Queisser, 1998, 1999; Stanton & Whiteford, 1998; Williamson & Pampel, 1998). While all of these countries have adopted some form of privatization, the schemes in Bolivia, El Salvador, and Mexico are fully privatized and thus closer to the Chilean model. The other countries have adopted mixed or coexisting programs that include a PAYG pillar. All of these countries have adapted aspects of the Chilean model,

but have done so in ways that respond to nation-specific economic, social, and political contextual factors.

Those countries that have fully privatized their pension systems have replaced the old system and require all employees who are new entrants to the workforce to participate in the new scheme. For example, the program in El Salvador requires all new employees and all younger employees (those who were under age 36 in 1998) to enroll in the privatized scheme. The old scheme remains in place for older employees, but as in Chile it is gradually being phased out (Queisser, 1998, p. 133). In Mexico and Bolivia, all employees have been shifted to the new privatized schemes.

Partial privatization has taken many forms in Latin America. In addition to the nations that have fully privatized their national pension schemes or are on the road to full privatization, there are an equal number of nations that have opted for partial privatization. These include Argentina, Colombia, Uruguay, and Peru. Some systems have eligibility restrictions for participation. For example, in Uruguay, those earning below 5000 Uruguayan pesos (US\$812) per year had to enroll in the nation's defined benefit public pension scheme, and those who earned over this limit had to enroll in the privatized scheme (Davrieux, 1997). This was the level as of 1995, but due to yearly indexing it is higher today. In Peru, workers entering the labor market have a choice between the privatized scheme and the public pension system, but once the choice has been made, they are not allowed to switch. In Colombia, workers may switch between the systems once every 3 years, and in Argentina, workers also have the option of switching up to twice a year (Isuani Ernesto & San Martino, 1998; Queisser, 1998, 1999).

Individual retirement savings accounts are typically funded entirely by employees themselves, but in some countries, the cost of funding these accounts is shared with employers or the government. In Argentina, Colombia, Uruguay, Bolivia, and Peru the practice is the same as in Chile; only the employee makes contributions to the individual accounts. Contributions in these countries range between 7% and 10%. In Mexico, contributions to the individual accounts are split three ways; the employee contributes 2.125% of salary, the employer contributes 7.95%, and the government contributes 2.375% (Huber & Stephens, 2000). In El Salvador, the 10.5% contribution to the individual accounts is split between the employee and the employer with the employer paying a slightly larger share (5.50% and 5.15% of salary, respectively) (Superintendencia de Pensiones, 1999).

The lesson from the various Latin American countries on this issue are likely to be most relevant to other developing nations considering the privatization of their PAYG schemes. Proposals for the US generally specify that all of the money in the individual account would come from the employees themselves.

In several of these nations with privatized schemes, there is a guaranteed minimum pension for workers who have been covered for a specified number of years, but for one reason or another end up with a very low pension benefit. In Chile, such a pension is available after 20 years of contribution. In El Salvador and Mexico it is available after 24 years (Cruz-Saco & Mesa-Lago, 1998b). But in some countries such as Bolivia and Peru (Graham, 1998, p. 52; Queisser, 1998), there is no such guaranteed minimum pension. Chile's minimum pension is about 27% of the national average wage and is indexed to inflation (James, 1998). The

minimum pension in El Salvador is set by the government and is not indexed to inflation or changes in the overall standard of living. In Mexico, it is equal to the minimum salary in Mexico City (Queisser, 1998, p. 68). In Argentina, 30 years of contributions are required and the minimum pension is determined by the government. Colombia has a minimum pension that is equal to one minimum wage; eligibility requires 23 years of contributions (Cruz-Saco & Mesa-Lago, 1998b). In countries such as Argentina and Colombia, the women and low-wage workers most likely to be in need of a minimum pension often will have opted for the defined benefit scheme.

In most of these countries, the government specifies upper limits with respect to the proportion of the pension fund assets that can be invested in various asset classes. Some countries such as Chile, Argentina, Mexico, allow investments outside the country; others such as Bolivia require that all assets be invested domestically. Regulations with respect to upper limits as to the fraction of fund assets invested in various asset classes are present in Chile, Mexico, El Salvador, Bolivia, and Uruguay. One reason for such regulation is to control the risk level of benefits. Control over where funds are invested is also used to assure that the assets are used to finance domestic needs for investment capital. The realization that a funded scheme will generate substantial assets that in turn can be used to stimulate economic growth has become a major argument in favor of privatization (Iwasaki, 1996; Reisen, 1997). For some countries such as Mexico, Uruguay, and Bolivia, rules about how much is to be invested in various asset classes are used to assure that a specified portion of the assets be invested in government bonds (Queisser, 1998). Policymakers expect these funded accounts to have a positive impact on the economy independent of the actual long-term returns for individual workers. Bolivia and Mexico do not guarantee minimum yields (Mesa-Lago, 1997). In several of these countries, the amount invested in government bonds is quite high, for example, in the fall of 1998 it was 100% in Bolivia, 94% in Mexico, and 79% in Uruguay. In contrast, the amount invested in bonds was only about 41% in Chile and 46% in Argentina (García, 1998).

Relatively little evidence is currently available with respect to the distributional consequences of these various privatization schemes, but what is available suggests that women and low-wage workers tend to do less well than men and higher-wage workers. It is difficult to make generalizations about how well women and low-wage workers are doing or will do in connection with these schemes relative to how they did with old defined benefit schemes. One reason is that the old schemes were typically in very bad shape when the change was introduced. In many of these countries, benefits under the defined benefit scheme had become very low and payroll taxes had become very high due to problems in the way the plans were designed. The old scheme in many countries covered only a very small fraction of the population and it often excluded a large portion of low-wage workers (Graham, 1998; Queisser, 1998). The old schemes often had provisions making it possible for certain categories of workers, typically those in high-wage public service occupations such as judges, to get very high pension benefits relative to payroll tax contributions (Ayala Oramas, 1997; Queisser, 1997).

We have already discussed the adverse distributional consequences for women and low-wage workers in Chile. In Peru, women and low-wage workers tend to do less well for the

same reasons mentioned in connection with Chile (Graham, 1998, p. 122). An additional factor for Peru is that there is no minimum pension; it was not included due to the large number of low-wage workers (Graham, 1998, p. 52). In Argentina, an important factor is the 30-year limit for eligibility for the minimum pension. Women and low-wage workers are less likely to have accumulated 30 years in covered jobs and for this reason, will be less likely to be eligible for that pension (Elter & Briant, 1995; Graham, 1998). However, in Argentina there is a special provision for homemakers allowing them to participate in the second-tier pension making a reduced contribution.

When workers shift from a defined benefit scheme to a defined contribution individual accounts scheme, they generally get credit for prior contributions to the defined benefit scheme, but the way credit is given takes many forms. One method found in Chile is a “recognition bond” that corresponds to contributions made to the prior scheme (Queisser, 1998, p. 48). Over the years, there is an increase in the value of this bond due to imputed interest and at retirement the government redeems the bond. This spreads the reimbursement over many years (as workers will retire in different years) reducing the fiscal burden on the government. An alternative approach is illustrated by Argentina. There the worker is issued a special lifetime pension available after a minimum of 30 years of contributions to the system (Cruz-Saco & Mesa-Lago, 1998b). As a result, the government spreads repayment over an even longer period of time than in Chile. In Bolivia, there is a compensatory pension made at retirement to those who contributed for 5 or more years to the old defined benefit system that is adjusted for the number of years worked. The policy is similar in Peru with a requirement of 4 years of contribution and in Colombia it is 3 years (Mesa-Lago, 1997). In El Salvador, there is also a special payment at the time of retirement (Mesa-Lago, 1997). In Mexico, the number of years contributing to the old system is added to the number of years contributing to the new system to meet the years of contribution requirement. At the time of retirement a worker’s pension is calculated two ways, based on the new system and based on the old system. The worker then gets the larger of the two benefits (Queisser, 1998, p. 50; Stanton & Whiteford, 1998). In Uruguay, there is no special compensation for contributions to the prior scheme; however, the number of years of contribution count toward the number of years a person must contribute to become eligible for a pension under the new scheme (Queisser, 1998). In some countries such as Peru these bonds are not indexed; in others such as El Salvador and Argentina they are indexed, but no interest is paid (Cruz-Saco & Mesa Lago, 1998b; Queisser, 1998, p. 29). In Colombia and Argentina the bond is indexed and pays a real return over and above inflation (Mesa-Lago, 1997).

Workers generally have very little control over how the assets in their pension funds are invested. In Chile, for example, there are currently eight pension funds to choose from, but the types of investments made are very similar across funds. Due to the penalty for a return on AFP assets of more than 2% below the average, fund managers tend to adopt very similar asset allocation plans (Reisen, 1997). In Chile, each of these pension managers is responsible for only one fund, a fund that will combine investments in many different asset classes. In Mexico, in contrast, some of the pension fund organizations will soon be able to set up several subfunds allowing workers to move their assets between these subfunds (Queisser,

1998). The goal will be to give workers more control over investment decisions than they have in Chile, but still nowhere near the control that IRA and 401(k) investors have in the US.

In most of these countries, the self-employed can participate in the defined contribution individual accounts schemes, but typically very few do. In Chile, coverage of the self-employed is voluntary and estimates of the proportion covered are between 10% and 20% (Kritzer, 1996; Queisser, 1999). Participation is also voluntary in El Salvador, Bolivia, Peru, Colombia, and Mexico. In Uruguay, participation of the self-employed is mandatory, but only if their income is above the income limit at which coverage by the privatized scheme become mandatory. In Argentina, the self-employed must participate in the earning-related second-tier pension, but there is a choice between the defined contribution individual accounts and the public defined benefit scheme (Cruz-Saco & Mesa-Lago, 1998b). The major reason that the self-employed generally are not covered is that it is so difficult to determine income or monitor compliance (Vittas, 1996).

In some of these countries, workers can retire early so long as they have accumulated sufficient funds in their individual retirement savings accounts. In Chile, a worker can retire early if he or she has accumulated sufficient funds to purchase an annuity that will pay at least 110% of the minimum old-age pension or if it is equal to at least 50% of his or her average (indexed) wage over the prior 10 years (Kritzer, 1996, p. 47). There are similar policies in place in Mexico (Stanton & Whiteford, 1998, p. 161), El Salvador (Queisser, 1998), Bolivia, and Colombia (Mesa-Lago, 1997).

4. Discussion

Most of what we know about the impact of the privatization of national pension schemes in Latin America is based on the Chilean case because the other schemes are comparatively recent. While there will be much to learn from these other models in the years ahead, their primary relevance to the current debate over the proposed privatization of social security in the US is for what they tell us about the different ways in which national pension schemes can be partially or fully privatized.

The proposal to privatize the Chilean pension scheme grew out of suggestions from Chilean government elites who had been influenced by similar thinking neoliberal policy analysts in the US. The model was quickly endorsed by policy analysts at the World Bank, the International Monetary Fund, the Inter-America Development Bank, and other such international financial institutions (IFIs). During the 1980s and 1990s, consultants from the IFIs often included pension reform along the lines of the Chilean model in connection with their suggestions for structural adjustments. Responding to such suggestions made it easier to get needed foreign investment, debt refinancing, development loans, and the like. Moves in this direction were looked upon favorably by the IFIs and indirectly by world financial markets more generally. However, the final form that privatization took was a function of a political process that varied from one nation to another. The models that emerged reflected different outcomes in a political process that typically involved both interest groups supporting privatization (such as business and financial interests) and those opposed to it

(such as organized labor and pensioner organizations). In those countries with greater centralization of power (such as Chile and Mexico), the outcome tended to be closer to full privatization (Huber & Stephens, 2000; Kay, 2000b).

In recent years, we have seen the emergence of what could become a worldwide trend in national pension policy, a trend away from the PAYG defined benefit schemes and a trend toward greater emphasis on funded defined contribution schemes. A number of structural, cultural, and ideological factors have played a role in shaping the policies that have emerged.

Some structural factors have been present in most if not all of the Latin American nations that have shifted from PAYG defined benefit schemes to systems that depend all or in part on a funded defined contribution component. They were all finding it increasingly difficult to provide promised benefits as their pension systems matured and their populations aged. Policymakers in these nations were concerned about projected demographic trends pointing to a continued graying of the age structure. Another important factor in many of these countries was concern with the maintenance of international competitiveness and a related interest in market-based policies (Kay, 2000b).

In some nations, country-specific structural factors have been important. In Chile, for example, the transition from a defined benefit PAYG scheme to a fully privatized scheme was made possible by the power of General Augusto Pinochet's authoritarian regime. By contrast, when Argentina made its move in the direction of privatization, policymakers had to contend with a more democratic political context (Isuani Ernesto & Martino, 1998, p. 131). It was necessary to compromise in the face of opposition from various interest groups and the result was a scheme giving workers a choice between the defined benefit and the defined contribution approach for the earnings-related tier of the national pension system. In Peru, there was some public discussion, but relatively little interest group involvement in the decision to partially privatize (Cruz-Saco, 1998).

Another important factor has been program history. In general, it has been easier for nations without mature PAYG defined benefit schemes covering a large proportion of the population to make the shift to defined contribution individual account schemes (Myles & Pierson, 2001). This line of reasoning can be used to explain why it was politically easier for a country like Britain (that did not have a mature earnings-related defined benefit scheme in place in the mid-1980s) to partially privatize its national pension scheme than it would be for the US (that has a mature defined benefit scheme in place) to do the same today.

But how do we account for the Chilean case? Unlike Britain, Chile did have a mature PAYG defined benefit scheme in place when the decision to privatize was made. Part of the answer is that Chile's commitment to the defined benefit approach had been substantially undercut by the steady decline in the proportion of preretirement income that the system was able to provide. It was clear to most Chileans that something had to be done. The payroll taxes were becoming unbearably high and benefits were still falling. In short, the Chilean policy legacy had become problematic. There were similar problems in Argentina (Isuani Ernesto & San Martino, 1998), Peru (Cruz-Saco, 1998), and many of the other countries.

Cultural factors have also played an important role in many of these countries. In Chile, it was possible to impose privatization because the structural power of Pinochet's authoritarian regime trumped the nation's populist and paternalistic political values that supported the prior

public defined benefit scheme. In some countries that considered making the shift in the structural context of greater democracy such as Argentina, Uruguay, and Peru, these traditional political values seem to have contributed to making it more difficult to make as dramatic a split with the past (Cruz-Saco, 1998).

Can we account for policy developments in Mexico, a country that opted for full privatization despite much greater democracy than was present in Chile in the early 1980s? Why did Mexico end up adopting a model closer to that of Chile than that of Argentina? One response is that the process was different. It took 7 years for Mexico to move from serious discussion about privatization to the implementation of the scheme; in Chile the decision was made much quicker. One reason it took as long as it did in Mexico was the original opposition of various interest groups such as the unions (Cruz-Saco & Mesa-Lago, 1998b). It is also of note that there was at the time still a great deal of centralization of power in the presidency (Huber & Stephens, 2000). Yet another part of the explanation is that Mexican workers covered in 1997 (the year the transition was made) by the old defined benefit system, at retirement will have the option of collecting benefits based on either the new scheme or the old scheme, whichever yields the greater pension benefit. This is arguably a more generous alternative than that offered to Chilean workers in 1981. While Mexico did in the end opt for full privatization, it did so in a way that reflected the different political context in which the decision was made.

The difference in the degree of concern about the impact of privatization on women as opposed to men throughout Latin America reflects the influence of regional cultural factors. The evidence suggests that the privatization of public pension schemes in Latin America has been particularly problematic for women (Graham, 1998; Kay, 1997a, 1997b). This is consistent with evidence from the World Values Survey suggesting that the economic status of women is of greater concern in countries such as Sweden and Denmark than it is in countries such as Chile, Argentina, and Mexico (Inglehart, Basañez, & Moreno, 1998, v128). In many Latin American countries, it is not only common to discriminate against women, but also legal to do so (Elter & Briant, 1995). That being the case, it is not surprising to find more attention in Sweden than in Chile to the potential impact of pension reform on women, particularly low-income women. For example, in Sweden, unlike Chile, the retirement annuities will not be gender-specific. In addition, the Swedish government will give pension contribution credit to women who take a few years off work to care for their children (Klingvall, 1998; Sundén, 2000).

Starting in the late 1970s and particularly since the late 1980s, the ideological center of gravity among national pension policymakers has been shifting to the right, not just in the Latin American countries being considered in this analysis, but also in many other nations including Britain, the US, and Sweden. The assumptions and beliefs embodied in the ideology of the free market lead adherents to market-based solutions to a variety of social policy issues. The ideology of market-based social policy is sweeping around the world with little by way of successful opposition from those on the left who have traditionally been skeptical of this degree of reliance on market-based policies.

The collapse of the communist regimes in Eastern Europe and the subsequent difficulty that many of these nations have had in adapting to a capitalist world system have contributed

to a discrediting of not only socialism, but also generous welfare states. Defined benefit public pension systems (which often include redistributive payout provisions) as well as other generous health and social welfare programs are increasingly being viewed as placing an unacceptable burden on the state. The solution to the problem of social provision according to advocates of this ideology is to make individuals and their families increasingly responsible. One goal is to shift the burden and the risk from the state to the individual.

Due to demographic trends, the maturation of existing public pension systems, and the pressures of world markets, it is becoming increasingly difficult for governments to finance expensive pension systems. The belief in market-based solutions offers what looks like a way out of both current and projected future financing problems through the partial or the full privatization of national pension systems. How well this approach will work in the long run remains to be seen; but in the short run it is looking attractive to policymakers in an increasing number of nations, both rich and poor.

One issue for the present study has been an analysis of what policymakers in the US have to learn from the evidence with respect to privatization efforts in Chile and other Latin American nations. One of the major lessons is that it is both politically and economically possible to shift from a PAYG defined benefit scheme to a scheme that depends in part or even entirely on defined contribution individual accounts. There is no evidence to suggest that the Chilean economy or any other Latin American economy has been harmed by the shift in the direction of privatization, and there is at least some evidence suggesting that the shift has had positive economic effects.

The extent to which the creation of individual accounts will increase the national savings rate is often overstated by advocates of privatization. Clearly, a portion of what goes into such accounts is offset by reduced individual savings outside such accounts. However, there is evidence from Chile suggesting that privatization has led to an increase in the national savings rate (Edwards, 1998). Privatization has resulted in a substantial increase in investment capital (Arenas de Mesa & Bertranou, 1997; Queisser, 1999). While experts disagree as to whether privatization has had a positive impact on economic growth, a number argue that the impact has been positive. The move toward privatization has also led to a decrease in the projected size of the future national debt. Future reductions in the size of the national debt would be likely to contribute to economic growth over the long run.

In Chile, the individual retirement savings accounts tend to be popular, particularly among middle- and upper-income male workers (Diamond, 1994; Navarro, 1997). There is good reason for this as the returns on contributions to these accounts have generally been greater than the imputed returns in connection with the public defined benefit scheme. However, there is much less interest in these individual accounts among low-wage workers. One reason is that many low-wage workers will end up with low balances in their accounts when they reach retirement age. As a result, they will be taking the guaranteed minimum pension, and the size of that pension will not be influenced by the balance in their accounts, except to the extent that they will be ineligible for these pensions if the balance is over a specified level.

The personal retirement savings accounts are also less likely to be attractive to women than to men. In Latin America as throughout the industrial world, women tend to earn substantially less than men and tend to spend fewer years in the paid labor force due in part to the tendency

for their lives to follow different institutional and cultural patterns (Arenas de Mesa & Montecinos, 1999; Elter & Briant, 1995). The result is that more women can expect to receive the guaranteed minimum pension when they retire. In other countries like Britain, these considerations lead many low-income women to opt for the public pension scheme rather than the individual accounts alternative (Liu, 1999).

While privatizing public pension systems seems to have positive economic consequences, in the long-run these benefits may turn out to be quite modest. The shift from redistributive defined benefit schemes to less redistributive defined contribution schemes may have some positive consequences for the overall economy and for some workers, particularly more affluent workers, those benefits will come at a price. The evidence suggests that privatization tends to be associated with both an increase in income inequality (Borzutzky, 1998; Graham, 1998, p. 123) and an increase in gender inequality (Elter & Briant, 1995; Kay, 1997a). While privatization contributes to the development of capital markets and may contribute to economic growth, to the extent that we emphasize such considerations to the neglect of the social welfare impact on the elderly, we risk forgetting that the traditional goal of public pensions in most countries has been to provide old-age security, not stimulate economic growth.

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References

- Arenas de Mesa, A., & Bertranou, F. (1997). Learning from social security reforms: two different cases Chile and Argentina. *World Development*, 25, 329–348.
- Arenas de Mesa, A., & Montecinos, V. (1999). The privatization of social security and women's welfare: gender effects of the Chilean reform. *Latin American Research Review*, 34 (3), 7–37.
- Ayala Oramas, U. (1997). *Reformas del Sistema de Pensiones y del Sistema de la Seguridad Social en Colombia* (Reforms to the pension and social security systems in Colombia). Santiago, Chile: CIEPLAN.
- Baker, D. (1997). The privateer's free lunch. *The American Prospect*, 81–84 (May/June).
- Ball, R. M. (1997). Bridging the centuries: the case for traditional social security. In: E. R. Kingson, & J. H. Schulz (Eds.), *Social security in the 21st century* (pp. 259–294). New York: Oxford University Press.
- Barrientos, A. (1998). *Pension reform in Latin America*. Aldershot, England: Ashgate.
- Beard, S. (1996). *Restoring hope in America: the social security solution*. San Francisco: ICS Press.
- Bipartisan Commission on Entitlement and Tax Reform (1995). *Bipartisan commission on entitlement and tax reform: final report*. Washington, DC: U.S. Government Printing Office.
- Borzutzky, S. (1998). Chile: the politics of privatization. In: M. A. Cruz-Saco, & C. Mesa-Lago (Eds.), *Do options*

- exist? *The reform of pension and health care systems in Latin America* (pp. 35–55). Pittsburgh: University of Pittsburgh Press.
- Cruz-Saco, M. A. (1998). The pension system reform in Peru: economic rationale versus political will. In: M. A. Cruz-Saco, & C. Mesa-Lago (Eds.), *Do options exist? The reform of pension and health care systems in Latin America* (pp. 165–185). Pittsburgh: University of Pittsburgh Press.
- Cruz-Saco, M. A., & Mesa-Lago, C. (Eds.) (1998a). *Do options exist? The reform of pension and health care systems in Latin America*. Pittsburgh: University of Pittsburgh Press.
- Cruz-Saco, M. A., & Mesa-Lago, C. (1998b). Conclusion: conditioning factors, cross-country comparisons, and recommendations. In: M. A. Cruz-Saco, & C. Mesa-Lago (Eds.), *Do options exist? The reform of pension and health care systems in Latin America* (pp. 377–428). Pittsburgh: University of Pittsburgh Press.
- Davrieux, A. (1997). The social security reform: the Uruguayan model. *Seguridad Social*, 209, 147–168.
- Diamond, P. A. (1994). Privatization of social security: lessons from Chile. *Revista de Análisis Económico*, 9, 21–33.
- Diamond, P. A. (1996). Proposals to restructure social security. *Journal of Economic Perspectives*, 10 (3), 66–88.
- Edwards, S. (1998). The Chilean pension reform: a pioneering program. In: M. Feldstein (Ed.), *Privatizing social security* (pp. 33–57). Chicago: University of Chicago Press.
- Elter, D., & Briant, M.-H. (1995). *La Situación de las Mujeres en el Nuevo Sistema Previsional Chileno* (Women's situation in the new Chilean pension system). Chile: Servicio Nacional de la Mujer, Departamento de Planificación y Estudios.
- Friedland, J. (1997). Chile's celebrated pension fund system has growing pains as returns decline. *Wall Street Journal*, A10 (August 12).
- García, C. (1998). Suman US\$153,286 millones Las Afores en el Mundo (AFP's accumulate US\$153,286,000,000 worldwide). *El Economista*, (November 5).
- Graham, C. (1998). *Private markets for public goods*. Washington, DC: Brookings Institution Press.
- Huber, E., & Stephens, J. D. (2000). *The political economy of pension reform: Latin America in comparative perspective*. Geneva: United Nations Research Institute for Social Development (UNRISD) (Occasional Paper 7).
- Inglehart, R., Basañez, M., & Morcno, A. (1998). *Human values and beliefs: a cross-cultural sourcebook*. Ann Arbor, MI: University of Michigan Press.
- Isuani Ernesto, A., & San Martino, J. A. (1998). The new Argentine social security system: a mixed model. In: M. A. Cruz-Saco, & C. Mesa-Lago (Eds.), *Do options exist? The reform of pension and health care systems in Latin America* (pp. 130–149). Pittsburgh: University of Pittsburgh Press.
- Iwasaki, M. L. (1996). *El Sistema Privado de Pensiones Peruano y el Mecanismo de la Pensión Mínima* (The private pension system in Peru and the mechanism of the minimum pension). Santiago, Chile: Departamento de Ingeniería Industrial.
- James, E. (1998). New models for old-age security: experiments, evidence, and unanswered questions. *World Bank Research Observer*, 13, 271–301.
- Kay, S. J. (1997a). *The future of social security for this generation and the next*. Testimony before the Subcommittee on Social Security of the House Ways and Means Committee, US House of Representatives, September 18.
- Kay, S. J. (1997b). The Chile con: privatizing social security in South America. *American Prospect*, 48 51 (July/August).
- Kay, S. J. (2000a). Privatizing pensions: prospects for the Latin American reforms. *Journal of Interamerican Studies and World Affairs*, 42, 133–143.
- Kay, S. J. (2000b). Unexpected privatizations: politics and social security reform in the Southern Cone. *Comparative Politics*, 31, 403–422.
- Klingvall, M. -I. (1998). *Pension reform in Sweden: a short summary*. Stockholm: National Social Insurance Board.
- Kotlikoff, L. J. (1992). *Generational accounting*. New York: Free Press.
- Kritzer, B. E. (1996). Privatizing social security: the Chilean experience. *Social Security Bulletin*, 59 (3), 45–55.
- Liu, L. (1999). Retirement income security in the United Kingdom. *Social Security Bulletin*, 62 (1), 23–46.

- Mesa-Lago, C. (1997). Comparative analysis of structural pension reforms in eight Latin American countries: description, evaluation, and lessons. In: M. H. Pearce (Ed.), *Capitalization: a Bolivian model of social and economic reform* (pp. 381–461). Miami, FL: North South Center, University of Miami.
- Mujica, P., & Larrañaga, O. (1992). Políticas Sociales y de Distribución del Ingreso en Chile (Social politics and income distribution in Chile). In: *Documentos de Trabajo*, 106). Washington, DC: Inter-American Development Bank (March).
- Myles, J., & Pierson, P. (2001). The comparative political economy of pension reform. In: P. Pierson (Ed.), *The new politics of the welfare state* (pp. 305–333). New York: Oxford University Press.
- Navarro, V. (1997). Chasing Chile — right over the cliff. In *These Times*, 29–30 (March 3).
- Peirce, M. H. (Ed.). (1997). *Capitalization: a Bolivian model of social and economic reform*. Miami: North South Center, University of Miami.
- Piñera, J. (1992). *El Cascabel al Gato: la Batalla por la Reforma Previsional* (The collar on the cat: the battle for the provisional reform). Santiago, Chile: Editora Zig-Zag.
- Piñera, J. (1999). *A real solution to the social security crisis*. Testimony before the Committee on Ways and Means, US House of Representatives, February 11.
- Orszag, P. R., & Stiglitz, J. E. (1999). *Rethinking pension reform: ten myths about social security systems*. Paper presented at the conference on new ideas about old age Security, World Bank, Washington, DC, September 14–15.
- Queisser, M. (1997). *Pension reform and private pension funds in Peru and Colombia*. Working paper no. 1853, Washington, DC: World Bank.
- Queisser, M. (1998). *The second generation pension reforms in Latin America*. Paris: OECD Development Center.
- Queisser, M. (1999). *Pension reform: lessons from Latin America*. Policy Brief No. 15. Paris: OECD Development Center.
- Reisen, H. (1997). *Liberalizing foreign investments by pension funds: positive and normative Aspects*. Technical Paper No. 120. Paris: OECD Development Center.
- Rotella, S. (1998). Social security countdown: taking a hard look at Chile's privately managed system. *Los Angeles Times*, C1 (December 6).
- Salisbury, D.L. (Ed.). (1999). *Beyond ideology: are individual social security accounts feasible?*. Washington, DC: Employee Benefit Research Institute.
- Schulz, J. H. (2000). *Older women and private pensions in the United Kingdom*. Waltham, MA: National Center on Women and Aging, Heller School, Brandeis University.
- Simone, V. J. (1983, April). Latin America: the effect of social, economic and political trends on benefit planning. *Pension World*, pp. 6, 54.
- Stanton, D. I., & Whiteford, P. (1998). *Pension systems and policy in the APEC economies. Pension systems and policy — discussion papers* (vol. 2, pp. 159–169). Canberra, Australia: Department of Social Security.
- Sundén, A. (2000). *How will Sweden's new pension system work?* Issue Brief No. 3. Chestnut Hill, MA: Center for Retirement Research, Boston College.
- Superintendencia de Pensiones. (1999). *Informe trimestral, Enero–Marzo, 1999* (Quarterly report, January–March, 1999). El Salvador: Superintendencia de Pensiones.
- Vittas, D. (1996). *Designing mandatory pension schemes: some lessons for Argentina, Chile, Malaysia and Singapore*. Public Policy for the Private Sector Note No. 72. Washington, DC: World Bank.
- Wadensjö, E. (2000). Sweden: reform of the public pension system. In: E. Reynaud (Ed.), *Social dialogue and pension reform* (pp. 67–80). Geneva: International Labour Office.
- Williamson, J. B. (1997). A critique of the case for privatizing social security. *The Gerontologist*, 37, 561–571.
- Williamson, J. B., & Hochman, G. (1995). Innovative old-age security models for developing nations: Chile and Brazil. *Journal of Aging Studies*, 9, 245–262.
- Williamson, J. B., & Pampel, F. C. (1998). Does the privatization of social security make sense for developing nations? *International Social Security Review*, 51 (4/98), 3–30.
- World Bank (1994). *Averting the old age crisis*. New York: Oxford University Press.